Inflation post #4: Why inflation is a monetary phenomenon. Date 2022-06-12

These posts are not intended to be a political analysis but rather an economic analysis; however, after listening to the testimony[1] by Janet Yellen to the U.S. Senate Commission on Finance, on the 7th of June, I am compelled to deviate from my planned post on inflation today, to provide some analysis of her arguments, and this necessitates some commentary on the role that politics plays more broadly in economics. I apologise for this. I can assure you that this post will not be a rant, but an attempt to clarify the root causes of inflation so that readers are not distracted by the political rhetoric on the topic.

The latest CPI release by the Bureau of Labor Statistics on the 10th of June showed that prices increased by 8.6% from a year ago, which is the largest yearly rise since 1982. I was surprised to hear that the Treasury Secretary pointed to supply-chain disruptions (from the Covid-19 pandemic) and Russia as the reason for high inflation; and that she saw little effect on inflation from government spending policies such as clean energy or subsidising the war in Ukraine. I'll explain why I believe these justifications for the causes of high inflation do not hold up to reality and that in fact the underlying cause is much simpler: Current inflation is a monetary phenomenon.

1. Gasoline prices at the pump are too high with respect to current oil prices.

The recent increases in international oil prices cannot alone explain the extraordinary increases in fuel prices (at the pump) that U.S. citizens are currently experiencing. These are clearly the result of internal political choices rather than external market conditions, such as the Ukraine-Russia war. Not so long ago, in late 2019, the U.S. was a net energy exporter and in just a few years has become highly reliant on foreign oil markets, while running record trade deficits. Internal policies related to the climate change agenda, which seek to limit oil production, are putting pressure on both internal and international oil markets.

To illustrate my point, in Figure 1 I show the historical evolution of WTI (West Texas Intermediate) spot oil prices and the all-country average retail gasoline prices by the EIA[2]. We can clearly observe that prices at the pump in May 2022 were running at a national average of 4.6$ per gallon (with WTI spot crude prices at 120$ per barrel), while in 2008 prices at the pump were "only" 4$ per gallon (with WTI spot prices at close to 150$ per barrel).

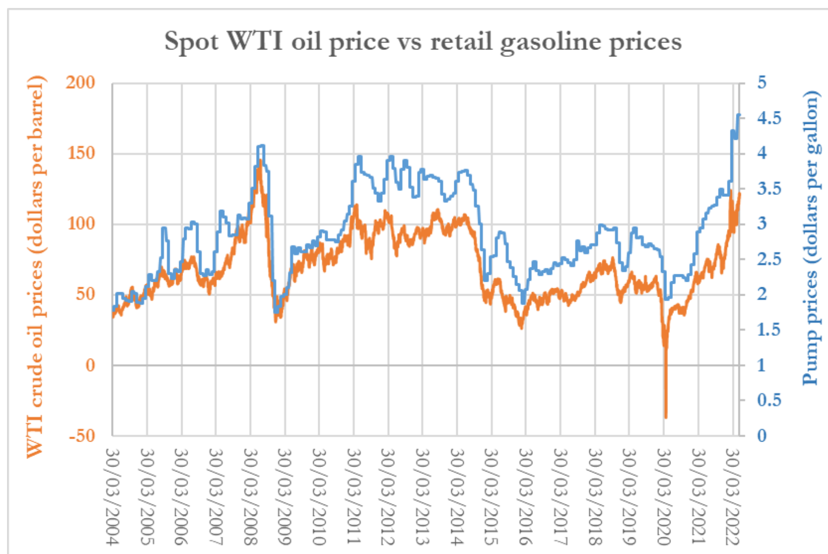

Figure 1 - WTI crude oil prices and gasoline retail prices

[1] Secretary of the Treasury Janet Yellen testimony before the U. S. Senate Committee on Finance. https://www.youtube.com/watch?v=SWkT7SSLHBU (2h06')

[2] Source: U.S. Energy Information Administration (https://www.eia.gov)

2. Increasing oil prices are not predominantly caused by the Russia-Ukraine conflict.

The second point I'd like to make is that the current trend in oil prices seem to follow the rising trend following the Covid-19 pandemic lockdowns in April 2020. At that time, the world literally ground to a halt as travel restrictions were enacted worldwide. Spot oil prices collapsed, as we can observe in Figure 2, reaching "impossible" values of -30$ per barrel as oil producers scrambled to find storage room for the pumped oil, as consumption fell almost to zero. The market disarray was temporary and expected to quickly normalise, as evidenced by the reaction of the December 2022 futures oil contract (blue line) that did not suffer a significant fall in April 2020.

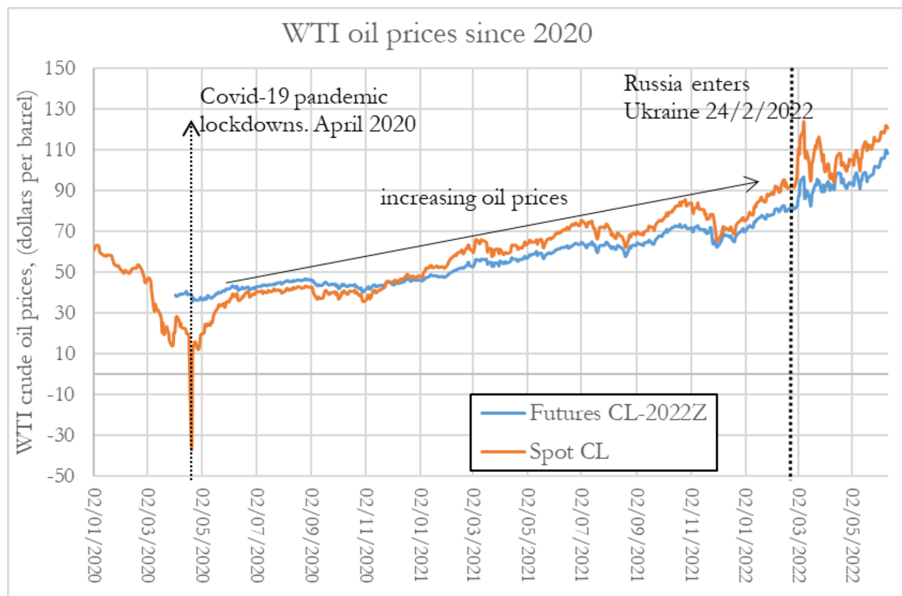

Figure 2 - Evolution of WTI crude oil prices since 2020

By late 2020 the economy started recovering from the initial pandemic shock, with the help of massive monetary and fiscal stimuli. Record low interest rates and unprecedented quantitative easing, together with large savings and pent-up demand by consumers led to the start of a very strong economic recovery. The economic recovery at first led to large increases in house prices and building materials and by September 2021 CPI inflation started to emerge. The strong demand tied together with supply-chain disruptions (due to the pandemic measures) led to shortages and prices increases in the markets where demand was targeted.

Demand for oil followed the economic expansion which led to higher demand on a market that had suffered large disruptions in 2020. Bringing extra capacity online takes time and restrictive oil exploration policies do not help. By February 2022, WTI oil prices were already standing at 92$ per barrel and while the start of the Russian operation in Ukraine on the 24th of February caused oil prices to jump to 123$ per barrel, they quickly subsided back to 96$ by mid-April. Currently, oil prices stand around 120$ per barrel, which I believe is the continuation of the inflationary pressures of the inflationary post-pandemic economic expansion. Next, I'll explain why.

3. High oil prices do not cause overall price inflation, a large increase in money supply does.

Consider this: If individuals could not afford high oil prices, they would buy fewer goods, travel less, and consequently oil demand would decline, lowering oil prices. The reason why this has not happened (yet) is that individuals have accumulated record levels of cash savings during 2020 and 2021, which, together with a historically strong economic recovery, and unemployment rates at record low levels, meant that they could still afford those price increases. Higher oil prices act like a tax on consumption and if in a robust economy it appears inflationary, it is ultimately deflationary as it eventually brings down consumer spending.

I believe that high oil prices are a consequence of an overheating economy which is at full employment and is generating inflation due to the extraordinary amount of quantitative easing since April 2020 which led to a 45% expansion in the M2 money supply up to 2022. The expansion of the money supply was at first offset by the drop in velocity of money due to the pandemic measures. As individuals started to normalise their lives (and savings rates) to pre-pandemic levels, the economic expansion gained steam and the velocity of money started to recover.

The consumer spending power driven by pent-up demand, together with and supply-chain issues, are leading to a generalised increase in prices (inflation). As I've stated in my previous posts on inflation, I expect that we'll see a prolonged period of inflation going forward as the record savings accumulated by U.S. households (from the pandemic years) are eventually deployed as confidence returns. Figure 3 shows that the quantitative easing by central banks ended up in increased liquid savings by households, which are still waiting to be deployed. This means that inflationary pressures will remain as households can afford higher prices (in general).

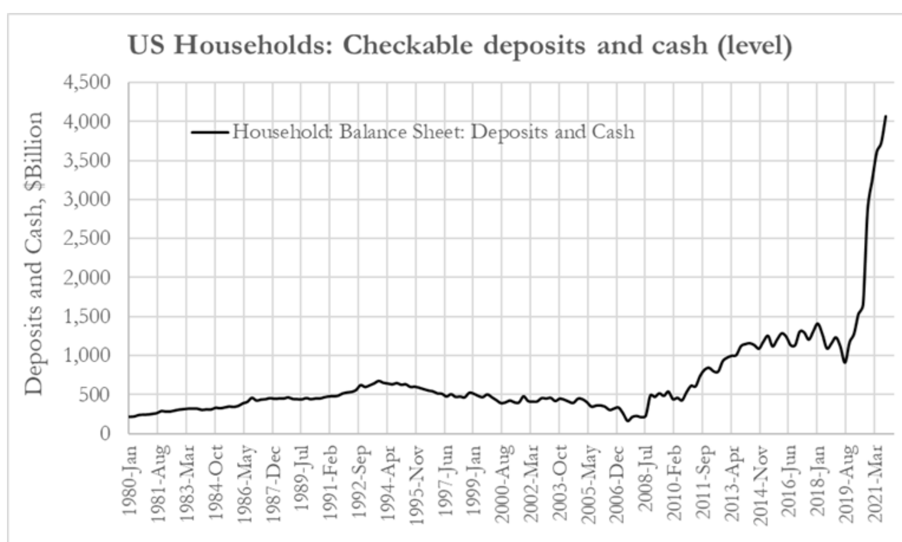

Figure 3 - Historical savings by US households. Source: St. Louis Fed FRED (series CDCABSHNO)[3]

4. High oil prices? Think again.

From what we've discussed, it appears that current oil prices are a consequence of a strong global economic recovery (including in the U.S.). When we adjust oil prices using gold as a deflator (see Figure 4) we observe that current oil prices (in terms of gold) are at the long-term average level since 1983 of (0.065 barrels per ounce). This means that oil prices are following a general trend in inflation.

Furthermore, to achieve a similar level to that of 2006, oil prices would have to rise above 240$ per barrel. At those levels, I suspect the U.S. economy would start to be affected by the high oil prices, as the tax on the economy would be too high.

[3] Board of Governors of the Federal Reserve System (US), Households and Nonprofit Organizations; Checkable Deposits and Currency; Asset, Level [CDCABSHNO], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/CDCABSHNO, June 14, 2022.

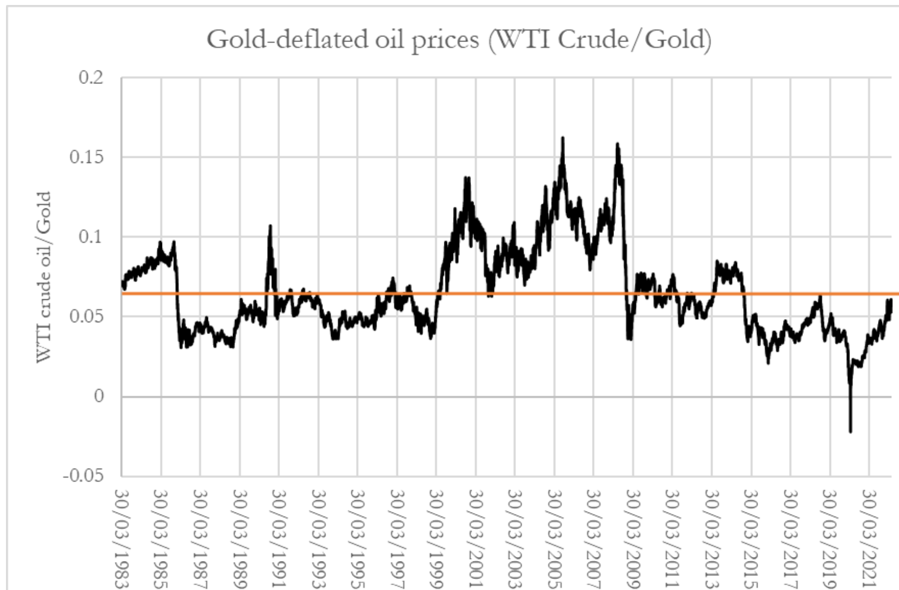

Figure 4 – Historical WTI Oil prices divided by gold prices

In late 2021, the U.S. economy was already starting to naturally decelerate from its unprecedented post-pandemic recovery as full employment was reached. With inflation picking up, the central bank promised aggressive rate hikes and the contraction of its balance sheet in the coming months to try to rein in inflation. These headwinds, together with the continuation of rising oil prices might lead to a stagnant or receding economy where inflation is still present. This is however topic for a different discussion…

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