VALUATION SCHOOL

LEARN HOW STOCKS ARE VALUED, *VISUALLY*

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Hello and Welcome!

If you invest, you must understand how to value a business.

But valuation can be incredibly confusing!

This eBook contains eight simple infographics designed to help you understand how businesses are valued.

Wishing you investing success!

Brian Feroldi **Brian Stoffel**

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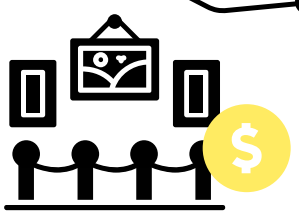
WHAT IS VALUATION?

BY BRIAN FEROLDI

VALUATION

➡ The process of valuing an asset

➡ To estimate the market value of an asset



WHY DO WE NEED TO VALUE AN ASSET?

A CEO's objective is to maximize <u>VALUE</u> of a business

So, we must be able to measure <u>VALUE</u>!

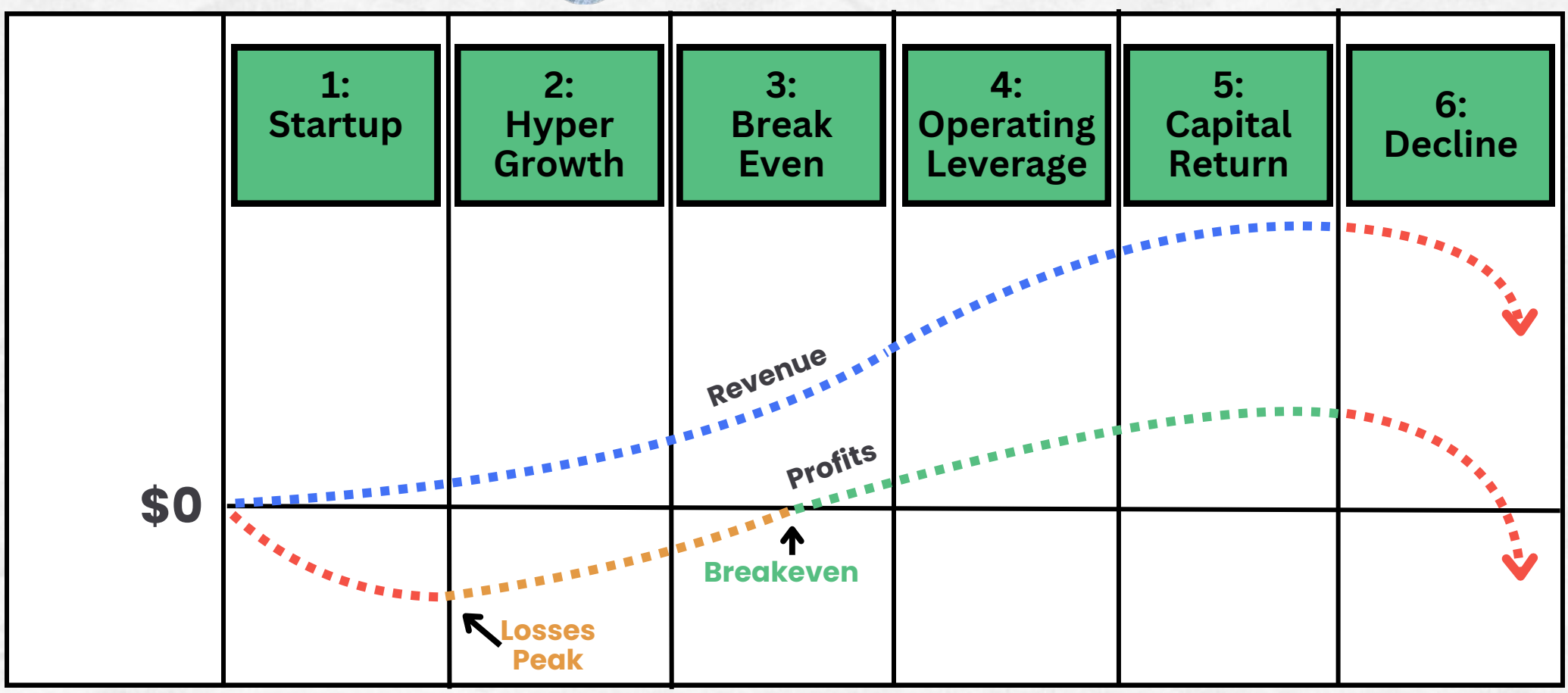
Valuation is also needed when pricing an asset for sale or purchase

Also required by law (Tax/Accounting/SEC...)

VALUATION METHODS		
TOTAL ADDRESSABLE MARKET	Company value is based on its market opportunity	✅ Method to value early stage or pre-revenue business ❌ Very sensitive to subjective assumptions
DISCOUNTED CASH FLOW (DCF) MODEL	Estimated future cash flows are summed and discounted to the present	✅ Includes forward-looking estimates ❌ Very sensitive to subjective assumptions
MARKET MULTIPLES	Company market value divided by a financial metric (Revenue, Earnings, EBITDA, Free Cash Flow)	✅ Simple method and based on current earnings ❌ Comparisons are needed
REVERSE DCF	Start with market price, solve for expectations	✅ Reflects expectations built into valuation ❌ Must have a market price

VALUATION BY PHASE

BY BRIAN FEROLDI



SOURCE OF VALUE	Product / Market Fit	Revenue Growth	Positive Cash Flow	Margin Expansion	Buybacks, Dividends, M&A	Asset Sales
TOTAL ADDRESSABLE MARKET	Useful	Useful	Somewhat Useful	Somewhat Useful	Not Useful	Not Useful
PRICE TO SALES (P/S)	Useful	Useful	Useful	Useful	Somewhat Useful	Not Useful
PRICE TO GROSS PROFIT	Somewhat Useful	Useful	Useful	Useful	Somewhat Useful	Not Useful
PRICE TO FORWARD EARNINGS	Not Useful	Not Useful	Somewhat Useful	Useful	Useful	Not Useful
PRICE TO FORWARD FREE CASH FLOW	Not Useful	Not Useful	Somewhat Useful	Useful	Useful	Not Useful
PRICE TO TRAILING EARNINGS (P/E)	Not Useful	Not Useful	Not Useful	Somewhat Useful	Useful	Not Useful
PRICE TO TRAILING FREE CASH FLOW	Not Useful	Not Useful	Not Useful	Somewhat Useful	Useful	Not Useful
DISCOUNTED CASH FLOW	Not Useful	Not Useful	Somewhat Useful	Somewhat Useful	Useful!	Not Useful
REVERSE DCF	Not Useful	Not Useful	Somewhat Useful	Somewhat Useful	Useful!	Not Useful

VALUATION CHEAT SHEET

BY BRIAN FEROLDI

REASONS FOR VALUATION

- **Mergers & Acquisitions:** Determine the purchase or selling price of a business
- **Raising Capital:** Calculate the valuation to use in negotiations with lenders or investors
- **Financial Reporting:** Make comparisons and report valuation over time
- **Strategic Planning:** Test the impact of strategic decisions like expansions or diversification
- **Tax Purposes:** Report asset and business value for estate planning and tax deductions
- **Exit Planning:** To guide the retirement or succession planning of a business

VALUATION INPUTS

- **Income Statement** → Study profitability
- **Balance Sheet** → What's owned and owed
- **Cash Flow Statement** → Look at cash movement
- **Growth Rates** → Check growth expectation
- **Discount Rate** → Required rate of return
- **Industry Data** → Look at comparable businesses
- **Market Condition** → The impact of market forces
- **Trends** → Business performance over time
- **Credit History** → If they are in good standing
- **Due Diligence** → Run it through a checklist

VALUATION METHODS

Discounted Cash Flow (DCF) Model	Valuation based on estimated future cash flows, discounted to the present time.	✅ Includes forward-looking estimates ❌ Very sensitive to subjective assumptions
Market Multiples	Company value divided by a profit multiple (earnings, EBITDA, free cash flow)	✅ Simple method and based on current earnings ❌ Multiple is subjective
Net Asset Value Method	Assets minus liabilities	✅ Gives a clear and tangible value to the business ❌ May undervalue of intangibles and earning potential
Reverse DCF	Start with market price, solve for expectatations	✅ Reflects expectations built into valuation ❌ Must have a market price

THE DISCOUNT RATE

Definition	The expected return that investor demands given the risk profile of the security
Relation to Risk	Risky investments have a higher discount rate to compensate for the risk
Impact on Valuation	A higher discount rate reduces the current valuation of an investment
Subjectivity	Setting a discount rate is not purely scientific and relies on judgement
Relation to Time	The discount rate can change over time as market conditions change
Weighted Average Cost of Capital (WACC)	**A common discount rate calculation:** Value of equity, Cost of equity, Corporate tax rate $WACC = (E/V * Ke) + (D/V * Kd * (1 - Tc))$ Total value of equity and debt (E+D), The market value of debt, The cost of debt

DISCOUNTED CASH FLOW (DCF) EXAMPLE

Assumptions	Value
Current Free Cash Flow (FCF)	$100
Growth Rate (next 5 years)	5%
Terminal Growth Rate (TGR)	2%
Discount Rate (WACC)	10%
Net Debt	$400

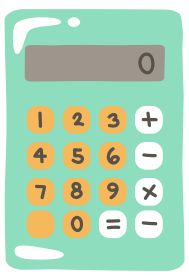
FORMULAS

- FREE CASH FLOW = Net Income + Non-Cash Charges +/- Working Capital Change - CAPEX
- PRESENT VALUE = $\frac{\text{Free Cash Flow}_{\text{Year N}}}{(1+\text{WACC})^{\text{Year N}}}$
- TERMINAL VALUE = $\frac{\text{Free Cash Flow}_{\text{Year 5}} \times (1+\text{TGR})}{(\text{WACC} - \text{TGR})}$

Assumptions	Year 1	Year 2	Year 3	Year 4	Year 5	Terminal Value
FCF ($)	105	110.25	115.76	121.55	127.63	1,627.3
Present Value ($)	95.45	91.12	86.97	83.02	79.25	1,010.4

VALUE = 95.45+91.12+86.97+83.02+79.25+1,010.4 = $1,446.2

EQUITY VALUE = $1,446.2 - Net Debt ($400) = $1,046.2



FACE VALUE VS FAIR VALUE VS MARKET VALUE VS BOOK VALUE

BY BRIAN FEROLDI

ASPECT	FACE VALUE	FAIR VALUE	MARKET VALUE	BOOK VALUE
Definition	The nominal or original value of a security as stated by its issuer.	The estimated price at which an asset should be traded.	The current price at which an asset or a security can be bought or sold.	The value of an asset according to the equity on its balance sheet.
Formula	Predetermined and Printed on the Security	Estimated Price	Current Trading Price	Total Assets - Total Liabilities
Determination	Set by the issuer at the time of issuance.	Calculated by an investor or issuer.	Determined by the prevailing market prices.	Calculated based on the company's accounting principles.
Used For	Bonds, stocks (par value), and other financial instruments.	Valuation of assets for investing decisions.	Trading assets in financial markets.	Accounting purposes in a company's financial statements.
Fluctuations	Generally fixed and does not change.	Changes based on market conditions and assessment of the asset's value.	Frequently fluctuates based on market supply and demand.	Changes quarterly when an updated balance sheet is created.
Purpose	To denote the original value of the instrument for legal purposes.	To provide a reasonable estimate of an asset's value.	To reflect the current market perception of the value of an asset or stock.	To provide a bookkeeping value of an asset.
Example	A bond issued with a face value of $1,000.	An investor calculates the value of a stock should be $20 per share.	A stock is currently trading at $25.50 per share on a stock exchange.	The value of a company's equity is $15.50 per share.

TAM vs SAM vs SOM

BY BRIAN FEROLDI

To evaluate a business opportunity, you need to look into three key metrics:

TOTAL ADDRESSABLE MARKET

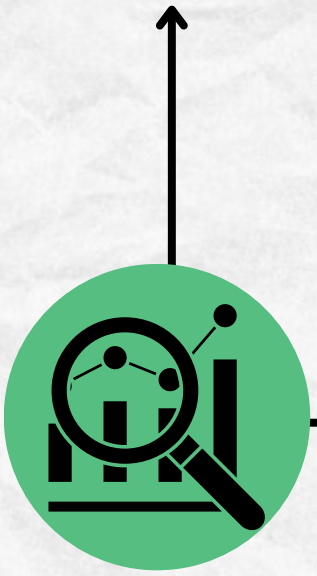
The entire revenue opportunity of the business.
Number of Customers X Revenue Per Customers

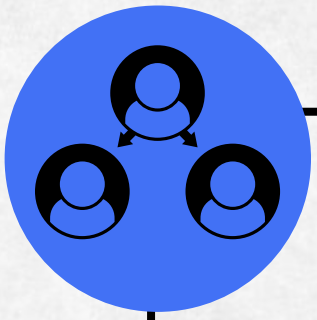
SERVICEABLE ADDRESSABLE MARKET

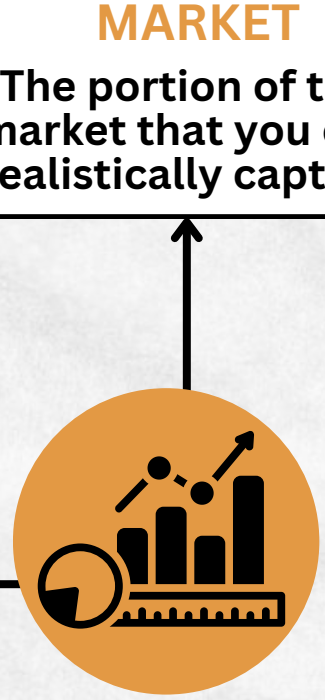
The people you can reach with your business

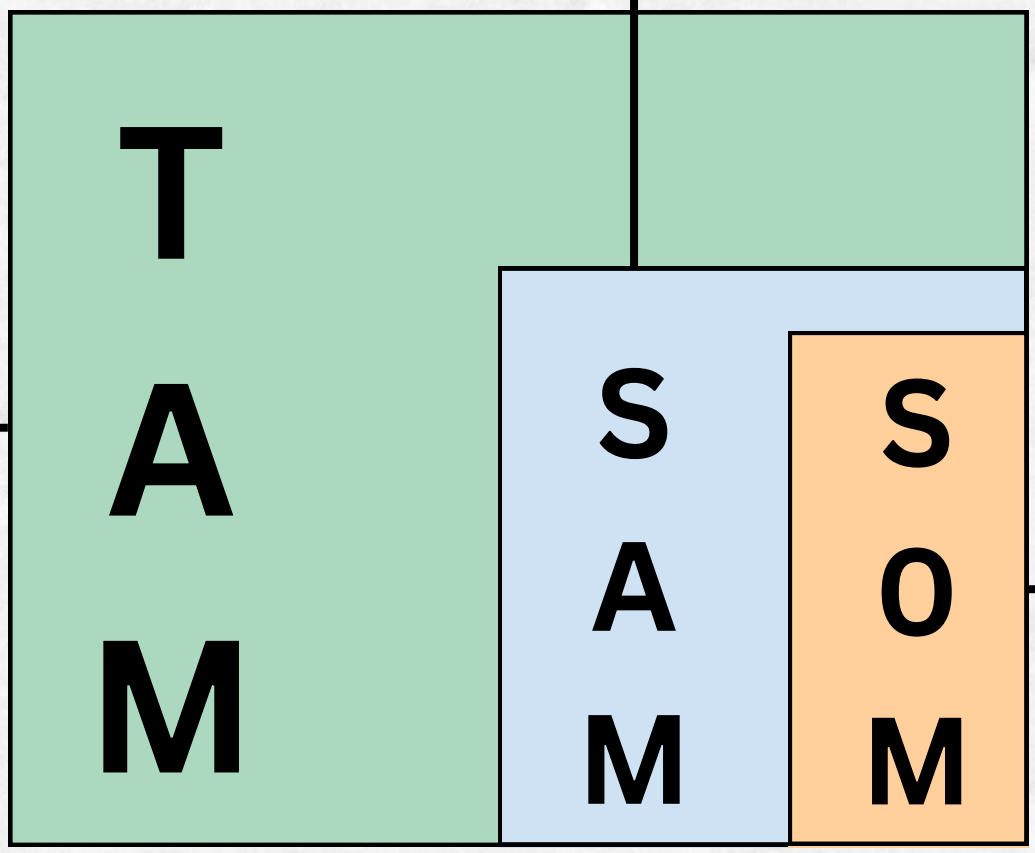
SERVICEABLE OBTAINABLE MARKET

The portion of the market that you can realistically capture





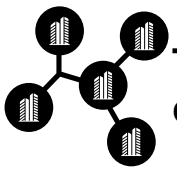




2 WAYS TO CALCULATE TAM

BOTTOM UP

Current Clients (ICP)



Total number of similar companies that fit your ICP

Total number of companies X Annual contract value (ACV)

TOP DOWN

Total size of the overall market for your product or service

Portion of the market that is relevant to your business

Subsegments (e.g. geo)

VALUATION MULTIPLES

BY BRIAN FEROLDI

WHAT ARE MULTIPLES?

- A valuation method that compares a company's market value to a financial metric such as earnings, sales, or cash flow.
- Useful for comparing a company's financial performance to other similar companies in the market.
- A quick and easy way to assess a company's relative value.

PROS	CONS
✅ Simple	❌ Easy to misuse
✅ Market-based	❌ Short-term focus
✅ Widely accepted	❌ Circular logic
✅ Historical data	❌ Doesn't show risk

POPULAR MULITPLES:

PRICE-TO-EARNINGS (P/E)	Most useful in the valuation for companies with stable earnings and a predictable growth rate
PRICE-TO-SALES (P/S) RATIO	Most useful in valuations for companies that are not yet profitable or have inconsistent earnings but have high growth potential
PRICE-TO-BOOK (P/B) RATIO	The P/B ratio is often used to evaluate companies in industries with a lot of tangible assets.
ENTERPRISE VALUE-TO-EBITDA (EV/EBITDA)	When evaluating companies that have high levels of capital expenditures and/or companies with significant debt levels.
PRICE-TO-CASH FLOW (P/CF) RATIO	Useful when a company has stable cash flows and predictable earnings.

COMMON MULTIPLE CALCULATIONS:

Market Capitalization: Shares Outstanding X Share Price	Divided By	Income Statement:	Equals	Valuation Metric:
Market Capitalization	/	Sales (Revenue)	=	Price-to-Sales Ratio
		- Cost of Goods Sold		
Market Capitalization	/	Gross Profit	=	Price-to-Gross Profit Ratio
		- Operating Expenses		
Market Capitalization	/	Operating Income (EBITDA)	=	Price-to-EBITDA Ratio
		- Depreciation Expense - Amortization Expense		
Market Capitalization	/	Operating Income (EBIT)	=	Price-to-EBIT Ratio
		- Interest Expense		
Market Capitalization	/	Pre-Tax Income (EBT)	=	Price-to-EBT Ratio
		- Income Tax Expense		
Market Capitalization	/	Earnings (Net Income)	=	Price-to-Earnings Ratio
		Cash Flow Statement:		
Market Capitalization	/	Free Cash Flow	=	Price-to-Free Cash Flow Ratio

DISCOUNTED CASH FLOW METHOD

BY BRIAN FEROLDI

VALUE OF ANY ASSET = SUM OF THE PRESENT VALUE OF ALL FUTURE CASH FLOW

- **Future value / (1+ discount rate)^time period** — Future value
- Includes recurring & one time cash flows, savings generated, etc.
- Includes only future cash flows, ignores past cash flow.
- Includes cash outflow and inflow. Does not refer to net income (See box 1 before)

Asset	Cash Flow Discounted To Present Value	Discount Rate
Bonds	Interest payments & principal repayment	Yield
Stock	Dividends & future selling price	Expected return
Business	Free Cash from the business (see box 1)	Weighted Average Cost of Capital
House	Rental/ other income & estimated selling price	Expected return
Art	Future selling price	Cost of Capital

Step 1: Estimate future cash flow over a period (forecast period)

Step 2: Estimate growth rate after forecast period

Time period: t_0 t_1 t_2 t_3 ..... t_n t_{n+1}

Cash Flow: CF_0 CF_1 CF_2 CF_3 ..... CF_n CF_{n+1}

Assumes cash flow continues perpetually

Step 3: Discount future cash flow to present value

Cash Flow during forecasted period

Step 4: Discount terminal cash flow to present value

Value of any asset =

$$\frac{CF_0}{(1+r)^0} \quad \frac{CF_1}{(1+r)^1} \quad \frac{CF_2}{(1+r)^2} \quad \frac{CF_3}{(1+r)^3} \quad \ldots\ldots \quad \frac{CF_n}{(1+r)^n} + \frac{CF_{n+1}}{(r_t-g)}$$

Step 5: Sum up present values

Present values of cash flow over the forecasted period

Horizon Value

CF = Cash Flow

- Net free cash flow after all expenses, capital expenditure, changes in working capital, etc.
- Formula: Net income + Depreciation - non cash items - capital expenditure- changes in working capital
- Note that this cash flow is not net income
- Honesty, judgment and experience is required to estimate cash flow

r = discount rate

- The factor that connects future cash flow's value to today's value
- Incorporates:
  - Risk of cash flow
  - Opportunity cost
  - Expected inflation
- Rate must match the time period of cash flows
- r1= Terminal discount rate maybe different from rate during the forecast period

g = Terminal growth rate

- Rate at which the cash flow will grow after the forecasted period
- One of the hardest & most important assumptions required and accounts for a large portion of the value arrived at.
- Conservatively approximated to be equal to historical inflation

ADVANTAGES

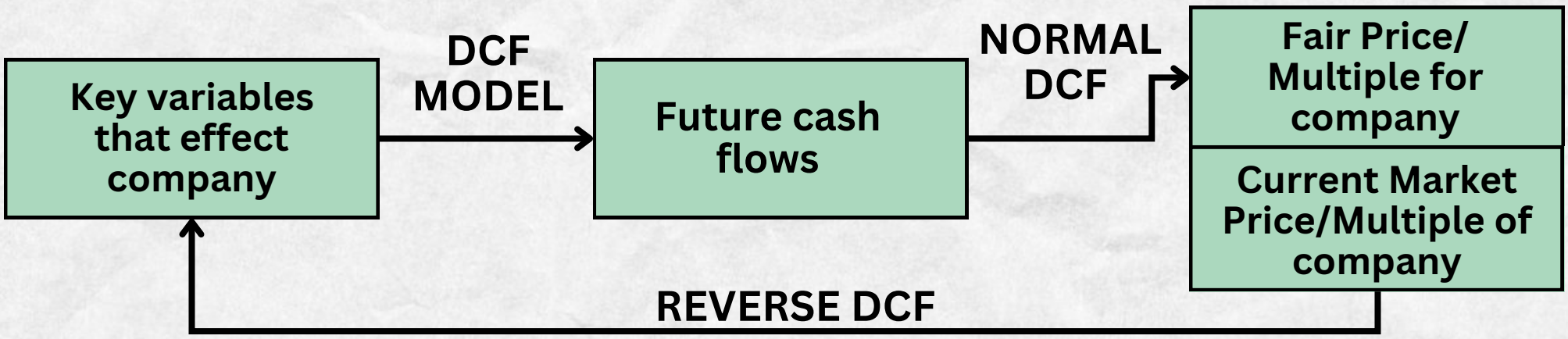
- Values the asset based on cash flow which is a real indicator of value.
- Not based on market sentiment but based on fundamentals.

DISADVANTAGES

- Requires many assumptions to be made.
- Assumptions can be manipulated.
- Can become overly complex if not careful.

WHAT IS A REVERSE DCF?

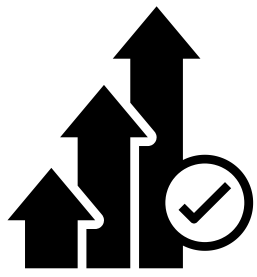
BRIAN FEROLDI



METHODOLOGY

It starts with a company's current market value and works backward to determine what growth expectations are implied based on that valuation.

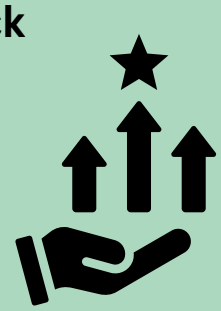
PRIMARY USE



To understand the market's expectations of growth in future cash flows of the business built into the current stock price.

ADVANTAGES

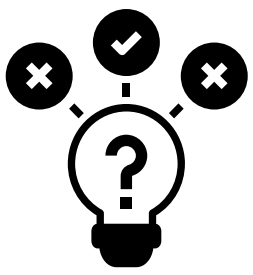
- Useful for checking if current stock prices are reasonable based on future performance expectations.
- Helps investors understand the market's sentiment and expectations.



LIMITATIONS

- Assumes market efficiency, implying that the current price is always correct, which may not always be the case.
- Relies heavily on the chosen discount rate and the accuracy of the current market capitalization.

ASSUMPTIONS



- The current market price accurately reflects all available information and expectations.
- Growth rates and cash flow projections can be accurately back-calculated from the current valuation.

KEY INPUTS

- Current market value
- Current cash flows
- Discount rate

OUTPUT

Implied cash flow growth expectations that justify the current market valuation.

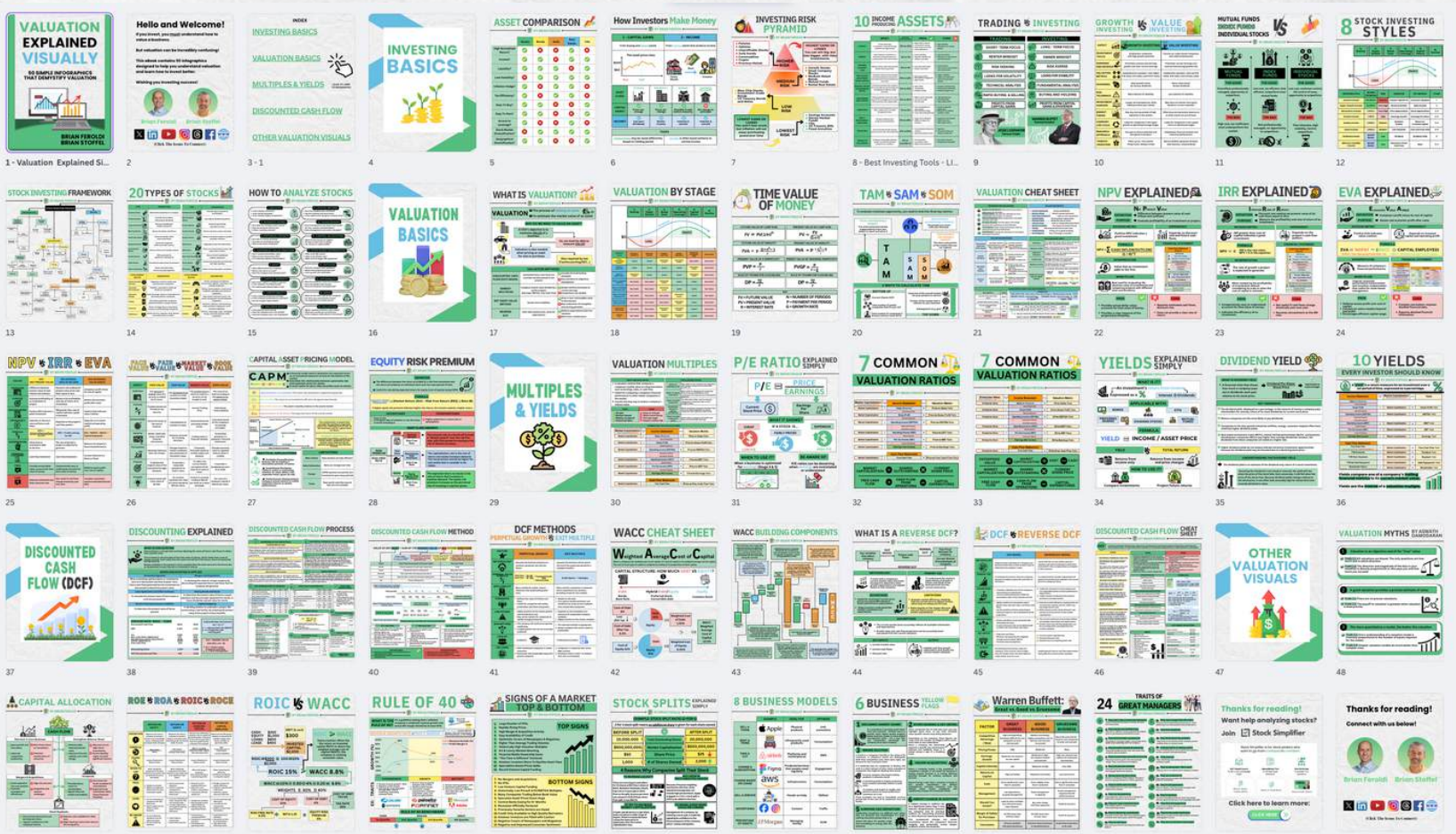
Thanks for reading!

If you enjoyed this free ebook, you'll love our full Investing Infographic ebook - Valuation Explained Visually

These 50 simple infographics make complex investing concepts crystal clear...even if you're not a numbers person.

🧠 **Grasp Core Concepts Fast**
Understand TAM, P/E Ratios, DCF, Reverse DCF, and more — visually.

📊 **Learn by Seeing**
Perfect for visual learners who want to cut through the jargon and actually get how valuation works.



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Brian Feroldi **Brian Stoffel**

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