

BVCU 2023 Strategy – Whitepaper Introduction to the Board Discussion

Brett Oland, CEO

April 29, 2022

1. Inflation – The Big Bad Wolf – Part I

The inflation rate is the highest it's been in 40 years in the US.¹ Doesn't sound that scary? It should.

It is my base case throughout this paper that inflation will continue to persist for the foreseeable future as governments around the world continue to go into debt, print money, and get further and further away from a sound financial system, which I think has become the fundamental problem with society as a whole.

When inflation first starts accelerating, it feels great. Inflation causes asset prices and stocks to rise, and people feel rich. Asset owners love to see their real estate and equities increase in value. Non-asset owners get left behind as traditional assets of the middle class become out of reach. Eventually the asset value increase slows or stops, and inflation transitions to everyday items such as food, energy, commodities, and basic necessities. This is where most of society feels the pinch of inflation in everyday goods. Soon, everyday basic necessities become out of reach for people at the lower end of the income spectrum. When basic necessities become out of reach, people have trouble putting a roof over their families' head or food on the table. You start to see more and more civil discourse and political unrest. People turn to more and more extreme leadership to solve their fundamental basic needs. These populist governments exacerbate the problem by promising more public handouts, which give people short-term lived gratification as they force nations deeper into debt and only increase inflation long term.

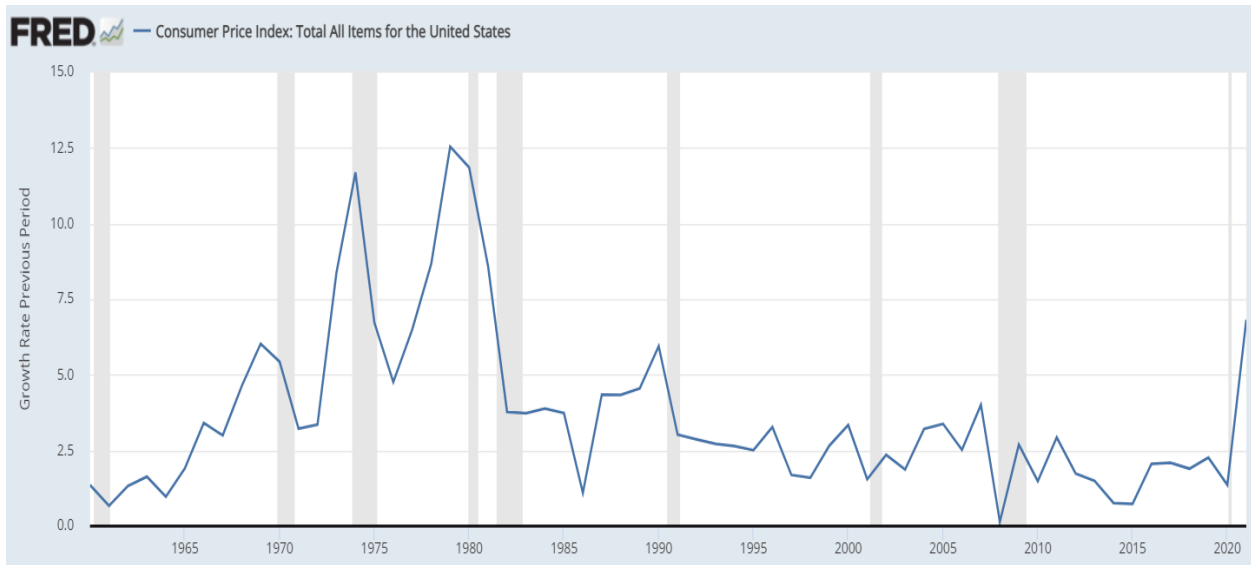
With higher inflation, the general population demands more return on their investments. People go further and further out on the risk curve into massively speculative "investments". They pile into assets that have little chance of success or where the timeline of success is decades into the future to try to receive a return, to keep up with hurdle rate of inflation. Worse yet, with artificially low interest rates, people leverage their money to try to beat the inflation hurdle rate.

Sound somewhat familiar? It should, because we are at the start of a very inflationary decade. As demonstrated by the chart below, we are at the most inflationary time in 40 years, and it's going to get much worse.

¹ St Louis Fed – FRED database

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This whitepaper describes the MASSIVE problem that the US and the entire western world has in the coming years. I focus on the US because they are at the heart of the problem, but it translates into just about any western world country. Western world countries at the forefront are the US, Canada, all countries that are part of the European Union, Australia, New Zealand, and although it does not normally include Japan, for this whitepaper it will.

This is an incredibly complicated topic which I probably have enough thoughts on to write a book, but I think it's important to keep focused on the major topics although there are many rabbit holes that can be followed.

I believe inflation is at the heart of this very big problem that will see the Western World topple under its own weight of debt. Tinfoil hat thinking? Perhaps. But as a financial institution, we have a fiduciary duty to protect ourselves and our members from what I think is the most significant financial shift that we will see in our lifetime.

It is our fiduciary duty to protect the members of our Bow Valley Credit Union. I think inflation is going to be by far the worst problem that we face for decades as affordability is stripped away from those who don't own assets or have not properly prepared for this shift. This has a high likelihood of wiping out the middle class plunging them into poverty and will definitely wipe out the lower class as necessities become out of reach. This will cause massive civil unrest.

We must prepare our credit union to absorb the shock of this, what I think, is an inevitable end.

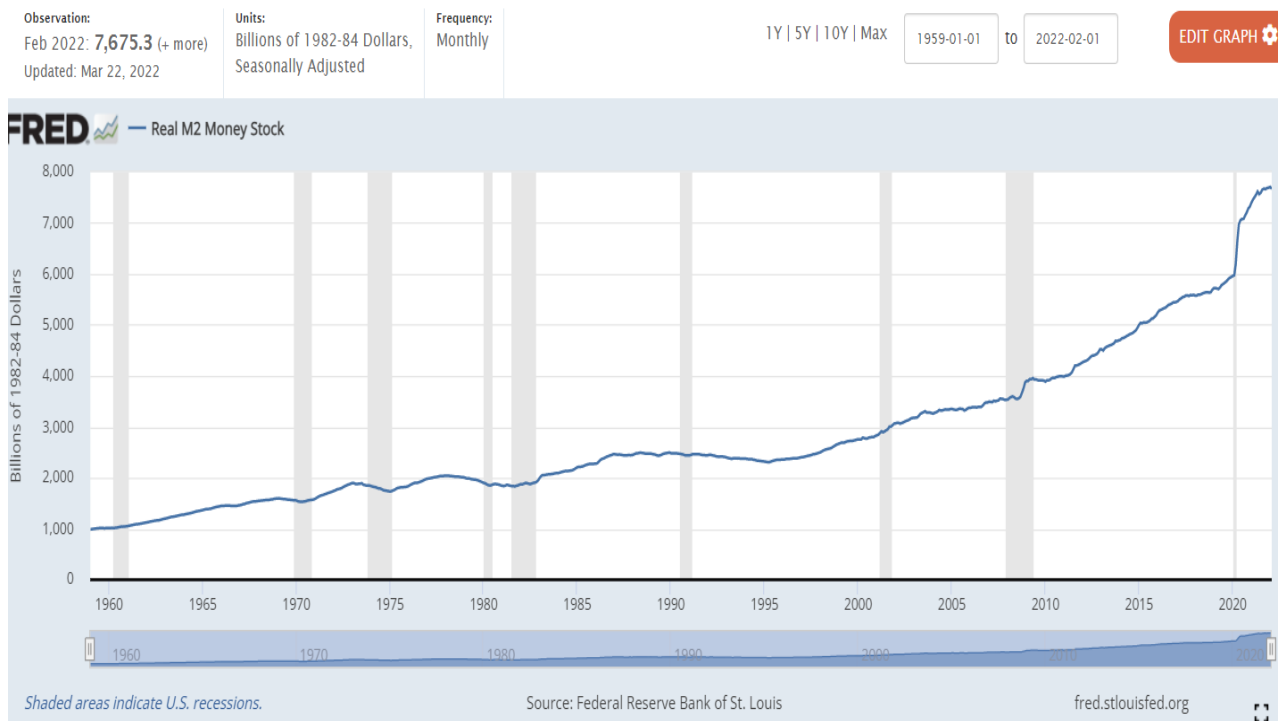
2. The problem - The US and Western World continue to print money

During covid, the US and other western world governments increased the M2 money supply (see definition below) by over 30%. This is what we see reflected today with massive price inflation. The US CPI suggested that inflation is only 7.5% to 8%, but these numbers are manipulated, and I

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think the CPI is closer to 15%+ (explained below). Although the US Federal Reserve (Fed) has stated that they have stopped the quantitative easing (QE) program, not only do I not think they are being honest about this, but I also think they will restart it once we are in the next emergency, which I think in a best-case scenario is a full out recession (best guess is that it begins 18 to 24 months from now) or in a worst-case scenario is a massive world war.



Above is the increase in the M2 money supply in the US, which shows the large spike in currency printing in the last few years.

3. What is Currency Printing?

When I use the term “Currency Printing” in this whitepaper, it specifically means an increase of Broad Money or M2 money supply, which is different from Base Money, or Treasuries. **What I mean when I say Currency Printing is an INCREASE of M2 money supply.** There is significant nuance between the types of currency, so before we get going, we must define these terms.

There are 3 types of “currency”:

1) Treasuries:

Issued by the government. When the governments spends more than they receive in revenues, they need to sell Treasuries (or bonds) to able to fund the difference. This is not necessarily currency printing (or an increase in M2 money supply).

2) Base Money:

The Bank of Canada (BOC) doesn't create money they create bank reserves which are denominated as loonies which are a liability of the BOC, which is Base Money. They are liabilities of the BOC just like if you have deposits at BVCU, this deposit would be a liability with BVCU.

These are assets of the Financial Institutions (commercial banks and Central 1 (C1)). The BOC uses these bank reserves to buy assets when they perform Quantitative Easing (QE) and sell assets when they perform Quantitative Tightening (QT). This money is not circulating in the real economy.

3) Broad Money (M2):

Broad Money, or M2 money, is the money that is circulating in the real economy that is buying goods or services.

There are four types of organizations that can hold money:

- 1) The Government (or Treasury) – who hold their money at the BOC.
- 2) The BOC – acts as an intermediary between the “Government” and Financial Institutions (i.e., Treasury Department and the Commercial Banks or C1). The BOC carries liabilities that are Bank Reserves in the case of the Commercial Banks or C1; or the Treasury General Account deposits in the case of the Government (or Treasury).
- 3) Financial Institutions - Commercial banks/Credit Unions (via C1) – act as an intermediary between the BOC and the general population, Corporation, or Non-Financial Institution entities.
- 4) Non-Financial Institution entity - General Population, Corporation, or Non-Financial Institution entities – hold money in various deposit vehicles.

Base and Broad Money do not go up in parallel. This is because, regardless of what Base Money is doing, the Financial Institutions (Commercial Banks or Credit Unions) create their own M2 money supply by issuing loans.

The most important take away from this complicated garbage above is the creation of money is only inflationary when M2 money supply increases and is what I refer to as Currency Printing.

4. What is QE? Is QE inflationary? And why it is different this time?

The Fed did an unprecedented amount of Quantitative Easing (or QE) during the Great Financial Crisis (GFC) of 2008.

QE is the process of central banks purchasing government treasuries (bonds) either from the open market, or upon issuance from the Treasury. This purchase is done to prevent a spike higher in interest rates on the open market treasuries. During the GFC, investors were running

for cover and getting out of all investable assets, which included treasuries. When there are fewer buyers than sellers for treasuries, the yield on the treasuries will increase to find a buyer. On the opposite side, when there are fewer sellers than buyers, the yield on the treasuries declines because there is more demand, even at the lower yield. The Government and the Fed don't want an uncontrolled increase in the treasuries' yield as there are several issues that causes (described in various places below).

The QE which happened in the GFC had little to no inflationary consequences. As a result, governments, and Modern Monetary Theory (MMT) advocates around the world cheered, because to them, it meant they could issue treasuries and spend money on any programs that they could dream up by simply using QE to slow the rise of interest rates.

During 2020, the covid crisis, government, and central banks (such as the Fed) around the world did the same QE process that happened in the US during the GFC. Governments and MMTer's assumed that the impact of QE would be the same. Governments thought they could get away with the same programs of QE during COVID-19 and beyond, without inflationary consequences. They could not have been more wrong.

There was a major difference between 2008 QE and 2020 QE, where in 2020, it would MASSIVELY increase the M2 money supply and hence inflation.

During the GFC of 2008, governments implemented a huge amount of QE. QE was used to purchase outstanding treasuries and specifically Asset Backed Commercial Paper (ABCP). During the GFC, investors were running scared. As you may remember, Commercial Banks, especially in the US, had a massive amount of ABCP and derivatives which were toxic to their balance sheets and led to massive write-downs, liquidity shortages, and bankruptcies of the US Commercial Banks. Quickly after the first few bankruptcies, the government came in and the US Fed purchased an unlimited amount of ABCP, essential backstopping the market and bailed out the Banks from collapse.

The government needed to sell treasuries to have the money to be able to do this.

When they dumped this many new treasuries into the market, the rate on these Treasuries started to skyrocket. Because of the unprecedented amount (unprecedented at the time) of issued treasuries, there were not enough buyers for treasuries, and rates were forced to rise to find buyers. BUT the US Government and the US Fed didn't want interest rates rising into an obvious recession, so the US Fed was forced to buy the treasuries and put them on their balance sheet to keep the rates lower.

So, why didn't we see massive inflation?

The reason we didn't see massive inflation in 2008 is because they did not increase the M2 money supply with these ABCP purchase programs.

Here is the reasoning.

There are four different situations that can happen with money:

- 1) If the US Fed buys or sells Treasuries to Financial Institution (or the Treasury (government)), there is no increase or decrease to M2. They only exchange bank reserves for the Treasury, and no new money is created.
 - 2) If a Non-Financial Institution entity buys or sells a Treasury to another Non-Financial Institution entity, there is no increase or decrease in M2. There is no new money created.
- BUT,
- 3) If the US Fed, Treasury or Financial Institution buys a Treasury from a Non-Financial Institution entity, there is an INCREASE in M2 money supply.
 - 4) If the US Fed, Treasury or Financial Institution sells a Treasury to a Non-Financial Institution entity, there is a DECREASE in M2 money supply.

So, what was different in 2020?

In the GFC, the government was using the money generated from the Treasury to purchase ABCP from the Commercial Banks and it did not go outside into the Non-Financial Institution entities. Therefore, there was no increase in the M2 money supply as a result (so no Currency Printing) and therefore it did not cause inflation.

During covid, the government sold treasuries, took the money from the sale, and sent it out to the voting population in the form of individual and business covid stimulation cheques, therefore MASSIVELY ADDING to M2 money supply (Currency Printing), hence why we have inflation in the past few years and will continue to see excessive inflation.

This is what kickstarted a massive inflationary super cycle which I expect to see for the next decade (or more), which is what is identified as the major problem in this whitepaper. Throughout the rest of this whitepaper, I discuss several factors as to why we will see inflation continue to persist. Governments around the world have let the inflation genie out of the bottle and I have serious doubts they can or have the desire to get inflation under control.

5. Interest Rates have been too low for too long

Governments, through QE (which we know from above may or may not be inflationary) have created artificially low interest rates. They are artificial because the central banks are buying treasuries to keep their prices lower than they would be in the open free market. With artificially low interest rates, it has created massive asset bubbles just about everywhere you look.

There is a lot of malinvestment on very speculative assets as far as the eye can see. Bitcoin and crypto currency are a symptom of this (some argue they will be the solution, but I don't think so, but that is a bigger conversation). This massive bubble, if popped, may result in up to 80% of the

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stock market being wiped out and a housing price reduction that will make the GFC of 2008 look like a Disney cartoon (Disney stock is also in a bubble). The government is between a rock and a hard place because they have taken on so much debt that they cannot allow interest rates to rise too much, otherwise they will default on the debt, but with inflation running so hot, they have no choice but to let interest rates rise (discussed further below).

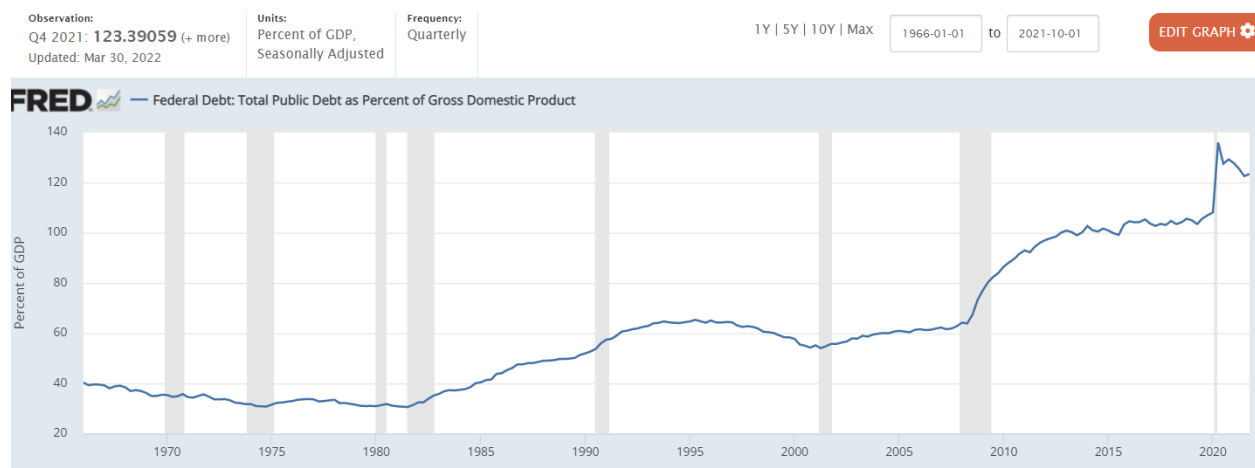
This is why as of late we have seen a decrease in the price of crypto currencies and the NASDAQ as they are loaded with speculative assets. Speculative assets such as crypto and a lot of the stocks on the NASDAQ do not do well with rising rate environments. This is because they are unproven assets. A lot of them have no income (or even heavy losses), but they have an expectation of making money a long way in the future. With interest rates rising, investors become less patient with a company's ability to potentially make a return at a date infinitely farther in the future and move to assets where return is more certain today.

But the damage has been done. With the interest rate being so low, for so long, it has inflated expectation of capital gains and returns in stocks, crypto, and housing. And I believe all of them are in a bubble ripe for popping as interest rates rise.

6. Across the Debt to GDP Rubicon

There have been 54 countries with debt to GDP over 130% since the 1900s. Of these countries with debt to GDP over 130%, 53 of them have defaulted on the debt and these nations went bankrupt. Based on these odds, this means the probability of the US defaulting on their debt is about 98.1%.

Canada has a debt to GDP of 118% and the US's debt to GDP was as high as 137%² (this does not include provincial/state and municipal debt).



² St Louis Fed - FRED database

You may be holding your breath and think that the US will be in the 1.9% of the countries that won't go broke, but the one country that did not default on their debt is Japan, and I'll explain why this is a false hope below.

7. Japan Debt to GDP Anomaly

Japan has bucked the trend, being the only country with debt to GDP over 130% that has not defaulted, yet. Japan's debt to GDP is 234% (which does include provincial and municipal debt). A few things are much different about Japan that have allowed this to continue since 2008.

- a. Most of Japan's debt is held by its citizens and not held by outside countries. In the US, most of the debt is held by outside countries (see US Debt held outside the US below). So, it is more unlikely that Japan's own citizens would force the country into default. The US and Canada are not so lucky.
- b. Japan is a Creditor Nation and has a trade surplus.
- c. Japan holds \$1.3 Trillion in US treasuries.

But, although Japan has these advantages over the US, the nation is at the end of its rope.

The Bank of Japan (BOJ) has recently announced that it will buy an "unlimited" amount of 10-year Japanese treasuries (QE) to keep the treasuries rate at or below 0.25%. But further than the QE, they have implemented Yield Curve Control (YCC) on their 10-year bonds in late February 2022 (see Yield Curve Control below). They do this by the BOJ buying as much of the 10-year bonds as necessary to keep the rates below a certain point. In other words, they are putting a cap on long-term rates through QE.

As we know, interest rates will rise to find a bidder when treasuries go into the open free market. Generally, the higher the risk, the higher the rate to compensate the lender appropriately. In my mind, QE is something Banana Republics do, finance their own countries debt, or also called "monetizing" their debt. This is the first step toward the end a country's debt system. All other 53 countries, just like Japan is doing now with a debt to GDP over 130%, tried to monetize their debt prior to going bankrupt. It didn't work.

There are several problems with YCC, or monetizing debt described below. This is a MAJOR indication that the game is up and the Debt to GDP is no longer sustainable. We are already seeing big hits to Japanese Yen strength (value in relation to other currencies, as has already seen an 18.37%³ decline in its value since the beginning of 2022 (as of April 20, 2022).

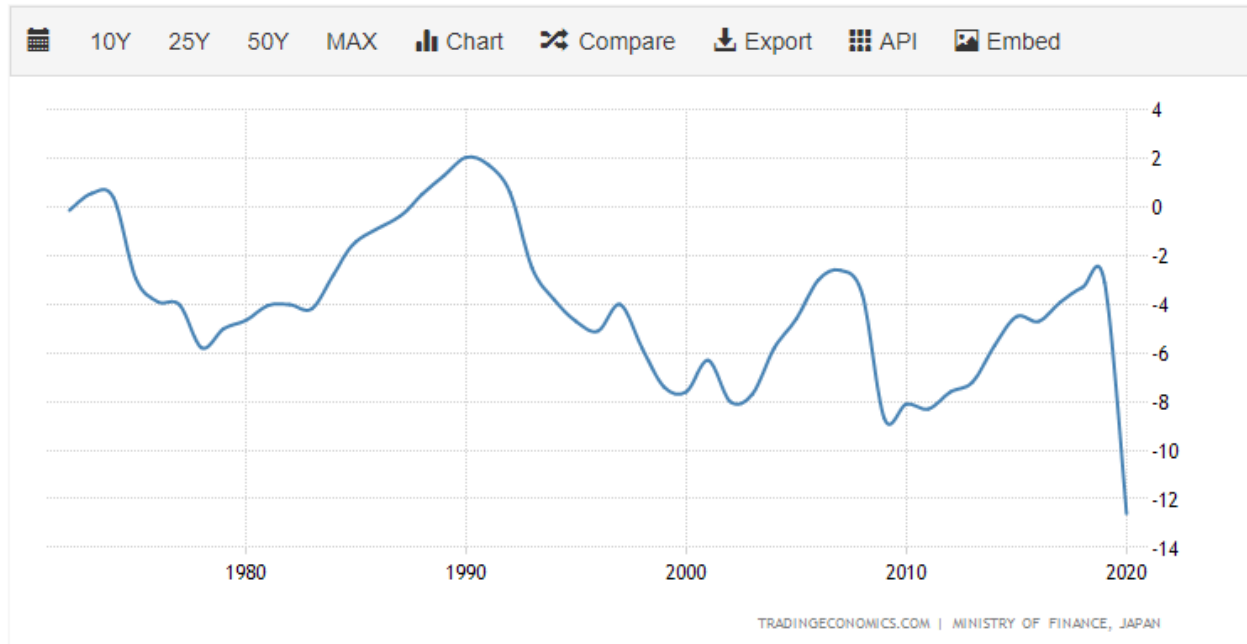
Another problem arises with interest rates held artificially low: it encourages the government to take on more debt, and the cycle quickly spins out of control. QE by itself is fine, but unfortunately the Japanese government keeps spending the money generated from the sale of

³ Trending Economics

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treasuries. In fact, Japan has not been in the black with their spending since the 90's. Below is Japan's % of revenue shortfall.



The bigger problem with YCC comes to head in Japan's ability to service the debt. The BOJ will have to eventually flip-flop away from YCC as the Yen will continue to get crushed, inflation will get out of control, as the balance sheet of the BOJ explodes higher. Inflation will rise significantly for Japan, not only because of energy prices and supply chain issues, but also because the value of their Yen is so much less, and they will have to buy products with devalued currency. Once the BOJ backs away from YCC, it will cause rates to rise very quickly to a much higher rate, which becomes a debt servicing problem.

8. Yield Curve Control (YCC)

There are several problems with YCC:

Assume a country starts implementing YCC on a new 10-year treasury bond issued by the Central Bank. Keeping the yield lower on the treasury bond may work for a short time, but then cracks will start to appear in other areas, as we have and will start to see more of this in Japan:

- a. Firstly, you'll start to see rates rise in other government bond lengths, i.e., you'll start to see accelerated rate increases in the 3, 5, 7 etc. year treasury bonds. Central Banks can try and buy the entire curve, but eventually, if the game goes long enough, they will own the entire bond/treasuries market. I expect that this will happen in Japan, where the rate

suppression on the 10-year treasury bonds will spill over in the different length terms in short order.

Inflation causes all bonds to fall, not just treasury bonds. If the government implements YCC long enough, they will eventually have to buy all bonds: Treasury bonds, state/provincial bonds, municipal bonds, corporate bonds, junk bonds, all bonds will feel the sting of inflation, and the market will want out of them, causing all bonds to fall even further as rates try to rise. Central Banks will have to try and buy it ALL, and the yield curve will become completely manipulated. This will eventually spill over into the equity market.

- b. The government is effectively overpaying for treasury bonds. Because the government puts a cap on rates, it incentivizes the market to sell to the Central Bank. This is because YCC effectively signals that rates will rise if not purchased by the government. If rates rise, the bond will be worth less and people try to get out of the way before rates inevitably rise. Nor will you be able to get a better coupon rate for the bonds. So, this means everyone will sell their bonds to the Central Bank because they will effectively never get a better price for them. This is because the Central Bank is irrationally overpaying more for the bonds than the open market would.
- c. YCC does work to dampen treasury rate increases for a period, but it does not eliminate its yield rises. In deficit spending nations like Japan, YCC acts like a spring on suppressing rates: the longer YCC is in place it like pushing down harder and harder on a spring, but eventually you can no longer put more pressure on the spring without breaking it and the spring must be released. At this point of release, rates spring back with a vengeance. The more and longer they use YCC, the worse the rates rise will get in deficit nations, and the harder it is to keep the rates spring in check.
- d. When a country attempts to bring all their debt home, the government sometimes forces pension funds, insurance companies, etc. to buy the debt. You have seen this with various legislation changes of the past several decades. Governments get away with this legislation by suggesting that to make the organization “more stable” they need to buy the “no risk” debt. (See **Pension Crisis – A Demographic Time Bomb** below). This effectively spreads out the risk for government, so they don’t have to carry all the treasuries.

This action of bringing all of a nation’s debt home is what will ultimately break the system. See US dollar as a Safe Haven below.

- e. The last point we are seeing already as it weakens a country’s currency. This is causing all sorts of problems, but probably the worst is that it exacerbates the inflation problem, which makes it harder to keep the YCC in place.

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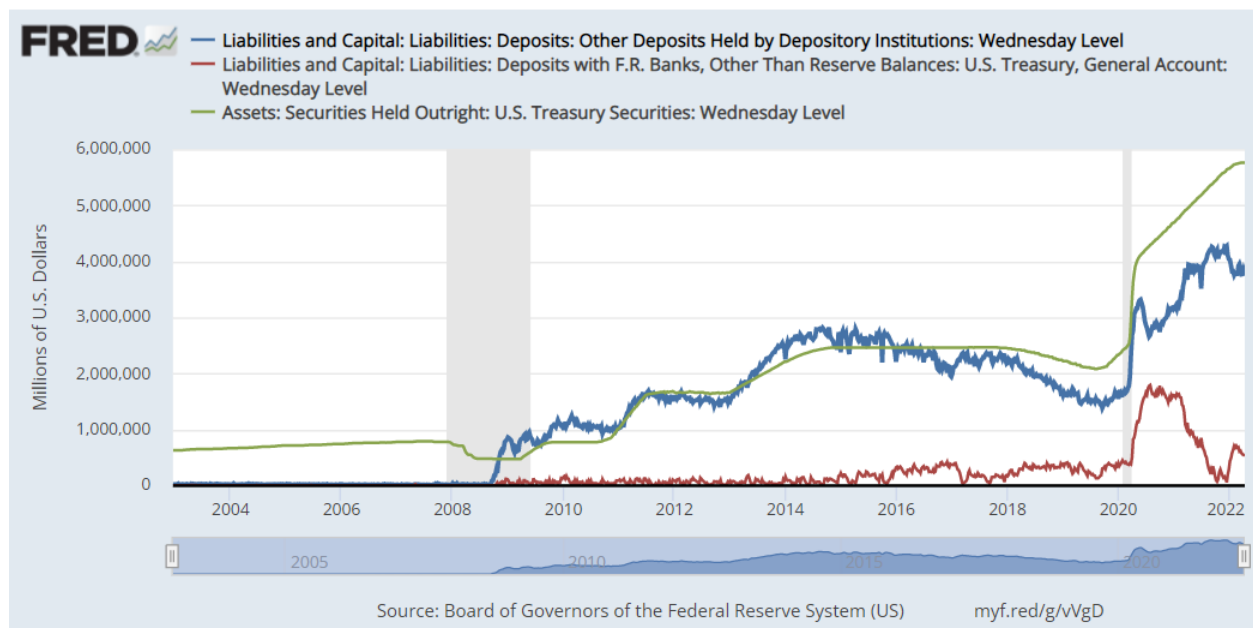
Countries around the world generally want their currency weak in relation to the US dollar. This is because the US is the largest consumer in the world, and when they have a lower currency value in relation to the US dollar, the US buys more from that country.

In Japan's case, the value of the Yen has decreased too quickly and will force inflation on its citizens as they try to import goods and services from outside their country.

If ALL counties print money at the same rate, which we have largely done in the western world, all currencies are declining at the same rate, so no harm no foul. But this is very difficult to do, based on the difference between counties wanting or not wanting to print money and being fiscally responsible.

9. US implementation of YCC

I have no doubt that the US, like Japan, will eventually implement YCC, but unlike the BOJ the US Treasury has a much shorter rope. QE is effectively YCC, and the Fed and the Bank of Canada were buying treasuries through the past 2 years, but they just didn't publicly announce it as YCC, or peg the rate at a certain level like the BOJ.



As can be seen in the graph above, the Fed has been purchasing US Treasuries (line in green) especially over the past two years. Foreign central banks and depository institutions did purchase US Treasuries at the start of the pandemic but have started to decrease their amounts on their balance sheets (seen in the red and blue lines), where the Fed has only flatlined purchases when the government stopped needing as much money. The Fed has stated that they will actively reduce their balance sheet (QT), but I suggest when the next emergency comes about, such as a pending recession or a major war, the emergency will cut the Fed's plan for QT

short. The US Fed's will likely need to expand their balance sheet again and higher with more QE, to combat this pending decline of yields because of a decline in assets' prices because of the pending recession or major war.

Adding to (or taking away) from this already short rope, is the fact the US is a dual deficit nation (trade and financial deficit), whereas Japan is only a financial deficit nation, but has a trade surplus. Also, the US has other significant problems outlined in this whitepaper, that US citizens need to pay for by printing money and Japan is not depending on International Financing to fund these deficits and unfunded liabilities.

The only thing that may prolong the US's ability to have YCC is the US dollar and its World Reserve Currency Status.

10. World Reserve Currency status

The argument that allows the US to get away with all these monetary shenanigans is the privilege that the US oversees the World Reserves Currency.

The US dollar is the World Reserve Currency which means that a *large quantity of US dollars are maintained by central banks and other major financial institutions to prepare for investments, transactions, and international debt obligations, or to influence their domestic exchange rate. A large percentage of commodities, such as gold and oil, are priced in the reserve currency, causing other countries to hold this currency to pay for these goods.*⁴

The US is the only country in the world that is able to produce the US dollar.

March 12, 2022 may well go down in history as the beginning of the end of the US dollar as the World Reserve Currency. On March 12, 2022, the US removed Russia from the SWIFT payment system because Russia invaded Ukraine.

What does the world reserve currency do?

In general, a reserve currency:

- Has the depth and liquidity to allow for reliable and efficient international transactions.
- Can be freely and easily exchanged for other currencies.
- Is held by many monetary authorities and institutions, in significant amounts.

The countries with the most foreign reserve currency in 2019 were:

1. China: \$3.2 trillion
2. Japan: \$1.3 trillion
3. Switzerland: \$855 billion
4. Russian Federation: \$555 billion

⁴ Investopedia

5. U.S.: \$517 billion
6. Saudi Arabia: \$515 billion⁵

Most of these foreign reserve currencies are held in US dollars: \$6.8 Trillion: the next highest is the Euro at \$2.2 Trillion. ⁶

What is SWIFT? The Society for Worldwide Interbank Financial Telecommunications or SWIFT, is a messaging network that financial institutions use to securely transmit information and instructions through a standardized system of codes. Although SWIFT has become a crucial part of global financial infrastructure, it is not a Financial Institution itself: SWIFT does not hold or transfer assets. Rather, its use lies in its power to facilitate secure, efficient communication between member institutions. It really just a text-based accounting system. SWIFT transacts in US dollars, and countries require a US reserve account to be able to transact on SWIFT.

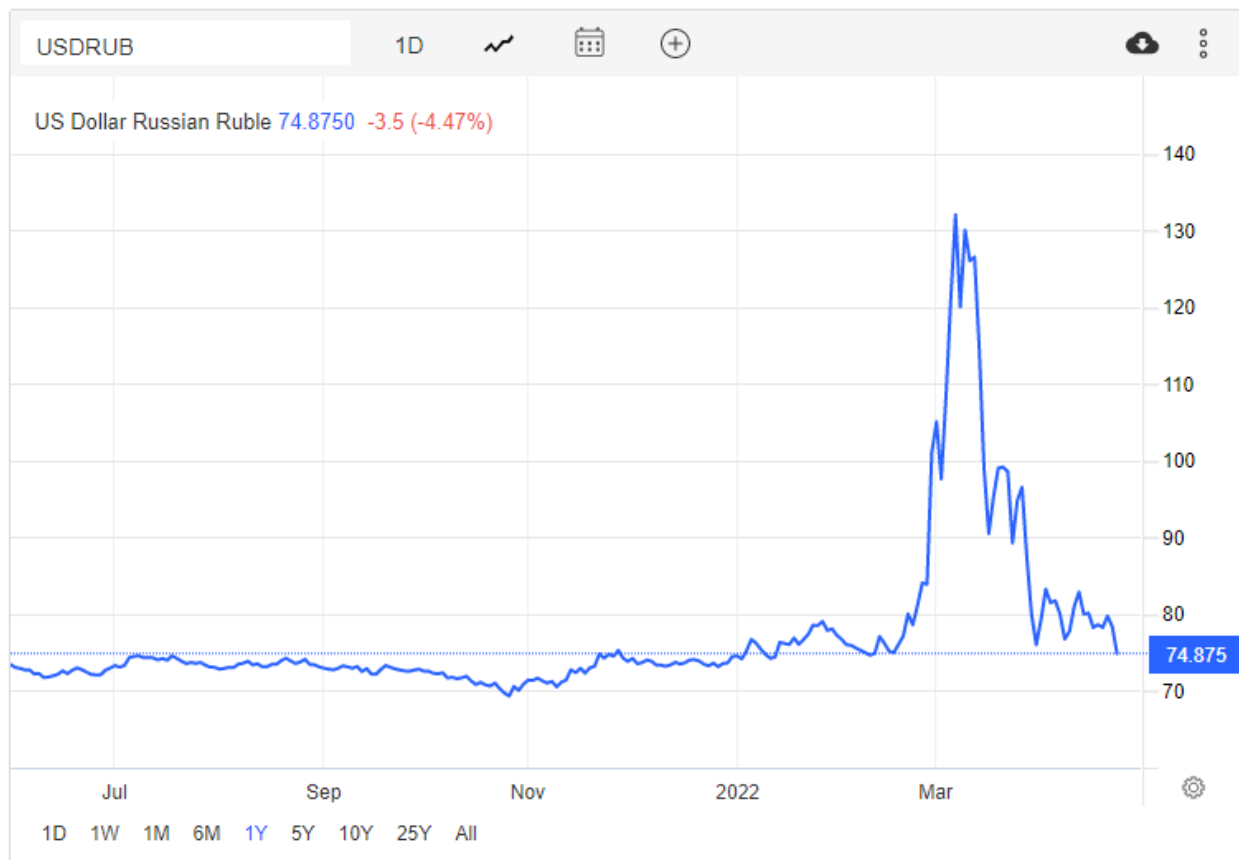
By the US removing Russia from the SWIFT payment system, it effectively froze their reserve assets and signaled to the world that if you are an “unfriendly” country to the US, you will be removed from the SWIFT system and your reserve currencies will be frozen. So, effectively the US has frozen over one-half of a Trillion dollars in Russian assets that they cannot use to transact. As a result, the Russian ruble crashed in value compared with the US dollar (seen in the spike below).

⁵ thebalance.com

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Russia has found a way around this problem of a crashing ruble. Announcing on March 23, 2022, the Russian Central Bank will take rubles or gold for its oil and gas. This has effectively put a floor on the value of the ruble. The Russian Central Bank pegged one gram of gold to 5,000 rubles. Now that means, one troy ounce of gold or 32 grams of gold would now cost 160,000 rubles. At the current exchange rate, 1 oz of gold would cost roughly \$1,600 US dollars in Russia.

But wait, in the US, the same quantity of gold would cost you approximately \$1,900. That means Russia has effectively ratcheted up its currency's value against the dollar by pegging it to gold. If, one gram of gold is bound to 5000 rubles, then according to western standards, the ruble must be valued at 70-75 units against 1 dollar. Hence, why Russia was able to stop the decline in the value of the ruble and return it to normal levels.

By this, Russia has not backed their currency by gold, but rather put a floor on the ruble in terms of gold (or the US dollar since the US dollar is the world reserve currency and gold is valued in US dollars). To truly be backed by gold, the Russian Central Bank would have announced that you could go to the Russian Central Bank, and they would give you gold for a certain number of

⁷ Trading economics April 22, 2022

rubles Regardless, this is one step closer to a currency being backed by gold like the US dollar prior to 1971 (see below).

But there is more. Russia is now using the Cross-Border Interbank Payment System or CIPS, seen as the Chinese equivalent of SWIFT, so effectively side stepping the western sanctions and making the SWIFT sanctions a non-issue.

What does this have to do with the World Currency Status?

If the US was willing to remove Russia, a large resource-rich, nuclear superpower from SWIFT, what is stopping them from doing it to smaller, less influential countries. Countries around the world are likely second guessing their status with the US and how they do business, as well as looking for alternatives in case they fall out of favor.

Loss of the reserve currency status would lead to significant US dollar weakness. The US dollar weakness will cascade into much bigger problems on the world stage. This can obviously lead to very significant problems in the US in the form of inflation. If the US dollar falls or collapses, the cost of everything being imported into the US (and Canada) will skyrocket. I predict there will be more struggles in Europe as everything is priced in US dollars. So, if they must purchase most everything on the backdrop of a declining US dollar (in relative terms not as a function of the DXY, explained below), once again inflation will skyrocket because of the loss of buying power of the US dollar. It is my belief that over-indebted, over-taxed, socialist nations will fall first. I believe the European Union will be the first domino to fall with the weakness of this US dollar on the world stage and loss as the World Reserve Currency. Ever think about why Britain wants out of the EU?

11. Energy is the Economy

Energy is the economy. You may have heard me use this phrase before. A little more explanation on this is needed since it is critical. Ever since the industrial revolution, energy demand has tracked with economic growth. For the past two centuries, the amounts of energy that economies need have increased virtually in lockstep with the amounts of wealth that an economy creates. So, wealth creation has depended on a country's ability to produce and use energy. By this logic, energy is the only true measure of wealth. Hence, it would make sense that value of money be based on this same approach. Hence, energy is the economy.

Prior to and during World War II, many European Countries sent their gold reserves overseas to the US for safe keeping in case their country was taken over by Axis forces. After the war ended, the US convinced the European countries to keep their gold in the US, and take the gold-backed US dollar in exchange for their physical gold. The war-battered European nations agreed, and the Bretton Woods system was formed in 1944, making the US dollar the World Reserve Currency, taking it away from the British Pound Sterling.

In the early 1970s, the international gold-backed dollar standard, known as the Bretton Woods, was collapsing as many foreign nations, who had previously agreed to a gold-backed dollar as the global reserve currency, no longer liked the arrangement. Nations like Britain, France, and Germany determined that a cash-strapped, Uncle Sam (or the United States) was in no financial shape to be leading the global economy. They were just a few of the many nations who began demanding THEIR gold back in exchange for their US dollars. Part of the agreement is that nations could exchange their US dollars for gold at any time, but when President Nixon closed the gold window and took the dollar off the gold standard in August 1971, this changed. The US had effectively defaulted on their obligation.

There needed to be a new standard, since the gold-backed dollar was no more, and the US effectively went insolvent. Since the US understood that Energy is the Economy, they needed to make an alliance with an oil-rich nation. At the time, Saudi Arabia was by far the most oil-rich nation in the world. So, the US formed an agreement with the Saudi Arabian Royal Family to ensure their control over the world monetary system continued through fiat money.

According to the agreement, the United States would offer military protection for Saudi Arabia's oil reserves. The US also agreed to provide the Saudis with weapons, and perhaps most importantly, guaranteed protection from Israel. In return for US protection, the Saudis had to agree to price all their oil sales in U.S. dollars only. Ever since, this was known as the Petro-dollar system. Or as I like to call it Bretton Woods 2.0.

Now fast forward to today, on August 30, 2021, the US ended its 20-year occupation of Afghanistan, leaving all their allies and equipment stranded to the will of the Taliban. Since this was a huge demonstration of weakness by the US to their supposed partners in Afghanistan, how do you think Saudi Arabia feels about their protection from the US military? Ever since, the US and Saudi Arabia have been at ever increasing odds surrounding Afghanistan, and now the war in Yemen.

In fact, Saudi Arabia was so upset with the US that they started talks with China about purchasing their oil in Chinese Renminbi or Yuan. The Wall Street Journal reported that Saudi Arabia had been in talks with China to sell its oil in Chinese Yuan instead of US dollars on March 15, 2022. This may be known as the day that Bretton Wood 2.0 died, and another big hit occurred to the US dollar as the World Reserve Currency.

Oil is by far the most important commodity because it IS the economy because the previous global monetary system was built upon it. There is a new system forming (see Bretton Woods 3.0 below) of the best guess of where this may be headed.

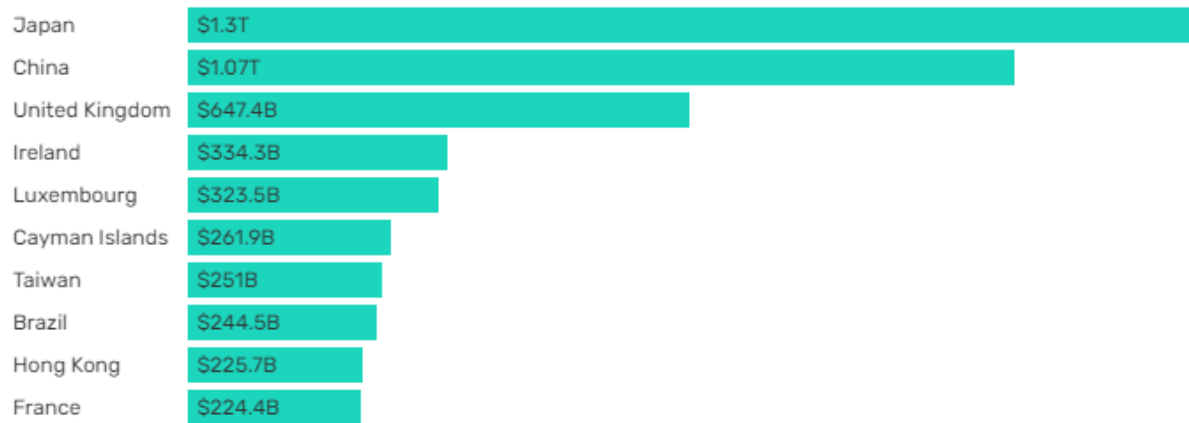
12. US Debt held outside the US

Will major powers no longer need to hold US Debt and Reserves because they no longer need the US dollar to purchase oil and gas?

Countries around the world have held US treasuries because they need to purchase goods and services, mainly oil, in US dollars. Does this make sense now, since a major oil-producing nation and China, soon to be the largest economy in the world, are stepping away from using it in trade? Below is the US Treasury holdings by major countries.

Major Foreign Holders of U.S. Public Debt

Japan is the largest holder of U.S. debt.



Source: [U.S. Department of the Treasury](#)

Further to this, Chinese holdings of US Treasuries has declined steadily since the aftermath of the GFC in 2008. Since the US continues to have a massive trade deficit with China and they are not purchasing US treasuries, where do you suppose the excess funds are going? My thoughts are when the US went through the GFC, China lost trust in the US dollar's ability to be a store of value in treasuries. It is also my guess that China does not want to lose over \$1 Trillion in assets, so rather than blowing up the investment, China needs to exit their position in US treasuries slowly.

US Treasuries Owned by China, in USD Billions

As of Jan. 2021, China owns \$1.095 trillion of the total \$28 trillion U.S. national debt.



Source: [U.S. Department of the Treasury](#)

U.S. goods and services trade with China totaled an estimated \$615.2 billion in 2020. Exports were \$164.9 billion; imports from China were \$450.4 billion. The US goods and services trade deficit with China was \$285.5 billion in 2020.⁸

According to the Organization of Economic Co-operation and Development, Saudi Arabia is the world's largest oil exporter at \$145 billion (US dollars), and China the largest buyer at \$204 billion (US dollars), with 2019 figures.⁹ Considering China is the largest importer of oil and Saudi Arabia is the largest exporter, would it not make sense for their governments to at least have a conversation about trading in their local currency? Currency risk would be reduced significantly if they traded in one of their local currencies.

Overall, countries around the world are less and less accepting of US treasuries for their products and services. They are becoming increasingly wary of the US's ability to pay for these long-dated options on US dollars. This is seen in the chart above with China, but it is becoming more prevalent in many parts of the world. Some countries are not decreasing their US treasuries, but they are moving towards not increasing their holdings. March 12, 2022, along with the US kicking Russia out of SWIFT, might also be marked as the date countries around the world shifted from trusting the US's ability to pay their debts.

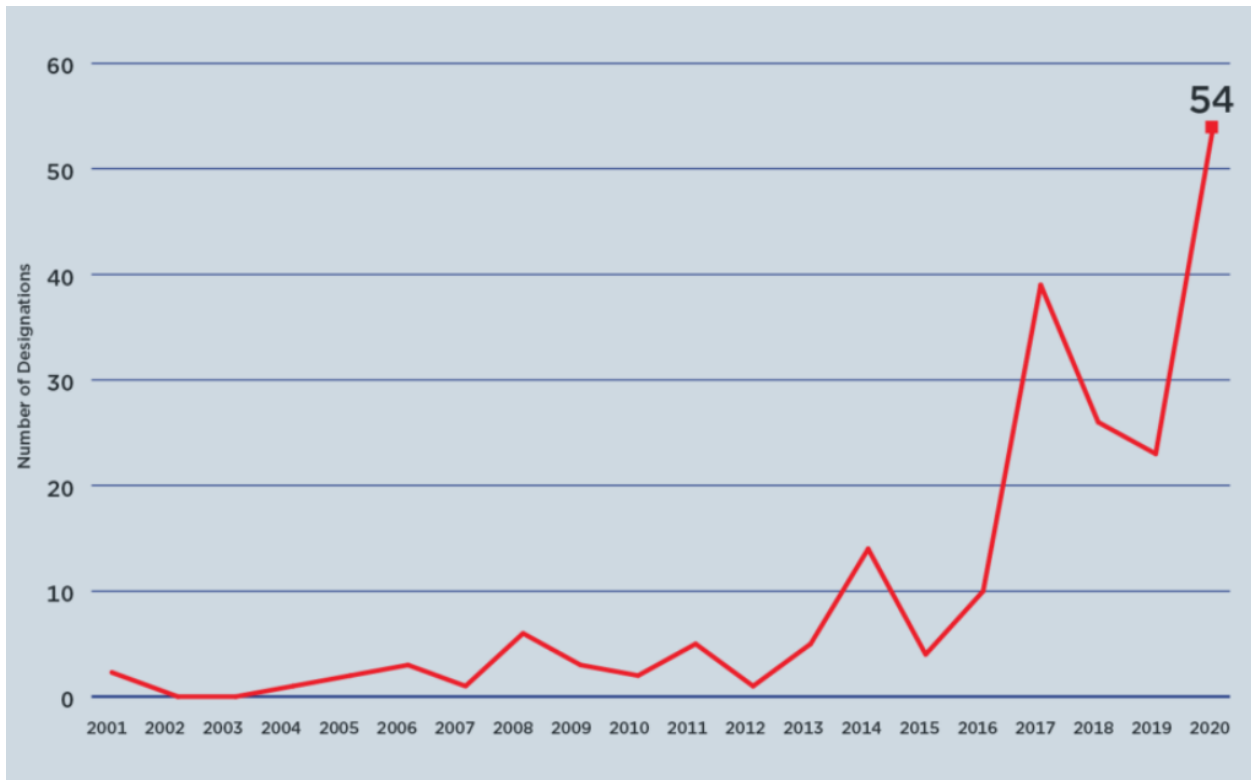
⁸ Office of the United States Trade Representative – Executive Office of the President

⁹ Why Saudi Arabia Won't Abandon Dollars for Yuan – Misis Institute

Brett Oland, CEO

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Below is a chart of countries under United States' sanctions¹⁰ and this chart only goes up to 2020, so it is prior to the US putting sanctions on regions of China and prior to when the Ukraine/Russia war broke out.



With more and more countries being added to the “unfriendly” sanctioned list, is it any wonder that international countries are backing away from using the US dollar? This will mean more countries may back away from holding US treasuries, because they are uncertain they will get their money back. If this happens in too large of a scale, the US government will become more reliant on the US Fed purchases of the shortfall via QE, so interest rates don’t rise out of control. This is quickly escalating. On April 20, 2022, Bloomberg reported that “Israel’s central bank has made the biggest changes to its allocation of reserves in over a decade, adding the Chinese yuan alongside three other currencies to a stockpile that last year exceeded \$200 billion for the first time ever.”¹¹

¹⁰ www.cnas.org

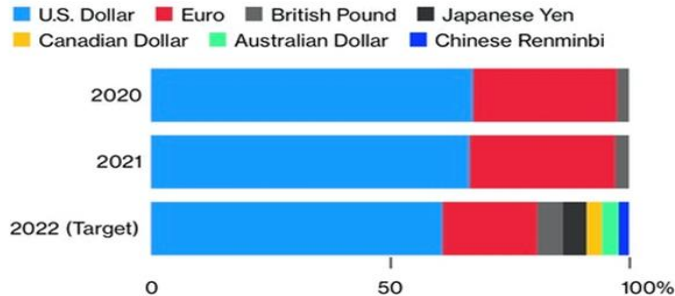
¹¹ Courtesy of QTR Fringe Finance

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New Mix

The Bank of Israel is adding 4 new currencies to its FX holdings in 2022



Source: Bloomberg, Bank of Israel

Also, according to Bloomberg on April 20, 2022, China's key state-run energy companies are in talks with Shell Plc to buy its stake in a major Russian gas export project.

This effectively means, countries around the world are taking active steps away from not only the US dollar and US treasuries, but the United States as a country as well.

13. Global Geopolitical Risk

Countries around the world are waking up to the fact that the US or Western Nations can remove them out of the international banking system at a moment's notice and freeze their reserve, which does not exactly instill confidence in the system. This list of countries that are "unfriendly" by the US standard is not exactly short and it continues to grow.

China doesn't like the fact the US constantly leverages its financial power on the rest of the world. In March 2009, shortly after the GFC, China and Russia called for a new global currency. They wanted the world to create a new reserve currency "that is disconnected from individual nations and is able to remain stable in the long run, thus removing the inherent deficiencies caused by using credit-based national currencies."¹² China is concerned that the trillion or so it holds in US dollars will significantly deteriorate in value if inflation escalates. China called on the International Monetary Fund (IMF) to develop a currency to replace the US dollar.

In Q4 of 2016, the Chinese renminbi became another one of the world's reserve currencies. As of the first quarter of 2020, the world's central banks held \$221 billion worth, according to the IMF. If China wants its currency to be fully traded on the global foreign exchange markets, the yuan would likely replace the US dollar as the world reserve currency.

Debating whether China has ambitions of the yuan becoming the world reserve currency is largely irrelevant. What is known is that there has been a fundamental shift of countries and the IMF away from the entire system being tied to the US dollar. What is also clear is China's ambitions under the One Belt One Road Initiative.

¹² thebalance.com

14. One Belt and One Road Initiative

One Belt One Road Initiative (BRI) is a global infrastructure development strategy adopted by the Chinese government in 2013 to invest in nearly 70 countries and international organizations. It is considered a centerpiece of the Chinese leader Xi Jinping's foreign policy.¹³

Xi originally announced the strategy as the "Silk Road Economic Belt" during an official visit to Kazakhstan in September 2013. "Belt" is short for the "**Silk Road Economic Belt**," referring to the proposed overland routes for road and rail transportation through landlocked Central Asia along the famed historical trade routes of the Western Regions; whereas "road" is short for the "21st Century Maritime Silk Road", referring to the Indo-Pacific sea routes through Southeast Asia to South Asia, the Middle East and Africa. Examples of Belt and Road Initiative infrastructure investments include ports, skyscrapers, railroads, roads, bridges, airports, dams, coal-fired power stations, and railroad tunnels.¹⁴

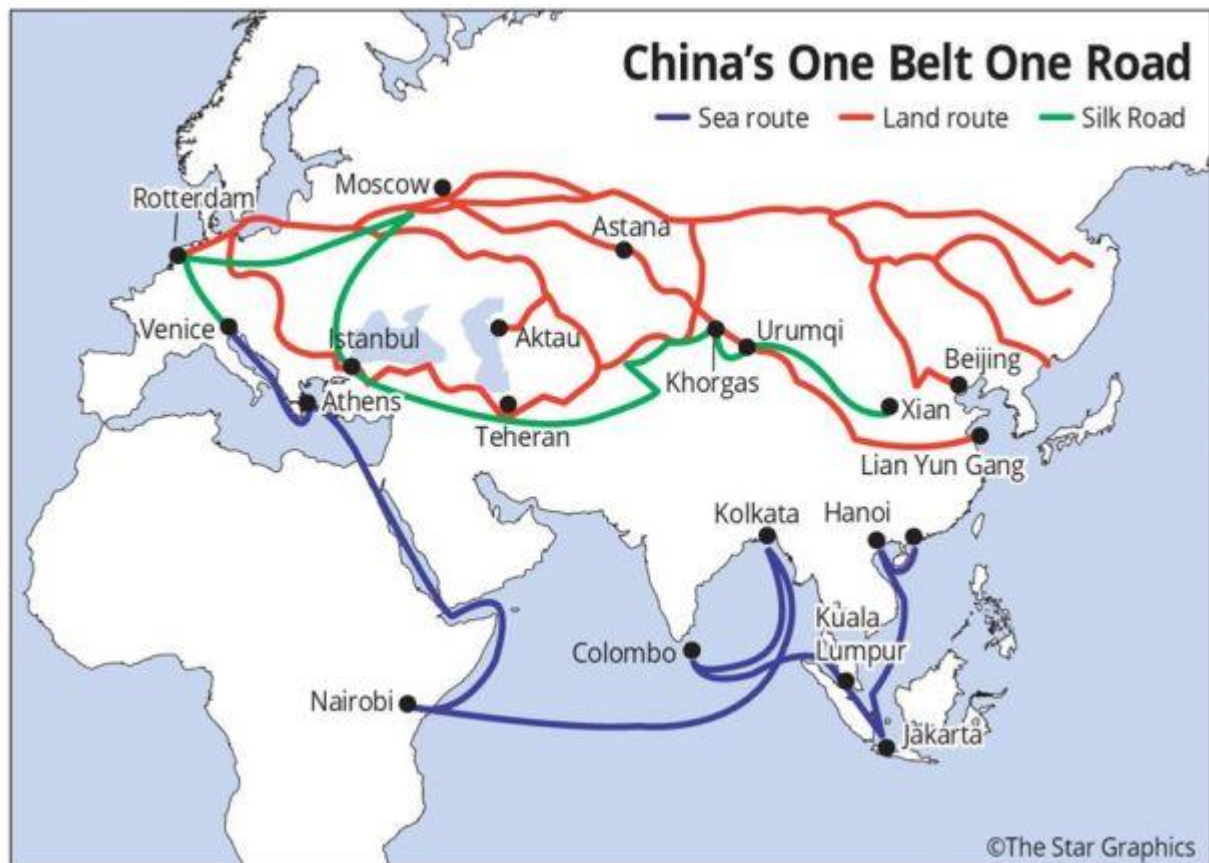
The initial focus has been infrastructure investment, education, construction materials, railway and highway, automobile, real estate, power grid, and iron and steel. Already, some estimates list the Belt and Road Initiative as one of the largest infrastructure and investment projects in history, including 65% of the world's population and 40% of the global gross domestic product as of 2017. The project builds on the old trade routes that once connected China to the west, Marco Polo and Ibn Battuta's routes in the north and the maritime expedition routes of Ming dynasty admiral Zheng He in the south. The Belt and Road Initiative now refers to the entire geographical area of the historic "Silk Road" trade route, which has been continuously used in antiquity.¹⁵

The main currency in use in the development of the BRI is the Renminbi (Yuan) as a currency of international transactions with the 70 counties involved. This development of the infrastructures of Asian countries will likely strengthen diplomatic relations and result in the reduction of the dependency on the US and create new markets for Chinese products and move commodities-rich countries more closely into the Chinese economy which are all objectives of the BRI.

¹³ Wikipedia

¹⁴ Wikipedia

¹⁵ Wikipedia



Given that 65% of the world's population will already be using the Yuan for development of the BRI, would it be very much of a step to move away from the US dollar as the world reserve currency?

This would not be without its challenges, as the Yuan is currently only available for use in China. But, if China had a neutral reserve asset backing the Yuan, it would be a different story.

What is also interesting is China banned the trading and mining of all crypto currencies in May 2021. Timing is not coincidental that China launched its Central Bank Digital Currency pilot program on August 20, 2021.¹⁶ Since its launch, 62 billion yuan (\$9.7 billion) of transactions as of the end of October 2021¹⁷ have been completed over the network. My guess is that they will eventually back this digital currency with a hard asset.

¹⁶ Securities.io

¹⁷ Coinbase.com

Brett Oland, CEO

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15. US Unfunded Liabilities

Getting back to the worst monetary house on a very bad street and inflation, the US government's total revenue is estimated to be \$4.174 Trillion for FY 2022,¹⁸ while the total expenses is expected to be \$6.011 trillion. Simple math suggests that the increase in deficit will be \$1.837 trillion in 2022 alone.

Table S-4. Proposed Budget by Category

(In billions of dollars)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Totals	
													2022-2026	2022-2031
Outlays:														
Discretionary programs:														
Defense	714	735	756	756	775	791	804	816	826	835	843	851	3,881	8,052
Non-defense	913	960	932	930	909	914	917	927	947	964	984	1,002	4,601	9,426
Subtotal, discretionary programs	1,627	1,696	1,688	1,685	1,683	1,704	1,721	1,743	1,773	1,799	1,827	1,854	8,482	17,478
Mandatory programs:														
Social Security	1,090	1,135	1,196	1,261	1,333	1,410	1,492	1,579	1,672	1,767	1,866	1,966	6,691	15,542
Medicare	769	709	766	841	840	947	1,014	1,085	1,227	1,178	1,325	1,412	4,407	10,633
Medicaid	458	521	571	582	616	645	674	698	734	768	801	837	3,088	6,926
Other mandatory programs	2,260	2,886	1,486	1,324	1,347	1,357	1,321	1,227	1,232	1,168	1,200	1,228	6,835	12,891
Subtotal, mandatory programs	4,578	5,251	4,018	4,008	4,136	4,358	4,501	4,589	4,865	4,882	5,191	5,444	21,021	45,992
Net interest	345	303	305	320	368	445	524	603	674	744	829	914	1,962	5,726
Total outlays	6,550	7,249	6,011	6,013	6,187	6,508	6,746	6,935	7,312	7,425	7,847	8,211	31,465	69,196
Receipts:														
Individual income taxes	1,609	1,705	2,039	2,242	2,288	2,436	2,676	2,896	3,044	3,194	3,354	3,526	11,680	27,694
Corporation income taxes	212	268	371	577	649	673	664	666	679	678	681	693	2,933	6,330
Social insurance and retirement receipts:														
Social Security payroll taxes	965	944	1,033	1,072	1,118	1,159	1,207	1,252	1,311	1,361	1,417	1,474	5,587	12,403
Medicare payroll taxes	292	287	359	383	400	418	436	453	476	496	518	540	1,995	4,478
Unemployment insurance	43	55	59	61	60	57	55	55	57	56	58	56	293	576
Other retirement	10	10	11	12	12	13	13	14	15	16	17	17	62	140
Excise taxes	87	74	84	89	93	94	95	96	96	98	101	102	455	948
Estate and gift taxes	18	18	21	18	19	20	21	32	33	34	37	39	99	274
Customs duties	69	85	57	45	45	47	48	49	51	53	55	57	242	506
Deposits of earnings, Federal Reserve System	82	97	102	103	99	77	68	65	71	75	75	79	448	814
Other miscellaneous receipts	36	37	39	40	44	46	49	52	55	57	59	60	218	501
Total receipts	3,421	3,581	4,174	4,641	4,828	5,038	5,332	5,632	5,888	6,119	6,370	6,643	24,013	54,665
Deficit	3,129	3,669	1,837	1,372	1,359	1,470	1,414	1,303	1,424	1,307	1,477	1,568	7,452	14,531
Net interest	345	303	305	320	368	445	524	603	674	744	829	914	1,962	5,726
Primary deficit	2,784	3,366	1,532	1,052	991	1,025	890	701	749	562	649	654	5,490	8,805
On-budget deficit	3,142	3,595	1,789	1,301	1,264	1,341	1,260	1,115	1,205	1,045	1,174	1,223	6,956	12,718
Off-budget deficit/surplus (-)	-13	73	48	71	95	129	154	189	219	262	303	345	496	1,813

Where will the US government come up with the \$1.837 trillion shortfall that will be added to M2 money supply? Well, no problem! They will print the money of course. You may ask, can't you just reduce the expenses to balance the budget? To which I would answer: Do you think a US politician is going to suggest reduction to the defense budget when a war is happening with Ukraine and Russia? What about reducing costs of Medicare, Medicaid, or Social Security? Not if they want to get reelected. In fact, under the current administration, there are increasing calls for Universal Basic Income, recently announced student debt forgiveness, and many other expensive social programs. No, if anything the shortfall will get bigger and bigger with programs that are meant to help people with, oh the irony, inflation.

¹⁸ Whitehouse.gov – Budget of the US Government Fiscal 2022

In addition to the deficit, the US federal government has \$129 trillion in unfunded liabilities (aggregate liabilities due in the future).¹⁹

Here's a breakdown of your drunk insolvent Uncle Sam's liabilities in broad categories:

- Medicare benefits – \$55.12 trillion
- Social Security obligations – \$41.2 trillion
- Publicly held debt – \$21.08 trillion.
- Military and civilian retirement benefits – \$9.41 trillion
- Other liabilities – \$2.25 trillion

With the sheer size of the unfunded liabilities and currency printing for the difference, we are only getting started on the exponential increase to inflation we are currently experiencing.

Pension Crisis – A Demographic Time Bomb

We already talked about the political handcuffs the US is in surrounding Social Security, Medicare, and Medicaid, and although these in my mind are underestimated and unsustainable expenses, there is a much bigger threat to the US: the Baby Boomers.

California Public Employees' Retirement System (CalPERS) is the largest pension fund in the US but is in a very similar situation to many other pension funds in Canada and the US, in the fact they are underfunded. The pension being underfunded is exceptionally bad considering the massive increase in the equities market in the last few years. CalPERS has scarcely two-thirds of the money it needs to pay benefits that state and local governments have promised their workers in retirement.

CalPERS' official estimate that it is 70.8% funded assumes future investment earnings averaging 7% a year, which is probably too high given the US treasuries they are forced to carry.²⁰ Meaning that CalPERS does not have the available funds to pay their commitment to retired people. Members of CalPERS are already headed for the exits because they see the mismanagement of the pension fund. One court case of exiting members in 2021 is expected to result in a \$2.9 billion court settlement that will become payable as soon as the dust settles.²¹ A \$2.9 billion hit may not seem like much to a \$477 billion pension fund, until you realize they are 30% or \$143 billion underfunded.

Although the state of California represents only one fifth of the US economically, imagine the fallout as all the over-extended US states' pension funds become insolvent at the same time as Baby Boomers try to retire.

¹⁹ truthinaccounting.org

²⁰ calmatters.org

²¹ CalPERS 2021 Financial Statements

Michael Kahn, director of research for the National Conference on Public Employee Retirement Systems (NCPERS) used data from the annual survey of public pensions by the US Census Bureau for 1993 to 2016 and other data and found that, for 25 years or so, state and local pension plans have always been able to meet their benefit and other payment obligations. The analysis shows four states—Illinois, Kentucky, New Jersey, and Connecticut—had pension funds whose unfunded liabilities were more than twice their assets (that is, they were less than 50% funded) in 2016. On the other end of the funding spectrum are New York, Tennessee, South Dakota, and Wisconsin, which were all more than 94% funded. Most states' pension plans were more than 70% funded. Twenty-eight out of 50 states (56%) had pension funding levels that were 70% or above. Overall, the 299 state plans had total assets of \$3.05 trillion and pension obligations of \$4.2 trillion—which translates into a funding level of 72.6%. However, using quarterly earnings data for 2016, the assets for the 299 state plans were \$3.26 trillion, which results in a funding level of 77.6%. As these pensions continue to fail to meet their 7-8% growth targets, the problem gets worse. Let's not also forget that most of the municipal and corporate pensions are in the same position as the state pension plans noted.

The problem is compounded by most of these pension funds being forced to carry government treasuries. In most countries, it is legislated that the pension funds must carry a certain percentage of treasuries in their portfolio. Other times this is called the 40/60 split, as a typical pension fund is made up of 40% bonds (treasuries or corporate bonds) and 60% equity. This has worked very well in declining interest rate environments such as the last 40 years. As interest rates have gone down, capital appreciation of the bonds (treasuries) has gone up. But the game is now over. Rates are at the zero level (and even negative in some countries) which means pension funds can no longer depend on the capital appreciation of the bonds. This problem is also amplified by the value of the bonds or treasuries held on book that are going down in a rising interest rate environment. With bond/treasuries not adding to the value of the portfolio and in some cases being a drag, pension funds will have an increasingly difficult time making up the difference in the equity portion of the portfolio. This will add to the probability that these pension funds will go bankrupt.

What does this mean? Who is going to give money to the unfunded liabilities including these pension funds across the US and Canada?

There are three options to service pension funds or other unfunded liabilities:

- 1) Government can increase taxes – this will not likely go over well with the voting population that is already overtaxed.
- 2) They can reduce the funds available to these programs. In the case of Medicare or Pension Funds, although there is a contract in place that “guarantees” a certain amount of cash or services, companies and government may be forced to renege on their promise. With pension employees, retired workers will have to take what they can get, so they either take the lower amount, or receive nothing at all if the pension fund goes

bankrupt. Think this won't happen? Why don't you ask the retirees of Sears, United Airlines, and American Motors Corp. if they feel the same way?

3) Governments can bail them out.

My guess is that all the Baby Boomers will force the government with political threats to make good with their pension funds, social security, healthcare, and other services guaranteed by bailing them out by – you guessed it – more currency printing.

Again, this will lead to a considerable amount of inflation.

16. Rock and a Hard Place for Politicians –

More than ever, asset prices cannot fall, BUT inflation cannot rise . . .

During the third quarter of 2020, nearly 30 million Baby Boomers in the US left the job market and retired, according to the *Pew Research Center*. Now all these Boomers depend on their pension funds, retirement savings, and social security programs for money to live. This puts enormous pressure on government to keep asset prices elevated in the equity and housing markets. In western democratic countries, things that negatively affect the voting populations' livelihood will not be tolerated of governments, which includes letting the stock market or housing prices fall. So, if politicians want to be elected, governments are forced to underpin these assets and put in place measures ("tools") to ensure these prices do not fall.

These government "tools" are a really short list, and it includes 1. Printing money. End of list.

So, governments have the juggling act of keeping asset prices propped up along with keeping inflation under control. Because politicians are politicians, their first mandate is to keep assets prices propped up – otherwise they will be voted out of office – and secondary to this is to keep inflation under control, or they will be voted out of office. Politicians also understand that inflation can also be a one-way ticket out of office, so they must lie, and pretend inflation doesn't exist. Inflation is much slower and more disguised than asset prices suddenly dropping, so they choose to walk the razor's edge of keeping asset prices propped up while lying about inflation being under control.

Printing money has worked well in the past and has propped up asset prices, and inflation was under control, think beyond the Great Financial Crisis (GFC) of 2008 with purchase of ABCP. The reason governments weren't overthrown was because a worse political career-ending specter did not materialize: inflation. Inflation did not exist for a few reasons: purchasing the ABCP was not currency printing, and we were exporting our inflation overseas (see Exporting Inflation and Funding of US Deficits below). But now this game has ended, inflation has shown up, and there is no end in sight (see Why inflation will not be transitory below).

17. Government's Big Lie - Incentive to keep official CPI low

It has never made sense to me why the body that has the most to benefit from a manipulated Consumer Price Index (CPI) also calculates the "official" CPI. It is like having the fox guard the chicken coup. Let me explain what I mean.

The Bank of Canada has four core functions:

- Monetary policy: The Bank's monetary policy framework aims to keep inflation low, stable, and predictable.
- Financial system: The Bank promotes safe, sound, and efficient financial systems within Canada and internationally.
- Currency: The Bank designs, issues, and distributes Canada's bank notes.
- Funds management: The Bank acts as fiscal agent for the Government of Canada, managing its public debt programs and foreign exchange reserves.²²

The Bank of Canada's #1 mandate is to keep inflation under control. A politician would argue that the BOC and the government are independent, but how can the government be independent when they report the CPI?

Also, several government-paid programs rely on CPI to adjust rates each year: OAS, CPP, EI, etc. and probably biggest of all, government debt. It is in the government's best interest to falsely report that CPI going up more slowly than. With the CPI growing slowly, the government only must increase the CPI adjusted spending on these programs at the same pace. The government then reports these falsely calculated CPI numbers to the BOC, which they use in their monetary policy around inflation and design the key lending rate for public debt. With this underreported CPI number, the Government of Canada saves billions in government costs and the game can continue. So, governments and central banks around the world will continue to lie about the state of inflation. Although the official US CPI is 8.5% in March 2022, my suspicion is that the actual CPI is closer to 15%.

18. Exporting Inflation and Funding of US Deficits

For decades, the western world has imported more and more goods and services from outside the western world, in particular, from Asian countries including China. The reason is because of lower cost of the goods and services. The worker base, especially the factory workers, do the job for significantly lower pay outside the western world. Also, there is significantly less environmental standards, taxes, regulation, and red tape in foreign countries. If all these products and services had to be produced in the western world, specifically the US, the costs would be significantly higher. In exchange for these cheap products and services, these countries accepted US dollars, the World Reserve Currency. These countries in general have a trade surplus with the western world, i.e., they export more than they import. These countries would use these trade surpluses to mainly purchase US treasuries. But, as mentioned above, this has all

²² Bank of Canada Website

started to change. Governments around the world are starting to no longer accept placing excess in US treasuries for payment. Therefore, the western world will start to no longer be able to export inflation to other counties, particularly China.

As mentioned, the US has the exclusive right to print US dollars, and since the World Reserve Currency is the US dollar, the US government has been forced to either have trade deficits or have a financial deficit (or both as is their position now) to ensure the world has enough liquidity (see Bretton Woods 3.0 below) for the world economy to effectively function.

Countries outside of the western world are waking up to the fact that they no longer want to accept green pieces of paper (long-dated US dollars options, or treasuries) from their goods or services, because they are becoming more and more devalued through currency printing. This will force the US to find other markets to get these products and services.

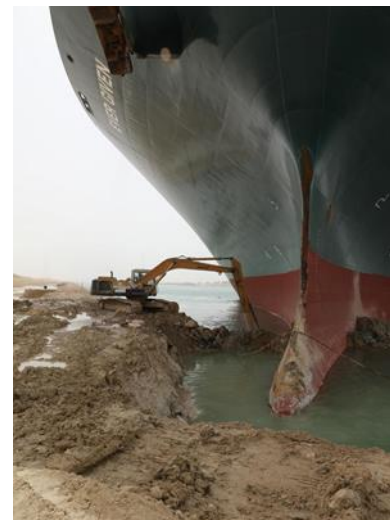
Also, it was clear during covid that supply chains were significantly disrupted. Critical items such as masks, microchips, and penicillin were all in short supply. The US government has recognized this as a major strategic problem. If we are on uneasy ground with China, yet they produce a significant portion of components required in military weapons, this is a major strategic problem. At any rate, exporting inflation will no longer be available. If the products and services are unlikely to be produced by unfriendly countries, and other countries are increasing unlikely to accept US dollars, this mean products and services will have to be produced in the US or in the western world, which will result in large inflationary pressures because our cost base is significantly higher.

19. Why inflation will not be transitory

Although a lot of the government narrative has been around inflation being transitory, it is my firm belief that it will be anything but temporary. It may go up and down slightly, but I think we are in for an inflationary decade, possibly longer. As a summary review and to elaborate there are several reasons for this:

- a) Supply chain issues – A considerable number of western nations have blamed inflation on “supply chain issues.” Remember that ship stuck in the Suez Cannel? Although I don’t necessarily agree that the inflation was “caused” by supply chain shortage, it definitely is a factor and will continue to get worse.

China has recently announced a further covid lockdown which will only limit supply further. Ukraine produces 50% of the world’s neon gas which is used for semi-conductor production. With the war in Ukraine, this will persist. Shipping costs continue to be sky high. These



are several examples of why “supply chain issues” will continue, which will increase inflation.

- b) Energy Costs – Crude oil costs have increased over 70% from this time last year. As Albertans, we know oil goes into much more than fueling our cars. Because oil goes into just about everything, and I expect oil costs to continue to rise, I expect this to continue to put pressure on rising costs. You have heard my fearless prediction that oil will be over \$150 per barrel by the end of August 2022, which will massively increase inflation.
- c) Labour Shortages – I’ve already discussed the unprecedented move out of the workforce in the US, and as asset prices remain propped up and people “feel rich”, I would only expect this to escalate, and with labour shortages, there will be a demand to increase wages, which will increase inflation.
- d) Environmentalism – For the past decade or so, the green revolution has struck a chord with the western world populations. For this conversation, I’ll focus on oil and gas. Oil and gas demand has increased since covid, and these gaps must be filled by production, whether environmentalists want to believe it or not. If western world virtue signaling does not allow for oil and gas development, the rest of the world will develop it for us. Regardless, oil and gas will remain very undercapitalized because of the last decade of underinvestment to develop sustainable oil and gas wells. In doing so, the western world has made the problem of oil and gas supply much worse. Whether you are on side with the green revolution or not, the end of oil and gas will likely be defined at sky high oil prices, not lower oil prices, which will increase inflation.
- e) De-Globalization – Through the past 30 years, the western world has gradually migrated most of its manufacturing to lower-cost production companies. As stated earlier in Exporting Inflation and Funding of US Deficits, through covid and beyond, there was a realization that strategically this caused significant challenges. For example, semi-conductors, penicillin, and military components were all being produced in foreign countries. Strategically, this caused MAJOR challenges and could potentially compromise the western world’s dominance. Therefore, there is a big push to move production of many key products back to home soil. This will come at a significant cost because we have hollowed the manufacturing base, labour costs are much higher, and regulator burden is much higher, which will increase inflation.
- f) World acceptance of US Dollars – As discussed above, the world acceptance of the US dollar as the world currency is dwindling. As people sell their US dollars for other more usable currencies, the US dollar’s value will decline relative to the value of other currencies such as the Chinese Yuan. This means it will become more expensive for the western world to import products, leading to further inflation.

- g) Government Currency Printing – Especially in the US, the government continues to spend more than they make in tax revenues. As noted earlier, I expect this to continue as governments basically have no choice but to print the difference. Also, in all their brilliance, governments have given subsidies to their populations because of higher oil prices. Although it may feel good in the moment, I'm pretty sure the solution to a currency printing problem, is not more currency printing. Also, as US treasuries lose their place on the global stage, the Fed will have to continue to print money to buy the treasuries nobody wants to avoid rate increases, and this will increase inflation.
- h) Governments NEED inflation – As discussed below, inflating away the debt is the only politically acceptable solution and therefore governments have no incentive to reduce inflation. Governments may signal that they are going to "work hard" to reduce inflation. But as we know, it is not in their best interest to stop it.

In fact, I cannot think of one valid reason why we should expect inflation to subside in the next decade. We may see it go up and down over the next little while, but we will likely never see deflation again in our lifetimes. There are only a few things that would change my mind. Number one is if we could find a stable, cheap source of energy within the next two to three years. Only nuclear energy comes to mind, but politicians and the public would have to get their heads wrapped around this, and I don't think it will happen in this timeframe. Number two is if India competed with China to become a major manufacturing hub. This would add to competition in the east and the west could continue to export inflation because of India's ability to have lower labour costs and regulations.

20. Rising Interest Rates

The only real tool that governments and central banks have to get inflation under control from rising is to increase interest rates. We have seen some hawkish talk out of several central banks that they will take steps to get inflation under control. I think this is nothing but virtue signaling, and they will eventually backpedal on this tough talk and be forced to move into not only reducing interest rates again, but also reimplementing QE. There will likely be a few immaterial rate increases for theater that they are addressing the problem, but they will reverse this policy at the first sign of a declining economy.

These minor interest rates will not combat inflation without breaking the system, and I don't think western governments will be willing to let assets' prices fall too far before they prop things up again. Currently, the rate of inflation in the US in February 2022 is 7.9%²³ and if the Fed's overnight rate is between 0.25% and 0.50%²⁴, that implies there is a real negative interest rate between 7.40% and 7.65%. This means the cost of things is still rising at 7.40% and 7.65% in real terms, which is diluting the US dollars' buying power.

²³ USInflationCalculator.com

²⁴ US Department of Treasury

Brett Oland, CEO

April 29, 2022

The International Monetary Fund (IMF) on March 25, 2022, called for the Argentina government to keep interest rates, measured by the effective annual rate, above inflation.²⁵ This was to keep their massive inflation under control. If there are calls for interest rates to be above the rate of inflation to keep it in check, why is this standard not applied to the US? Governments know these minor increases in interest rates will do nothing to dampen inflation.

I think central banks in the western world will keep increasing rates until something breaks. Equity prices or housing prices will fall and once this happens, governments will be forced by the voter base to back away from their rate increases.

Governments also understand that for every rate increase, their public debt burden gets higher with the higher rate on treasury yields. Once again, it is governments' and central banks' incentive to keep rates as low as possible while keeping inflation running hot.

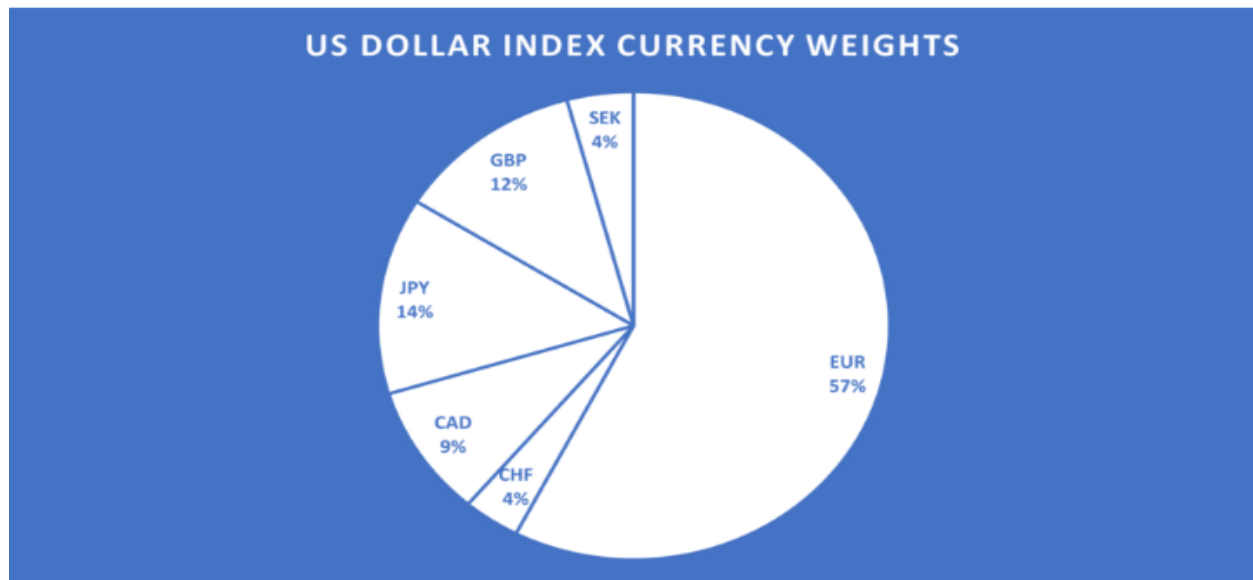
21. US Dollar as a Safe Haven

We have recently seen the US dollar rise in comparison to other currencies on the DXY.



The DXY is a composite of several currencies that gives an indication of how the US dollar is doing compared with other currencies. As can be seen below, the Euro is a large part of the DXY index, with Europe making up 77% of the index comparable.

²⁵ Bloomberg



US dollar index currency weights

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My base case is that, although the US is in bad shape, it is by far the cleanest dirty shirt in the laundry hamper. Investors will continue to move away from European and Japan's currencies and seek a haven in the US dollar. But for reasons mentioned above, I think the US dollars' last stand is before us. My prediction is countries around the world will move into a new standard for currency by as early as 2028 to as late as 2032. This will likely not be a "big boom" but rather slower slow decay and the move will crescendo with a very high US dollar (compared to the other western world currencies, indicated by the DXY strength).

We are already starting to see major problems because of the US dollar's rise in the undeveloped world.

Resource poor, developing nations have the worst of both worlds by having to buy commodities in US dollars and having their debt priced in US dollars. As the US dollar rises, it causes significant issues in these developing nations such as Argentina.

In Latin America, emerging economies like Chile, Brazil, and Venezuela generally suffer under a strong US dollar. These countries are commodity exporters which are priced in US dollars, the world reserve currency. A strong US dollar typically will force commodities to be less in demand. With less demand, the price of commodities will fall therefore less revenue for the developing nation. But this really hasn't been the case lately, as there is an inflation backdrop where commodities tend to do very well. But their debt is still priced in US dollars, so this may pretty much a wash. At any rate, resource/commodity-rich nations (or provinces) have the most to benefit from this decline.

In Asia, emerging markets India and China are net importers of both oil and commodities. Since economies that import commodities benefit from the cheaper commodity prices brought about by a strong dollar, India and China will also benefit from increased demand for exported manufactured goods as the rising dollar increases how much US consumers can afford to buy.²⁷

Larger problems will also start to show up in major developed economies such as Japan and Europe as the US dollar rises, on the DXY relative to other currencies. Commodities and debt priced in US dollars will need to be paid for in US dollars. As prices rise on commodities and debt, there will be a larger and larger shortage of US dollars within individual nations. This will force these nations to print more and more of their own currency to purchase enough US dollars. This is why I think European nations will be the first to fall, as a US dollar liquidity crisis turns into a massive debt crisis. Think a repeat of Greece's problems a few years ago, except this time all over Europe.

Eventually, governments and people around the world will get wise to the game that, if they lend money to these overindebted governments and the indebted nation continues to print money, their buying power will be substantially diminished. The US having world currency status has warded off this bankruptcy thus far, but as discussed, I think this US status is showing cracks and the dam will eventually break and a new reserve currency will have to be found. The US dollar losing the world currency status may take months or even decades. Probably the bigger question right now is, what is the alternative to the US dollar as the world reserve currency?

22. Inflation – The Big Bad Wolf – Part II

Inflation is a hidden tax. Governments don't need authorization from the people, or public input. Governments always state there is not enough inflation and design their monetary policy to increase inflation to get away with further spending. Inflation is hidden because governments can endlessly debate that it is transitory or another country's fault (Russia these days comes to mind). It is difficult to measure, but world economic indicators always contradict the government inflation narrative.

Although governments don't need approval for inflation, it is the most damaging tax as it hurts the poor and middle class the most. As we have seen, social division and political unrest is the highest I've seen in my lifetime. And I think this will continue to get much worse.

I predict there will be more and more food and housing shortages, and as a result, more and more protest, riots, and government overreach.

²⁷ Investopedia

Three options exist for over-indebted governments, and all are bad:

1. **Default on the debt.**
2. **Let inflation run hot for the next decade.**
3. **The western world (mainly the US) admits the fiat currency system is broken and the western world lives under its means, and works with large nations to design a new system, backed mainly around commodities or gold.**

Option one: Default on the Debt

Let's assume allowing any larger western government to go bankrupt is too politically unpalatable because it would likely lead to world disorder, and potentially to a massive world war. Noting that I think the European Union will be the first casualty to this world debt collapse, the US will likely bail them out by, you guessed it, printing money, which will add to the inflation problem. This game the governments are playing with ever-expanding debt cannot continue forever, no matter what the modern monetary theorists say.

Option 2: Let inflation run hot for the next decade

We already talked about how nations with over 130% Debt to GDP eventually go bankrupt. So, it is inevitable, in my mind, that the US will eventually side into bankruptcy unless they get the Debt to GDP under control.

So, the only politically palatable solution is this alternative, and governments know this is to have the US, Canada, and the western world try to inflate the debt away and hope to still have their heads at the end of it.

As an example of how this works: the official US inflation rate in January 2022 was 7.5% and February was 7.9%²⁸.

As mentioned, I argue inflation is much higher, around 15%, but these rates will be fine for this example.

Let's assume the average rate is 8% for the year. This would mean your buying power declined by 8% CPI per annum. If you wanted an item that cost \$1,000 it would compound in cost if the CPI remained the same over 10 years:

Year 1 $\$1,000 * 8\% = \$1,080$

Year 2 $\$1,080 * 8\% = \$1,166.40$

Year 3 $\$1,166.40 * 8\% = \$1,259.71$

Year 4 $\$1,259.71 * 8\% = \$1,360.49$

Year 5 $\$1,360.49 * 8\% = \$1,469.78$

²⁸ USInflationCalculator.com

Year 6 $\$1,469.78 * 8\% = \$1,469.78$
Year 7 $\$1,469.78 * 8\% = \$1,587.37$
Year 8 $\$1,587.37 * 8\% = \$1,714.35$
Year 9 $\$1,714.35 * 8\% = \$1,851.50$
Year 10 $\$1,851.50 * 8\% = \$1,999.62$

Effectively, your buying power is cut in half over 10 years with 8% inflation.

The opposite is true for governments and public debt (our debt). The “relative value” of debt would be cut in half over 10 years with 8% inflation. So, if a country has a Debt to GDP of 130%, after the 10 years of high inflation of 8%, all else being equal, the nation’s new Debt to GDP would be 65%. This is the option that politicians have chosen thus far and will likely continue with it unless there is a massive call to have inflation put in check by the voting population.

Option 3: The western world (mainly the US) admits the fiat currency system is broken and the western world lives under its means, and works with large nations to design a new system.

This option would require starting with the US government, so that our spending does not exceed their tax revenue and there is no option for currency printing. This may also require the world powers, including Russia and China, sitting down to discuss how to structure a world financial system that is based on sound money principles, where one country does not have a significant disadvantage over another. This would require that a country would be required to have a fixed money supply that cannot be manipulated, (i.e. tying a country's currency to physical gold in storage) and a country couldn't overextend themselves. But, also flexible enough to expand and contract as required.

This is probably the worst result for the US government because they will start having to live within their means and lose considerable power, but in the long run is the best option for all people in the world. So, politicians will likely try all other options prior to choosing this one, the right one.

23. Popping the Bubble

As mentioned above, governments and central banks will try to run inflation hot for the foreseeable future to get the Debt to GDP under control. As we know, inflation hurts the poor and middle class the most as basic necessities become out of reach. The general population is starting to get wise to the large inflation problem we have. Governments recognize that the voting population want inflation tempered, so they pretend to do something about it. As demonstrated above, although interest rates are rising, if they are not above the rate of inflation, they will be ineffective against keeping the real rate of inflation in check.

Governments will continue to increase interest rates until something breaks. My prediction is that it will be a major decline in the stock market, followed by a fall in the housing market. With

the NASDAQ falling 20.43% YTD, DOW falling 8.54% YTD, and S&P 500 falling 12.26% YTD as of April 26, 2022, we are already starting to see the breakdown, and the FED has only raised its rate by 25 bps on March 16, 2022. I think it is safe to say the system is already starting to break.

If the Fed increases rates further, we will see more pain in the equity market, which will eventually translate into the housing market. But my prediction is that voters will cry “uncle” before too long and they will fire up the printing presses once again. Can you imagine if interest rates were to rise above 8% to break “official” inflation? The entire system would fall apart, but the good news is, there wouldn’t be any inflation, because there would be no economy.

You can see how this is a MASSIVE problem for the west, and I believe we are at the point of no return, where any choice governments make is a bad one.

24. Bretton Woods – version 3.0

We went over Bretton Woods versions 1.0 and 2.0 above, but there is a movement into a new monetary system that Zoltan Pozsar, Global Head of Short-Term Interest Rate Strategy at Credit Suisse thinks started happening in 2022. He calls this system Bretton Woods 3.0.

“We are witnessing the birth of Bretton Woods III – a new world (monetary) order centered around commodity-based currencies in the East that will likely weaken the Eurodollar system and also contribute to inflationary forces in the West.” – Zoltan Pozsar, Former Federal Reserve and US Treasury Department official, and now Credit Suisse Global Head of Short-Term Interest Rate Strategy based in New York.

Pozsar suggests that there are two world systems forming:

1. One system using the existing western system Bretton Woods 2.0 which would be used by the G7 nations US, Canada, Japan, Italy, France, UK, and Germany and would also likely include Australia and New Zealand (inside money). This is our current US dollar as the world currency system.
2. Another system moving to a Bretton Woods III backed by outside money (gold bullion and other commodities) which include BRIC nations Brazil, Russia, India, and China (outside money).

Pozsar suggested commodities are collateral, and collateral is money, and the current monetary shift is of outside money over inside money. This is building on my Energy is the Economy comments above, but more specifically to all commodities, not just oil.

Bretton Woods 2.0 was built on inside money, and as suggested above, this system is breaking down, marked by March 12, 2022, with the US freezing Russia’s FX reserves, but the breaking down of the system has been happening for years with the devaluation of the US dollar. Regardless of the sanctions, Russia will find a way to export their commodities, perhaps even just

to their close trading partner, China (seems to me there are a lot of fire sales for commodity companies operating in Russia these days). The sanctions will likely exacerbate the problems with Bretton Woods 2.0's breakdown.

If China can get commodities from Russia at reduced prices, they will take advantage of it. In turn they will use the commodities to manufacture products for the west. In return for the commodities, Russia will take Yuan/Renminbi in exchange, completely bypassing the west and helping create a new monetary system: Bretton Woods III.

Because the Russian-sanctioned commodities are in a closed circuit and not available on the open market, commodity prices in the west will continue to rise, exacerbated by western ESG standards, deglobalization, and movement away from the US dollar, which will cause further pressures for inflation to keep rising. In the east, commodity prices will remain relatively stable and the payment system for commodities will become bifurcated. But wait, aren't commodities prices the same worldwide? The system has broken on this as well. Think of the price difference of natural gas between North America and Europe.

25. Conclusion – Message of Hope

Although I don't think there is much we can change regarding the massive inflation, pending downfall of the US dollar, and decline in the west's standard of living, I have thought about this from many different angles for the past two years and believe I have a solution that will act as an insurance policy to Bow Valley Credit Union. I would like to discuss this solution at the upcoming planning session in September.