

Economy Notes

Lessons Learned



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1 General

The simplest definition of economics is the effort to maximize the availability of limited resources (and just about every resource is limited) **to meet as many human demands as possible.** Tools, capital, and innovation are the keys to this equation. Keeping this in mind, it is easy to see what makes economies grow: finding better ways of producing more stuff that humans want. This doesn't change ... no matter how big an economy eventually gets. (Peter Schiff)

- Scarce resources are: capital, enterprise, land, labor. This forces us to make choices: a) what to produce? b) how to produce it? c) from whom to produce for?
- Society can do only 5 things with the savings:
 1. Save what was saved.
 2. Consume what was saved.
 3. Lend out what was saved.
 4. Invest what was saved.
 5. Try a combination of the other 4 options.

Savings can mean the difference between the life and death of society.

- ***“Economy doesn't grow because people consume more. People consume more because economy grows.”*** from the book *How an Economy Grows and Why it Crashes* (Peter Schiff)
- *Real Economy* depends on *Financial Economy* which depends on *Interest rates* (TODO).
- Gold is money, fiat currency is credit. Gold is global currency, it doesn't require any government to tell it's money. It's been like this for thousands of years. Gold price rises if people lose enough confidence in currency and financial system.
- What determine the movements of one currency versus another? Future growth rates and inflation rates.
- 5 world currencies (2021): pound, euro (20% of world reserves), yen, dollar (~65 % of reserve assets all around the world), Chinese currency (IMF board decides this).
- Money - It is a token of a trust.

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- See history of money [here](#).
 - In addition to the primary function as a medium of exchange, money has 2 other purposes:
 - * unit of account, meaning it is a yardstick against which things can be priced, helping us to judge the value of something
 - * store of value meaning it will not lose its worth over time - although it is debatable whether modern paper currencies fulfill this function
 - Technically, any kind of tradable unit can be treated as money - shells, jewellery, cigarettes, drugs, ...
 - *Ayn Rand* - "So you think that money is the root of all evil. Have you ever asked what is the root of all money?"
 - *Benjamin Franklin* - "Money never made a man happy yet, nor will it. The more a man has, the more he wants. Instead of filling a vacuum, it makes one."
 - Types of money:
 - * Commodity money - this has intrinsic value, even though it is not actually a form of money. Gold is an example, but also rice, copper, cigarettes, drugs, ...
 - * Fiat money - without intrinsic value. From the Latin "let it be", it simply means that a government has decreed that coins and notes of negligible intrinsic value are legally worth a certain amount. This is the system in place in modern advanced economies. Dollar bills are issued by the Federal Reserve and the US Treasury. In the UK, there is the Bank of England. Originally, paper money was convertible into commodity money, so that technically, citizens could demand a certain amount of gold in exchange for their dollar bills. However, since 15 August 1971, following an order from President Nixon, convertibility stopped and the dollar became a pure fiat currency. They are reliant for their stability on people's faith in the country's legal system and in the government's economic credibility.
 - * Central banks measure money in various ways. The most popular is what the Federal Reserve calls M1 - the amount of currency in circulation outside banks and the amount of funds people have left in their bank accounts. So it represents how much cash people have readily available.
 - M2 - less liquid assets, such as savings accounts that require notice for withdrawals
 - M3 - financial instruments such as long-term savings and money-market funds.
- For some reason, in the UK, the Bank of England's equivalent of M3 is called M4.

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- The marginal revolution - Rational people think at the margin 19th century - Carl Menger and the Austrian School - the value of a given thing is subjective. It depends entirely of how people value that thing at a given moment. Previously, people assumed something had an inherent value. After the marginal revolution, it became clear that things have value insofar as people want them.
- Zero unemployment is impossible.
 - This is, in practice, partly because people need time to seek out the right job even when it's available and partly because, as an economy develops and technology advances, some workers will inevitably lack the skills necessary to take on particular jobs. Also, the existence of unemployment benefit can encourage some to remain unemployed rather than work.
 - If unemployment falls below a certain level, it will push wages, and hence inflation, higher as companies become prepared to pay more to get hold of staff. The opposite is also true - high unemployment tends to push down inflation. Phillips Curve graphically illustrates this negative correlation - if you want to keep unemployment at say 4%, then you will have to settle for inflation of 6%. If you want to restrict inflation to 2%, you will have to accept an unemployment level of 7%.

1.1 Key Concepts

- *The Invisible Hand*
 - Self-interest is good for society.
 - Invisible hand is a shorthand for the law of supply and demand and explains how the pull and push of these 2 factors serve to benefit society as a whole.
 - The combined force of everyone in free market pursuing his or her own individual interests is to the benefit of society as a whole, enriching everyone.
 - **Government** can use three different levers **to control the macroeconomics**: fiscal policy, monetary policy, and foreign exchange policy.
 - *Fiscal policy*. The decisions a government takes about what to spend its money on, how to raise taxes, and how much to borrow. Keynesians - those who believe in Fiscal policy.
 - *Monetary policy*. The decisions a government or central bank (usually the latter) make about regulating the amount and price of money flowing around the economy (changing money supply, interest rates, etc).
 - * *Interest Rates* (Policy/Lending Rates - overnight borrowing rate for financial institutions from Central Bank).
 - * *Money Supply* (OMO - Open Market Operations - governments buying or selling securities in the markets, such as quantitative easing).
 - * *Exchange Rate* (Reserve Requirements - funds that financial institutions are required to hold at the Central Bank as a percentage of their total deposit liabilities).
 - *Kingston Currency System*
 - Gold is not an underlying asset.
 - State cannot borrow money from its own central bank.
 - Concept of *Money Supply*:
 - * M0 - money in cash in physical form - notes and coins
 - * M1 - M0 + deposits in bank accounts
 - * M2 - M1 + term deposits up to two years (M2 is also called *broad money*)
 - * M3 - M2 + shares, funds, bonds, ...
 - How a new fiat money is being created in Kingston system?
 1. Central banks will manage the money generation.
 2. Commercial banks will generate the money by so called “multiplication”. This is fractional reserve banking.
- So new money = new debt.

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- *Supply and Demand*

- The way these 2 forces interact determines the prices of goods in the shops, profits a company makes, and how one family becomes rich while another remains poor.
- Demand represents the amount of goods or services people are willing to buy from a vendor at a particular price. The higher the price, the less people will want to buy, up to the point then they simply refuse to buy at all. Supply indicates the amount of goods or services a seller will part with for a certain price. The lower the price, the fewer goods the vendor will want to sell, since making them costs money and time.
- Prices are the signal that tell us whether the supply of or demand for a particular product is rising or falling.
- Equilibrium price - the optimal price, at which the supply of goods matches demand. Something is perfectly priced when supply equals demand.

- *The Malthusian trap*

- Man needs food in order to survive, and man is multiplying at a rapid rate.
- In Malthus eyes, the human race was heading for an inevitable crunch. Unless it voluntarily cut its birth rate, the human population would suffer one of three things - famine, disease, or war.
- But he was wrong, because of new technologies that solve these problems, and partly thanks to the laws of supply and demand, which encouraged producers to devise better, more efficient means of generating food. Also, human population does not always grow exponentially.

- *Division of labor*

- Concentrate on your specialties. We can produce far more, far better, by dividing up the work and specializing in what each of us is good at.
- It is what helped drive the first Industrial Revolution, enabling countries around the world to improve their productivity and wealth dramatically.
- But there are problems as well - company can fire lot of redundant people, or become dependent on one person or small group of people. Also, for an individual, it can be morale-sapping to be forced to specialize only in one specific trade or expertise (having one repetitive job - degrading minds of such person and alienating him from others).

- *Comparative Advantage*

- specialization + free trade = win-win
- It is most often applied to international economics, it is just as important on a smaller scale.

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- David Ricardo's theory. He claimed (about free trade), that by trading freely with other countries - even those that, on paper, are more efficient at producing goods and services - one can become more prosperous than by closing one's borders.
- However, some people such as Hillary Clinton and Paul Samuelson have warned, that these ideas are no longer strictly applicable to today's rather more sophisticated economic world. Before, there were restrictions on people moving their capital overseas, but now it's very easy to transfer worth of assets electronically from one side of the world to another.
- *Capitalism*
 - It has attracted perhaps more criticism than any other model of economics, such as - it generates inequality, promotes unemployment and instability, and has tendency towards boom and bust. Also, that it often has a proclivity towards monopolies - where one company takes exclusive control of an industry, oligopolies (where a group of companies share an effective monopoly), and oligarchies (where economies are run by small groups of powerful people). The problem is also that monopolies are able to charge their customers more than they would if there was competition.
 - Since it is people rather than governments who dominate the economy, capitalism usually goes hand in hand with the free market.
 - It is the system where capital (the companies, equipment, and structures used for producing goods and services) is owned not by the state but by private individuals. It is probably the least worst way to run an economy.
 - Stock markets sit at the heart of capitalism.
 - Globalization is the adrenaline of capitalism.
 - Booms and busts seem to be an inevitable component of market capitalism. See The Black-Scholes equation.
 - It evolved as the feudal system in medieval Europe - in which agricultural laborers had to work for the profit of the landed gentry. This gave way in the late 16th century to mercantilism. This was a recognizable precursor to capitalism, fueled by trade between different nations and by the discovery by Europeans of lucrative resources in the Americas. The operators of these trade routes became extremely wealthy, and for the first time in history ordinary people started making money in their own right, rather than relying on the patronage of a rich monarch or aristocrat. In the 19th century merchants were replaced as the leading wealth generators by industrialists and factory owners, in what many regard as a golden age for free markets. However, the tendency of some industries to generate monopolies, and the economic and social trauma of the Great Depression in the 1930s - followed by the Second World War - spurred governments to intervene in their economies

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more, nationalizing certain select sectors and creating a welfare state for their citizens.

- Capitalism is inherently democratic. Invisible hand, encouraging entrepreneurs to work hard and improve themselves, prioritizing individuals' self-interest over the state's decisions about what might be best for people, and allowing shareholders control over companies, it enshrines individual democratic and voting rights in society in a way other top-down systems simply can't do. It's no coincidence that non-capitalist societies have tended almost exclusively to be unelected dictatorships.
 - When the Berlin Wall and the Soviet Union fell, it became clear to all that capitalism had left the Western economies in a far healthier position than those previously run under communism. Economies therefore concluded that despite its many flaws, it remains the best means we have yet discovered of running a modern, thriving economy.
 - TODO Late stage capitalism
- *Keynesian economics*
 - Governments should spend to prevent deep recessions.
 - He argued that it was the responsibility of government to kick-start the economy (in times of recession) by borrowing cash and spending it, hiring public-sector staff and pouring cash into public infrastructure projects. Interest-rate cuts can go some way towards boosting an economy, but they are not the whole answer. According to him, the extra cash spent by government would filter through the economy.
 - The 6 principal ideas, according to former presidential adviser Alan Blinder:
 1. Keynesians believe that an economy's performance is influenced by both public and private decisions and sometimes behaves erratically.
 2. The short term matters, sometimes even more than the long term. Short-term rises in unemployment may cause even more damage in the long run since they can leave a permanent dent in a country's economy.
 3. Prices and wages respond slowly to changes in supply and demand, which in turn means unemployment is often higher or lower than it ought to be given the economy's strength.
 4. Unemployment is often too high and volatile, while recessions and expressions are economic maladies - not, as the invisible hand would have it, efficient market responses to unattractive opportunities.
 5. The natural boom and bust of the economy is a problem that governments should actively attempt to stabilize.
 6. Keynesian economics tend to be more concerned about combating unemployment than conquering inflation.

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- There is also some criticism. Such as - on what basis should we assume that governments know best how to run an economy? Also, Keynesian policies came under fire in 1970s from monetarists. One of the main arguments was that governments cannot “fine-tune” an economy by regularly adjusting fiscal and monetary policy to keep employment high. There is simply too long a time lag between recognizing the need for such a policy (tax cuts, say) and the policy actually having effect by the time that tax cuts are actually having an effect, the problem they were designed to solve may have worsened - or dissipated.
 - Keynesians - at the core of their view was the idea that governments could smooth out the volatility of free markets by expanding the supply of money and running large budget deficits when times were tough. The Austrians argued that recessions are necessary to compensate for unwise decisions made during the booms that always precede the busts. Austrians believe that the booms are created in the first place by the false signals sent to business when governments “stimulate” economies with low interest rates. So whereas the Keynesians look to mitigate the busts, Austrians look to prevent artificial booms.
 - Because it offers the hope of pain-free solutions, Keynesianism was an instant hit with politicians. By promising to increase employment and boost growth without raising taxes or cutting government services, the policies advocated by Keynes were the economic equivalent of miracle weight-loss programs that require no dieting or exercise.
 - Some economists say that Keynesian policies were responsible for ending the Great Depression. Many have argued that without stimuli provided by government we would never have recovered from the economic abyss.
- *Monetarism*
 - Control the growth of money.
 - Whereas Keynes paid more attention to unemployment than inflation, and warned that the economy could be improved by a certain amount of state interference, Friedman argued people should be left to their own devices with the government’s main role to monitor and control the amount of money flowing around the economy. In short, by pumping extra money into the system, as Keynesians suggested, governments would drive up inflation, risking major pain for the economy. Friedman believed that if central banks were charged with maintaining control of prices (using interest rates with some strict rules), most other aspects of the economy - unemployment, economic growth, productivity - would more or less take care of themselves.
 - “Always fight inflation”
 - In a downturn, Friedman said, central banks should prevent deflation by pumping more money into the system.

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- Problems - inflation may be a monetary phenomenon, but the amount of money in circulation often rises and falls for reasons that have nothing to do with inflation.
- *Communism*
 - An egalitarian, entirely state-run society. It can be summed up in one sentence
 - Abolish all private property.
 - Karl Marx states that a commodity is worth the amount of time it takes for someone to make it. He also predicted, that capitalism was inherently chaotic, it would be prone to ever-larger booms and busts over time, causing a series of major economic slumps and large rises in unemployment. Plus, daily drudgery of doing the same repetitive job would eventually become too much for the proletariat to bear, and revolution would ensue.
 - In communist society, property and the means of production (factories, tools, raw materials, ...) would be owned not by private individuals or companies, but by everyone. Initially the state would own and control all companies and institutions, running them from the top-down and ensuring companies did not oppress their workers.
 - Marx was wrong about the eventual evolution of capitalism. It has not descended into a monopolistic system (at least not yet) thanks in part to government regulation and in part to the invisible hand. The world did not become overrun with unemployed, and although booms and busts have continued, government control is as much to blame for these capitalist forces.
 - While the forces of supply and demand created dynamic economies that generated wealth at a rapid rate, the staid, centrally controlled systems in the Soviet Union and China stifled innovation - no competition between companies (the fundamental driving force of free markets), the economy simply trundled along, pushed forward by bureaucrats. But the Soviets truly excelled at military and astronautic innovation.
- *Individualism*
 - Individual human choices are paramount.
 - The Austrian School emphasizes instead of aggregate measures such as GDP or inflation, that individual decision-making should be at the forefront. After all, only individuals can act; countries, companies, and institutions do not have minds of their own - they are a collective entity, but one that comprises many different individuals.
 - According to Carl Menger, father of the Austrian School, he maintained that economics is still a social science, aiming to classify people's actions into a logical framework and asset of patterns.

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- Friedrich Hayek - *"A society that does not recognize that each individual has values of his own which he is entitled to follow can have no respect for the dignity of the individual and cannot really know freedom."*
- *Supply-side economics*
 - Higher taxes mean lower growth.
 - It is among the most controversial of economic theories. The debate over it encapsulates the divide between those who believe in greater government distribution of wealth and those who believe, above all in individual liberty and free market.
 - The government raises taxes but rather than bringing in more money to its accounts this actually reduces its revenues. Conversely, cutting taxes brings in more cash. This is the main tenet of supply-side economics.
 - Arthur Laffer argued, that the more people have to pay in taxes, the greater will be people's incentive to avoid paying them or to work less hard.
 - The Laffer Curve - Laffer argued, that if a government levied no taxes it would receive no revenue; neither would any money pour into its coffers if it imposed 100% taxes (because no one would have any incentive to work). He then sketched out a bell-shaped curve which showed that there was a point somewhere between 0 and 100% where a government could get maximum potential revenues. The argument - lower taxes could actually increase government revenues. When tax rates are low, it encourages people to work longer hours, although the respective share the government takes of every extra dollar earned is less. The Laffer Curve illustrates that the government must strike a balance between the two.
- *Creative destruction*
 - Companies must adapt or die.
 - Joseph Schumpeter - he argued that recessions should not be avoided. Most economists, as well as John Maynard Keynes argued that recessions and depressions cause such significant collateral damage, in terms of unemployment and slumping confidence, that they should be countered by every means at a government's disposal, such as cutting interest rates and spending public funds to kick-start the economy.
 - * *"The process of industrial mutation ... incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one ... This process of Creative Destruction is the essential fact about capitalism."* (Joseph Schumpeter)
 - * During a boom, consumers are spending more money and often borrowing more, and it is easier for business to make money. Schumpeter and his fellow Austrian, Friedrich Hayek, argued that this leads to inefficient

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firms that, in less favorable times, would not even have been formed in the first place. Conversely, when economy slumps and people spend less, inefficient companies go bankrupt. It forces investors to put their money into other, more attractive parts of the economy. This in turn boosts the potential growth rate for the economy in the years ahead. He argued that governments should not slash interest rates massively to prevent recessions. Instead, those who made unprofitable investments during booms should suffer the consequences or else the same mistakes would invariably be made in the future. Survival of the fittest.

- *Modern Monetary Theory*
 - TODO
- *Multilateralism*
 - Nations can achieve more by working together.
 - It means collaborating with all other major countries when taking major decisions, rather than a country acting on its own unilaterally or bilaterally (with partnership with other country or a set of countries).
 - Often, when a country decides to raise tariffs on trade, or to artificially inflate the value of its currency, it sets off a chain reaction that can cause major damage to other countries.
 - *International Monetary Fund (IMF)* and *General Agreement on Tariffs and Trade (GATT)* which later metamorphosed into the *World Trade Organization (WTO)*. These were major multilateral organizations. The IMF acts as the world's central bank, pooling resources from its members and lending out cash to those who suffer a major currency or capital account crisis. It is a lender of last resort - but in this case to countries rather than banks and companies. Its second role is to ensure that countries around the world are running their economies sensibly. But it has failed in the past to prevent some countries taking poor economic decisions - it has no power to discipline those who defy it.
 - BRICs are an idea, a phenomenon and a quarter of the world's most up-and-coming countries - Brazil, Russia, India, and China. Massive population, incredible appetite for work and growth. They together account for 40% of the world's population and more than 25% of its landmass. Their economies are growing at rates of 10% or even more.
 - In the 20th-century economy was dominated by the G7 - group of the world's 7 major industrialized economies - US, Japan, Germany, UK, France, Italy and Canada. However, in 2008, G7 was replaced with the G20 - a far broader group of the world's largest economies.
- *Protectionism*

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- The biggest threat to world peace and prosperity.
- It usually means the imposition of high barriers and tariffs on goods imported from overseas, and the prevention of foreign takeovers.
- The World Trade Organization (WTO) is charged with leading the fight against protectionism. Its primary role is to bring countries together to discuss how to remove tariffs and barriers on trade. These talks must be global, since only by removing tariffs internationally rather than unilaterally can all countries benefit.
- (Frederic Bastiat) *"When goods cannot cross borders, armies will."*
- *The Millennium Development Goals (MDGs)*
 - Set of 8 goals focused on improving the plight of those living in developing nations. They were laid down by the United Nations in 2001:
 1. Eradicate extreme poverty and hunger
 2. Achieve universal primary education
 3. Promote gender equality and empower women
 4. Reduce child mortality
 5. Improve maternal health
 6. Combat HIV/AIDS, malaria and other diseases
 7. Ensure environmental sustainability
 8. Develop a Global Partnership for Development
- *Macroeconomic goals (of a government)*
 - T - Trade performance, the objective is to balance trade - not having much deficit neither surplus (revenue entering the country and leaving the country)
 - I - Inflation, the objective is low and stable
 - G - Growth, strong and sustained growth (GDP)
 - E - Employment, as low as possible
 - R - Redistribution of income, inequality
 - S - Stability (economic stability)
- *Globalization*
 - Process in which national economies have become increasingly integrated and inter-dependent.
 - Causes: trade liberalization, trading blocks, technological advancement, mobility of labor and capital, growth of MNCs.
 - Pros

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- * Lower prices
 - * Benefits of trade
 - * Greater employment
 - * Free movement of labor
 - * Technological transfers and innovations
- Cons
 - * Growing inequality
 - * Higher structural unemployment
 - * Environmental costs - lack of sustainability
 - * Trade imbalances
 - * Less cultural diversity
- *Privatization*
 - Pros
 - * allocative efficiency, it's great for consumers
 - * private companies are driven by profits, which encourages competition
 - Cons
 - * limited competition will lead to productive and allocative inefficiency
 - * loss making services and products are not being run, even if they are socially desirable
 - * law of natural monopoly
 - It depends on
 - * the level of competition past privatization
 - * level of government regulation
- *Happynomics*
 - The idea is that the economics is not all about money.
 - The hierarchy of needs, devised by psychologists Abraham Maslow in 1943
 - 0 physiological needs (body functions working properly, safer (shelter, employment, health), love, esteem and morality. Furthermore, by the Richard Easterlin, argued that once you get rich you get accustomed to it very quickly, and soon take such a standard of life for granted. Moreover, research shown that once one's basic needs are fulfilled we start to measure our own contentedness based not on our absolute wealth or achievements, but on comparison to others.
- Today's (2020) Economics is divided into 2 camps:

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- *Austrian Economics* - savings and production drive economic growth.
- *Keynesian Economics* - spending drives economic growth, savings decrease it (in the last 50 years the world was driven mostly by Keynesian approach).
- According to Paul Collier, poor countries can fall into 4 traps:
 1. Civil War
 2. Resource trap
 3. Land trap
 4. Bad governance
- What drives the economy? (see GDP over time)
 - Productivity growth
 - Short-term debt cycle
 - Long-term debt cycle

An economy is simple a sum of the transactions. If you divide total spending (credit spend + money spend) by total quantity sold, you get a price. Total amount of spending drives the economy.

A transaction is a building block of an economy machine. All cycles and all forces in an economy are driven by transactions.

The biggest buyer and seller is a government. It consists of 2 important parts:

- Central government - collects taxes and spends money
- Central bank - controls the amount of money and credit in the economy by influencing interest rates and printing new money
 - * If interest rates are high, there is less borrowing because it's expensive. If they are low, borrowing increases because it's cheaper. When borrowers promise to repay and lenders believe them, credit is created. Credit is one of the most important thing and probably least understood. Any two people can agree to create a credit out of thin air. Credit has a different names - as soon as credit is created, it immediately turns into debt. Debt is both an asset to the lender and a liability to the borrower. In the future when the borrower repays the loan plus interest, the asset and liability disappear and the transaction is settled. Credit is important because when a borrower receives a credit it increases his spending. And spending drives the economy. Because one person's spending is another person's income. So when you spend more, someone else earns more.
 - * Borrower - having a lot of income in relation to his debt gives him the ability to repay. In the event that he can't repay, he has valuable assets to use as collateral that can be sold. This makes lenders feel comfortable lending him money. Increase income increase borrowing which allows

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increase spending. And since one person's spending is another person's income, this increases borrowing. This self-reinforcement pattern leads to economic growth and is why we have cycles.

- * Productivity matters in the long run and credit matters in the short run. This is because productivity growth doesn't fluctuate much so it's not a big driver of economic swings. Debt is - because it allows us to consume more than we produce when we acquire it and it forces us to consume less than we produce when we pay it back.
- * Debt swings occurs in 2 big cycles - one takes about 5-8 years and the other about 75-100 years. Swings are not due to how much innovation or hard work there is, they're primarily due to how much credit there is.
- * If you buy something you can't afford, you need to spend more than you make. To do this, you essentially need to borrow from your future self. In doing so you create a time in the future that you need to spend less than you make in order to pay it back. It resembles a cycle. Basically any time you borrow, you create a cycle. This is true for individual as well as for an economy. This makes credit very important because it sets into motion a mechanical, predictable series of events that will happen in the future.
- * This makes credit different from money because money. Money is what you settle transactions with. The total amount of credit in US is about \$50 trillion and total amount of money is about \$3 trillion (2013).
- * Central Bank decisions determine the economic path of the country, or group of countries by:
 - Rate changes
 - Currency devaluation/depegging
 - Policy changes
- * Central Banks provide additional information to the market via:
 - Testimonies, press conferences, speeches, meeting minutes.
 - Sentiment surveys.
 - Economic research papers.

Debt Cycles:

– Short cycle

- * Expansion - spending continues to increase and prices start to rise. This happens because increase in spending is fueled by credit. When the amount of spending and income grow faster than the production of goods, prices rise, which we call inflation. Central bank doesn't want too much inflation, because it causes problems. Seeing prices rise, it raises interest rates. With higher interest rates, fewer people can afford to borrow

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money. And the cost of existing debt rises. Because people borrow less and have higher debt repayments they have less money left over to spend, so spending slows. And since one person's spending is another person's income, incomes drop. When people spend less, prices go down. This is deflation. Economic activity decreases and we have a recession.

- * If recession is severe and inflation is no longer a problem, the central bank will lower interest rates to cause everything to pick up again.
- * With low interest rates, debt repayments are reduced and borrowing and spending pick up and we see another expansion.
- * When credit is easily available, there is an economic expansion. When credit isn't easily available, there is a recession.
- * This cycle is controlled primarily by central bank. The bottom and top of each short cycle finish with more growth and more debt than the previous cycle
- * Because of this, over long periods of time, debts rise faster than income, creating long term debt cycle.

– Long term debt cycle:

- * Despite people becoming more indebted, lenders even more freely extend credit. Because everybody thinks things are great. People are focusing on what's been happening lately - asset values are up, income is raising, stock market roars, there is much more borrowing and spending - we call this a bubble. So even though debts have been growing, incomes have been growing nearly as fast to offset the debt. As long as income rises, debt stays manageable. People feel wealthy. But this cannot continue to go forever.
- * Over decades, debt burdens slowly increase creating larger and larger debt repayments. At some point, debt repayments start growing faster than income forcing people to cut back on their spending. And since one person's spending is another person's income, incomes begin to go down, which makes people less creditworthy causing borrowing to go down. Debt repayments continue to rise, which makes spending drop even further, and the cycle reverses itself. Debt burdens simply becomes too big.
- * Now there comes deleveraging - people cut spending, income falls, credit disappears, asset prices drop, banks get squeezed, stock market crashes. As incomes fall and debt repayments rise, borrowers get squeezed. No longer creditworthy, credit dries up and borrowers can no longer borrow enough money to make their debt repayments. Borrowers are forced to sell assets. People feel poor. Less spending, less income, less wealth, less credit, less borrowing, and so on.

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- * This is similar to recession, but interest rates can't be lowered to save the day. In recession, lowering interest rates works to stimulate the borrowing. However, in deleveraging, lowering interest rates doesn't work because the interest rates are already low and soon hit 0%, so stimulation ends.
- * The difference between a recession and deleveraging is that in deleveraging borrowers' debt burdens have simply gotten too big and can't be relieved by lowering interest rates. Lenders realize that debts have become too large to ever be fully paid back. Borrowers have lost their ability to repay and collateral has lost value. Lenders stop lending. Borrowers stop borrowing.
- * The problem is that the debt is too high and it must lower down. There are four ways this can happen:
 1. Cut spending (this is usually the first step - businesses, banks and even governments cut their spending to repay debt. This can cause incomes to fall. They fall faster than debts are repaid and the debt burden actually get worse. This cut in spending is deflationary and painful. Businesses are forced to cut costs - less jobs and higher unemployment).
 2. Reduce debt through defaults and restructurings - debt restructuring means lenders get paid less or get paid over a longer time frame or a lower interest rates than was originally agreed. Lenders would rather have little of something than nothing. But still, debt burden continues to get worse because debt disappears, but debt restructuring causes income and asset values to disappear faster, so the debt burden continues to get worse. Like cutting spending, debt reduction is also painful and deflationary. All of this impacts central government, because lower interest rates and less employment means the government collects less taxes. At the same time it needs to increase its spending because unemployment has risen. Many people needs money and government creates stimulus plans and increase their spending to make up for the decrease in the economy. Government's budget deficit explode in a deleveraging because they spend more than they earn in taxes. This is budget deficit. To fund their deficits, governments need to either raise taxes, or borrow money. But with income falling and unemployment rises, they have to take money from the rich.
 3. Redistribute wealth - governments naturally raises taxes on the wealthy, which facilitates a redistribution of wealth in the economy. Most of what people thought was money was actually credit. So when credit disappears, people don't have enough money. People are desperate for money - and central bank can print money.
 4. Print money - this is inflationary and stimulative. New money is

1 General

used to buy financial assets and government bonds. It helps to drive asset prices which makes people more creditworthy. However this only helps those who own financial assets. The central government on the other hand can buy goods and services and put money in the hands of people. But it can't print money. So in order to stimulate the economy, the two must cooperate. Bu buying government bonds, the Central bank essentially lends money to the government, allowing it to run a deficit and increase spending on goods and services through stimulus programs and unemployment benefits. This increases people's income and government debt. However, it will lower the economy's total debt burden.

This is risky time. Policy makers need to balance - the deflationary ways need to balance with inflationary ways in order to maintain stability. If balanced nicely, there can be a nice deleveraging. In such deleveraging, debts decline relative to income, real economic growth is positive, and inflation isn't a problem. This balance can be achieved by doing balance between all 4 steps above. Printing money won't raise inflation if it offsets falling credit. Spending is what matters. Income must grow faster than debt grows.

Leveraging - 50+ years, depression - 2-3 years, and reflation (debt burdens to fall and economy activity is going back to normal) - 7-10 years (hence the term "lost decade").

So it's super important:

- don't have debt rise faster than income
- don't have income rise faster than productivity
- do all that you can to rise productivity

2 History

- 10,000bc - First evidence of bartering in parts of Africa
- 3,000bc - First evidence of taxation in Ancient Egypt
- 600bc - First evidence of gold and silver coins in Lydia
- 350bc - Aristotle declares that property should be private
- 800s - China invents first banknotes
- 1397 - Medici bank is founded - the world's first recognizable bank
- 1600 - British East India Company founded (the first major corporation which had a government-granted monopoly on trade with British territories in Asia - but even before that, the first recognizable company was the Virginia Company, that set up to finance trade with colonists in America)
- 1668 - The Riksbank, the world's first central bank, founded in Sweden
- 1671 - Stockholm's bank is using the first paper note as a money. They were first in the world. It was backed up by gold, in ratio 1:1
- 1693 - British government issues the first modern-style sovereign bond
- 1694 - The Bank of England is founded
- 1700s - The first industrial revolution - invention of the steam engine
- 1743 - Mayer Amschel Bayer - from Jewish family from Frankfurt. He changed his name to Rothchild (ECB has headquarters in Frankfurt)
- 1776 - Adam Smith (Scottish father of economics) - The Wealth of Nations (Invisible hand; also, division of labor is summed up) He explained how division of labor works, by describing the process in a pin factory
- 1776 - Bank of England changed the ratio of notes to gold to be from 1:1 to 2:1
- 1776 - USA - beginning of the nation as an independent nation (George Washington unified 13 states) - independent from England
- 1792 - The Buttonwood Agreement lays the foundation for the establishment of the New York Stock Exchange

2 History

- 1798 - Thomas Robert Malthus (taught mathematics at Cambridge) - Essay on the Principle of Population (The Malthusian trap)
- 1798 - US president George Washington constructs the earliest American tariffs, on trade with the UK
- 1798 - William Pitt the Younger introduces Britain's first income tax
- 1801 - London Stock Exchange is founded
- 1800s - Industrial Revolution ushers in age of capitalism (and also, the first era of globalization, that ended because of First World War)
- 1815 - Nathan Rothschild makes a fortune on the bond market after the Battle of Waterloo
- 1816 - Introduction of the Gold standard (an international system in which countries currencies are fixed in relation to gold prices), pegging all money to a set amount of gold (ended in 1914), in ratio 1:3
- 1817 - David Ricardo - On the Principles of Political Economy and Taxation (Comparative Advantage)
- 1848 - Karl Marx (from middle-class Jewish/Protestant German family) - The Communist Manifesto
- 1865 - Abraham Lincoln was murdered (BTW, he didn't want to create central bank)
- 1867 - Karl Marx - Das Kapital
- 1871 - Carl Menger - Principles of Economics (father of the Austrian School - Individualism and Marginalism)
- 1873-96 - The Great Deflation follows the US Civil War
- 1880 - Bismarck sets up the first state pension and medical insurance scheme
- 1885 - First automobile powered by internal combustion engine is invented by Karl Benz in Germany
- 1889 - The International Prototype Kilogram, small cylinder of platinum and iridium made; it's the object against which all scales in the world are calibrated.
- 1890 - Alfred Marshall - Principles of Economics (popularizes marginal utility - Marginalism)
- end of 19th and beginning of 20th - second industrial revolution - electric and technical revolution - electricity, steel and other materials, crude oil, petroleum and gasoline

2 History

- 1907 - The Panic (Stock Market Crash)
- 1901-32 - The Gold Standard still employed
- 1903 - Wright brothers fly the first powered plane
- 1907 - J.P. Morgan - he “attacked” banks and was saying that banks are insolvent, and people wanted to withdraw all their money. Chain reaction, thousands of banks were gone under. People lost money, and J. P. Morgan bought a big piece of financial sector in the US. People still didn’t like the idea of having central bank.
- 1908 - David Lloyd George introduces pensions in the UK
- 1913 - Henry Ford and the assembly line - automation of car manufacture (division of labor in practice)
- 1914-18 - First World War
- 1913 - The US Federal Reserve set up by Woodrow Wilson. The system is comprised of 12 regional reserve member banks, each of which focuses on its particular geographical zone, in coordination with the New York Fed.
- 1917 - Russian Revolution puts Lenin in power, leading to the foundation of the Soviet Union
- 1920s - Germany suffers hyperinflation after the First World War.
 - Hyperinflation was a result of massive money printing so that Germany can pay a massive war debt payments to France, England, and others. People were extremely discontented and Adolf Hitler used that.
 - How the heck Hitler got money to pay for war debt payments and restart the economy to such a prosperity? He got support from America - Dawes Plan and Young Plan (1924-1930). Germany received \$2.5B in loans from USA, and send \$2B in reparations to Allies, and they send \$2.6B back to USA.
- 1929 - The Wall Street Crash sends stocks plunging and triggers The Great Depression. Black Thursday. It was triggered by Margin loans, overconfident market and public, and the government raised interest rates. Everyone was buying stocks.
- 1930 - US and much of the world is trapped in deflation during the Great Depression
- 1930s - Sir John Hicks refines the economics of supply and demand
- 1933 - Unemployment in the US hits 25% during the Great Depression
- 1933 - Franklin Roosevelt - gold was confiscated. You’d have to pay a \$10k fine. Citizens had to sell very low (\$20.67 exactly, set by the government), and then, afterwards, the gold price was much higher. From \$20.67 -> \$35.

2 History

- 1936 - John Maynard Keynes (economist that put his theories into action) argues in *The General Theory of Employment, Interest and Money* that governments should borrow more in times of recession (direct response to the Great Depression). He argued that governments had a duty to help keep the economy afloat in times of trauma.
- 1938 - Germany had to pay loans to the USA (Dawes Plan and Young Plan), but they didn't have enough money. II. World War started in 1939 in Poland. As one of the first thing, German troops confiscated gold from central banks. Then they conquered cities and villages. USA delivered weapons and received a massive amount of gold in return.
- 1940s - Governments worldwide raise taxes to unprecedented highs to pay off war debts and fund the creation of welfare systems
- 1942 - Joseph Schumpeter - *Capitalism, Socialism and Democracy* (popularized the idea of creative destruction, hailed originally from CZ area, but moved to Vienna and then emigrated to the US)
- 1944 - Friedrich Hayek (successor of Carl Menger; plus, he won the Nobel Prize) - *The Road to Serfdom* (Individualism, Austrian School)
- 1944 - The Bretton Woods Agreement on fixed exchange rates - one year before II. World War ended.
 - It was in American city Bretton Woods. US dollar is the world reserve currency. All strategic raw materials must be traded in dollars. Note that the USA got the biggest amount of gold.
 - Two institutions were established as a supervision - World Bank and International Monetary Fund. If some state wanted to be a part of it, they had to deposit 25% of gold and 75% of their national currency. Then they could borrow up to 200% of original deposit.
 - If governments want their dollars to change for gold, FED will change it.
- 1945 - Push for freer trade begins after the Second World War (comparative advantage)
- 1945 - United Nations is established
- 1949 - Mao Zedong establishes the People's Republic of China as a communist state
- 1950s - Macroeconomics gains popularity along with Keynesianism
- 1963 - Kennedy changed the rules - FED should no longer print money, but a government body will. More than \$4M were printed. He was murdered in less than 6 months.

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- 1970s - Keynesianism falls out of favor as Western nations battle against inflation
- 1970s - Arthur Laffer develops the idea of the Laffer Curve (Supply-side economics, these ideas were embraced by Thatcher and Reagan later)
- 1970s - The pioneers of behavioral economics - psychologists Amos Tversky and Daniel Kahneman (he was awarded in 2002 the Nobel Prize in Economics), who adapted theories on how the brain processes information and compared them with economic models.
- 1971 - Milton Friedman (from a family of Hungarian immigrants and was born in NYC, he was awarded the Nobel Prize for Economics) and Anna Schwartz - A Monetary History of the United States (set out theories of monetarism)
- 1971 - First oil crisis
- 1971 - President Nixon decreed that USA won't change US notes for physical gold. This was against The Bretton-Woods agreement. This is called "Nixon Closes Gold Window". Gold price was no longer set by government, but by supply-demand. Gold price boomed.
- 1972 - Bhutan starts to develop a Gross National Happiness index (Happynomics)
- 1975 - President Ford finally canceled the restriction that US citizens cannot own gold. After 42 years.
- 1976 - Kingston Currency System - it's still valid today. This is exactly 200 years since the notes were backed up by gold with ratio 1:1. Fiat is in translation "So let it be written, so let it be done." Some people say that fiat money was the easiest way to convert society into sheep.
- early 1980s - Second oil crisis
- 1980s - Taxes are cut in the UK, US, and across the Western World (Supply-side economics)
- 1980s - Third industrial revolution - development of the internet and computer
- 1985 - Plaza Accord - agreement among G-5 nations - UK, USA, Germany, France, Japan - to manipulate exchange rates by depreciating the U.S. dollar relative to the Japanese yen and the German Deutsche mark
- 1987 - Black Monday - the US Stock market drops 22,6%
- 1989 - Fall of the Berlin Wall, triggering the spread of capitalism throughout the former communist world
- 1989 - World Wide Web is developed by Tim Berners-Lee

2 History

- 1990s - Behavioral economics gains popularity
- 1994 - Estonia introduces flat taxes (in which everyone pays the same rate)
- 1998 - The European Central Bank established in preparation for the launch of the euro
- 2001 - Dot-com bubble pops
- 2002 - Full introduction of the euro
- 2006-8 - Property bubbles pop in the US, UK, and much of the Western world, triggering The Financial Crises in 2008
- 2008 - Keynesian ideas return as governments across the world borrow and spend in order to fight recession
- 2008 - The G7 is replaced with G20
- 2009 - Major economies, including the UK and US, experience deflation for the first time since the Second World War
- 2010 - The Flash Crash (Stock Market Crash)

TODO - Magna Carta, French Revolution, Boston Tea Party, American Revolutionary War

2.1 The Growth and The Crash of Economy

(from book *How an Economy Grows and Why it Crashes*, by Peter Schiff)

- In the past, the United States was known as a nation of savers. (So they under-consumed in order to generate a capital) Throughout much of US history, American citizens typically saved 10% or more of their incomes annually. This discipline not only helped build a huge supply of savings to finance US growing industrial activity, but it also helped families and communities endure unexpected hardships. However, in recent years, economists have severely downgraded savings on the economic value chain. Keynesians view savings as detrimental to growth because the act removes money from circulation and decreases spending (which they assume is the crucial element in creating economic growth). Policy makers, influenced by these ideas, have made rules that reward spenders and penalize savers. As a result, Americans have, for years, spent more than they earned. Spending for its own sake means nothing.
 - What if you spent \$1M, but bought nothing but air? How would this benefit society? It would surely benefit the person who sold you the air. He would get \$1M formerly belonging to you. Using our modern methods of economic accounting, such as the measurement of GDP, the transaction would certainly look like genuine activity. It would be counted as \$1M worth of growth. But the act of buying air does not improve the economy as a whole. The air was always there. The fact that someone spent money on it does not change a thing. Spending is merely the yardstick that we use to measure production. Since everything that is produced will eventually be consumed, why does spending really matter? Even the stuff that no one really wants will be consumed if the price falls far enough. But nothing can be consumed until it is produced. It's production that adds the value. Savings creates the capital that allows for the expansion of production. As a result, a dollar saved makes more of a positive economic impact than a dollar spent. Just don't try to explain this to an economist or a politician.
- According to Schiff, there is no greater propaganda victory in economics today than the complete vilification of deflation (and the relative acceptance of inflation). As far as economists and politicians are concerned, deflation, which is defined as the overall decline of prices over time, is the economic equivalent of the Bubonic plague. At the slightest whiff of deflation, governments will typically enact policies to push prices back up. But what's wrong with falling prices? Prices in the US fell steadily for almost 150 years - from late 1700s all the way to 1913. During that time, US experienced some of the fastest economic growth in the history of the planet. This was possible because of increased efficiency. When combined with a stable supply of money (as existed in the US until the establishment of the FED), efficiency will push prices down. The vastly increased productivity of the industrial revolution made it possible for working-class people to afford all kinds of goods. Yet despite

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the obvious benefits of lower prices we still fear deflation. We are told that if prices were to fall, people would stop buying, companies would stop spending, workers would lose their jobs, and we would all return to the economic dark ages. But we all see time and time again how falling prices do not deter particular industries. For example, as a result of efficiency in design and manufacture, millions and millions of people each year spend less and less to experience the marvels of digitization. Modern economists mistakenly assume that spending drives growth, and that when deflation is present, people tend to defer purchases (to allow prices to fall); and when they do spend the diminished price makes less of an economic impact. According to P. Schiff, this is absurd. It's production that counts, not spending. People do not need to be persuaded to spend. Human demand is essentially endless, and if people don't want something there is likely a good reason. Either the product is not good or the consumer simply cannot afford to buy it. Either way, the act of deferring a purchase, or saving instead of spending, is made for rational reasons and tends to benefit the economy as a whole. Despite all, deflation remains economic enemy number one. This is because inflation is every politician's best friend.

- Higher interest rates would discourage borrowing and slow business growth. But the higher rates would also encourage savings. Eventually rates would start to drop. Lower savings rate indicate a preference for more immediate consumption. As a result, long-term capital investment designed to provide goods for future consumption would be discouraged. This cyclical interest rate mechanism—firmly regulated by the desire to maximize the returns on the bank's deposits, the fear of losing capital on risky ventures, and individual time preferences for consumption—produced a rate of interest that would stabilize the market. Deferring consumption to a later date would provide financing for capital projects that would increase future production and raise living standards.
- For almost 100 years, FED (in theory a private bank, but in practice an extension of the Treasury Department) has set the base level for interest rates upon which the entire rate structure rests. By setting its "federal funds" rate higher or lower, the Fed does not dictate the particular rate any bank offers for every loan, but it does move the entire market up or down. Banks will always charge a higher rate to the public than they pay the Fed to borrow money. So when the Fed raises or lowers its rates, businesses and individuals will pay more, or less, to borrow.
 - The Fed was given this authority in order to keep the economy running smoothly in good times and bad. The theory goes that the collective wisdom of Fed economists could help keep the economy on track by determining the optimal interest rate for any particular moment in time. For instance, the Fed tries to boost a struggling economy by lowering interest rates to the point where businesses and consumers would be more inclined to borrow. In very good times, when overconfidence often leads to foolishness, the Fed is supposed to do the opposite and raise rates so that people will think twice

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about taking out loans.

- This system has 2 massive flaws:
 - * It assumes that a small group of people at the Fed can make better decisions than millions of people making independent decisions (marketplace) about the proper level of interest rates.
 - * The Fed's decisions are always determined by political rather than economic considerations. As low rates tend to make the economy appear better on the surface, push down the cost of servicing mortgages and other loans, and help financial firms make money, there are a great many people who want lower rates. Presidents seeking reelection will always bang the drum for lower rates, and they will pressure the Fed to help out.
- Low rates encourage borrowing and discourage saving. Not surprisingly, the US has been transformed from a nation of savers to a nation of borrowers.
- Trade on a national level is no different than labor specialization on a personal level. Each individual, or country, trades what it has in abundance, or what it does best, for the things that it doesn't have or can't easily make.
- Infrastructure spending can make a huge impact on an economy. But such spending is helpful only if the benefits exceed the costs. If not, the projects waste resources and hinder growth. Many politicians and economists erroneously view infrastructure spending not as a near-term cost that may lead to long-term gain, but as an immediate means to create jobs and boost the economy. This view can lead to costly misallocations of resources and the unseen destruction of jobs in other areas.
- It makes no sense to waste our labor making things that can be produced more efficiently abroad. If we focus on the things that we can make more efficiently than anyone else, then we can trade those products for the things that others produce better. In the end we'll have more stuff. Of course, the problem is that because of our artificially high currency, high taxes, and restrictive wage and labor laws, we just are not competitive in enough product categories. According to Peter Schiff, this has to change.
- US experienced sustained deflation for most of its history. Then in 1913, the Fed was established. The notes it issued, which promised to pay the bearer gold on demand, replaced the private bank notes then in circulation, which offered similar guarantees. But as soon as the Fed came on the scene, prices started rising steadily. The Fed was originally given the mission of establishing an "elastic money supply". The idea would be that the Fed could expand or contract the amount of money in circulation to correspond with economic activity. It was thought that such movements could hold prices steady through good times and bad. Over the past 100 years, the dollar has lost more than 95% of its value. So much for price stability! The truth is that the Fed now exists for the sole purpose of providing

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the inflation necessary to allow the government to spend more than it collects in taxes. During the Depression, President Roosevelt decided to devalue the dollar against gold. In order to pull this off, the government had to control the entire gold market, and for a time the government made it illegal to own gold coins. Later on the ability to redeem the notes for gold was restricted to just banks, then to just foreign banks, and then finally to no one. We are left with a currency that has no real value and can be expanded at will. This has prevented the government from ever having to make hard choices about spending and taxes, and has set us on a path that will eventually destroy the remaining value of the dollar.

- One of the reasons that economists have been so successful in obscuring the source of inflation is that they have short-circuited the very definition of the word. Nearly everyone believes that rising prices means inflation. So if prices aren't rising there must be no inflation. But, according to P. Schiff, rising prices are merely the results of inflation! The inflation is the expansion of the money supply. Any dictionary printed before 1990 defines inflation purely as an expansion of the money supply. Newer editions have hedged their bets. But if you understand the true definition, you know that it is possible that prices can stay flat, or even fall, while the money supply itself is being inflated. During a recession people wisely stop spending. When they do, demand drops and prices should fall. But sometimes these forces are counterbalanced by an expanding money supply that diminishes the value of currency. When inflation is present in a recession, prices may go up (if the printing is fast enough), stay flat, or fall less than they would have with no inflation. But during a recession prices need to fall in order to re-balance the economy. Recessions should be deflationary. Falling prices will cushion the blow of low employment. Somehow, modern economists see falling prices as never-ending abyss toward demand destruction. They forget that when prices fall far enough, people start spending again. The process allows unneeded inventories to be worked off, and for prices to fall to a level justified by underlying supply and demand. By keeping prices artificially high, inflation prevents this from happening. Governments now reflexively fight recession by creating money. If they go too far, they can produce inflation and recession simultaneously, leading to a condition called "stagflation" which flourished in the 1970s, economists now insist that inflation and unemployment can't co-exist. They argue that when people lose their jobs, demand falls and process follow. They forget the other side of the equation. When fewer people are working, less stuff is produced, reducing supply. When things are scarce, prices rise. Adding more money into the mix could cause prices to soar.
- Most people see relationship between US and China as a mutually beneficial system whereby the US gets cheap products and cheap loans, and China gets manufacturing jobs. But is such an arrangement really a benefit for both parties? The Americans do well: they get stuff without producing it and they get to borrow money without having to save. For their part, the Chinese get to work without consuming what they produce. Where's the benefit there? In order to lend,

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someone has to save. Fortunately for the US, the global economy allows these relationships to go beyond borders. The trump card for the US thus far has been the status of the US dollar. As the world's official reserve, the dollar is accepted as the exchange currency for any international transaction. This means that everyone, not just the US and its trading partners, needs dollars to conduct trade. So even if no one actually buys things that are made in this country, dollars are always in demand. No other country has this monetary good fortune. Many of these dollars held by foreigners are typically deposited in American banks, where they can be borrowed by Americans. That way they can spend even if we don't save. By holding their currency to a strict peg against the US dollar, the Chinese authorities have essentially required that their citizens hold at least some of their savings in US dollars. Without these savings from China and other nations, everyone in the US including the government would have a much more difficult time borrowing, and they would likely have to pay much higher interest rates for the privilege. High interest rates and scarce credit would be a lethal combination for our debt-fueled economy. As current American leaders come into increasing conflict with China, this lifeline needs to be clearly understood, before it is callously cast adrift. Of course, since this relationship cannot last forever, the sooner it ends the less painful it will be, particularly for Americans.

- For most of the history, US exported much more than it imported, resulting in trade surpluses. In some years, especially toward the middle of the twentieth century, these surpluses were truly massive. Americans used the excess funds to build more capital at home, and to buy up more capital abroad. In the process they became the richest country on the planet. But in the late 1960s the trade balance started to change, and by 1976 the US began running persistent trade deficits. The dollar's reserve status has played a significant role in allowing this deficit to grow unchecked. Without the built-in demand for dollars made possible by the global economic system, no country could long sustain such imbalances. Companies and governments would simply refuse to trade goods for a currency with which it couldn't buy anything. For the first decade of 20. century, which corresponded with the rise of China as an export economy, the US trade deficit averaged around \$600 billion per year, topping out at a staggering \$763 billion in 2006. That's more than \$2,500 for every man, woman, and child in the United States. After the recession of 2008 began, those figures mercifully started to retreat. But US policies soon put an end to that positive reversal. Normally, trade deficits tend to be self-correcting. A country with a trade surplus, in that it sells more abroad than it buys, will create an international demand for its currency. If you want its stuff, you need its currency. As a result, strong trading positions tend to strengthen a country's currency. The opposite is true with countries with weak trading positions. If no one wants your stuff, no one really needs your currency. But when a country's currency rises, its products become more expensive. This gives a competitive opportunity to countries with weak currencies to start selling some of their products into that market. When they sell more, demand for their currencies

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risers. This currency counterweight should keep runaway trade imbalances in check. But the dollar's reserve status and the decision of the Chinese government to maintain the currency peg, has gummed up the machinery and has allowed the situation to grow dangerously out of kilter.

- Precious metals, particularly gold and silver, have all the qualities that make money valuable and useful: scarcity, desirability, uniformity, durability, and malleability. In contrast, paper money has value only as long as enough people agree to take it in exchange for goods and services. But that makes its value completely subjective. Since it can be produced at will, and has no intrinsic value itself, the paper can become worthless if enough people lose faith in it.
- US is able to consume more than it produces. Current choices are simple:
 - Consume less and use the savings to pay back debt.
 - Produce more and sell the extra goods to pay back debt.
 - Borrow more to continue current levels of consumption.

The first two choices would involve unpleasant outcomes for Americans. Either they would be working harder, eating less, or both. The third choice deals all the sacrifice to foreigners, so the pain would be shipped abroad.

- As a result of a few quarters of positive GDP, economists now tell us that the Great Recession is over. But with unemployment still more than 10%, and underemployment (those who have given up looking or who work only part-time) still more than 17%, many Americans would be surprised to hear the good news. In truth, the Great Recession had begun the painful, but unfinished, work of rebalancing US economy. In 2009, US national savings rate ticked up for the first time in years, and its trade deficit finally began to shrink after its dizzying ascent earlier in the decade. But the Bush and Obama Stimulus programs put a stop to this. The creation of ever greater quantities of debt has given us a reprieve from the process of returning to living standards commensurate with US productivity. Once China and Japan, US creditors, realize that the continual extension of credit to a customer that can't pay is a waste of resources, they will change course. At that point they will refocus their productivity on domestic consumers, who will then fully enjoy the fruits of their labor. With more than 50% of our government debt currently sold to foreign governments, who will pick up the slack when they stop buying? With very little domestic savings to tap into, Americans alone won't be able to do it. When that day comes, Americans will have two choices: default or inflation. Both options will violently force American living standards downward through lost purchasing power and higher interest rates.
- Throughout history, governments have gotten themselves into trouble by spending more than they have. When the gaps become too big, difficult choices arise.

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- One option is to increase revenue by raising taxes. This path is never popular with citizens, and in a democracy is hard to push through. Even in authoritarian states, tax increases are problematic. Higher rates always discourage productivity and deflate economic vitality. There is a limit to how high taxes can go. Raise them enough, and people stop working. Raise them higher, and they may even start rioting.
 - A far better option is to cut government spending. However, this is often more difficult than raising taxes. Those whose benefits are cut are particularly apt to express their hostility both at the polls and on the street. This is especially true when the recipients feel entitled to the benefits. Politicians make lots of promises to secure their elections and voters rarely consider the ability of taxpayers to actually foot the bills.
 - To avoid either of these politically unpopular options, some governments choose to default instead. To do this, a country simply tells its creditors that it can't pay the full amount of its debt obligations. If the debt is largely owed to foreigners, the decision is that much easier to make. Politically speaking, it is better to stiff a foreigner than to raise taxes on, or deny benefits to, a country's own citizens. And default can be embarrassing for political leaders. To avoid this, many opt to simply print money to pay debts, effectively repudiating their obligations by inflating them away. Since inflation is usually the easiest choice to make, it is often the most likely. Creditors get paid, but what they get isn't worth much, because government dilutes its own currency, and if inflation turns into hyperinflation, it's worth nothing. Inflation is simply a means to transfer wealth from anyone who has savings in a particular currency to anyone who has debt in the same currency. With hyperinflation, the value of savings gets completely wiped out and the burden of debt is removed. It has happened many times before: France in the 1970s, Germany in the 1920s, Hungary in the 1940s, Argentina and Brazil in the 1970s and 1980s, and Zimbabwe today. The countries satisfied staggering debt by wiping out the value of their currencies. As a result, their own populations were thrown into abject poverty. If US would lost reserve status, US dollar would be just as vulnerable as those currencies that went down before.
- America gets more of what it doesn't need (spending and restrictive regulations) and less of what does need (savings and free enterprise).
 - Just as prices in a free market are set by supply and demand, financial and real estate markets are governed by the opposing tension between greed and fear. But US government has done all that it can to remove fear from the equation. And so beginning in 2008, as market forces moved to deflate the credit and housing bubbles, the government stepped in to re-inflate both. Bailouts and stimulus everywhere. The spending, which the government has borrowed from future generations, has kept Americans from the pain of living within their means. By refusing to allow market forces to rein in excess spending, liquidate bad investments, replenish

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depleted savings, fund capital investment, and help workers transition from the service sector to the manufacturing sector, the US government has resisted the cure while exacerbating the disease. In the process, US have turned just about all forms of debt into government debt.

3 Glossary

- *QE, Money printing* ([source](#)) TODO
- *Consumer Price Index (CPI)* - TODO, CPI alternative ([source](#))
- *The Consumer Confidence Index*
 - It is the result of a monthly survey of 5,000 U.S. households by the Conference Board that measures how optimistic or pessimistic consumers are about the economy's current and future performance. When the index is high, consumers are expected to increase their spending on goods and services.
 - When it is low, a decrease in spending is expected. Since consumer spending accounts for about two-thirds of gross domestic product, consumer confidence is an important indicator of where the economy might be headed.
 - The Consumer Confidence Index, or CCI, has a benchmark value of 100. Analysts can view CCI data by consumer age, income and census region.
 - $\text{Economy} = \text{CCI} + \text{GDP}$
 - Economists consider the CCI a lagging indicator, meaning that it changes after, not before, the economy changes.
- *The Federal discount rate*
 - It is the amount of interest a central bank charges private banks for short-term loans.
 - This is a rate charged by the Fed when lending funds to members to deal with short-term shortages of liquidity on a collateralized basis.
 - Discount rate is higher than the Fed Funds target rate.
 - Both primary and secondary credit are for very short terms.
- *Federal Funds rate*
 - Interest on Excess Reserves Rate, I.O.E.R., TODO
 - It is a rate at which banks lend/borrow among themselves on an unsecured basis.
 - This is money still held at the Fed to maintain reserve requirements.
 - FOMC sets a range for this rate but the actual rate is calculated from data.
- *Tariff*

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- Tax on services or goods that are imported.
- The purpose of it is to protect that product or service that is domestically produced.
- The protection is done by government - higher taxes on imports.
- For example, if a different country is importing their goods to our country, with similar product, but cheaper price, our company that a given product is manufacturing would need to fire some workers, or so...
- The tariff goes to the government. If governments of both countries would increase tariff against each other, that would be a trade war. No one would benefit from that perhaps.

- *Taxes*

- Income tax - deducts an amount based on someone's salary
- Sales taxes - levied on items at the point of purchase and including flat-rate excise on items like fuel
- Capital gain taxes - on profits from the sale of an investment that has increased in value
- Business or corporation taxes - on companies' profits
- Inheritance taxes - on the estate of someone who dies
- Property taxes - on home transactions
- Import and export tariffs - customs duty
- Environmental taxes - on emissions
- Wealth taxes - based on the value of one's assets

Today, typically there is a progressive income tax systems - people receive a tax-free allowance. Then they pay a certain percentage on another part of their salary up to a certain level, then an even higher proportion on the next tranche, and so on.

- *Interest rates*

- They are the primary yardstick for measuring how much return lenders will get. However, the stated interest rate on a loan, sometimes called the nominal rate, doesn't tell the whole story.
- Because of inflation, the purchasing power of every dollar lent out to an individual or a business tends to decrease over time. Lenders take this into account by calculating what's known as the real interest rate (nominal interest rate minus inflation).
- Interest rates are affected by a couple of things:
 - * Demand/supply of money in the economy

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- * International forces
- * Actions of the federal government
- *Stagflation* (or recession-inflation) - is a situation in which the inflation rate is high, the economic growth rate slows, and unemployment remains steadily high.
- *Velocity of Money* - GDP divided by Money Zero Maturity (M2M). It can be seen as a rate of return. In 1980s, the velocity of money was 3.5, so every dollar created 3.5 dollars in GDP. It's highly correlated with 10-year treasury rate.
- *Gross Domestic Product (GDP)*
 - Total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. As a broad measure of overall domestic production, it functions as a comprehensive scorecard of the country's economic health.
 - The key yardstick of a country's economic performance.
 - A country's GDP is quite simply the measure of its entire income. It is the most widely recognized measure of a country's economic strength and performance.
 - What does GDP include? Total income of the country and its total spending. GDP measures both goods and services, including invisible items (such as housing services - the amount people pay to live in their homes, whether they rent or buy)
 - What is not included? Illegal goods. Also, GDP measures the value of anything produced within a certain country. If a US company owns a factory in Mexico, that factory's output contributes to Mexico's GDP.
 - Also, there is Gross National Product (GNP) which is quite similar to GDP. It measures the economic output of a country's citizens, whether they are based at home or abroad. So it for example includes income earned by US citizens at home and abroad, but excludes what citizens and companies from other countries earn in the US.
 - If a GDP shrinks in 2 successive quarters, then the economy is technically in recession. The worst recessions of all are generally called depressions. There is no broadly accepted definition for a expression, although many economists stipulate that an economy must shrink by 10% from peak to trough.
 - It can be calculated monthly, quarterly, or annually. There are 2 approaches:
 1. Income approach - sum everyone's earnings, or
 2. Expenditure method - add up all spending.The second method is more popular and can be calculated as: $GDP = C + I + G + (X-M)$

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where C - consumption (consumer's spending, and this can be 2/3 of all GDP),

I is investments (business spending),

G is government spending,

X is export, and

M is import

- Micro and Macro

- Micro for business, macro for countries
- *Microeconomics* - study how households and businesses make their decisions and interact with markets. It is more heavily based on statistics, with its practitioners often creating complex computer models to demonstrate how supply and demand will react to a particular change.
- Macroeconomics - study how economies as a whole function. A macroeconomist is more interested in questions about why a country's growth rate is so strong but inflation low.
- Those 2 are interrelated, but what makes them different subjects is that micro focuses on one market in isolation whereas macro looks at all markets collectively.
- Positive economics is the empirical study of what is happening in the world. For example, why some countries are getting richer, why certain families are getting poorer, and what is likely to happen to them in the future.
- Normative economics, engages with what is happening in the world and attempts to sketch out how the economy could be improved.

- *Inflation*

- Keep prices rising slowly.
- It is expressed on an annual basis usually.
- There exist different measures of inflation: CPI (the most common measure), RPI, PPI, Gross domestic product deflator, or others
- When an economy is growing fast, employees receive generous pay increases, meaning they will spend more on goods and services. Prices will tend to rise in response to this increase in demand, whether it be for houses or haircuts. Likewise, if the economy slows, demand will follow suit and prices will come down, or will at least rise at a slower rate.
- The price of goods is affected not just by demand but by the amount of money people have at their disposal. If the money supply grows (either because more money is printed or because banks are lending out more), there will be more money chasing the same volume of goods, which will push the price up. The

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debate over how precisely to influence this process was one of the major intellectual battles of the 20th century, between monetarists and Keynesians.

- The question is, whether prices always have to rise - can't they just stay still? Inflation theoretically is not necessary for economies to function, politicians have tended particularly in the past century or so, to encourage a little bit of inflation in their economies, for number of reasons.

Inflation encourages people to spend rather than save, because it slowly erodes the value of the money in one's pocket. Certain degree of this forward momentum is essential in modern capitalist economies, since in the long run it encourages companies to invest in new technologies. Also, inflation erodes debt, so indebted governments have in the past all too often allowed it to bubble even higher, effectively reducing the amount of money they owe. Similarly, inflation levels are usually analogous to interest rates, and people are accustomed to positive rather than negative interest rates. Finally, people are inherently used to rising wages. It's human nature - people strive to improve themselves, and often find it difficult to stomach a pay freeze each year, even if prices in the shops are more or less static.

- *Deflation*

- Falling prices can cripple an economy.
- Prices of goods and services are falling, usually on a year-to-year basis. During heavy deflation, such as The Great Depression, banks collapsed under the weight of their debts, house prices fell, companies shut down and millions of people lost their jobs. As people realize that things will be cheaper in a few months, they gather cash instead of spending it. It is also a disaster for companies, that sell goods and services for lower prices but still facing the same wage costs. Companies have to fire more workers.
- Many of those symptoms are very similar to those experienced in a period of high inflation.
- Deflation inflates the cost of debt and other commitments.
- The economic explanation for deflation is that the amount of money in the system falls or the supply of goods and services increases. So, whereas inflation involves too much money chasing too few goods, the opposite is true in deflation.
- Typically, the main tool central banks use to control inflation is interest rates. However, they cannot reduce these below zero, so when prices fall there is little more they can do except resort to more unconventional tools. Central banks start injecting more cash into the economy - for instance, by directly buying assets such as bonds or shares, or by increasing the amount of cash commercial banks have in their vaults - all those are collectively known as quantitative easing.

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- *Quantitative easing*
 - Methods central banks employ when interest rates no longer work. It attempts to influence the quantity rather than the price of money in the economy. So this is kind of "printing money & buying financial assets", and it can go into asset prices, so it isn't that effective for stimulating the real economy, so the money doesn't go to individuals and businesses, but into wealthy individuals who held a high number of assets.
- *Currency markets* - also known as *Forex* (short for foreign exchange)
 - This is where investors buy and sell currencies.
 - Every year trillions of dollars' (or euros' or pounds') worth of currency is bought and sold by investors.
 - There are many reasons why a currency rises and falls, but two in particular affects its behavior. First, a currency tends to rise and fall in tandem with perceptions of the economic health of the country with which it's associated. Second, currency investors tend to chase the currency with the highest yield. If a country has high interest rates it means the government bonds and other investment opportunities it issues will offer a greater return than in a country with very low interest rates. Investors from around the world buy them up, and as a result of this extra demand for the country's investments, the value of the currency increases.
 - Floating or pegged? Since 1970s almost every country in the Western world has had a floating currency, the value of which ebbs and flows against other currencies as determined by the markets. But there are some exceptions, with some countries fixing their currencies against either another currency or a group of them. China - whose government carefully controls the value of the renminbi against the dollar by buying dollar-denominated assets as necessary. Other nations occasionally intervene by doing the same if they believe their currency is over- or undervalued.
- *Bond markets*
 - Bonds are the basis of government financing.
 - The international bond markets where companies and governments raise money are far less renowned and understood than their equity counterpart - the stock market - yet they are in many respects far more important and influential. By determining whether a country can cheaply raise cash or not, the bond markets have helped determine the course of wars, revolutions and political struggles, and have had far-reaching implications in almost every corner of life for centuries. Even in times of peace, the ability of a government to raise money is of massive importance to a country's citizens - the higher the interest rates it has to pay, the higher are the borrowing costs all the way across the economy.

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- Sovereign bonds - these are issued by a national government.
 - Bonds are regarded as among the safest investment available. Credit-ratings agencies, such as Standard & Poor's or Moody's and Fitch, exist to rate government and corporate bonds based on the likelihood of default. These ratings range from AAA, the best quality, to C. Typically, bonds rated at BAA or above are regarded as "investment grade" and those below are called "junk bonds". Junk bonds' interest rates are usually far higher.
 - Since governments throughout the worlds typically have to borrow in order to keep their budgets balanced, they are regularly issuing new bonds. In the US, the most common types of government bonds are known are Treasury bills, Treasury notes, and Treasury bonds. In the UK, they are known as gilt-edged securities, or gilts.
 - Bonds originated in medieval Italy, where the city states, often at war with one another, would force their wealthier citizens to lend them certain amounts in exchange for regular interest payments. Modern investors are not forced to buy bonds, in the UK and US the bulk of government debt is owned by the citizens, largely through their pension funds. Pension funds are obliged to put a major chunk of their cash into government debt, since it is regarded as the least risky investment available.
 - The yield curve - it simply measures the interest rates on a variety of different government bonds over time. Occasionally the yield curve becomes inverted, meaning that interest rates on bonds which expire soonest are higher than those expiring in future years. This is a fairly reliable sign that the economy is heading for recession, since it implies interest rates and inflation will fall in the coming years - two phenomena usually associated with an economic slump.
- *Banks*
 - They connect borrowers with lenders. They give money from savers (savings, say 1%) to spenders (loans, say 3%, so the bank keeps 2%).
 - Mark Twain - *"A banker is a fellow who lends you his umbrella when the sun is shining and wants it back the minute it begins to rain."*
 - How they make money?
 1. They make a profit by charging more interest on the money they lend out than the money they have as deposits.
 2. Second banks offer customers other financial advice and services, often for a fee. For example, insurance or investment advice.
 - Key to modern finance is a system called fractional reserve banking. Central banks typically control the amount of reserves banks are obliged to hold - in the US, for example, the reserve requirement is usually 10% - bank with 100\$ deposit can lend out \$90 worth of it. This makes economic sense. It is far

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more efficient for banks to use the money deposited with them, maximizing its opportunity cost, rather than to leave it lying idle. However, there are important side-effects for the wider economy. By lending out this extra cash, banks will be adding to the money supply, and will push up inflation.

- Bank runs - if a large number of depositors may attempt to withdraw their money.
- Governments set up deposit insurance schemes, in the US, it is called Federal Deposit Insurance Corporation (FDIC), and in the UK the Financial Services Compensation Scheme (FSCS) - both protect deposits at banks to a certain amount (as of 2008, \$250k and £50k respectively) This was a necessary to do, because if a bank collapsed, the savers faced losing all their money - as it was during the Great Depression.

- *Central Banks*

- Steer economies away from booms and busts.
- The big four:
 - * The Federal Reserve (US)
 - * The European Central Bank (Europe)
 - * Bank of Japan
 - * Bank of England
- The main function of a central bank is to drive the economy by setting interest rates. But it is not an easy task, because most of the statistics upon which central banks base their decisions are, by definition, out of date by the time they are published. For example inflation figures refer to the previous month. It takes time for the actual effects of certain changes in the economy to manifest themselves statistically. Central banks are concerned with keeping inflation under control.
- Lower interest rates generally mean a faster-growing economy and potentially higher inflation as a consequences, since savings is less lucrative, and borrowing and spending are more attractive options. The situation is reversed with higher rates.
- In general, most central banks set a base rate (In the US, this is called Fed Funds Rate, and in the UK, Bank Rate) on which other private banks base their own interest rates. In order to set this rate, policymakers in central banks have various levers to pull.
 - * First, they announce that they are changing their rate, and private banks usually follow and change their own mortgage, lending and savings rates accordingly.
 - * Second, they use open-market operations, which means buying and selling government bonds in order to influence the interest rates accordingly.

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- * Third, they capitalize on the fact that all commercial banks are obliged to store a slice of their own funds in the central bank's vaults (known as reserves). Central banks can change the rate of interest they pay out on these reserves, or can order banks to hold more or less reserves, influencing how much they want to lend out to their customers, which in turn influences the interest rates.
- Almost every country with its own currency and a government able to impose taxes has a central bank. Most central banks operate independently of politics, though their leading executives are usually appointed by politicians. The banks tend to make an interest-rate decision every month or couple of months, and have hundreds of employees permanently at work monitoring actual rates of borrowing in the market to ensure it's actually working.
- ALSO! Inflation isn't the only thing affected by interest rates. Higher interest rates often strengthen a country's currency as investors from around the world channel their funds into buying it. The downside of this is that a stronger currency makes a country's exports more expensive for overseas customers.
- And also, the role of central banks is not just to control interest rates but also, more broadly, to ensure that the underlying financial system of an economy is in good health. As such, they also act as a lender of last resort in times of economic turbulence.
- *Financial Markets*
 - Any place, where buyers and sellers can trade financial assets.
 - The primary role of them is to bring together lenders (savers or investors) and borrowers (individuals, firms, government). It is done by intermediaries, such as commercial banks, investment banks, pension funds, hedge funds, mutual funds, etc.
 - Types:
 - * *Money Market* - bonds, inter-bank lending, IOU \leq 1 year
 - * *Capital Markets* - primary and secondary, bonds (debt) and shares (equity), IOU $>$ 1 year
 - * *Currency Markets* - spot and futures
- *Money markets*
 - London Interbank Offered Rate (Libor) - is administered by the British Bankers Association sits at the hub of one of the key sectors of the world economy - money markets. It is here that companies borrow and lend money in the short term. These markets are the central nervous system of the world's financial system, and when they fail, it can send the entire economy into shock.
 - * In normal times, Libor simply reflects the rate at which banks are willing to lend to each other in the short term. This lending - often referred to as

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inter-bank lending - is unsecured - it is rather like an overdraft or credit card as opposed to a mortgage, and is essential for banks to function.

- * Libor is a far better indication of the real cost of borrowing in the broader economy. The Libor rate is only an indicative rate, showing what banks would in theory be willing to charge each other.
- * Over time, banks have become increasingly sophisticated in how they create the securities (investment instruments such as bonds, options, shares, etc). Not only have they bundled mortgages together into packages. They have also sliced and diced them into instruments known as collateralized debt obligations (CDOs), and even more complex versions such as CDOs² and CDOs³.
- * SOFR - secured, LIBOR - insecure (not backed by any collateral), so SOFR is almost always going to be lower than LIBOR. TODO SOFR

- *Money Market Fund*

- Bank's fund consisting of CDs, Commercial Papers, U.S. Treasuries, Repurchase Agreements, MBS, Bankers' Acceptance, etc. Investors would buy shares in such fund and would receive interest paid in form of further shares (like DRIP).
- It's very similar to savings account, it's supposed to be super-safe and it should have higher interest rate. The important thing is that money market fund can invest almost in anything (in comparison to savings account) - Shadow Banking - the term for the collection of non-bank financial intermediaries that provide services similar to traditional commercial banks but outside normal banking regulations.
- Tons of money was invested into these funds.
- Commercial paper market - place for really big safe companies to raise short-term (couple of days/months) debt. It goes to money market funds. So people are basically buying this debt. Commercial paper is only issued by firms with high-quality debt ratings.

This big companies then can buy government bonds and then if they run out of cash and need some more money quickly, they can enter so called Repurchase Agreement (Repo). It is an agreement where these big companies decide to sell some of these government bonds to big money market fund on the promise that the company will buy back these bonds in short period of time for slightly higher price. Usually just a few days.

- People trust MMF like they trust savings account. So money market funds invest in mortgages, but also provides a lot of money to large companies through the commercial paper and "Repo" markets.
- In Financial crisis in 2008, hundreds of billions of dollars were invested in MMF, and a lot of money in MMFs was invested in MBSs, and the rest was

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in financing the ongoing operations in some of the largest companies. But a lot of MBSs were worthless. Banks sold MBSs to The reserve primary fund, and this led to investors to rush and pull the money out of the reserve primary fund, and within 2 days, over \$40B had been withdrawn from the fund. This was not an isolated incident, this was happening across the market. So people were withdrawing money like crazy and eventually the MMFs had to sell all of the assets - meaning that they were dumping these assets into the market, contributing to the selling pressure and making the situation worse. And all of these big companies relying on the MMFs to provide short-term funding suddenly had nowhere left to turn. They couldn't pay their employees, suppliers, but also they couldn't roll over their outstanding debt. In this way, the global financial crisis touched so many industries. The only way to start regain the trust in MMFs was to impose new regulations so that they wouldn't invest in these risky assets. But this would destroy the point of these MMFs in the first place. These days, MMFs in the U.S. are separated into two types - Treasury funds (only invest in government debt) and Prime funds (still invest in wild range of products, such as repurchase agreements, commercial papers, CDs).

- Note - a lot of money is now (2020) in Bond ETFs, instead of MMFs.
- Government deficits
 - Government will borrow more and more money each year. Big institutions such as International Monetary Fund (IMF) or Organization for Economic Cooperation and Development (OECD) warn the US and UK about the parlous state of their finances. Governments are addicted to debt.
 - US administration recorded a budget deficit in lots of years - it has received less in tax revenues than it has spent, and has had to borrow to make up the difference. US Federal Budget for 2008 (but this breakdown is similar in most Western economies):
 - * 21% on Social Security (payments to elderly mostly)
 - * 21% on National defense (salaries and equipment - aircraft, guns, etc)
 - * 13% on Income security (payments to poor families)
 - * 12% on Medicare
 - * 10% on Health
 - * 9% Net interest (payments on the debt the government has taken out in previous years)
 - * 3% on Education, training, employment, and social services
 - * 3% on Transportation
 - * 3% on Veterans benefits and services
 - * 5% on Others

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- Higher borrowing tends to weaken that country's currency.
- *Inequality*
 - The wealth gap will destabilize nations.
 - (Milton Friedman) *"A society that puts equality before freedom will get neither. A society that puts freedom before equality will get a high degree of both."*
 - Gini coefficient - the wealth gaps calculation which uses the income between the top earners and those at the bottom of the pile.
 - Studies show that in countries and areas where income inequality is small, people are most likely to trust each other, which makes sense, given that people there will generally have less reason to envy others. Violent and fatal crimes are also far less frequent.
- US Treasury vs Federal Reserve ([ref](#))
 - The U.S. Treasury mints the coins, it is a department of the U.S. government. It collects revenue, oversees the debt based on laws and the budget. It does not create the budget and debt, but the President and Congress do this.
 - Federal Reserve Bank controls the currency and influences the purchasing power in the economy through the use of the interest rate policy tools.
 - * The goal of the Federal Reserve is to "to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates". This state goal of managing the free market opened the door to questionable new role money in the economy. No longer was it to be a medium of exchange but a policy tool to paradoxically engineer capitalism. The Fed is a semi-autonomous organization. The Fed is the central bank for all USA banks and a lender of last resort. The Fed expands and contracts the money supply using the more broadly defined as M2 or even M3 definitions of money.
 - * The central bank can, in a roundabout way, create money out of thin air. This can and does cause inflation. It exacerbates the business cycle and causes pain and suffering in the economy.
 - * The Federal Reserve bank has power. It controls the interest rates. If you control interest rates, then you control the world. In one day, you could push interest rates to 50% or 0%. This means it has much power. Of course, it would not do that, but it does not matter. An incorrect choice of interest rate policy, which is almost always the case, affects the world on and large-scale internationally and on a small-scale.
 - * It could be argued that the Federal Reserve caused WWII. I am not joking. An over-expansion of credit in the 1920s created the great depression, which leads to the rise of opportunist dictators. How was the Federal Reserve not responsible?

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- * The Fed was created in 1913 to provide liquidity to prevent financial panics, such as in 1907, which could turn into a real sector crisis. However, since the economy is complex and can not be micromanaged by turning dials and nob, this is why the Fed consistently gets it wrong. For example, the great depression, the Internet Stock bubble, the housing bubble, to mention a few. From 1836-1913 the USA had no central bank and prospered, including the American “Gilded Age” and free bank era.
 - * When people say the Federal Reserve "prints money," they mean it's adding credit to its member banks' deposits ([video](#)).
 - * A Federal monopoly of money (either the Treasury or the Federal Reserve) gives Washington a blank check to electronically expand the money supply, which is basically printing money.
 - The Federal Reserve (the Fed) System
 - Is spread all around the USA, in 12 branches, plus the board, which is in Washington, D.C.
 - Independent government authority that manages the macroeconomic objectives (growth, employment, inflation, consumption) of a country or group of countries by:
 - * Conducting monetary policy
 - * Regulating the bank sector
 - * Acting as “lender of last resort” to the banks
 - * Coordinating and cooperating with other Central Banks
 - * Providing research and economic indicators
 - * Managing the country's reserves
 - *Sovereign Wealth Funds (SWF)* is a state-owned investment fund or entity that is commonly established from foreign currency reserves. SWFs were created to satisfy investments in non-traditional assets:
 - Hedge Funds
 - Private Equities
 - Infrastructure
 - Direct Investments
- Central Banks are 100% government owned. They have regulatory and monetary policy responsibilities. SWFs are also 100% government owned, but they do not have regulatory and monetary policy responsibilities.
- *Federal Open Market Committee (FOMC)*

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- 12 voting members - 7 members of the Board of Governors of the Federal Reserve System, The President of the Federal Reserve Board of New York, and 4 of the remaining 11 are Reserve Bank presidents
 - Meets 8 times in a year
 - Decides the Committee's target for the Fed Funds rate
 - Voting method: majority rules
- Passage of Time / Lindy Effect TODO

4 References

Some of those YouTube channels helped me enormously, especially during my first year. But still, books cannot be replaced by any means.

Disclaimer: I knew nothing about the topic and had no background, my journey started during Christmas period 2019.

4.1 Books

1. [How an Economy Grows and Why It Crashes](#)
2. [50 Ideas You Really Need to Know: Economics](#)

4.2 YouTube Channels

1. [George Gammon](#)
2. [Rebel Capitalist](#)
3. [Real Vision Finance](#)
4. [Peak Prosperity](#)
5. [Pavol Lupt{a}k](#)
6. [EconplusDal](#)