Post #11 on Inflation. The inflation roller coaster: Why deflation is coming next. Date 2023-05-30

The economic developments over the last year compelled me to write this post as we are going to enter a deflation period of what I have previously termed the "inflation roller coaster", which started in March 2020, with the pandemic policy response. After the massive monetary stimulus that started in March 2020 we warned that inflation was coming, now we see a period of deflation ahead of us. In this post we explain when and why.

1. The context.

As I've discussed in the second edition of my book[1], the unprecedented expansion of money that was a coordinated economic response to the government lockdowns enacted in March/April 2020 was bound to set loose the inflation genie. During 2020 and until mid-2021, inflation seemed to be under control but since then it exploded. I warned that the inflation that started mid-2021 was not a temporary phenomenon and did not originate from problems in global supply chains but was in essence a monetary phenomenon and also a result of the pent-up demand from the pandemic lockdowns that led to record savings by households[2].

The CPI release by the Bureau of Labor Statistics on the 10th of June of 2022 showed that prices increased by 8.6% from a year prior, which was the largest yearly rise since 1982. By then, mainstream economists were voicing exaggerated views on inflation (and hyper-inflation) and the Fed was committed to fight inflation "at whatever cost". The Fed embarked in a policy of quantitative tightening (by reducing its balance sheet) as well as an aggressive series of rate rises from 0.25% to 0.5% in 3/2022 to 5% to 5.25% in 5/2023 (see Table 1).

FOMC Meeting Date	Rate Change (bps)	Federal Funds Rate
May 3, 2023	25	5.00% to 5.25%
March 2, 2023	25	4.75% to 5.00%
Feb 1, 2023	25	4.50% to 4.75%
Dec 14, 2022	50	4.25% to 4.50%
Nov 2, 2022	75	3.75% to 4.00%
Sept 21, 2022	75	3.00% to 3.25%
July 27, 2022	75	2.25% to 2.50%
June 16, 2022	75	1.50% to 1.75%
May 5, 2022	50	0.75% to 1.00%
March 17, 2022	25	0.25% to 0.50%

Table 1 - Fed rate rising cycle since 3/2022

The result of the policy actions by the Fed led to an unprecedented drop in the money supply, as measured by the M2 aggregate. We were not expecting this to occur, as the last time we saw a drop in M2 was during the Great Depression of the 1930s. As we'll show in this post, the recent decline in M2 is almost as severe an event (to the downside) as the unprecedented increase after March 2020. This requires us to adjust our forecasts for inflation going forward, which is the purpose of this post. We are going to enter a deflation stage of the inflation roller coaster that started with the Covid-19 pandemic.

2. The current perception of inflation is wrong.

If we project forward the burst in inflation that peaked in June of 2022, then we have real reason for concern as anecdotes of rises in retail prices of some goods seem to be running at multiple times the headline CPI

[1] http://www.cyclesdebtanddemographics.com/
[2] https://phinancetechnologies.com/content/2022-05-28%20Inflation%20LinkedIn%20Post-3.pdf

figure. Calls for hyper-inflation abound in the mainstream media with the usual gold bugs re-gaining predominance.

Having warned in 2021 and 2022 that persistent inflation going forward was a real risk, after the extreme policy actions by the Fed, we now believe that towards the end of 2023, the headline CPI figure (YoY changes) will normalise at 2% or below. This statement is supported by the fact that seasonally adjusted 3m annualised inflation is already running at about 1.7%, as shown in Figure 1). We can also observe that the reason why the headline CPI measure is still stubbornly high at 4.4%, is due to seasonal effects, which can be seen by the non-seasonally adjusted annualised 3m CPI value of 3.5%.

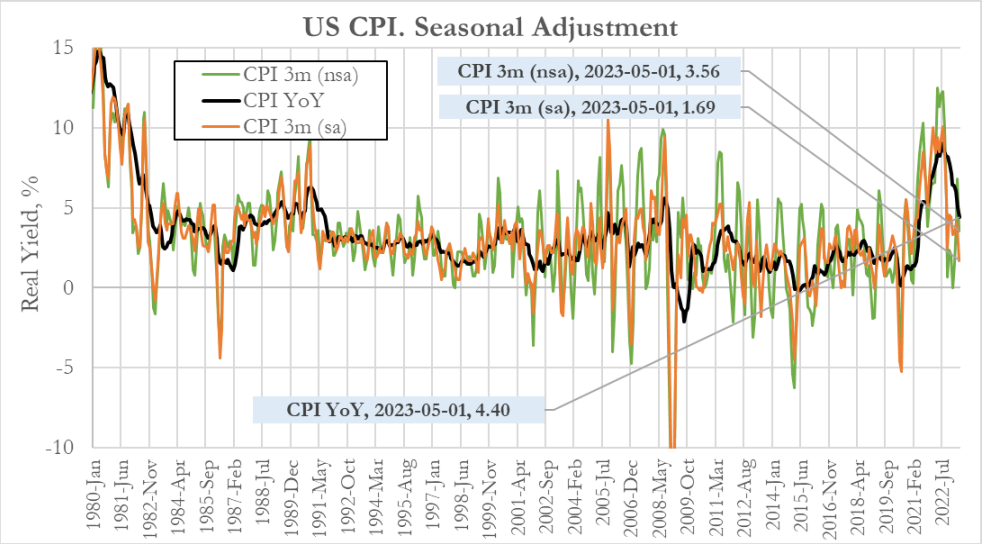

Figure 1 – Historical US CPI. Thick black line refers to YoY changes, green line refers to non-seasonally adjusted annualised 3m CPI changes, and the orange line refers to seasonally adjusted annualised 3m CPI changes.

Additionally, as we've discussed in a previous post, our ECIs (Early Cycle Indicators) show that the US economy is poised to enter a deep recession in the coming months[3]. The decline in economic activity will put further downward pressure on prices. The US is not alone in having economic struggles; Germany is officially in recession already. With the ongoing demographic slowdown and housing crisis in China and demographic decline in Korea and Japan, the global economy will face greater headwinds as the US and Europe go into recession.

The outlook for subdued global demand is the reason why the OPEC nations decided to further cut oil production by 3.66 million barrels per day, following their meeting on the 3rd of April 2023[4]. Even those substantial cuts in oil production did not have an impact on oil prices as we can observe in Figure 2.

The evolution of the WTI oil price in 2023 points towards a low demand with no signs of inflation. When adjusting the oil price for inflation, the picture is even starker and oil prices are very low at current levels of $70 per barrel. We will write a separate post on the recent behaviour of commodity prices which further points to a scenario of low demand.

[3] https://phinancetechnologies.com/content/2022-12-5%20-%20LinkedIn%20Post-9%20V1%20-%20Incoming%20US%20recession%20-%20December%20Update.pdf
[4] https://www.reuters.com/business/energy/why-is-opec-cutting-oil-output-2023-04-03/

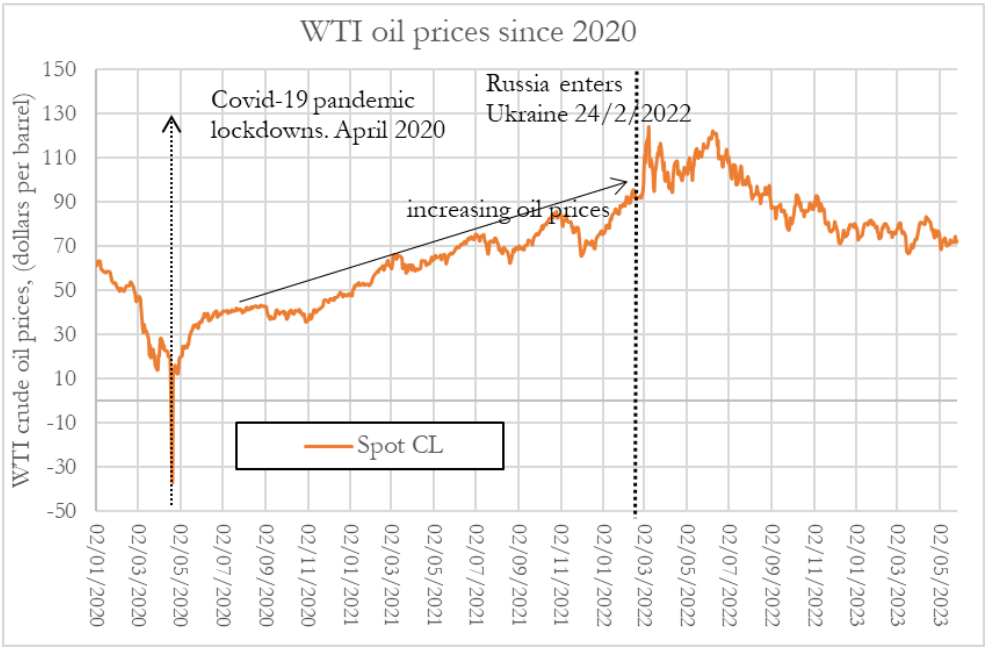

Figure 2 - Evolution of WTI crude oil prices since 2020

3. Inflation is a monetary phenomenon.

As I've stated in previous posts, inflation is a monetary phenomenon. We can understand how inflation surfaces by analysing the equation of exchange that states that Nominal GDP is the quantity of Money (M) multiplied by the velocity at which it circulates (V). When writing the equation in terms of changes, we observe that percentage changes in nominal GDP equal percentage changes in the money supply plus percentage changes in the velocity of money, which is written as:

$$\frac{\Delta M}{M} + \frac{\Delta V}{V} = \frac{\Delta GDP}{GDP}$$

As nominal GDP can be decomposed into real GDP and inflation, we can observe how inflation is related to the money supply and velocity of money. Real GDP is related to changes in employment and productivity.

From the equation above we can understand why the massive expansion in the money supply from March 2020 eventually led to inflation. The reason why inflation did not surface earlier, in 2020 and early 2021, was that the economic lockdowns and general fear among the population subdued consumer spending so that the increase in the money supply was equated by an equivalent decrease in the velocity of money (see Figure 3). From mid-2021, when the government policies were relaxed and after the vaccine rollout campaign, consumers started spending again which led to a recovery of the velocity of money. As the money supply did not decrease, inflation surfaced.

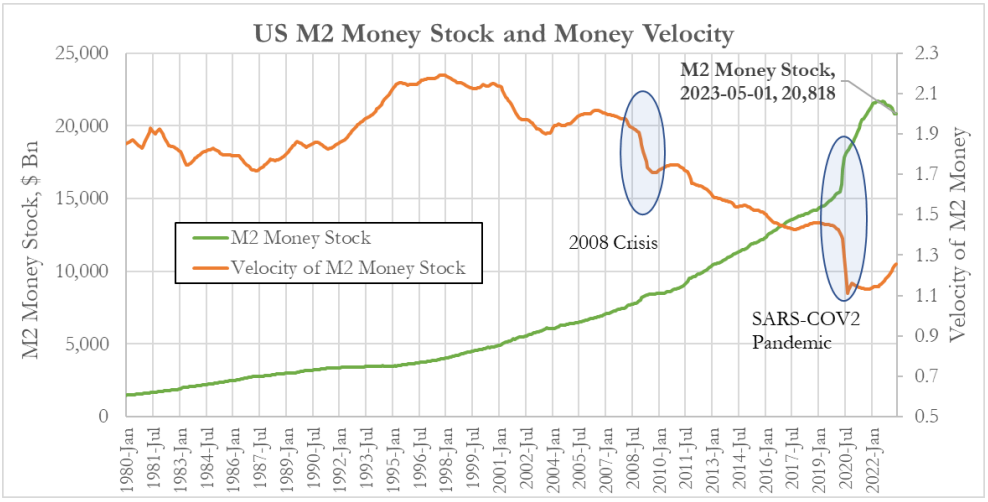

Figure 3 - Historical M2 money stock and Velocity of Money.

The Fed economists recognised inflation late, and only by March 2022 started to tighten monetary policy as shown in Table 1. The Fed policy tightening was timid at first, but then very aggressive until the end of 2022. By then, according to our ECIs the US economy was already slowing down (or in stagnation) but as inflation was still high and unemployment was at record lows, the Fed continued its monetary tightening into 2023 albeit at a slower pace. We believe that the Fed had already tightened monetary policy too much in 2022 and that the extra tightening in 2023 was a policy mistake (perhaps driven by political pressure). The aggressive policy of tightening led to a drop in the money supply, which is currently running at about -4% year-on-year as shown by Figure 4.

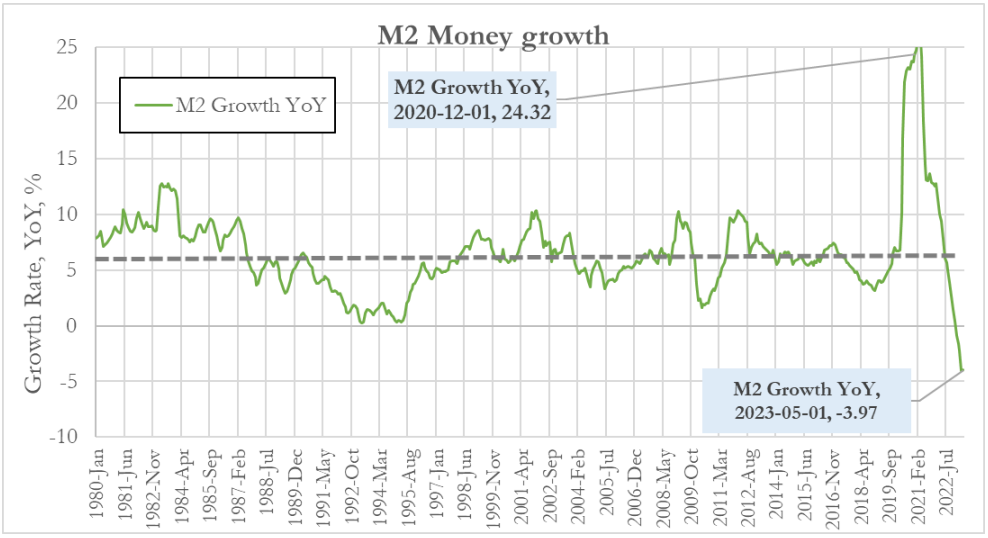

Figure 4 – YoY changes in the M2 money supply since 1980. Source: St. Louis Fed FRED

A drop in the money supply is an extreme occurrence which last happened during the Great Depression of the 1930s. Figure 4 shows that since 1980, the year-on-year growth in the money supply averaged about 6%, and did not go negative either in the 1990s Savings and Loans Crisis or the Great Recession of 2008. The current drop in M2 is almost as extreme as the subsequent rise from March 2020. This is likely to lead to significant economic dislocations, which have already been picked up by our ECIs. The draining of liquidity from the financial system, together with the huge budget deficits (which crowd out private

financing) are putting a squeeze on the real economy, in particular on smaller institutions (one such example is the failure of smaller banks in the US) that have difficulties of financing themselves in the bond markets.

The yearly drop in the money supply of -4% together with the economy diving into recession is likely to lead to a deflation scenario by late 2023, which is likely to result in a deflation "panic" by early 2024. We believe that the CPI will already be below 2% by the 4th quarter of this year as indicated by the annualised seasonally adjusted 3m rate of inflation of 1.7%, shown in Figure 1.

4. What to expect going forward

We expect to see a continuation of the Fed policy mistake.

As the Fed has a dual mandate of full employment and stable prices (with an inflation target around 2%), we believe that the Fed will keep a tight monetary policy stance for longer. With the headline CPI at 4.4%, and mainstream media cries of "inflation", we believe that the Fed will be under substantial pressure to continue "bringing down inflation". Additionally, as the unemployment rate is still at record low levels and "help wanted" signs abound, policymakers don't have a justification for inverting their policy stance.

Figure 5 – Historical US unemployment rate. Source: St Louis Fed FRED

However, as we've mentioned in a previous post[5], we believe that the unemployment rate is artificially low due to the substantial rise in disabilities and lost worktime in 2021 and 2022, which in our estimates is lowering the unemployment rate by about 0.7%. This means that the Fed might be too late in reverting its monetary policy, adding to the economic crisis that is developing.

In summary when looking ahead we see deflation coming.

We expect that, as the US economy goes deeper into recession in Q3-2023 and the headline CPI continues dropping, we will reach a point where deflation worries will surface into the mainstream. We expect deflation to be clear by Q1-2024 and that it will remain a worry for policymakers throughout 2024. How policymakers will respond is still unknown to us (even though we suspect a new round of QE with the introduction of CBDCs is awaiting us), but we will follow their actions and adjust our future projections accordingly.

Thank you for reading. I hope this post helped clear up the noise instead of adding to it.

[5] https://www.linkedin.com/posts/carlos-alegria-b68878a_post-10-us-economy-the-flavour-of-the-activity-7049481327900864514-YfB7