

The Chronicle of an Upcoming US Dollar Squeeze

Nov 2023 | Michael Nicoletos

Introduction

This document aims to present a comprehensive analysis of how the economic policies implemented by the United States government and the Federal Reserve influence the dynamics of the US dollar and the US Treasury market. It recognises that various external factors may impact these areas but focuses primarily on the intrinsic link between the USD and U.S. Treasury securities. The paper's objective is to delve into the mechanisms through which current policies are expected to affect the value of the US dollar.

In contextualising this analysis, it is noteworthy to reference data from the International Monetary Fund (IMF). As of the first half of 2023, the US dollar accounted for roughly 60%¹ of global currency reserves. This level is a reduction from its peak of just above 70% earlier in the century but remains notably higher than the 50% mark observed 30 years ago. When it comes to the US Treasury market, it is the largest and most liquid bond market in the world and by far larger than any other market in terms of trading volume. The average monthly trading volume² of US Treasury securities is \$15 trillion, compared to the following for other major economies: Eurozone: \$6.0 trillion, Japan: \$3 trillion, China: \$2 trillion, Germany: \$1.5 trillion, UK: \$1.2 trillion, France \$0.8 trillion. This context is crucial for understanding the evolving influence of US economic policies on the global standing of the US dollar and the US Treasury market.

Step 1

After 13 years of Quantitative Easing (QE)³, the FED ended the expansion of its balance sheet. In response to inflation running well above its long-run target, the Fed began unwinding its accommodative monetary policy. As a first step, the FED decided to end QE, thus ceasing to provide US dollar liquidity in the market economy by purchasing US Treasuries and Mortgage-Backed Securities (MBS).

¹ <https://www.reuters.com/markets/currencies/us-dollar-share-global-fx-reserves-stays-flat-q2-imf-2023-09-29/>

² [International Capital Market Association \(ICMA\), Secondary Market Practices Committee, Secondary Market Data – H1 2022](https://www.icma.org/secondary-market-practices-committee/secondary-market-data-h1-2022)

³ <https://www.forbes.com/advisor/investing/quantitative-easing-qe/>

With QT, the Fed moved a step further and stopped reinvesting any maturing US Treasuries and MBS, passively shrinking its assets as those securities "rolled off" without being replaced. As the months went by, the amount of QT also rose, shrinking the FED balance sheet even further. The FED Balance Sheet is now down to 30% of the US GDP⁵.

FED Balance Sheet



A shrinking of the FED’s balance sheet means that other buyers will need to step in to buy the US Treasuries the FED was buying until now, which means more US dollars from market participants are needed to buy the portion of Treasuries the FED was buying. Hence, world markets began to need even more US dollars to buy US Treasury bonds, adding to the US dollar liquidity removal amplified by the rate hikes. So, global demand for US dollars increased further.

In the meantime, and as Monetary Policy was into reverse mode...

Relations between the US and China deteriorated further. Globalisation started moving in reverse as well, and everyone went looking to either re-shore or near-shore production activities it had been outsourcing for twenty years.

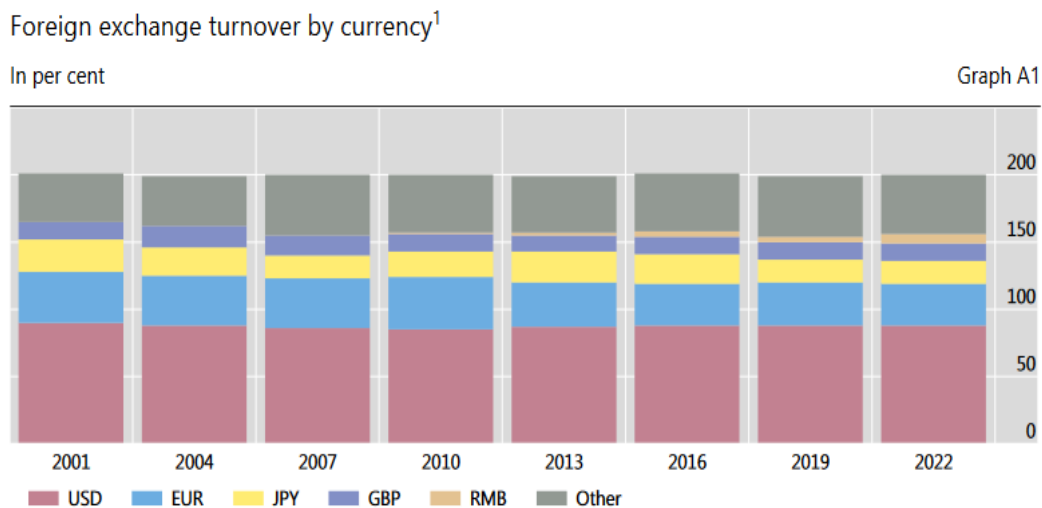
⁵ <https://research.stlouisfed.org/publications/economic-synopses/2023/08/23/the-mechanics-of-fed-balance-sheet-normalization>

The relocation, together with the higher costs of production associated with the new jurisdictions, put pressure on input costs, which fed into the inflation numbers.

At the same time, the War in Ukraine occurred, driving energy and various commodity prices higher.

Since global trade occurs mainly in US dollars and commodities are also priced in US dollars, more US dollars are now needed to transact. Given the macroeconomic environment I described, the deteriorating geopolitical situation puts the US dollar in even greater demand.

A BIS report (Dec 2022)⁶ stated that while more than 50 currencies trade globally, FX trading activity is concentrated in just a few major currencies. Nearly 80% of all FX trading occurs in the five FX trading hubs, which are also major financial centres. The average daily turnover with the US dollar on one side of the transaction was \$6.6 trillion – up 14% from \$5.8 trillion in 2019, in line with the change in total turnover. This means the US dollar was on the one side of 90% of all FX trades.



¹ As two currencies are involved in each transaction, the sum of shares in individual currencies will total 200%. Adjusted for local and cross-border inter-dealer double-counting, ie "net-net" basis; daily averages in April.

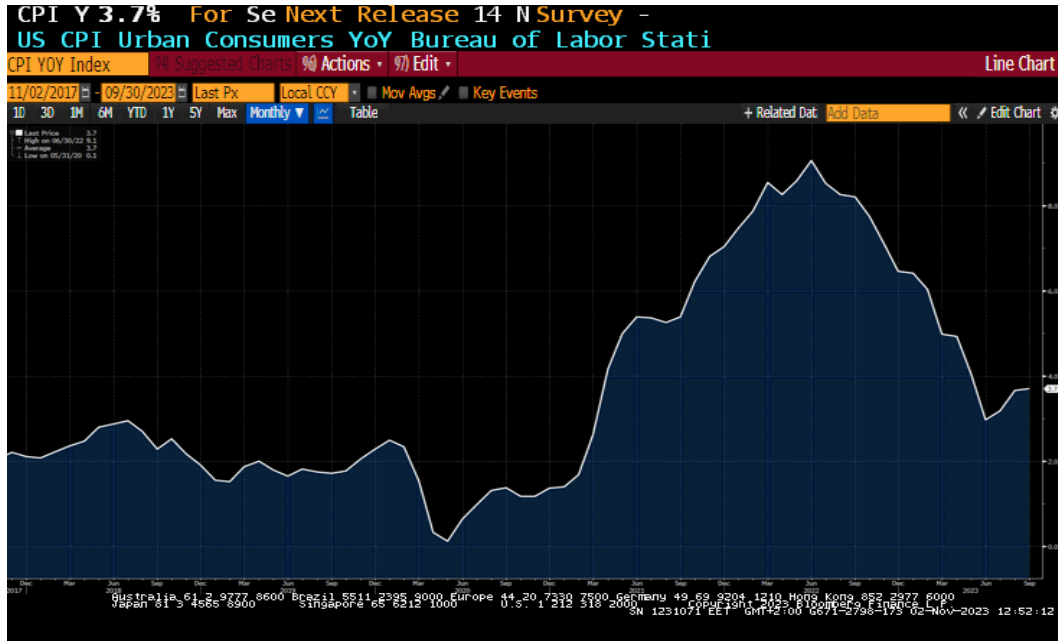
Source: BIS Triennial Central Bank Survey.

⁶ https://www.bis.org/publ/qtrpdf/r_qt2212f.pdf

Step 4

As inflation threatened global economies, reaching its peak of 9.1% in the US and 10.7% in the Eurozone, central banks were forced to continue raising interest rates.

US CPI YoY%

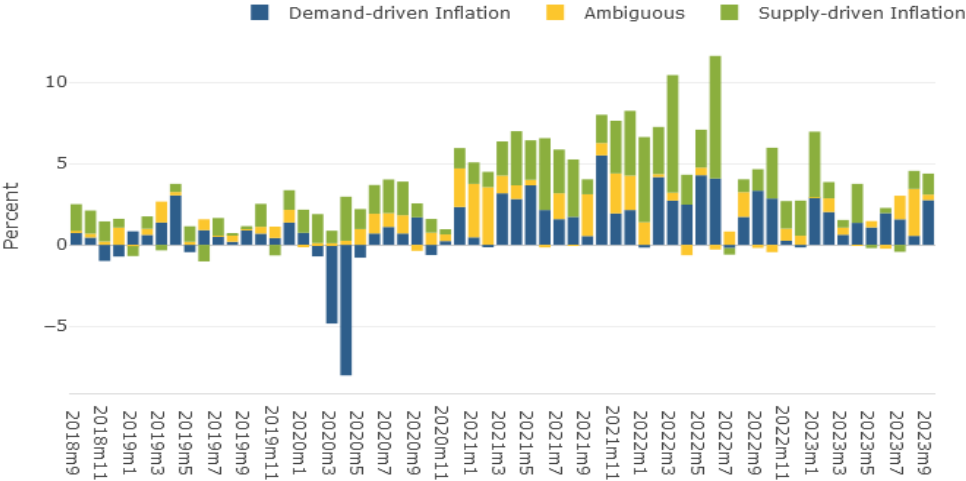


Eurozone CPI YoY%



Interestingly, a Federal Reserve of San Francisco research paper found that a big part of inflation was supply-driven. Given that all commodities are priced in US dollars, and 2/3 of the inflation pressure comes from supply-caused reasons, the more the FED raised rates, the more the Rest of the World (RoW) had to do the same. Should they not have followed the FED in raising interest rates, their currencies would have devalued vs the US dollar, driving their input costs higher (due to an FX devaluation, import costs rise).

Figure 1: Supply- and Demand-Driven Contributions to Annualized Monthly Headline PCE Inflation



So, as everyone started raising interest rates, global economic activity started falling. This effectively means that countries with current account surpluses (such as China) will eventually get hit. It also means that as economic activity slows down (and many believe that down the road, we are likely to see a severe recession), the price of any collateral will move lower. When this happens, borrowers are forced to find liquidity to cover the shortfall. Given that US dollar-denominated debt outside the US has reached \$13 trillion⁷, demand for US dollars will grow to cover the potential margin calls, draining global US dollar liquidity further.

⁷ <https://stats.bis.org/statx/srs/table/e2?m=USD>

The facility offers loans of up to one year to eligible depository institutions pledging US Treasuries, agency debt and mortgage-backed securities, and other qualifying assets as collateral. Notably, the BFTP values qualifying collateral at par, eliminating the haircut institutions might face if they seek to sell securities on the open market.

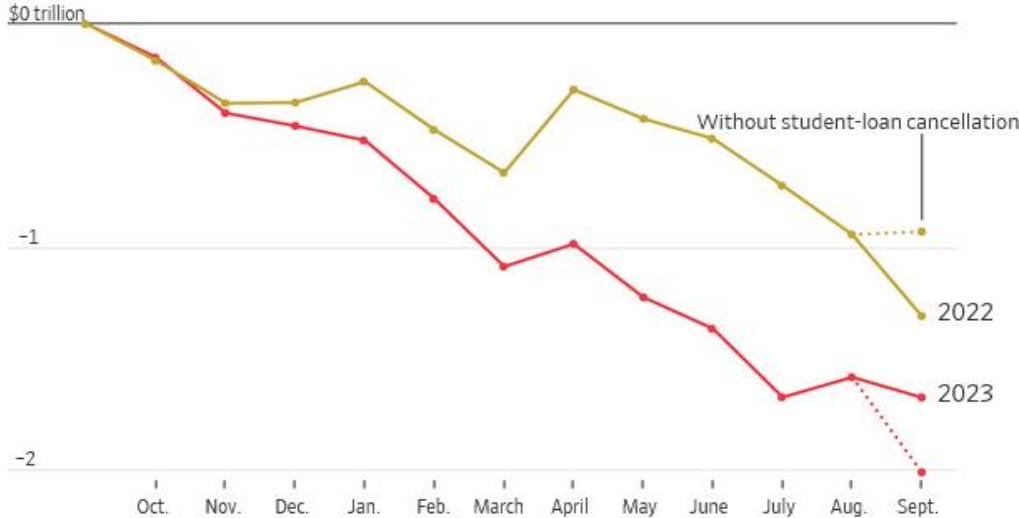
By doing so, the US made sure to protect US commercial banks by accepting US Treasuries as collateral at face value. So even if bonds traded at 90 and a bank needed to sell them at a massive loss for liquidity purposes, it did not have to do so anymore. Now, US commercial banks can sit on their US Treasury holdings, placing them (accounting-wise) in the Held to Maturity account without posting any mark-to-market losses. Should they need any liquidity, the FED will provide it, no matter the price they are trading at. Effectively ring-fencing US financial institutions from any losses caused by its monetary policy.

Borrower eligibility: Any US federally insured depository institution (including a bank, savings association, or credit union) or US branch or agency of a foreign bank eligible for primary credit.

This means that any institution with no operations in the US, facing the same issue on its US Treasuries, does not get the safety net provided by the FED.

Step 7

The US government continues running large deficits, at 7% this year and is expected to average 7% over the next few years, which means there will be an increase in the issuance of US Treasury bonds. With interest rates at 5,5% and the FED not buying any US Treasuries, demand will need to come from foreign and domestic buyers, creating even further drainage of US dollars across the globe.

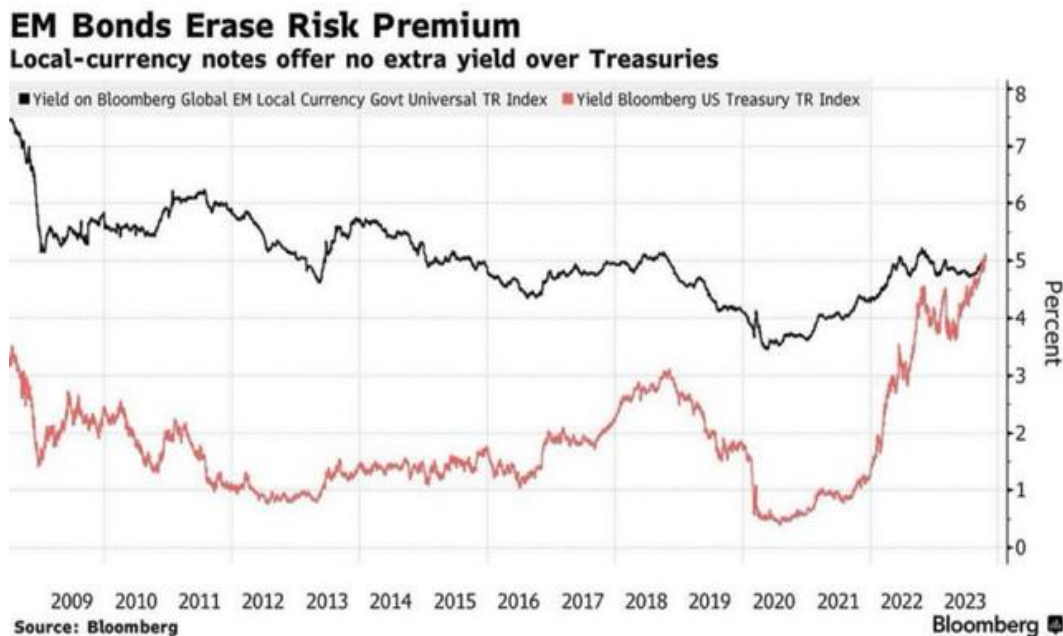


Note: Figures for September 2023 are projections. Fiscal year ends Sept. 30.
Source: Congressional Budget Office

Side Effects

Although it sounds counterintuitive, an increase in the US budget deficit at a time when the Federal Reserve is not buying securities means that investors will be using part of their US dollars to buy these Treasuries, reducing the available supply of US dollars. The US government sells bonds through this operation to finance its internal needs and effectively buys US dollars.

As all these policies unravel, capital markets for non-US participants, especially emerging markets, which are more dependent on the US dollar, become much more expensive. Why will any investor buy Emerging Markets (EM) risk when the yield in US Treasuries is at current levels?



Given the current risk/reward differential, investors will start investing more in US Treasuries and less in EM, driving the cost of funding for these countries higher at a time when they need more US dollars to repay their outstanding debts. Emerging markets are forced to borrow at much higher interest rates to compensate for the higher risk. But this is not linear as lending interest rates increase for domestic and foreign-denominated debt EM currencies also get pressured. Looking at the following two charts, this becomes very apparent. The first chart is the DXY⁹ US dollar basket (green) inverted (this means that as the green line moves lower,

⁹ The US Dollar Index (DXY) measures the value of the United States Dollar relative to a basket of foreign currencies. The basket of currencies consists of the Euro (57.6%), Japanese Yen (13.6%), British Pound (11.9%), Canadian Dollar (9.1%), Swedish Krona (4.2%), and the Swiss Franc (3.6%)

the US Dollar appreciates) vs the EMB (JP Morgan US Emerging Markets Bond ETF - purple). The second chart is the DXY (green) inverted vs the EEM (MSCI Emerging Markets ETF - red).

DXY (inverted) vs EMB (JP Morgan US Emerging Markets Bond ETF)



DXY (inverted) vs EEM (MSCI Emerging Markets ETF)



A vicious loop has begun, which will likely intensify as all these policies influence the real economy. The problem lies in the fact that it can take a long time for a monetary policy action to affect the economy and inflation. And the lags can vary a lot, too. For example, the significant output effects can take three months to two years¹⁰. And the impact on inflation tends to involve even longer lags, perhaps one to three years or more.

Also, it is essential to understand that not all inflation is the same. When an increase in demand drives inflation, monetary policy can be very effective. However, when inflation is caused by supply issues (for example, a war drives energy prices higher), monetary policy is not the appropriate tool to address the problem. In this case, fiscal policy is more appropriate. This raises the question of why the FED is aggressively using a restrictive monetary program while the US government is following an expansive fiscal policy when it knows this isn't the remedy.

As we move forward, as all these policies start having a more significant effect due to the time delay component, we are likely to see demand for US dollars rise at a time when US dollars are less available. I expect the US dollar to be much higher in the coming months, even though the US deficit is likely to continue soaring.

DXY¹¹ – US Dollar Basket



¹⁰ <https://www.frbsf.org/education/teacher-resources/us-monetary-policy-introduction/real-interest-rates-economy/>

¹¹ The US Dollar Index (DXY) measures the value of the United States Dollar relative to a basket of foreign currencies. The basket of currencies consists of the Euro (57.6%), Japanese Yen (13.6%), British Pound (11.9%), Canadian Dollar (9.1%), Swedish Krona (4.2%), and the Swiss Franc (3.6%)

The Eurodollar Market

Vital to understanding the magnitude of what I discussed is understanding what we call the Eurodollar market. The Eurodollar market plays an essential and complex role in the world's financial landscape; its significance is paramount. Although the existence of the Eurodollar market is recognised by many in the financial sector, the depth of its influence on market dynamics, economic conditions, and even international political relations is frequently overlooked, especially the substantial effect it has on geopolitics.

The Eurodollar market is a global financial market where US dollars are deposited, lent, and traded outside the United States. Despite its name, the standard definition of a Eurodollar is any US Dollar on deposit in a bank outside of the United States (not just in Europe). It is a decentralised market, meaning it is not regulated by any government agency.

As per Jeff Snyder¹², one of the foremost experts on the global monetary system (specifically the Eurodollar money system and all aspects of its misunderstood inner workings and who has a dedicated podcast on the subject - Eurodollar University) to gauge the amount of domestic US dollars in circulation, we use various monetary aggregates, with M2 being the most comprehensive and commonly recognised. As of October 2023, US M2 was approximately \$20.7 trillion.

Outside the US, the US M2 monetary aggregate includes¹³: Foreign currency deposits held by US residents at US banks and their international branches and US dollar deposits held by foreign residents at US banks and their international branches. Thus, we can say that Eurodollars are all the US dollars in circulation that are not included in the US M2 measure.

Important to note: Foreign deposits in US banks that foreign banks or other official institutions hold are not included in M2.

The Eurodollar market began in the late 1950s and early '60s when Russian banks started keeping US dollars in European banks. They did this to avoid American rules on how money could move in and out of the country. In the '70s and '80s, the market proliferated because banks and businesses liked the higher interest rates and fewer rules compared to the US.

During the time of the Bretton Woods agreement, which tried to keep the value of the US dollar and British pound within a specific range, the Eurodollar market became a way for

¹² <https://linktr.ee/eurodollaruniversity>

¹³ <https://www.federalreserve.gov/releases/h6/current/default.htm>

banks to get around those rules. The agreement had a weakness - it didn't really work when the economy was growing fast because it didn't allow for more US dollars to be made.

So, banks started to find other ways to ensure they had enough money to keep up with the growth.

Jeff Snider argues that central banks would look for ways around the Bretton Woods system when they needed more money to support economic growth. The Eurodollar market was one of these workarounds. It allowed banks to match the amount of money in the market with the demand for money without being limited by gold.

For example, imagine an oil sheikh in 1960 who had a \$1.0 million Certificate of Deposit (CD) in US dollars in a New York bank. He discovers he could earn more interest in a London bank, so he transfers his CD there. The London bank now has \$1.0 million of US dollars on its balance sheet to lend out. It can directly lend out that \$1.0 million. If it lends it to a local company that does business with the US, the money returns to the US market. The net domestic effect of money supply in the US is zero, but the global money supply has increased, given that one million US dollars still sit on the London banks' balance sheet.

If instead of the London bank lending to a London company to trade with a US company, that London company trades with a Russian company, and then that Russian company trades with a Chinese company, this process will continue to expand the Eurodollar Market. The only restraint on its growth is the Banking reserve requirements:

So, if London banks must keep 10% of deposits on hand, they can only lend out 90% of those million dollars. If each country the money passes through has the same rule, the amount of money that can be lent out gets smaller each time. But even with these limits, the original \$1.0 million could turn into \$9.0 million in the global Eurodollar market. This shows how money can multiply outside the US banking system.

Milton Friedman, a famous economist, looked into this and found that moving US dollars abroad for better returns was like creating a new money supply outside of the US. This growth only stops when banks run out of money to lend, often because of the rules about how much they need to keep in reserve.

Today, the Eurodollar market is used by a wide range of participants, including banks, businesses, governments, and individuals. It is a vital part of the global financial system, providing a source of liquidity and financing for international trade and investment.

To better understand the Eurodollar market, go to Jeff Snyder's Eurodollar University¹⁴ or read the exceptional research paper by my friends at Lykeion - Primer: The Eurodollar Market¹⁵, from which I derived much of the information you see here.

The BIS estimates that the Eurodollar market accounts for over 40% of the global over-the-counter foreign exchange market and over 20% of the global derivatives market. This makes the Eurodollar market one of the world's largest and most important financial markets.

The exact size of the Eurodollar market is challenging to estimate, as it is a decentralised market with no central reporting authority. There have been many attempts, but given its size and complexity to calculate, there is no number we can be sure of. Various sources estimate it from \$5 trillion to up to \$20 trillion.

Swap Lines

Because bank funding markets are global and have sometimes broken down, disrupting the provision of credit to households and businesses in the United States and other countries, the Federal Reserve has entered into agreements to establish central bank liquidity swap lines with six foreign central banks¹⁶.

These are the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, the Swiss National Bank, and the Bank of Mexico under the NAFTA agreement.

Two types of swap lines were established: dollar liquidity lines and foreign-currency liquidity lines. The swap lines are designed to improve liquidity conditions in dollar funding markets in the United States and abroad by providing foreign central banks with the capacity to deliver US Dollar funding to institutions in their jurisdictions during times of market stress.

Likewise, the swap lines allow the Federal Reserve to offer liquidity in foreign currencies to US financial institutions should the Federal Reserve judge that such actions are appropriate. These arrangements have helped to ease strains in financial markets and mitigate their effects on economic conditions. The swap lines support financial stability and serve as a prudent liquidity backstop. In the 2007 financial crisis, the Federal Reserve swap lines proved key in dealing with the crisis.

Remember that if a global liquidity scare occurs, as it did in 2007, only six central banks now have a swap line with FED to provide liquidity in US dollars.

¹⁴ <https://linktr.ee/eurodollaruniversity>

¹⁵ <https://www.thelykeion.com/primer-the-eurodollar-market/>

¹⁶ https://www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm

What is essential to understand here is that all these banking institutions (outside the US) that are part of the Eurodollar market and that have taken part in this process are not ring-fenced by the US Federal Reserve. Banks in jurisdictions where the Federal Reserve does not have a swap line agreement and/or are not protected by the Bank Funding Program (BTFP)¹⁷, would have great difficulty getting US dollar liquidity in case of credit and/or liquidity crisis.

Conclusion

In 2022, the curtain closed on a period of thirteen years, characterised by expansive global monetary strategies. With the United States dollar holding the esteemed position as the Global Reserve Currency (GRC), the implications of American monetary and fiscal decisions extend far beyond its borders, profoundly influencing global economic frameworks.

This paper has thoroughly dissected how recent shifts in US economic strategy are precipitating a scarcity of US dollars on a global scale - a trend that, while emerging, is anticipated to manifest more visibly in the forthcoming months. This projection takes into account the intrinsic lag between policy implementation and its economic impact.

If the current trajectory of US governmental policy persists, a pronounced liquidity shortfall in US dollars will likely materialise internationally, driving the price of the US dollar much higher. We are witnessing policies that effectively repatriate US dollars to finance expanding domestic deficits, a mechanism that could exacerbate economic strains for nations reliant on current account surpluses and those burdened with elevated US dollar-denominated debt.

This phenomenon of US dollar liquidity retraction is poised to exert sustained pressure on global economic expansion, potentially accelerating the economic deceleration already observable in regions outside the United States. However, it is essential to note that this deceleration is not expected to be geographically isolated; its impact is likely to negatively impact the US economy as well, albeit to a lesser degree, given the current climate.

It is, however, essential to consider the potential impact of the upcoming US elections, which may catalyse a temporary policy reversal. Nevertheless, based on current trajectories and post-electoral tendencies, I believe the established course of the US dollar is likely to be sustained even in the aftermath of the electoral process.

¹⁷ <https://www.federalreserve.gov/financial-stability/files/bank-term-funding-program-faqs.pdf>

While avoiding conspiracy theories, the underpinnings of these policies merit scrutiny, as some appear to contrast with conventional economic rationale. This inaptness propels me toward a contemplation made by Carl von Clausewitz's aphorism: "War is merely the continuation of policy by other means." Clausewitz asserted that war is fundamentally a political act, an extension of political objectives through alternative instruments.

If we apply this logic to monetary policy, probing questions emerge: Is it plausible that the constriction of US dollar liquidity is a tactical component of a broader geopolitical strategy? Might these economic policies be intertwined with the objectives of U.S. foreign policy?

The validity of these hypotheses remains to be determined, yet they warrant a place in the discourse surrounding the strategic calculus of US policy decisions.