

### cardinals

real money is your ability to invest quietly and reap gargantuan.

sizing too big in volatile markets is the biggest sin of the financial markets (you could be right about the longterm trends however you get smashed due to your position size and volatility)

"the trend is your friend until it ends."

"keep dancing and stand near the door."

"It's more than what you think you know, it's what you have to think about (consider)."

they are always opportunities regardless of the economic environment.

"the big money is not in the buying or selling, but in the waiting." - c. munger

money follows assets - build something valuable and your pockets will thank you.

to make money you need a lot of dumb people.

### negative wealth effect

if an individual's wealth decreases (for example, if the value of their investments or home falls), they may be less likely to spend money and may cut back on their consumption. *this can have a negative impact on aggregate demand and economic growth.\**

### building efficiency

**occupancy rate =** occupied space / total space ×100%. (above 80% is good)

### building efficiency (cont)

**space utilisation ratio =** usable space / total space ×100%.

**cost per square foot (sq) =** total cost of property / total square footage

### risk management (market mathematics)

- "a fool and his money are soon parted."

- **gresham's dynamic:** the more the bad practices spread, the more everyone has to mimic them to be competitive.

- never depend on too much on variables you cannot control.

- there is a price that pulls everyone out of their positions.

- number go up doesn't mean anything fundamentally has changed about the underlying asset(s).

- ride with house money.

- investors should know better, you can't baby sit adults too much.

- we are living in the **golden age of fake business.**

- the **usa is the top level of the global mlm scheme**, china being second

- the most valuable commodity is information.

- the weakest link of the chain determines the strength of the whole chain.

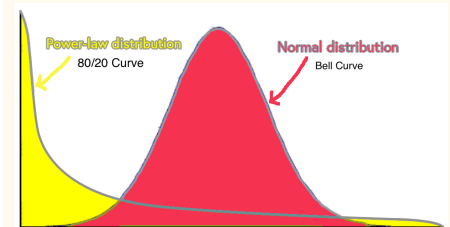
- the stock is a higher risk vehicle, bonds are lower risk. the bond market is much bigger and more widely held but equities are more transparent than bonds.

- **banks?** are the loans good.

### risk management (market mathematics) (cont)

\$200T of wealth assets, only 2% (\$4T) of this is invested in alternative markets.

### power law vs. normal distribution

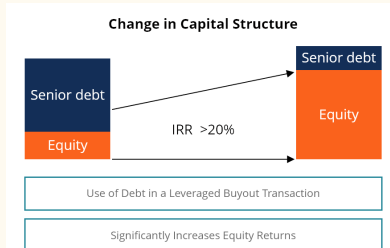


### zone of possible agreement (ZOPA)



the seller determines the price, the consumer determines the value.\*

### change in capital structure



*demonstrates how the use of leverage can significantly increase equity returns as the debt is paid off over time.\*\**

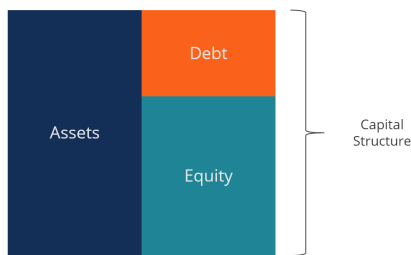
## capital structure dynamics

A company		Investment dynamics			
Capital Structure		Risk	Return	Ownership	Performance
Assets	Debt	Low risk	Low return interest Capital back	No ownership rights	Temporal
	Equity	High risk	High return Dividend Capital growth	Ownership rights – voting rights	Permanent

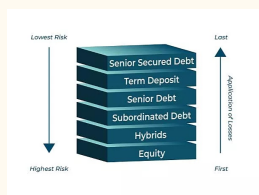
## low vs high leverage



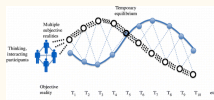
## capital structure



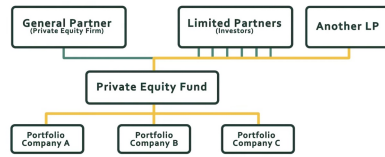
## cap structure decile



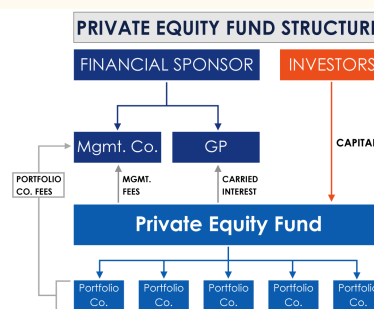
## theory of reflexivity



## fund structure



## PE fund structure

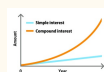


- 3.7% of all managers reach a 1BN USD in AUM.\*
- 93% of all small funds (below 100M) fail within the first 5 years.\*

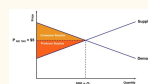
## exters pyramid



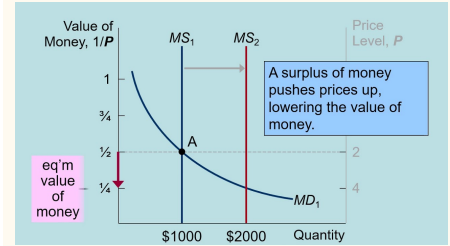
## simple v. compound interest



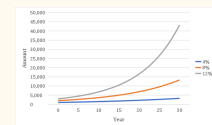
## deadweight loss



## value of money



## time value of money



## primary v. sceondary markets

**primary:** where securities are issued directly by companies to investors.

**secondary:** where those securities are traded among investors.

## systemic risk

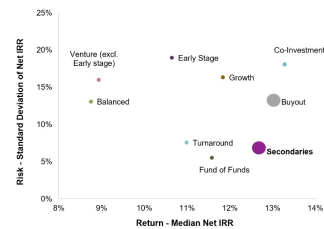
the possibility that an event at the company level could trigger severe instability or collapse in an entire industry or economy.

the risk of a breakdown of an entire system rather than simply the failure of individual parts. in finance, it captures the risk of a cascading failure in the financial sector, caused by interlinkages within the financial system, resulting in a severe economic downturn.\*

## risk profile (primaries vs. secondaries)

### Risk profile - Secondaries vs Primaries (1)

Risk/return profiles of PE strategies (vintages 2005 – 2012)



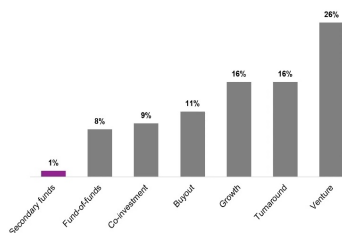
Source: Preqin as at June 2019

## risk profile (secondaries)

### Risk profile - Secondaries vs Primaries (2)

Secondary funds have an excellent risk/ return profile through the cycle

Proportion of funds with a net multiple <1.0x



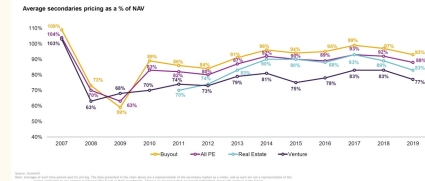
Source: Preqin. All private equity funds whose performance is tracked on Preqin (from 1987 until 2017). This includes funds that have not been fully realized

*secondary funds have excellent risk/return profile through the cycle. fewer secondary funds return a loss\**

## secondary pricing

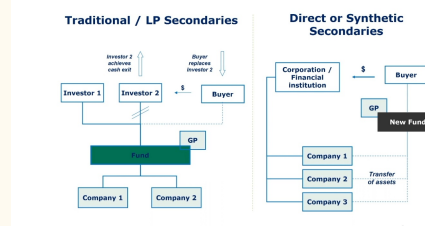
### Secondary pricing - What to expect looking at History

Discounts to NAV increase post-crisis as portfolios are marked to market



## types of secondary transactions

### Types of Secondary Transactions



## total addressable market (tam)

$$\text{PENETRATION RATE} = \frac{\text{NUMBER OF CUSTOMERS}}{\text{MARKET SIZE}} \times 100$$

$$\text{MARKET VALUE} = \text{NUMBER OF CUSTOMERS} \times \text{AVERAGE ANNUAL SPENDING}$$

Example: For a company with 1,000 customers in a market of 10,000 customers and average annual spending of \$500, its penetration rate is 10%, and its market value is \$500,000.

number of target users x purchases expected in a given period of time = market size or volume\*

## jevons paradox



an observation that increased efficiency in the use of a resource often leads to a higher overall consumption of that resource, rather than a reduction.\*

## the fiat problem

fiat doesn't allow you to save effectively. It forces market participants to invest in hopes you can place it in something that matches inflation or beat it such as: real estate, bonds, stocks etc. It is a game that forces participants to play.

## s&p 500

is an optimal system that attempts to match inflation and perpetually increase price value.

## securities

- 10-K: annual
- 10-Q: quarterly
- 8-K: current report for unscheduled material events or corporate changes.
- S-1: registration statement for new securities.
- form 4: filed before shareholder meetings detailing matters to be voted on.
- proxy statement (def 14a): changes in beneficial ownership of a company's securities by insiders.

## volcker rule

restricts banks from making certain kinds of speculative investments that do not benefit their customers, to prevent excessive risk-taking.

*the market does most good when it's most unfettered and it is our desire to control that often turns it against us.\**



### circuit breaker

regulatory measure that temporarily halts trading on an exchange to prevent panic-selling and extreme volatility.

### credit event

a negative occurrence, such as default, bankruptcy, or restructuring, that affects a debtor's ability to meet its financial obligations.

### monetary policy

**qe:** generally quantitative and targets specific amounts. (increases the reserves of banks, improving their liquidity and lending capacity)

**qqe:** expands the monetary base quantitatively and qualitatively, affecting both the amount and type of assets purchased.

**yield curve** central bank targets specific yields on government bonds to

**control:** control interest rates across different maturities.

### yield and yield curves.

**yield curve:** a line that plots yields (interest rates) of bonds having equal credit quality but differing maturity dates.

**short end of the yield curve:** refers to yields that are generally less than one year.

**long end of the yield curve:** usually refers to yields that are 10-yrs or greater.

**key rate duration:** a measure of the sensitivity of a security or the value of a portfolio to a 1% change in yield for a given maturity.

**duration:** a measure of the sensitivity of the price of a bond or other debt instrument to a change in interest rates.

**effective duration:** a calculation for bonds with embedded options that takes into account that expected cash flows fluctuate as interest rates change.

### yield and yield curves. (cont)

**inverted yield duration:** the unusual drop of yields on longer-term debt below yields on short-term debt of the same credit quality.

### global averages

**housing:** ~25-30%

**food:** ~15-20%

**transportation:** ~10-15%

**healthcare:** ~5-10%

**education:** ~2-5%

**recreation:** ~5-8%

**miscellaneous:** ~10-15%

metrics as of 2022/23\*

### point of sale (pos) loans

consumers of pos loans spend on average **40% more money and shop 50% more often.**

### purchase loans

a consumer loan taken to finance a purchase

### shape ratio

measures the performance of an investment compared to a risk-free asset, after adjusting for its risk, calculated as the average return earned in excess of the risk-free rate per unit of volatility or total risk.



### shape ratio (cont)

**calculate the average return:** find the average return of the investment over a specific period, typically the annual return.

**calculate the risk-free rate:** determine the return of a risk-free investment, such as a government bond or Treasury bill, over the same period. This represents the return an investor could achieve with no risk.

**calculate the standard deviation of Returns:** measure the volatility or fluctuation in the investment's returns over the same period. this indicates the investment's risk.

### shape ratio (cont)

**calculate the sharpe ratio:** subtract the risk-free rate from the average return of the investment, and then divide this difference by the standard deviation of returns.

*a higher sharpe ratio = indicates better risk-adjusted performance, meaning the investment provided more return for the amount of risk taken.\**

*lower sharpe ratio = suggests less desirable risk-adjusted performance.\**

### short-trade

look at leverage, how much debt they have relative to equity.

compare this to other companies in the same sector.

find out what they need in order to achieve a tangible equity/leverage ratio comparable to their peers

what will they need to raise?

how much assets will they need to sell?

will they make enough money to be able to pay their dividends?

### cover-trade

**buy to cover refers to a buy trade order that closes a trader's short position.**

*short positions are borrowed from a broker and a buy to cover allows the short positions to be "covered" and returned to the original lender.\**

### government surplus

occurs when a government's revenues exceed its expenditures over a specific period.

### mag7

typically refers to the "magnificent seven," a group of seven large-cap U.S. tech stocks that dominate market indices.

### mortgage-backed securities (mbs)

a bond secured by a bundle of home loans.

*mbs can offer regular income through interest and principal payments, portfolio diversification, and potentially higher yields than other fixed-income securities.\**

### asset-backed security (abs)

financial securities backed by income-generating assets such as credit card receivables, home equity loans, student loans, and auto loans.

*ABSs are created when a company sells its loans or other debts to an issuer, a financial institution that then packages them into a portfolio to sell to investors.\**

### stripped mbs

a stripped mortgage-backed security (mbs) segregates the principal and interest portions of the MBS into individual securities.

### mortgage-backed revenue bond

a debt security, usually issued by a municipality, that is used to fund low-rate mortgages.

### risk premia

the amount by which the return of a risky asset is expected to outperform the known return on a risk-free asset.

(measure of excess return that is required by an individual to compensate being subjected to an increased level of risk.)

### audit risk

risk that financial statements are materially incorrect, even though the audit opinion states that the financial reports are free of any material misstatements.

### inherent risk

the risk posed by an error or omission in a financial statement due to a factor other than a failure of internal control.

*most likely to occur when transactions are complex or in situations that require a high degree of judgment in regard to financial estimates.\**

*inherent risk is common in the financial services sector due to complex regulations and the use of difficult-to-assess financial instruments.\**

### control risk

risk that a company's internal controls will fail to detect or prevent a material misstatement in financial statements.

### detection risk

risk that an auditor's procedures will fail to detect a material misstatement in the financial statements.

### risk on/risk off

**risk-on** paradigm under which asset prices are dictated by changes in investors' risk tolerance.

**risk-on:** have high-risk appetite and commonly drive up some asset prices.

**risk-off** more risk averse and sell assets.

### stealth startup

a company's **temporary state of secretiveness**, usually **undertaken to avoid alerting competitors** to a pending product launch or another business initiative.

### market edge

**first call:** paying for first call (to get informed first)

**first call:** shelter goes up during July-Aug.

### market edge (cont)

**write-offs:** most taxes filed (April 15th, US)

**sell in may go away:** theory that the period from nov-april inclusive has significantly stronger stock market growth on average than the other months.

**4 things that move markets:** strong fundamentals, innovation, speculation and war

**gold and risk assets:** scan for unusual price-action that indicates war.

**TAM:** total addressable market.

**hedge:** the best way to hedge risk is to control everything.

*also spread risk out in multiple locations/jurisdictions. so It's harder to track assets and ownership.\**



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### market edge (cont)

**escape velocity** no matter how bad a company is. there is a certain price where people who sold it want to take profit, people who see it for the first time want to buy and people who bought already want to buy more. When all these three things happen at once it is market physics, you get escape velocity.

### bubble theory

bubbles have this aspect where they are extremely hard to define, they involve these incredible abstractions," Thiel said at Yale, drawing an implicit parallel to cryptocurrency markets.

#### indicators;

1) moderately big innovations are usually systematically underestimated for 5-10 years.

2) things that are exponential are extremely powerful but extremely unsustainable.

3) psychosocial mania - there is a psychosocial component. (the tulip bubble of 1637)

balloons in the air theory: too many balloons in the air to juggle.\*

### underground banking

unreported or illegal economic activities that **operate outside government regulation and taxation.** some estimates put the underground economy at 11% to 12% of U.S. gross domestic product (GDP), or roughly \$2.25 - \$2.5T. (2018.)

*shadow economy, the black market, or the informal economy.\**

### wall street / main street

**main street:** general individual investor (invest in small amounts of money, typically less sophisticated or rational when making investment decisions).

**wall street:** professional investment managers and security traders.

### wholesale (banking)

refers to banking services sold to large clients, such as corporations, other banks, and government agencies.

*opposite of consumer/retail banking.\**

### (handshake) banking

system, institution, or concept that relies on trust-based or informal agreements to manage financial transactions, rather than formal contracts or legal documentation.

*informal savings or lending groups where members pool money and rely on trust for repayments.\**

### datacenter infrastructure

### (banks) and banking

**banks hold treasuries** and that is their security of all the credit they generate.

the vast amount of the money (value) in the world is greater, from credit issued.

### the nascent and wager

it's not a bad thing in my opinion that older market players may be dismissive or think a new paradigm or technology is too small yet - that's continued opportunity for you (the early). It is the naïveté of youth and entrepreneurship, it's the opportunities that may seem small that can end up being really big tomorrow.

### sharpe ratio

whether the return getting from an investment is worth the risk they're taking.

a sharpe ratio greater than 1.0 is considered acceptable, higher indicates the investment provided more return for the amount of risk-taken.

2-2.99 = **very good** greater than 3 = **excellent**

*the top 10% own 93% of stocks.\**

### BTFP (bank term funding program)

when there is an increase in the use of **discount window lending** from the central bank, this signals a problem in the financial system.



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### BTFP (bank term funding program) (cont)

interbank rate (mainly, overnight rate): interest charged on short-term loans made between U.S. banks.

### ofac

administers and enforces the economic sanctions programs and requirements of the U.S.

### specially designated nationals (SDN)

assets of sanctioned persons or entities on the SDN list are frozen and it is prohibited to conduct business with them.

### short term interest rate trading (STIRT)

futures and options are derivatives based on short-term interest rates.

stir derivatives are most often based on three-month interest rate securities.

*the primary use of these is to hedge against interest rate exposure in short-term lending.\**

*buyers or calls or futures on STIR securities are betting interest rates will rise, buyers of puts are betting interest rates will fall.\**

### keys

it is better to observe what governments do rather than listen to what they say\*

central bank reserves percentage changes\*

good return ton return/risk ratio

trust but verify

### keys (cont)

maximisation of speed (*can this be done by the end of the day?*)

low rates can make anyone look good, with regular-high rates you have to really know what you're doing or you'll be exposed for being a hobo

constant size on various trades

- know your circle of competence

- as an investor it is not everything you touch, don't be a creep. as a man attempting to woo a woman he likes, you study her, get to know her, find out what moves her soul, what makes her tick. All of this is your study period, your homework

- don't buy stocks at a premium price, despite if its a great company, because if you do it essentially means you are betting on the company to continue to be great and that is often not a good investing bet as great can become merely very good, and that's a negative surprise.

- own or get owned type style of asset investing

- those who are credit dependent are controlled by some institution.

- it's not merely what market you're in, it's what street and what corner you're on.

- if you lose 75% you're practically out of business, it takes five and a half 25% up (gain) years to come back to zero.

### real vs. nominal value



### financial quarters

quarter	commences	final date
Q1	january 1	march 31
Q2	april 1	june 30
Q3	july 1	september 30
Q4	october 1	december 31

### debt

- the debt that is outstanding = someone owns it

### fed

**object-ives:** max. employment + stabilise markets

- monetary policy works with long and variable lags.

- USA = largest collateral hub in the world.

- prices and wages are assumed to be sticky, so monetary policy affects output and employment in the short to medium term.

*benjamin strong (Fed Implementation): benjamin strong thought he could use the banks power to set interest rates to influence what was happening in the economy. In other words, this was the start of modern monetary policy.\**

*after 08 due to the alarming debt problem, the fed panicked and lowered the rates to 0% for 15 years. Once you do that it is very hard to raise it.\**



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### window guidance

a credit policy allowing central banks to steer bank lending toward certain economic activities.

*in the post-war period, it was common for both developed and emerging economies to employ various forms of credit control and allocation.\**

### fund reporting

type of reporting	frequency	details
regulatory	quarterly/annually	Form PF, AIFMD, etc.
investor	monthly/quarterly/annually	Performance, NAV, strategy updates
internal	daily/weekly	Performance, risk metrics, compliance

*window dressing typically happens at the end of the month. Fund manager try to make their books look better.\**

### twap (twapping)

**order division:** the large order is divided into smaller portions.  
**execution schedule:** these portions are then executed at regular intervals over the set time period.

### twap (twapping) (cont)

**minimizing market impact:** By spreading the trades out, the strategy aims to reduce the market impact, avoiding significant price movements that a large order might cause.

**achieving average price:** The average price of the trades should be close to the market's average price over the time period, ensuring the trader gets a fair price without excessive costs.

### linear/logarithmic

there's more money now than in the past. Showing a linear graph would hide the early growth in the market, and would make it difficult to show normal growth in the future, because it would explode off the chart. (useful when analysing longer timeframes)

### trade on

- if uncorrelated trades, look at the drivers of these markets and their behaviours.

- if leveraged open interest needs to be flushed out = short

- stop orders should be placed 1% up or down from the last sale of the position you enter.

- swing trade: ~4 day trades where the asset is 3-5% off its MA.

- ema (15, 30, 65 and 2000), rsi and pivot points

country risk

beta

gamma

delta

### trade on (cont)

covariance

### carry trade

borrowing money in a currency with low interest rates and investing it in a currency with higher interest rates to profit from the interest rate differential.

**strategy that involves borrowing at a low interest rate and reinvesting in a currency or financial product with a higher rate of return.** But much more is involved, including a bias in the market toward higher interest rate currencies that can't be explained by traditional economic theory.

### short selling

seeing a companies weakness before anyone else does and shines light on it. **It is the greatest disinfectant on what otherwise is a dubious company or tale.**

*putting a sell on a company a lot of people don't like you and angers a lot of market participants. everyone likes you when you buy a stock and they make more money...\**

### delta neutral

describes a portfolio of related financial securities, in which the portfolio value remains unchanged when small changes occur in the value of the underlying security (having zero delta).

### de-fi (key metrics)

24/hr volume	open interest
funding rate	24/hr liquidation
stables volume	cme

when you buy an L1, you buy the L1's main de-fi coin/asset + meme coin\*

### physics of de-fi

a lot of liquidation and no bids (huge drop in asset price = negative diversion)

lending against crypto (via ETFs) is what = problem

leverage (is equity not) ≠

when there is a huge liquidation in other stuff, people will sell what they can = mini crash or brutal crash.

when you park money in providing liquidity (pools) you are essentially betting on volume and not the current or future price independently.

never fade the first-mover of any meta.

### bullshit metrics:

- tvl can be rented (can loop or rent capital from MM)
- active wallets (programmed robots)

### cme (chicago mercantile exchange)

provide insights into market sentiment, trading volumes, and price movements across various futures and options markets.

### free roll

a situation in gambling or investing where there is no risk of loss but a potential for gain.

### market corrections

everything happens for a reason. **market correction is a politically correct term in reality it is profit harvesting by institutions** (retail investors pay for this...).

### three main economic groups

consumers, producers and government.

### group economics

group economics is a collective of people who pool their finances to reach a common goal that couldn't have been accomplished otherwise.

### unit economics

unit economics > chasing top-line turnover (usually associated with high cost)

ltv > cac

unit economics = ltv / cac

### moat identifiable strata.

- planned obsolescence
- subscription based business models
- religion
- pyramid scheme Monopolies
- middleman delivery services

*tech, AI and anything that doesn't need a bank loves financial crises'. They have essentially infinite profit margins once they have created really good software.\**

### apy

**simple interest** = principal x interest rate x time

**compound interest** =  $a = p (1 + r/n)^{nt}$

apy takes into account the effect of compounding and is a more accurate measure of the true return on an investment.\*

### usa

US corporations expenditure has been outsourced and is not included in domestic GDP. The military provides protection for the US companies internationally.

raising rates = exportation of inflation. this hurts the US' trading partners.

### asia

**hong kong is the conduit for mainland Chinese capital** to go into a semi-free market in comparison to china.

### compound effects

if you can make 20% on your money annual. It will double every 4 years, the math works.

### g-sibs

~30 largest banks. typically determined by both size and complexity and cross border activity. these banks are elected by the fsb (financial stability board)

*13 from Europe, 10 from North America, ~7 from Asia\**



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### funds lag the s&p

Unsurprisingly, the majority do not beat the benchmarks, and even the ones who do don't keep their lead for long. Over its 23-year history, the SPIVA report shows that, on average, 64-80% of active large-cap fund managers fare worse than their benchmark (the S&P 500) in any given year.

### averages

**avg=** total amount spent / total amount of shares

*it no longer needs to get back 10 (where it started). by the time the asset is at 4 you've doubled your money.\**

### portfolio allocation

allocation to any asset class depends on your:

liquidity needs	time horizon
tax considerations	legal situation
unique circumstances	

### funding rate

<b>negative funding rate:</b>	shorts paying longs (bearish)
<b>positive funding rate:</b>	longs paying shorts (bullish)

### cpi

cpi (consumer price index) is a widely used measure for inflation, but it has its limitations. some alternative metrics offer different perspectives on economic changes:

### cpi (cont)

**pce (personal consumption expenditures):** index is preferred by the fed as it includes a broader range of goods and services than the cpi.

**core inflation:** excludes volatile elements like food and energy prices, offering a more stable measure.

**gdp deflator:** measures the change in prices of all new, domestically produced final goods and services in an economy.

**producer price index (ppi):** measures the average change over time in the selling prices received by domestic producers for their output.

**asset price index:** tracks changes in asset prices, such as real estate, stocks, or bonds.

### cpi (cont)

**real wage growth:** considers changes in wages relative to inflation, reflecting actual purchasing power.

### inflation

**no inflation:** prices stay the same, no purchasing power eroding, people earn the same each year, debt easier to pay.

**low inflation:** drive economic growth, keeps money moving around

can't do credit with a deflationary money.\*

in many cases inflation is transitory, as more currency can be created infinitum.\*\*

2% inflation will not be reached unless the underlying problem is address. hardcore QT will slow much advancements however it is the only way, all else is the art of keynesianism.\*\*\*

whoever is close to the central bank will steal the wealth of those paying the highest levels of interest with any given nation.\*\*\*\*

### causes of inflation

**demand -pull:** increase in demand for goods and services that outpaces supply.



### causes of inflation (cont)

**cost-push:** rising production costs, such as wages and raw materials, which push prices higher.

**growth in money supply:** excessive growth in the money supply can devalue currency, contributing to inflation.

### gdp

**real gdp:** inflation-adjusted measure that reflects the value of all goods and services produced.

**nominal gdp:** the value of all goods and services produced at current market prices.

**actual gdp:** measurement in real-time, meaning a specific interval, and shows what the state of the economy is at this very moment.

### two market types

**sellers market:** shortage of goods available for sale, resulting in pricing power for the seller.

**buyers market:** environment that favours buyers over sellers.

### two market types (cont)

**value =** were rational buyers and sellers meet.

*the logic of expected value (EV) can be used to overly justify anything, be wary the trap of delusion.\**

### basis

the expenses or total cost of an investment. (can be used to refer to the difference between the spot price of an asset and its corresponding derivative futures contract.)

### rube goldberg theory

a set of reactions that work in succession, triggering one event after another until the final event is triggered.

### chain letter theory

a message that encourages the recipient to forward it to multiple people, often with promises of luck or threats of bad consequences if not followed.

### net-net

value of a company's assets minus its total liabilities and any other relevant deductions, often used to assess its intrinsic value.

**current assets:** assets that are cash + assets that are converted into cash within 12 months (including accounts receivable and inventory)

### net-net (cont)

**strategy #1:** find companies with a market value below its net-net working capital (NNWC) —cash and short-term investments + 75% of accounts receivable + 50% of inventory - total liabilities—may be an effective strategy for small investors.

**strategy #2:** invest in companies whose stock prices are no more than 67% of their NCAV per share. (study showed an average return of 29.4% from 1970-1983 when holding stocks for one year using this, recommended holding ~30 stocks)

*strategy does not consider long-term assets or liabilities, which usually makes it unreliable for long-term investments.\**

### usa post 1945

The U.S. dollar was chosen as the world's reserve currency.

Countries started asking for physical gold from the U.S., prompting Nixon to halt it.

U.S. and Nixon stopped backing the U.S. dollar with gold in 1971.

Without gold backing, fiat currency is established, Some countries devalue their currency to enhance desirability as trading partners.

When the government needs money:



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### usa post 1945 (cont)

- 1) The Federal Reserve prints it.
- 2) The government sells bonds to raise money, promising to pay back with interest.
- 3) This forces the Federal Reserve to later print more money.

Since 1971, the U.S. has had a trade deficit, buying more from other countries than they buy from us. Printing more money leads to a decrease in the value of the dollar (inflation).

After the U.S. dollar stopped being backed by gold and inflation rose:

\* Wives had to get jobs too.

\* Inflation continued to rise, making it difficult for people to save.

\* People resorted to debt to get by.

### hayek v. keynes

**hayek:** it was debated if capitalism was even the right way to organize society, or if the new ideologies of communism and fascism, with their centrally planned systems, held the answer. He was convinced both were utterly wrong. Hayek said, "Not merely can human beings struggle to understand how to cope with uncertainty, but the world is just too complex for them to cope with understanding all of it. A market system conveys so much information that makes it feasible; central planning will fail under the weight of the impossibility of understanding the complexity of the economy." That's Hayek's most important insight, and if people had listened to that, they would never have been so worried about the threat from communism as they were, because central planning failed under the weight of its own inconsistency of central planning.

### hayek v. keynes (cont)

**keynes:** keynes flattered governments with the idea that they could tilt the course of human history their way, to which Hayek's rebuttal was that they shouldn't even try. We might uncover the laws of the universe; however, we were never going to master the complexities of human nature.

### 08 blow up

rock bottom fico

no income verification

adjustable rates

1-4% default rate, **5-8% default blow up-boom**

### national debt problem

there is a crazy budget deficit and presumably, you have to do one of three things: you have to raise taxes a lot, you have to cut spending a lot or you're just going to keep borrowing money.

### ways to solve

figure out ways to have smaller governments, figure out ways to increase the age on Social Security, means test Social Security so not everyone gets it. just figure out ways to gradually dial back a lot of these government benefits.

### largest expenditure of tax revenue

#1) social security #2) interest payments

*inflation is a tax on the poor.\**

### turtle trader

purchasing a stock or contract during a breakout and quickselling on a retracement or price fall.

*an experiment in the 1980s that demonstrated anyone could be trained to trade successfully using a specific trend-following system.\**

### headline risk

the risk of a negative impact on the value of a company, as reflected by its stock price and other publicly traded instruments associated with the company.

*it also refers to the damage to the core business due to a loss in reputation caused by a news piece.\**

### indicators

**leading:** metrics that predict future conditions.

*(help you identify and anticipate trends and what might happen to the economy, your industry, your competitors etc.)\**

**lagging:** a financial sign that becomes apparent only after a large shift has taken place.

*(confirms long-term trends, but they do not predict them.)\**



### term length (horizons)

short term:	less than two years
medium term:	2 - 10 years
long term:	10 years +

### market levels



### market (deal sizes)

upper middle market:	500MM - \$1B+
middle market:	10MM - \$500MM
commercial business(lower middle market):	10MM - \$50MM
small business:	< 10MM

*the upper middle market makes up a relatively small percentage (1%) of the overall market compared to the middle market. While they are nearly invisible, they usually have reputable brands, have high **barriers to entry**, command **premium valuation multiples**, and boast a large market share.\**

*around 55% of the companies in the upper middle market have been in business for 30 years+\**

*long-standing presence and high revenues account for a significant contribution to economy.\**

### fixed v. float exchange rate

**fixed exchange rate:** denotes a nominal exchange rate that is set firmly by the monetary authority with respect to a foreign currency or a basket of foreign currencies.

**floating exchange rate:** determined in foreign exchange markets depending on demand and supply, and it generally fluctuates constantly.

### reverse repo's & the fed (CB)

reverse repos go up -> reversal by Yellen via short-term bond issuance -> bull market.

BoE adds more stimulus (prints) = pound falls + gilts rise.

### Libor (li-bur) & SOFR

the global reference rate for unsecured short-term borrowing in the interbank market.

the secured overnight financing rate (SOFR) is a benchmark interest rate for dollar-denominated derivatives and loans that replaced the London Interbank Offered Rate (LIBOR).

*today, SOFR is the dominant U.S. dollar interest rate benchmark.\**

### runway

the term cash runway refers to the length of time that a company has before it exhausts its current sources of funding before it must seek additional capital. Early-stage startups estimate their cash runway by using financial forecasts or calculating the burn rate.

### untruths

treasury dumping =	riskier assets dump
efficient market hypothesis (EHM) states that share prices reflect all information =	rubbish
stocks trade at their fair market value on exchanges =	rubbish
consistent alpha generation is impossible =	false
possible to beat the market and that stocks can deviate from fair market values =	true

### counter to negative on hedge funds

they (a1) fund growth in companies by providing capital and (b1) assist a company's management to navigate hardship in their respective industry, geography, and market. the byproduct of (a1) and (b1) is (a2); jobs, and (b2); wealth. anyone who tells you that b2 is the sole function of a hedge fund is ignorant, glib, envious, and actively seeks to lie to you.



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### counter to negative on hedge funds (cont)

those liars essentially evangelise their position out of envy. their ethos boils down to the logic in the following question: if everyone pretends a lie is true, then why is the actual truth even relevant?

### austerity

austerity = less spending + more taxes

when a government loses the authority to print money, **austerity is the only option left.**

### cutback measures have three main goals:

avoid the accumulation of deficits that increase total debt

reduce high inflation

limit over investment and speculative bubbles

**you can only reduce debt to gap ratio by either:**

increasing gdp

lowering government debt via (increasing taxes or cut spending)

*adopt austerity measures when there are economic problems, especially when they cannot pay their debts.\**

### recession feedback loop



### single market

allows for people, goods, services and capital to move around a union as freely as they do within a single country – instead of being obstructed by national borders and barriers as they were in the past.

### straddle (options)

a straddle is an options strategy that involves the purchase of both a put and a call option.

*most effective with heavily volatile investments. the premiums paid on multiple options may easily outweigh any potential profit without strong price movement.\**

### cme gap

a price gap or space in the futures chart that occurs when futures markets close and then reopen at a different price, typically due to significant off-hours market news or events.

friday (close) - sunday (open)

### china

chinese companies have ~30% cash reserves (retained earnings or other liquid assets) and low PE ratio with double digit growth. cheap cheap cheap

### high interest (HI) rates

high interest rates usually **lead to a stronger exchange rate** because they **attract foreign capital seeking better returns**. this increased demand for the currency boosts its value on the global market.

### congestion pricing

increasing prices during certain periods of time or at the places where congestion occurs; or introducing a new usage tax or charge when peak demand exceeds available supply in the case of a tax-funded public good provided free at the point of usage.

### zombie corporations

companies that generate just enough cash to continue operating and service their debt but not to invest in growth.

### AI

vertical AI models.

power to run these models (nuclear, the cheapest producer of power within any given jurisdiction will vacuum the most money).

### private credit (pc)

private credit tends to be cyclical and dries up when the spread thins out, everyone no longer wants to chase the same deals.

### who:

non-bank lending typically to middle market companies that are non-investment grade, which typically range in size from US\$25m to US\$75m in EBITDA.

### non-investment grade:

non-investment grade bond, also called a speculative bond, a high yield bond, an unsecured debenture, or a junk bond, is a bond that is **considered a low quality investment because the issuer may default.**

*pc can serve as a diversifier in a private markets portfolio as debt is less correlated with equity markets.\**



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### geometric nature of return

**geometric return:** compounding effect, where your returns grow on the returns that have already been earned. (snowballing down a hill, picking up more snow as it goes.)

**geometric mean:** the nth root of the product of n numbers, used to find the central tendency in multiplicative datasets.

### determining the culprit

who is interested + who is capable

cui prodest scelus is fecit (*for whom the crime advances, he has done it*)

follow the trail, cui bono?

### counterparty risk

the potential for one party in a financial transaction to default or fail to meet its obligations, leading to financial losses for the other party.

### capital ratios

category	description	range
<b>poor</b>	capital ratio is below regulatory minimums, indicating significant risk of insolvency and inability to absorb losses. Bank may face regulatory scrutiny and potential intervention.	less than regulatory minimum

### capital ratios (cont)

**below average** capital ratio meets regulatory minimums but is at the lower end of the spectrum. Bank has limited buffer against losses and may struggle during economic downturns.

**average** capital ratio meets regulatory requirements but does not provide a substantial cushion against risks. Bank's stability may be adequate but lacks robustness for unforeseen challenges.

**above average** capital ratio exceeds regulatory minimums, providing a reasonable buffer against risks. Bank is better positioned to absorb losses and maintain stability in various economic conditions.

### capital ratios (cont)

**good** capital ratio is comfortably above regulatory requirements, indicating strong financial health and resilience. Bank can withstand adverse events and has capacity for growth and innovation.

**excellent** capital ratio significantly exceeds regulatory minimums, demonstrating exceptional financial strength and risk management. Bank is well-prepared for unexpected shocks and has ample capacity for expansion and investment.

*the percentage of banks capital to its risk weighted assets. It measures the funds it has in reserve against the riskier assets it holds that could be vulnerable in event of a crisis.\**

*major depository banks around the world have also used financial innovations such as structured investment vehicles to circumvent capital ratio regulations.\**



### negative ev

- losses
- poor ROI
- high risks (*high levels of risk that are not adequately compensated by potential rewards. This could include factors such as market volatility, regulatory uncertainties, or operational challenges.*)
- wasted resources
- opportunity cost (*pursuing opportunities with negative EV may prevent a business from allocating resources to more promising ventures that could generate higher returns.*)

### tail risk

the risk of extreme and rare financial events that lead to significant losses, occurring more frequently than predicted by standard models.

*(financial crises, market crashes, natural disasters, pandemics, political upheaval, terrorist attacks, sovereign debt crises.)*

### capitalism/socialism

**capitalist society** = voluntary cooperation, voluntary exchange.

**socialist society** = force, no choice, all is decided for you.

### positive ev

- built-in incentive
- narrative

### positive ev (cont)

profitability?, ROI?, risk management (are there strategies in place to help mitigate potential losses), opportunity assessment (is it the one with the highest yield?), decision making (focus on actions that are expected to add value to the business)

### the stripper index

sex industry workers can and do indicate soon to be realised economic downturn.

### the post Series-A problem

If you are dependent on external funding Post Series-A you run the risk of being subject to slow enshittification with all subsequent rounds raised. The faster to revenue, the better.

### IRR

If you make 10% in a month is better than 10% in a year due to IRR.

### seigniorage

- the difference between the face value of money—both paper bills and coins—and what it costs to produce it.

- may be counted as positive revenue for a government when the money it creates is worth more than it costs to produce.

- if, for example, it costs the U.S. government 5 cents to produce \$1, the seigniorage is 95 cents or the difference between the two amounts.

### seigniorage (cont)

- the banks get to benefit from seigniorage (profits from creating money) and the government benefits from cash, that's why it still exist. If you look at a governments treasury balance sheet there's a entry labelled seigniorage income (profits from selling their cash to a bank) and the bank pays for it with digital currency and puts it in their ATM.

- in some situations, **the production of currency can result in a loss instead of a gain** for the government creating the currency. this loss is more commonly experienced in the production of coins because the metal used to produce coins has inherent value.

*this value, often called the melt value, may be higher than the denomination it originally represented or, when combined with production costs, may result in a loss. For example, the U.S. penny, with a face value of one cent, cost 2.10 cents to produce in 2021—the sixteenth year in a row that production costs exceeded the penny's face value.\**

### tender offer (buyback)

an offer to purchase some or all shareh-olders' shares in a corporation.

### mark to market

accounting practice that values assets and liabilities at their current market prices.



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### capital cost

total expenses incurred to acquire and maintain a capital asset, including purchase price, installation, and maintenance.

### bridge finance

short-term loan used to cover immediate expenses, until permanent financing is secured.

### fire sale

rapid sale of goods or assets at heavily discounted prices, often due to financial distress.

### global liquidity cycles

fluctuations in the availability of global capital and credit, influenced by monetary policies and economic conditions.

### money market fund (mmf)

a type of mutual fund that invests in short term, high-quality, low-risk debt instruments, offering liquidity and stability.

net asset value (NAV) of a money market fund usually stays the same at \$1 per share. this is because regulations in the market allow the fund to calculate the value of its investments based on their original cost rather than their current market value. so even if the value of the investments in the fund fluctuates, the NAV remains stable at \$1 per share.\*

### commercial paper

short-term, unsecured promissory note issued by corporations to finance their immediate operational needs.

### promissory note

written promise to pay a specified sum of money to a specified person at a specified future date.

### anchor limited partner

a primary investor in a fund, often providing significant capital and credibility, attracting additional investors.

### vc dilemma

as VC firm funds that grow beyond AUM \$1B they have a real challenge to create returns as there is simply not sufficient "exitable" unicorns to support the 25%+ IRR promised to LP investors. So the possible reactions are to go deep and broad, reducing the previous rigour around due diligence, or move into more traditional PE investments.

in many cases they tend to use both\*

### self-dealing

when someone in a fiduciary position acts in their own interest rather than in the best interest of those they represent.

### long-tail liability

an insurance claim that is not settled until a long time after a policy has expired.

### 1x liquidation preference

gets paid back their full investment amount before any shareholders lower in the priority stack receive their payouts

*a multiple greater than 1x, such as a 2x or 3x liquidation preference, is less common.\**

### long tail

a business strategy that allows companies to realise significant profits by selling low volumes of hard-to-find items to many customers, instead of only selling large volumes of a reduced number of popular items.

### insurance loss control

a set of risk management practices designed to reduce the likelihood of a claim being made against an insurance policy.

### finite risk insurance

a transaction in which the insured pays a premium that constitutes a pool of funds for the insurer to use to cover any losses. ( a company might enter into a finite risk insurance agreement to cover potential losses from product liability claims up to \$1 million over the course of a year. If the losses exceed \$1 million, the company would be responsible for covering the additional costs.)



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### valuation

**pre-money:** value of company before any external funding is injected into it. (value of the company without taking into account the new investment).

**post-money:** value of a company after external funding has been added to its balance sheet. It is the total value of the company after the new investment has been made.

*example, if a company has a pre-money valuation of \$10 million and raises \$5 million in a funding round, its post-money valuation would be \$15 million (\$10 million pre-money + \$5 million investment).\**

### use of secondaries

start-ups are using funding markets as ATMs, this is not sustainable.

*before capital used to be raised off DCF and now startups are raising on future funding.\**

### top 5 factors

timing:	42%
team/execution:	32%
idea (truth) outlier:	28%
business model:	24%
funding:	14%

### futures

**based on forwards:** forwards are commonly used by producers and manufacturers in the the real world to fix the price in which they take or make delivery of an asset.

these principles are taken a step further and converted into tradable futures contracts. Advantages being one doesn't have to move any assets around in order to speculate on the price of them changing.

as many people can participate in the future markets the volume and value of contracts traded on an assets i.e copper can far exceed the amount of copper that is physically exists on the planet.

### futures (cont)

if you do not offset or rolled your position prior to contract expiration, the contract will expire and it will go to settlement. At this point, a trader with a short position will be obligated to deliver the underlying asset under the terms of the original contract.

### perpetuals (perps)

**fluid:** have no settlement date.

**contingent on minimum requirements:** initial and maintenance margin, liquidation and insurance fund.

**collateral/initial margin:** amount committed when opening a leveraged position.

**maintenance margin:** dynamic value that changes according to the assets market price and to the total balance of the traders margin account (**minimum value required to keep all positions open**)



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### general theory of employment, interest and money

**aggregate demand:** emphasised the importance of total spending in an economy (as the primary driver of economic activity)

**involuntary unemployment:** unemployment can persist even when people are willing to work due to insufficient demand for goods and services.

**role of government:** government intervention to stimulate demand during economic downturns, using fiscal and monetary policies.

**liquidity preference:** concept of liquidity preference, stating that people prefer holding cash over other assets due to uncertainty.

**interest rates:** central banks could influence interest rates to encourage or discourage investment and spending.

### general theory of employment, interest and money (cont)

**animal spirits:** psychological factors that influence economic decision-making, which can lead to market fluctuations.

**paradox of thrift:** saving too much during a recession can exacerbate economic problems by reducing demand, leading to a self-reinforcing cycle of decline.

**long-term vs. short-term decisions:** short-term factors (economic decisions) often dominate economic behaviour.

### basel framework

an international regulatory framework for managing credit risk and market risk.

*their key function is to ensure that banks hold enough cash reserves to meet their financial obligations and survive in financial and economic distress.\**

### essence of monies creation

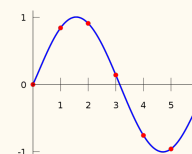
- if you haven't got the ability to produce what you need. You have to go and find money in order to exchange it for what you need - this is the trap.

### essence of monies creation (cont)

- **money has to be backed.** productivity or gold is recent instruments of what has been used to achieve this.

- a change is zero(0) because there is no disappearance. It is merely a transformation, the money did not go anywhere - it simply changed hands.

### interpolation



a mathematical technique to estimate the values of unknown data points that fall in between existing, known data points.

this process helps fill in the blanks.

technical traders use interpolation to understand how prices have behaved in the past, even when they do not have full information.

### disorder brothers

uncertainty	entropy
variability	time
imperfect / incomplete knowledge	the unknown
chance	randomness
chaos	turmoil
volatility	stressor
disorder	error





### net interest margin (nin)

the difference between a financial firm's interest income and interest expenses, expressed as a percentage of income-generating assets.

**calc:** (net interest income a lender earns from credit products like loans and mortgages) - (interest it pays to holders of savings accounts and certificates of deposit (CDs)).

### publishing rights

**mechanical royalties:** payments to songwriters and publishers for the reproduction of their music, typically when their songs are sold, streamed, or used in physical or digital formats.

**performance royalties:** payments made to songwriters, composers, and publishers when their music is publicly performed, such as on the radio, TV, or live venues.

**synchronization royalties:** payments made to songwriters and publishers when their music is licensed for use in visual media, such as movies, TV shows, or commercials.

### sporting revenue

**market and merchandise:** brand sponsorships and event physical goods.

**broadcasting rights:** exclusive right to broadcast the top sporting events live.

**live gate:** the sum of money taken at a sporting venue for the sale of tickets.

**ancillary rights:** all rights that are related to exploiting property in ways that are different from their original format.

### banks (exist to)

broker	dealer
bank	credit

### wells notice

notification from the SEC indicating that it may take enforcement action against a person or firm, giving them a chance to respond before the action is taken.

### animal spirits

confidence	corruption
money illusion	fairness

### animal spirits (cont)

stories

*the five cognitive and psychological types of animal spirits identified by Akerlof and Shiller include following. These phenomena help economists consider answers to tricky questions such as "why do economies fall into depression" and why are financial prices and corporate investments so volatile?"*

### confiscation

there is a problem with trying to finance things by confiscating the wealth of the wealthy.

**all you can confiscate is the material wealth, you cannot confiscate human capital without enslavement.**

### fragility & volatility

volatility cleans up a system periodically.

the illusion of stability attempts to hide/conceal risk within a system. (hidden risk, this is usually hidden in the tails).

the longer we've been doing something that we don't understand, the longer we would do it.

with time what is fragile will break. Whatever is not perishable, namely an idea, will have life expectancy that increases with time. There is an intelligence of time that is at work, a book that has been read for 3,000 years will still be read approximately 3,000 years to come.

companies that are currently lowering sales by percentages will be a lot more hurt under economic pressure.



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### fragility & volatility (cont)

debt brings fragility, bigger size causes fragility.

### asset volatility

**80 vol. assets:** a higher volatility indicates that the price of the asset can fluctuate widely in a short period, indicating higher risk.

*80 vol asset would imply that the price of the asset is expected to exhibit significant fluctuations\**

### stonks

**NYSE:** older (1792)

**Nasdaq:** younger brother (1971)

**S&P500:** tracks 500 of the largest companies on both exchanges.

**index:** amalgamates a whole bunch of share prices and transforms it into one clean number.

**DOW (excl-ive):** only follows the 30 companies it considers the most important.

### annual general meeting (agm)

a yearly gathering of a company's interested shareholders.

### market v. limit order

**market:** "buy some juice!" / juice costs 5¥

**limit:** "buy some juice!, if it's less than 4¥" / juice costs 5¥

### rule of 40?



the principle that a software company's combined growth rate and profit margin should exceed 40%

### gold is not the hedge you think it is

gold is not a hedge for inflation, it is only a good hedge if one is under the impression that the FED/central bank is not going to do anything to address the problem near short term.

### ratings (big three)

**s&p global:** known for rating both corporate and government debt.

**moodys:** known for its detailed analysis of sovereign debt.

**fitch:** often considered a tie-breaker when S&P and moody's ratings differ.

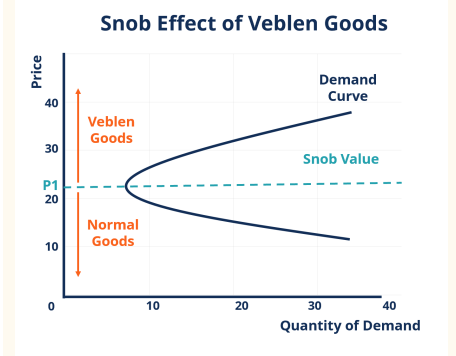
evaluating creditworthiness of companies and governments, assessing the risk of bonds and other debt instruments, influencing borrowing costs for rated entities

### public-private partnership (ppp)

collaboration between a government agency and a private-sector company that can be used to finance, build, and operate projects, such as public transportation networks, parks, and convention centers.

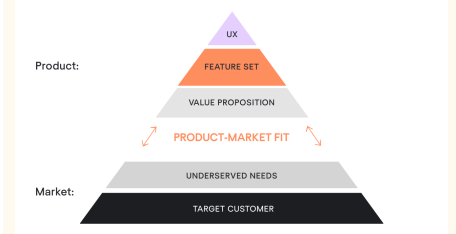
(private sector providing expertise, capital, and management) + (government oversees and regulates the project)

### veblen good



a good for which demand increases as the price increases.\*

### product-market fit



*being in a good market with a product that can satisfy that market,\**



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