

The topic of inflation seems to be a recurring theme since the pandemic, but what causes that? What could cause the U.S. dollar's value to drop so much, so quickly? Most people know that printing money causes inflation. And though this is right, there are a lot more moving parts which I will discuss.

What really is inflation? Well the definition is really quite simple: inflation is the increase in the amount of money, which causes the money to lose value and prices go up.

First of all, there are two ways that the money supply is enlarged. The first happens when the government needs money for support systems, to pay debts, and other things. The Federal Reserve prints the money the government needs, and the government puts the money into circulation. Consequently the dollar's value drops.

The other way that inflation can happen is through banks. When someone puts his money in a bank, that bank will only keep a fraction of what it received, investing the rest in various things including loans and government securities. But the catch is when they do loan money, they are legally allowed to loan out much more than what they actually have—up to 9x. The loanee will spend the money. The recipient will put the money in the bank, and then that bank will loan the money out at up to 9x. This cycle can repeat until the money grows into a much greater number than it started out as. For example if Tom gets \$100 and puts it in a bank, it will loan \$900 dollars to, let us say, John. John might spend that money to buy a couch from Sam. Sam would put that money in the bank, which it would loan out at 9x, so \$8100 to, let us say, Peter. Peter might use the money to buy a sports car from Jerry, who would put the money in his bank, which would loan at 9x, that is \$72,900. This is how banks produce inflation, through the use of credit, they effectively make money from nowhere. And if their customers ask for their money and the bank isn't able to give it to them, what should happen? In a fair and just system that bank would go out of business, but instead whenever a bank has overinvested itself in this way, the Federal Reserve prints money to keep banks in business. But in fact, it is important that they do stay in business, because as we discussed, banks create money. And when a bank goes out of business, part of the money it held disappears, since it was created with credit. Well, when the money supply decreases, that is called deflation. The Government can also cause deflation, by changing policies. Deflation is the opposite of inflation, causing prices to drop. Now you might think that since deflation causes falling prices, it would be the ideal method to combat inflation. But the problem is although some prices will fall, there are certain prices that have to remain the same because there are legal contracts involved. For instance mortgages on farms, homes, stores, and office buildings, as well as leases all have specified monthly payments in specific amounts. Deflation means that incomes drop, leaving people to pay off amounts that are now completely out of reach.

Again, one might think that the economy would be much better if the government just stopped printing money, but the truth is that it cannot. When the Federal Reserve stops printing money after doing it consistently, it can be very disastrous. You see, when the money supply expands, interest rates drop. (This is because of the law of supply and

demand. When there is more money in circulation, you could say the money costs less to get, (i.e. borrow) and its purchasing power shrinks, since it is more common. When there is less money in circulation money is more valuable, so its purchasing power is greater as well as the cost to borrow.) Lower interest rates allow people to borrow easier and more often, letting them spend more than they otherwise would have. This tricks businesses into thinking that everyone is richer, causing them to invest in those more expensive things that everyone is buying. Then as a result of the money printing, prices rise. So then the government stops printing money to get a handle on inflation, causing the interest rate to rise. People stop buying as much, since interest rates are up. It is now worth it to save their money in a bank account. People stop buying those expensive things that businesses invested in, causing businesses to lay off workers or get rid of excess equipment and resources. This is what is called a depression. Businesses go broke and people lose their jobs and many become poor. A depression is the period of correction after inflation, with which deflation is usually involved. Usually, before a depression happens the government will print more money to avoid it. A depression started but did not fully mature. That is called a recession. So now we know that if the government prints money prices will go up, and if they stop printing money, the economy will go up in flames. They have started inflation and cannot stop whether they would like to or not.

But what happened after the pandemic to cause such high inflation? What choices were made to put the economy in such a state as it was? Well, there were multiple reasons why prices were so high. First of which, the government's response to the pandemic was to organize quite a few federal initiatives, including the American Rescue Plan, and the CARES Act, which, altogether, accounted for roughly \$5 trillion in government spending, with most of that amount probably printed. Disrupted supply chains also played a part in the mass inflation. Auto production in America dropped from 11.7 million vehicles pre-pandemic, to less than 9 million in 2021, due to shortages of computer chips and other inputs. Also, the crude oil market was disrupted by the Russians' war against Ukraine, causing a rise in oil products. Energy and food prices rose, and shortages drove up prices. The effects of the supply chain disruption faded away, but the consequences of the government's choices did not. Inflation continued, though not at such high rates as before.

Now from all this money printing, you would think that the government is in enormous debt, currently over \$30 trillion. Why is the government in debt when they have all their tax revenue and access to potentially unlimited money? Well, the answer is that the debt is a choice. The debt is used to gain investors, so the government is in no hurry to pay it off. After the revolutionary war, the government was almost \$80 million in debt, while tariffs and taxes brought in \$4 million. Alexander Hamilton, the first secretary of treasury, was tasked to find a way to get rid of it. After examining the situation, he realized that almost no solution was without its drawbacks. If the debt was paid off, investors would move on and invest in other things, and it would require an enormous amount in taxes. Hamilton's solution was to sell government bonds, so as not to halt spending. So then,

Hamilton's plan to pay the debt was to create more debt. This system did in fact keep investors for quite a long time. The US would spend money in different countries. Then what would that country do with the dollars? Well they couldn't put them into their own economy, because the dollars would compete with the national currency. Thus the countries would invest in the US treasury. Which is basically investing in US debt, comparable to having your money in a bank account; that is a debt of the bank to you. The government keeps spending because to cut spending would mean neglecting certain programs already in place. Dubious as this seems, it did turn the US into a prospering country.

During periods of instability in currency, people look for a safe place to invest their money, such as stocks, and precious metals. Specifically, gold and silver are the front runners in precious metals. The price on precious metals has gone up considerably since the pandemic, but why is that? At first you would think that it is inflation, since during and after the pandemic prices rose for most things. But upon closer inspection, it is apparent that is not the case- silver before the pandemic was less than \$20 an ounce and gold was about \$1,500 an ounce. Now, silver is valued over \$50 an ounce and gold is about \$4,000. The prices on both gold and silver have more than doubled since 2020, so the answer cannot be only inflation. The answer is after the recent inflation, people are unsatisfied with the security that paper money offers. Silver is a unique metal, having qualities that make it essential for electronic devices, electric cars, and solar panels, and medical products. Half of mined silver is made into electronic products, which are produced more than they ever have before. Combined with its monetary value, prices rise considerably. Mostly small investors want silver for its monetary value, because it is much cheaper than gold -they can get much more metal for their money, while gold is bought by large investors, because they can store much more value than if they had bought a cheaper metal like silver. When you inspect the gold situation you will find that demand for gold is far greater than the supply, but also that it has been so for many years; yet only more recently has the gold price skyrocketed. Now this goes against everything we would learn in a basic economics class- if demand goes up without the supply going up prices rise- but prices stayed roughly the same for years! Why would this be? The simple answer is the gold market is not like other markets.

Central banks hold the majority of the gold in the world, and in this last decade have increased their gold supplies substantially, mostly due to the devaluation of the dollar. As stated before, countries would invest in the US debt, but they are now investing in gold. Another factor in central banks buying gold is what happened to Russia after it began the war with Ukraine. After Russia had started the invasion, the US and UK seized Russia's holdings in their currencies, causing other countries to get very uncomfortable in their holdings in UK and US currency and thus investing in gold.

The main reason that the gold price stagnated for so long is that central banks (mostly the US and England) would sell their gold short, far below what the demand would call for, so

that they can keep gold prices down . But how were banks able to afford to do this? Doing this should cause them to go bankrupt. Well they do this by selling put and call options. Put and call options are basically betting on the market, on whether the price will go up or down. Buying a put is buying the right to sell someone a specific security at a locked in price in the future, and buying a call means buying the right to purchase a specific security at a locked in price sometime in the future. The idea is that by buying a put or call you can save money by buying a specific thing for less than the market price, or making money by selling something for more than the market price. People buy the put and call options, thinking that gold prices will rise, (since that is the long term trend of gold) and the central banks made a profit even though they are selling gold short. Because the prices stayed low most purchased put and call options are not exercised. Gold prices tend to surge in times of turmoil- during the 2008 financial crisis, prices reached \$1000. During the pandemic gold reached \$2000. Gold prices reached \$3000, when Trump unveiled his plan for tariffs. And now gold is over \$4,000 an ounce!

So in conclusion, the surge in gold price is due to inflation, unrest due to what happened to Russia, and overall distrust in paper money and the liberties that can be taken upon it. Gold and silver's value does not depend on governments, as currency does; governments cannot debase them by simply creating more. It holds its value where government currency does not, making it a worthwhile store of value for every average Joe. After all, if central banks are acquiring it, why shouldn't you?