

# The \$340 Trillion Problem

January 2020

**When money is mispriced, all assets are mispriced.**

**Wealth is created by productivity growth and efficient use of capital – the dollar system that created temporary wealth this decade is now changing.**

***The task is not so much to see what no one has yet seen, but to think what nobody has yet thought about that which everybody sees.***

***- Arthur Schopenhauer***

## Abstract<sup>†</sup>

This paper seeks to explain the rise and persistence of anomalies that we have observed in the US equity markets over the past decade, which we believe have been created by the excesses of the dollar system and the explosion of cheap money from unprecedented US monetary policy. In the US stock market, we have observed that:

- Management teams that efficiently allocate capital underperform profitless “disruptors.”
- Revenue growth matters more than profitability.
- Failing companies can access capital cheaply/often.
- Stock option grants are rewarded by an increase in capitalization, not dilution.
- The stock market has risen in lockstep with monetary stimulus from the Federal Reserve Bank of the United States (Fed).
- Stock prices moves are often unrelated to company information.
- Stock valuations are at unprecedented levels on a host of metrics.

This economic cycle itself has defied much of the conventional wisdom of economics:

- Debt explodes higher, but interest rates decline.
- Governments can print money without inflation.
- Massive budget deficits do not “crowd out” private spending.
- Negative yielding bonds are a “Safe Haven.”
- Precious metals have no value.
- Historic Chinese demand sends commodity prices to 100-year lows relative to financial assets.
- China can finance “ghost cities” with no tenants.
- US equities trounce international equities, led by strength from the consumer.

These anomalies have developed over a decade and turn the basic laws of finance and economics on their heads. As a result, active investment managers, who rely on the rational valuation of security cashflows to allocate capital, have underperformed passive investment indexes.<sup>1</sup> Passive investments, by contrast, simply replicate market indexes without security-level analysis. In April 2019, passive investments surpassed active investments. By mid-2019, JP Morgan estimated that passive investments controlled 60% of equity assets, while quantitative funds – those relying on trend-following models instead of fundamental research – accounted for 20% of the market.<sup>2</sup> This means that 80% of the US equity market is driven by investors who do not look at the individual stocks in their portfolios.

John Bogle, the father of the index fund, noted in 2017 that the market could become a “dangerous place” if index concentration exceeded a certain threshold of the market — in his view, somewhere beyond 75%.<sup>3</sup>

***“If everybody indexed, the only word you could use is chaos, catastrophe... the markets would fail.”<sup>4</sup>***

**Jack Bogle, founder of Vanguard**

We believe the US equity market has essentially - failed in the sense that it is unmoored from the intrinsic values of its underlying securities and wholly coupled to the Fed’s macro stimulus and interest

<sup>1</sup> <https://www.morningstar.com/insights/2019/02/12/active-passive-funds>

<sup>2</sup> <https://www.cnn.com/2019/06/28/80percent-of-the-stock-market-is-now-on-autopilot.html>

<sup>3</sup> <https://www.wsj.com/articles/bogle-sounds-a-warning-on-index-funds-1543504551>

<sup>4</sup> <https://www.marketwatch.com/story/john-bogle-has-a-warning-for-index-fund-investors-2017-06-01>

<sup>†</sup> The opinions expressed in this paper are exclusively those of the authors, Chris Galizio and Moses Grader, and do not necessarily reflect the opinions or views of Focused Capital, LLC, Little Harbor Advisors, LLC, or their respective members..

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rate policy. The efficient market hypothesis – which states that asset prices reflect all available information – has been eviscerated by dominant passive investment flows into the market, which are disconnected from real assessments of the cumulative risk of their underlying securities. As a result, corporate managers have been largely immune to the consequences of debt binging and encouraged to pursue top-line growth to confound venture capital risk or broken business models. Stock price discovery is concealed behind a massive wall of passive money – a potential “catastrophe.”

Under these conditions, we believe most all active managers have capitulated and have followed the trend to passive. Rather than fundamentals justifying price, we observe analysts using price to justify the fundamentals.

The story behind the destruction of price discovery in the US equity markets is preceded by a broader story of the dislocation of the price of money itself. The \$340 trillion problem is the approximate sum of global corporate and government bonds, securitized debt, and listed stocks that have been built up under the current global monetary regime which, led by the Fed, has created a fundamental capital market failure: the price discovery of money. With negative interest rates upending the basic laws of finance, the relationship between debt and interest rates have been broken.

This paper explores the thesis that unprecedented monetary policy has led to the most unproductive economic cycle in history, to massive distortions in debt and equity markets, and to a potential sovereign debt crisis that is imperiling the foundations of the fiat money system.

**“Right now people think central banks around the world can do whatever they want. They can’t....**

**I think it’s very hard for central banks to forever make up for bad policy elsewhere. And that puts them in a trap....”<sup>5</sup>**

**Jamie Dimon, CEO of JP Morgan Chase  
Davos Economic Forum 1/22/2020**

A combination of factors has placed the Fed in a trap of its own making. For the reasons we outline in this paper, we believe that the Fed has committed to keeping interest rates low and to expanding its balance sheet again indefinitely. With an intractable budget deficit requiring massive Treasury issuance and a yawning current account deficit, the Fed has only four ways to escape:

1. Grow the economy
2. Cut the budget deficit
3. Get foreign monetary authorities to buy US Treasuries, and
4. Devalue the dollar

We think that the US is too far gone in the economic and political cycles for the first three options to work. We therefore believe the Fed is short the dollar and is likely counting on a policy of dollar devaluation (which occurred as the option of last resort only twice before under the FDR and Nixon administrations) to rectify our current account deficit and redress the global financial asset bubbles of its making.

We believe asset prices will return to their intrinsic values, but not without a major shock to global financial markets. We think that this will coincide with a turning point in the global monetary system and world economy – from a strong dollar with low inflation to a weak dollar with potentially high inflation.

Running to cash or bonds in the next downturn will be like running into a fire doused in kerosene. The US stock market, on the other hand, offers unprecedented opportunities to capitalize on the pricing and structural inefficiencies of the last decade. Markets are not efficient – they have never been more inefficient – nor has there been a better time to be a bottom-up, long-short equity, active manager.

- Chris Galizio
- Moses Grader

<sup>5</sup> <https://www.cnbc.com/2020/01/22/jamie-dimon-at-davos-2020.html>



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## Signposts of Change

Inflation has been absent for so long that recent magazine covers such as those at right earnestly question whether the absence of inflation is now the new normal, rather than a sustained anomaly in global markets. Not surprisingly, our view is that we are near the tail end of a historic anomaly characterized by massive and continuous central bank stimulus for over 10 years without inflationary consequences. Ironically, magazine covers like these tend to be uncanny contrarian indicators at major turning points in markets....

### *So why has inflation not increased, despite historic central bank money printing?*

We believe the simple answer is that the current system has coordinated currencies and interest rates to keep inflation at bay. The **US dollar is the world's leading reserve currency** because most global and international transactions are conducted in dollars. Money flows to the dollar have been maintained by coordinated interest rates which keep the Fed's rate slightly higher than those of big central big banks of the other developed economies. Also, when fear grips global markets, money flows to the US dollar or US bonds as safe havens. When assets flow to the dollar, the dollar strengthens versus other currencies, keeping US inflation in check because of the relatively low cost of imports for American consumers and the dampening of domestic growth from more expensive exports. In the domestic US economy, we believe that **coordinated zero and negative interest rate policy has also helped keep inflation down by dramatically lowering the velocity of money**, which is the rate at which a dollar turns over in the economy. Lower velocity means that fewer transactions are being done in goods and services per available dollar, which has so far proportionately offset the massive increase of

printed money supply.<sup>6</sup> As discussed below, money velocity is at the lowest point ever recorded in the US. As long as the dollar remains strong, cash deposits held in US dollars will keep money velocity low. But this could change.



### *Why is a fundamental intrinsic investor so concerned about macroeconomic conditions?*

The “Goldilocks Scenario,” characterized by a strong dollar and low inflation, has given rise to enormous imbalances and large market pricing distortions which will continue until they are corrected by market forces. We believe the scale of the corrections amounts to a potential major paradigm shift to a weaker-dollar, higher-inflation economy accompanied by a re-ordering of the debt and equity markets. Although there is no way to predict the speed or magnitude of this economic shift, the consequences for the **stock market** will be unprecedented, **as asset prices return to their intrinsic values.**

holding liquid cash is so low, ii) a large percentage of households are living paycheck to paycheck, and iii) income is uncertain in the gig economy. It is also likely that, for similar reasons, institutions and households have more recently developed higher expectations for higher future interest rates, which means that these investors have moved to cash to avoid negative returns on debt and to seek liquidity in times of market uncertainty. The preference for liquidity is a major driver for lowering the velocity of money.

<sup>6</sup> The “quantity theory of money” relates the general price level in the equation  $MV=PY$ , where M is the money stock in the economy, V is the money velocity or dollar turnover in the economy, P is the price level and Y is the level of real GDP. While the government has increased M, V has plummeted offsetting the inflationary pressure P on a low rate of Y growth. Velocity is an independent variable that is affected by a host of factors. One explanation for very low money velocity is that perennially low interest rates have increased the demand for money among households because the i) opportunity cost of

# The Making of Unlimited Liquidity Policy and the Destruction of Price Discovery

It is easy to forget that we live in one of the most unique times in US and world history. The situation was created by the global central banks, largely led by the Fed, to save the financial system following the Global Financial Crisis (GFC).

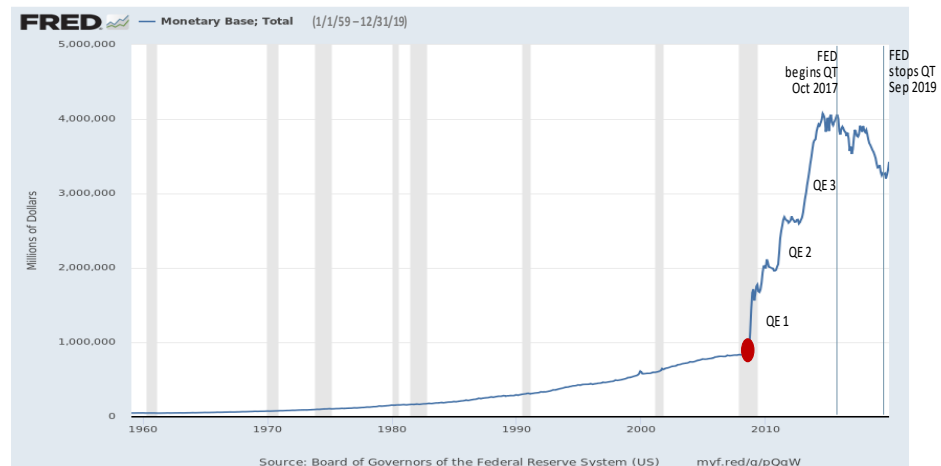
## Unprecedented Intervention

For the first time in US history, the Fed conducted three massive rounds of balance sheet quantitative easing (through open-market operations of printing money to buy bonds to inject liquidity into the capital markets) and sharp reductions of the federal funds rate to zero (effectively creating cheap money to stimulate economic activity). The scale and speed of both interventions were unprecedented and very aggressive.

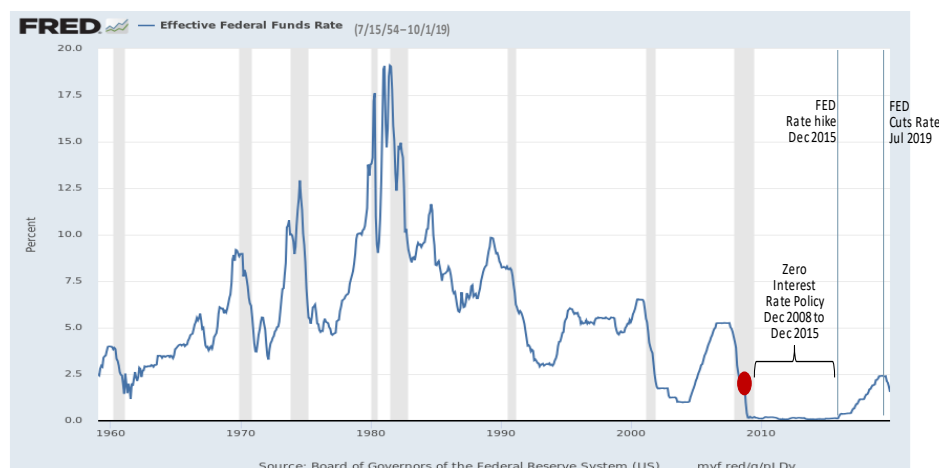
The Fed's quantitative easing (QE) massively increased its balance sheet from \$0.9 trillion in 2008 to \$4.4 trillion in late 2015, which was used initially for the purchase of bank debt, mortgage-backed securities, and long-term US treasuries.<sup>7</sup> As shown in the graph at right above, the Fed's massive balance sheet expansion had the targeted effect of proportionately increasing the monetary base liquidity of the US economy.<sup>8</sup>

Following the three QE cycles, the Fed reversed QE and began late cycle quantitative tightening (QT) in October 2017, which brought down the Fed balance sheet 20% to approximately \$3.2 trillion by September 2019. In that month, the Fed stopped QT on recession fears and the uncertainty surrounding US/China trade

negotiations. On September 17<sup>th</sup>, the Repo market seized up and the Fed was forced to deploy its balance sheet to provide liquidity in that market – wiping out 13 months of QT in the 3 months from September 17<sup>th</sup> to December 31<sup>st</sup>.<sup>9</sup>



Along with QE, the Fed slashed its funds rates from 5.2% prior to the GFC to zero, and then pursued a zero-interest rate policy for the next eight years. The Fed began to increase the funds rate in December 2015 through July 2019, when it reached 2.50%, before resuming rate cuts three times in the second half of 2019 to 1.75%.<sup>10</sup>



<sup>7</sup> <https://fred.stlouisfed.org/series/WALCL>

<sup>8</sup> <https://fred.stlouisfed.org/series/BOGMBASE>

<sup>9</sup> Note: QE1 (11/25/08) = Fed starts buying \$1.24T in mortgage securities. QE1 expanded (3/16/2009) = Fed starts buying \$300B in Treasuries. QE2 (11/3/10) = Fed starts buying \$600B in Treasuries. QE3 (9/13/12) = Fed starts buying \$40B/month in mortgage securities (open ended). QE3 expanded (12/12/12) =

Fed starts buying \$45B/month in Treasuries. Fed terminated QE net purchases (10/1/14). Fed reduced holdings (10/1/17-9/30/2019). Fed stops reducing holdings 9/30/2019. Sources: <https://www.yardeni.com/chronology-of-feds-quantitative-easing/> and <https://fred.stlouisfed.org/series/WALCL>

<sup>10</sup> <https://fred.stlouisfed.org/series/FEDFUNDS>

***The Fed has never used QE in its history and the last time that US short term interest rates reached zero percent was in the early stages of the 1930-32 depression.<sup>11</sup>***

On a global level, the Big Five Global Central Banks<sup>12</sup> increased their balance sheets from about \$3.0 trillion in November 2007 to over \$16.0 trillion in December 2019.<sup>13</sup> At the end of December 2019, three of the five central banks had fund rates at zero or below.<sup>14</sup>

Fed	ECB	BoE	BoJ	SNB
1.75%	0.00%	0.75%	-0.10%	-0.75%

### **Massive Debt Formation with Little to Show**

With their massive injection of liquidity and setting the price of money to approximately free, the central banks spawned an unprecedented level of debt formation. We now live in a world in which global debt has reached an all-time high of \$246 trillion, the equivalent of about 319% of estimated 2019 global GDP.<sup>15</sup>

In the United States, total private and public debt has increased by a third since the GFC to over \$74 trillion, representing about 345% of US 2019 GDP of \$21.4 trillion.<sup>16</sup>



***"The debt is growing faster than the economy. It's as simple as that. That is by definition unsustainable.... And it is growing faster in the United States by a significant margin."***

***Jerome Powell, November 11, 2019***

Despite this stimulus and record capital formation, the economic recovery in the US since 2009 averaged about 2.3% annualized GDP growth. This compares dismally to prior recoveries, and points to an especially poor-performing capital allocation cycle in the most overextended recovery on record.<sup>17</sup>

Recoveries	Duration Months	Annual GDP Growth
Oct 1949-Jul 1953	45	6.9%
May 1954-Aug 1957	39	4.0%
Feb 1961-Dec 1969	106	4.9%
Dec 1982-Jul 1990	92	4.3%
Mar 1991-Mar 2001	120	3.6%
Jun 2009 – Ongoing	124	2.3%

### **The Nationalization of the Repo Market?**

The most important way in which the Fed has traditionally controlled the Fed Funds Rate is through its open market operation in the Fed Funds market, a market for unsecured overnight loans between US banks. The Fed Funds rate is the

interest rate banks charge each other for overnight loans, which are called Fed Funds because banks use these funds to meet federal reserve requirement each night. If they don't have enough reserves, they will borrow the fed funds needed in the Fed Funds market. By law, the banks can set any rate they want, but the Fed controls the Fed Fund rate through its open market operations which buys

<sup>11</sup> <https://www.bridgewater.com/big-debt-crises/>

<sup>12</sup> Federal Reserve Bank of the United States (Fed), European Central Bank (ECB), Bank of England (BoE), Bank of Japan (BoJ), Swiss National Bank (SNB).

<sup>13</sup> <http://fingfx.thomsonreuters.com/gfx/rngs/GLOBAL-CENTRALBANKS/010041ZQ4B7/index.html>

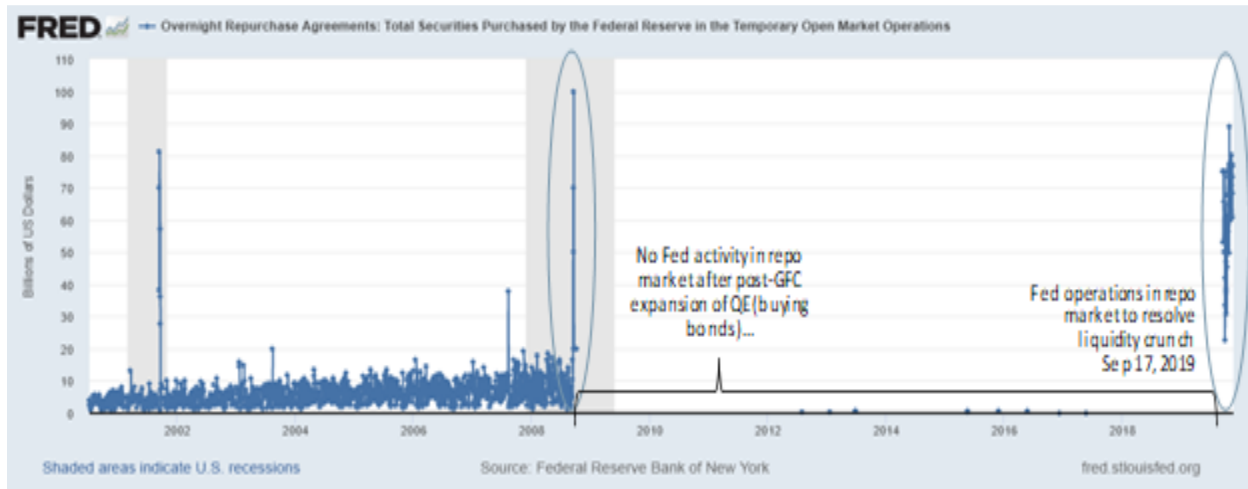
<sup>14</sup> <https://www.global-rates.com/interest-rates/central-banks/central-banks.aspx>

<sup>15</sup> [https://www.iif.com/Portals/0/Files/content/GDM\\_Aug2019\\_vf.pdf](https://www.iif.com/Portals/0/Files/content/GDM_Aug2019_vf.pdf) Institute of International Finance, Debt Monitor, Slide 3.

<sup>16</sup> <https://fred.stlouisfed.org/series/TCMDO>  
<https://countryeconomy.com/gdp/usa>

<sup>17</sup> [https://en.wikipedia.org/wiki/List\\_of\\_economic\\_expansions\\_in\\_the\\_United\\_States](https://en.wikipedia.org/wiki/List_of_economic_expansions_in_the_United_States)





securities to inject liquidity into the Fed Funds market to lower the Fed Fund rate and sells securities to tighten liquidity to increase the rate.<sup>18</sup>

The overnight Fed Funds market (between banks and the Fed) is related to the broader overnight Repo market (between companies, banks, and financial institutions). The Repo is a contract in which one party lends out cash in exchange for a roughly equivalent value of collateral securities, often Treasury notes. The market exists to allow parties that own lots of securities, but are short on cash, to cheaply borrow money. Conversely, it also allows parties with a lot of cash to earn a small return while taking little risk, because they hold the securities as collateral. A key feature of the market is that the cash borrower agrees to repurchase the securities at a later date, usually overnight, for a slightly higher price. The difference in price determines the Repo rate of interest. The overnight Repo rate normally tracks closely to Fed Funds rate, although it is slightly higher due to counter-party and delivery risk in the Repo market that does not exist in the Fed Funds market.

In addition to the Fed Funds market, it has not been unusual for the Fed to participate directly in the Repo market (inserting itself as a counterparty on repo trades) as well. Before the GFC, the Fed implemented part of its monetary policy by lending out cash in Repo markets, but in smaller amounts.

As pictured on the chart above, Fed activity before the GFC was between \$10-20 billion dollars per operation. The two major exceptions where the \$80 billion and \$100 billion interventions during temporary overnight liquidity crises, respectively, of the technology bust and the GFC. However, Fed activity in the Repo market evaporated almost completely for the first time when the first QE in US history injected massive liquidity into bank reserves and the economy commencing in September 2008. The Fed's inactivity in the Repo market continued for 11 years, until the Repo rate unexpectedly shot up from under 2% to about 10% on September 17, 2019 – forcing the Fed to inject \$53 billion into the market that day.<sup>19</sup> **From September 17<sup>th</sup> to December 31<sup>st</sup>, 2019, the Fed lent at an average clip of about \$60 billion per day into the Repo market (for an astonishing \$4.3 trillion in total activity in the Repo market).** There was effectively no private liquidity at the Fed depository banks or the broader institutional economy to clear up to a 10% interest rate in the Repo market.

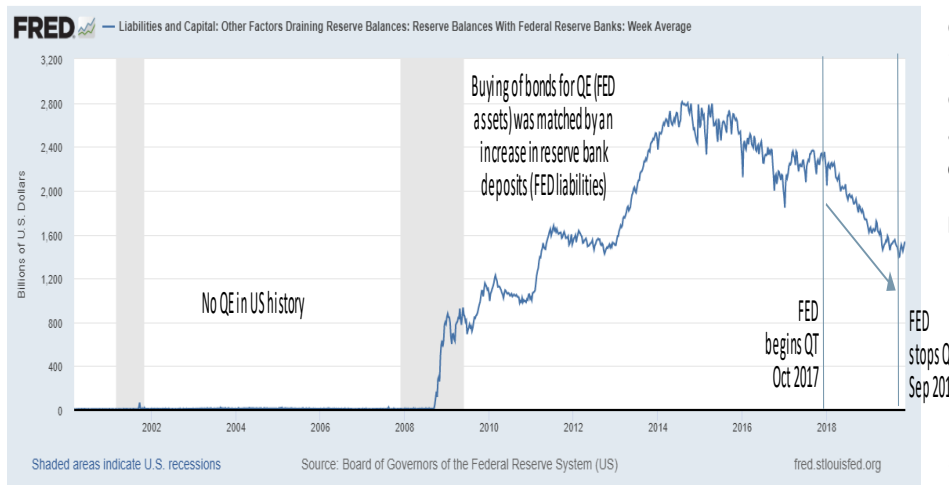
There are potential short-term explanations (bank reserve requirements, quarterly corporate tax payments, withdrawals from petrodollar accounts) for the banks inability to provide liquidity at such a high interest rate, but the scale of the intervention is unprecedented and has continued unabated.

<sup>18</sup> [https://www.newyorkfed.org/markets/rrp\\_faq.html](https://www.newyorkfed.org/markets/rrp_faq.html).  
<https://www.thebalance.com/how-does-the-fed-raise-or-lower-interest-rates-3306127>

<sup>19</sup> <https://www.wsj.com/articles/the-repo-market-what-it-is-and-why-everyone-is-talking-about-it-again-11568743438>;  
<https://tradingeconomics.com/united-states/repo-rate>.

Our analysis is that the conditions for the Repo market intervention were set up by the central bank's recent efforts to shrink its balance sheet. Post-GFC rules that were meant to eliminate the need for bank bailouts require banks to hold on to large stores of reserves and high-quality assets. Some banking functions can only be done in cash, however, so banks often need to pledge their high-quality assets—government securities—in exchange for cash. Until recently, banks had more than enough reserves to fulfill their needs for cash and regulatory requirements. But when the Fed started to shrink its bond portfolio as part of QT in late 2017, cash reserves at banks diminished as the private lenders bought debt securities that the Fed once would have snapped up.<sup>20</sup>

As shown in the following chart, bank excess reserves declined by more than 50% since QT began until the Repo market funding crunch, which occurred with approximately \$1.4 trillion remaining in US depository bank reserves:



We believe the Fed miscalculated the level of reserves it should have kept in the system so that banks could smoothly supply credit to the securities and foreign currency markets and fulfill their regulatory capital requirements at the same time. The Fed is the only player capable of providing liquidity to the Repo market because, as we will explain later, the US commercial banks faced a

textbook case of US government debt “crowding out” private loans.

It appears to us the Fed was surprised on September 17, 2019, when US Treasury repo funding market froze up and the overnight rate jumped as high as 10% that day.

***The spike in the Repo rate has put into question the functioning of the Fed interest rate mechanism and, given the divergent spike in the Repo market, the potential irrelevance of the Fed Fund market.<sup>21</sup>***

The Fed could not allow the Repo rate to spike higher because it would likely lead to a significant debt crisis. To put this in perspective, interest rates of 10% on the \$23 trillion in US Federal debt equates to approximately \$2.3 trillion in debt service costs per year – with total US tax revenue per year of \$3.5 trillion, debt service would balloon to 66% of total tax revenue, up from about 11% in 2018 – and the US budget deficit would grow from 5% to 60% of

GDP (assuming no drop in GDP). The impact on interest rates across the entire risk-spectrum would also have probably been catastrophic.

In a November 2019 interview by CNBC's Rick Santelli, Jim Grant, the editor of Grant's Interest rate Observer, commented that the Fed had at the time pumped “upwards of \$3 trillion in the Repo market – this is a

lot of money, even when you say it fast!” Mr. Santelli asked if that meant the “*de facto* nationalization of the Repo market?” Grants response was comprehensively bleak:

*“The federal funds market is kind of a ghost town, it exists in name only, and the fed funds rate is for show only. What has superseded it is the Repo rate, and the Repo market is completely dominated by the federal reserve and to that*

<sup>20</sup> <https://www.barrons.com/articles/federal-reserve-money-market-repo-intervention-51575400640>

<sup>21</sup> <https://www.barrons.com/articles/federal-reserve-money-market-repo-intervention-51575400640>



*extent, yes, it is the property of the US government. There is no more price discovery and we are dealing with administered rates, with huge amounts of money. I think it's kind of worrisome."*<sup>22</sup>

***It's especially worrisome because the policy-driven collapse of these markets evidences the disconnect between the i) pricing of money and ii) the real supply/demand dynamics of the US economy's liquidity markets.***

The Fed is considering alternative policy benchmarks in more robust clearing markets. It is currently pushing to replace the Fed Fund's rate and the Repo rate with the secured overnight financing rate, or SOFR.<sup>23</sup> SOFR is an influential interest rate that banks use to price U.S. dollar-denominated derivatives and loans based on transactions in the Treasury repurchase market, where investors offer banks overnight loans backed by their bond assets.

Meanwhile, Morgan Stanley and Goldman Sachs, two of the four major depository banks, have been quietly conducting periodic test runs with the New York Fed's Discount Window. As of September 2019, JPMorgan Chase pledged \$313 billion in high quality liquid assets at the Fed's discount window to secure borrowing capacity from the "lender of last resort."<sup>24</sup> **This may mean that the major depository banks believe that the Discount rate, which sets a cap on the Fed Funds rate, is cheaper than the rate that can or, is likely to, clear short-term lending markets.**

The Fed has no choice but to contain the Repo contagion. But we make the case in the next sections that the conditions for that contagion have already spread across the interest rate risk spectrum in the bond market and into the equity markets, having created very large bubbles in both.

### **When Money is Mispriced, All Assets are Mispriced**

Distorted interest rates have an enormous impact on asset prices. By way of simple illustration, below is a

table of a \$1.00 annuity at different interest rates (formula for the discounted value of an annuity in perpetuity = Cash Flow/Interest rate).

Interest Rate %	Intrinsic Value of Annuity
10%	\$ 10
5%	\$ 20
2%	\$ 50
1%	\$ 100
-1%	Infinite

Notice that the lower interest rates become, the higher is the marginal impact of lowering (or raising) interest rates on the intrinsic value of the annuity.

**Negative interest rates make no sense from the perspective of one of the basic laws of investment finance.** Artificially low interest rates over more than a decade have justified investment decisions across all asset classes at high valuations. What happens if interest rates rise even by only 1% from such low levels? The result is a logarithmic and massive correction in asset prices.

*"At a zero percent interest rate, it makes sense to flatten the Rocky Mountains to save on gas driving back and forth across Colorado."*

*Paul Samuelson*

### **The Impact of the Distorted Price of Money in the Debt Markets**

We are not historians, but in the pre-2009 world, going all the way back to the Greeks, we're fairly certain that bonds have never traded with negative yields as they are now. If an investor buys a bond from an issuer with a lot of debt, then that investor should expect a higher interest rate for the higher risk taken. Nonetheless, astonishingly, negative yielding corporate debt more than doubled from \$8.3 trillion to \$17.0 trillion in the recent eight months between December 2018 and August 2019.<sup>25</sup> Thirty percent of all investment-grade securities now bear sub-zero yields, meaning that investors who

<sup>22</sup> <https://www.cnbc.com/video/2019/11/13/santelli-exchange-the-feds-quiet-about-face.html>

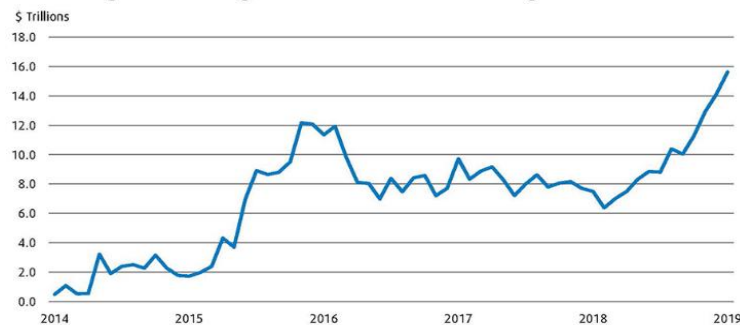
<sup>23</sup> <https://www.bloomberg.com/news/articles/2018-12-11/the-death-of-fed-funds-as-market-dries-up-fomc-asks-what-next>

<sup>24</sup> <https://wallstreetonparade.com/2019/11/as-fed-pumps-3-trillion-into-repo-market-morgan-stanley-and-goldman-sachs-practice-borrowing-from-the-feds-discount-window/>

<sup>25</sup> <https://www.bloomberg.com/graphics/negative-yield-bonds/>

acquire the debt and hold it to maturity are guaranteed to make a loss.<sup>26</sup>

#### Global Negative Yielding Debt Has Reached Record Highs



Source: BMO Global Asset Management and Bloomberg. Represents the Bloomberg Barclays Global Aggregate Negative Yielding Debt Index. Investments cannot be made in an index.

Part of the structural issue with the growth of negative yielding bonds is the **large increase of passive, broad-based indexes investing in the bond markets**, which do not evaluate the underlying credit constituents of their portfolios. The Federal Reserve Bank of Boston wrote a white paper on August 27, 2018, entitled “The Shift from Active to Passive Investing: Potential Risks to Financial Stability,” and noted that that passive funds made up 26% of all bond investments, whereas they were less than five percent in 1995.<sup>27</sup> By the end of 2019, the bond market was close to 40% passive.<sup>28</sup> Passive indexes typically make market-weighted allocations to bonds, opening up the capital markets to credits of all stripes, increasingly poor ones. For example, in the case of the astonishing \$600 million Mattel bond offering described in the side bar on the next page, Mattel’s BB- credit was added to the Barclay’s Aggregate Bond Index at exactly the wrong time in the credit cycle.

**The negative yield phenomenon has turned financial markets on their heads. We believe it is a prominent sign of a broad-based market distortion spread by the mispricing of debt:** investors are basically saying that bonds, especially government bonds, are “safe havens” and that it’s better to be in bonds than be exposed to the risk in the stock market.<sup>29</sup> But are bonds a safe haven if they carry a

negative yield from a company that can barely cover its debt service or a country that can only pay you back by monetizing its debt by printing money?

To quote James Grant again: “The word ‘safe’ is kind of a puzzle, you see it a lot modifying the word ‘government’ and then ‘bonds,’ as if there is something **intrinsically** safe about a bond that’s price to yield less than nothing to maturity. So, count me confused on the application of the word ‘safe’ to the fixed income markets today. I think it ends, does this monetary problem drama, with

a much higher gold price, that’s my firm and perhaps predictable idea. Nobody seems to be standing up for the price mechanism.”<sup>30</sup>

Because central banks have, over a long period of time, succeeded in removing price-discovery from the credit markets with zero percent interest rates, we believe risk does not have an accurate market-based pricing mechanism in interest rates anymore and strongly **indicates that we are in the biggest bond bubble in history.**

#### **Distortions in the US Stock Market**

Ben Bernanke, the former Chair of the Fed summed up Fed policy regarding the stock market in a 2010 Washington Post Op-Ed as follows:

*“Easier financial conditions will promote economic growth. For example, lower mortgage rates will make housing more affordable and allow more homeowners to refinance. Lower corporate bond rates will encourage investment. **And higher stock prices will boost consumer wealth and help increase confidence, which can also spur spending.** Increased spending will lead to higher incomes and profits that, in a virtuous circle, will further support economic expansion.”<sup>31</sup>*

<sup>26</sup> <https://www.bloomberg.com/graphics/negative-yield-bonds/>

<sup>27</sup> <https://www.bostonfed.org/publications/risk-and-policy-analysis/2018/the-shift-from-active-to-passive-investing.aspx>

<sup>28</sup> James Grant, The Interest Rate Observer, November 19, 2019

<sup>29</sup> <https://bmogamviewpoints.com/market-charts/global-negative-yielding-debt-has-reached-record-highs/>

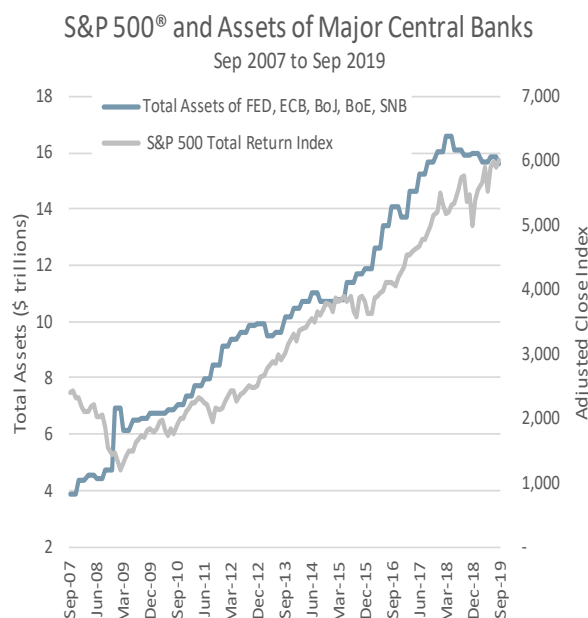
<sup>30</sup> Jim Grant, from the Interest Rate Observer, in an interview with Rick Santelli from CNBC on August 28, 2019.

<https://www.cnbc.com/video/2019/08/28/santelli-exchange-cheap-money-fairy-tale-doesnt-end-well.html>

<sup>31</sup> <http://www.washingtonpost.com/wp-dyn/content/article/2010/11/03/AR2010110307372.html>

This statement seems to us surprising from a Fed chairman, since it is not the Fed's job to manipulate the stock market. The statement also had little to do with real economic capital formation.

Sure enough, nine years later, the stock market has increased in lockstep with central bank liquidity operations, reflecting the wealth effect in the virtuous circle that Ben Bernanke had expected.<sup>32</sup>



In the shorter term over QE1, such a wealth effect may have been welcome, but the sustained manipulation through QE3 drove the stock market higher and encouraged the rise of **passive equity investment vehicles**, which invested “risk on” or “risk off” in the broad market as if it were its own fundamental.

As a result, assets have simply flooded into the US stock market in passive vehicles based on sentiment largely set by the pronouncements of the Fed, driving up stock prices irrespective of underlying fundamentals of companies. In a real sense, we believe the stock market is now a policy tool of the US government because of the wealth effect of the stock market's rise.

In such a context, passive equity vehicles outperformed active equity investment managers and ushered in a self-fulfilling massive shift from

<sup>32</sup> <https://www.yardeni.com/pu/peacockfedecbassets.pdf> and Little Harbor Advisors, LLC

#### Sidebar: Bums' Rush

You just can't keep a good company down. Yesterday, toymaker Mattel, Inc. (MAT on the NYSE) sold \$600 million in senior unsecured notes due 2027 and priced for double-B-minus-rated Mattel, which was forced to pull a \$250 million offering in August after receiving an “anonymous whistleblower letter.”

A Nov. 6 expose in *The Wall Street Journal* clarified that the company and its auditor PricewaterhouseCoopers attempted to bury an accounting error in 2017 which would have forced an earnings restatement. Brett Whitaker, Mattel's director of tax reporting at the time, told the *Journal*: “It was well known within Mattel that if we took this approach, at worst we might get a slap on the wrist from the Securities and Exchange Commission. But if a company disclosed a material weakness, a senior executive said to me it would be the ‘kiss of death.’”

Accounting and management adventures aside, **Mattel creditors are lending to a company already loaded with leverage**, as net debt of \$3.2 billion stands at 7.7 times consensus 2019 adjusted EBITDA. Operating income of \$125 million in the 12 months ended Sept. 30 failed to cover the \$190 million in interest expense incurred over that period.

As Mattel's experience suggests, **the capital markets remain wide open for would-be issuers of all stripes**. The yield on the Bloomberg Barclays Global Aggregate Index (“AGG”) has fallen to just 1.41% from 2.2% in November 2018. By comparison, Bloomberg's global CPI metric is up 3% from a year ago.

Much as in stocks, fixed income has been increasingly dominated by this shift, as passive investment products (which are largely identical to one another in terms of holdings, i.e., they purchase the investment-grade AGG) are set to account for 40% of bond fund assets, up from 16% in 2009. Similar to the equity indices, **the AGG is weighted by market capitalization, which means that the more debt an issuer takes on, the greater its relative weight within the index and the more flows it attracts (the so-called bum's rush problem)**.

So, let me get this straight. The passive AGG for the past 10 years, and looking forward, is offering the lowest expected returns in its history. It is now offering close-to-zero real yields, and the global AGG is a negative real yield. It's got deteriorating credit quality at exactly the wrong point in the cycle.

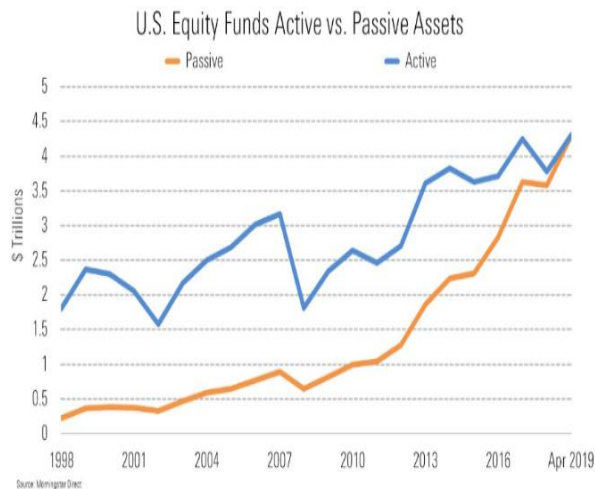
James Grant, *The Interest Rate Observer*,  
November 1, 2019, Vol. 37, No.21  
(emphasis added)

active to passive management. In 2007, active managers in the U.S. stock category managed over \$3 trillion, compared to less than \$1 trillion invested in passive index funds or ETFs.<sup>33</sup> But after the financial crisis, as investors lost faith in the financial industry in general and in active managers' ability to protect them from the GFC market rout, investors' tastes seemed to permanently change.

Assets in passive domestic investments grew over an average 13% per year to \$4.3 trillion at the end of

<sup>33</sup> <https://www.institutionalinvestor.com/article/b1fg0jnvbp536/History-Made-U-S-Passive-AUM-Matches-Active-For-First-Time>

April 2019, surpassing the amount held by active managers.<sup>34</sup>



According to estimates by JPMorgan, passive investments now control about 60% of the equity assets, while quantitative funds – those relying on trend-following models instead of fundamental research – now account for approximately 20% of the market share.<sup>35</sup> **This means that about 80% of the US equity market is driven by investors who do not look at the individual stocks in their portfolios.**<sup>36</sup>

John Bogle, the father of the index fund, noted in 2017 that the market could become a “dangerous place” if index concentration passed a certain threshold — somewhere beyond 75% in his view.<sup>37</sup>

**“If everybody indexed, the only word you could use is chaos, catastrophe... the markets would fail.”<sup>38</sup>**

**Jack Bogle, founder of Vanguard**

<sup>34</sup> <https://www.morningstar.com/blog/2019/06/12/asset-parity.html>

<sup>35</sup> <https://www.cnbc.com/2019/06/28/80percent-of-the-stock-market-is-now-on-autopilot.html>

<sup>36</sup> The simple passive investment theses and models that allocate to sectors, factors, market indexes (or ETFs and mutual funds mimicking these strategies) do not require the full security-level analysis that is required for true price discovery. Asset allocators use risk models that measure returns versus risk, using factors like growth, value, currency, leverage, size non-linearity, momentum, size, dividend yield, volatility and earnings variability to help measure returns. Quantitative investors, another trend in passive investing, use quantitative analysis to make statistical “bets” on the above factors. The macro drivers behind these investment approaches are in direct conflict with the concept of intrinsic value of underlying securities.

We think that the efficient market hypothesis – which states that asset prices reflect all available information – has been undermined by a **market failure reminiscent of the securitization of CDOs leading up to the GFC: like CDOs, the aggregate risk of index passive investment vehicles is disconnected from the real assessment of underlying security risk.** Price discovery is concealed by a wall of dumb money.<sup>39</sup>

Nonetheless, innovation and disruption have occurred very rapidly over the past 10 years. A major reason that the pace of innovation has accelerated in every sector of the economy is that US venture capital has shifted from the private markets to the public markets. **Similar to the public offering of new internet businesses models during the technology bubble of 2001, the investment banking industry has successfully transferred venture capital risk onto the public shareholder and passive equity index investors.** Led by companies like Uber and Lyft, which lose billions of dollars, investors have been rewarded with rich valuations before companies prove their profitability. Similarly, many unprofitable “zombie” corporations that do not have the cash flow to pay the interest on their debt, and in normal times would go bankrupt, have been kept alive by accessing capital markets.

**Active managers and securities analysts perform a critical function for an efficient economy.** They allocate assets to strong performing companies, take assets away from weak performers, and price risk securities – a critical role in a capitalistic society. The very diminished presence of active managers in the last capital deployment cycle has been a major factor in the discontinuity of stock market

<sup>37</sup> <https://www.wsj.com/articles/bogle-sounds-a-warning-on-index-funds-1543504551>

<sup>38</sup> <https://www.marketwatch.com/story/john-bogle-has-a-warning-for-index-fund-investors-2017-06-01>

<sup>39</sup> Not only do passive vehicles control most of the stock and debt market, three companies – Vanguard, Blackrock, and State Street – control 81% share of index fund assets. “Three ongoing mega-trends are reshaping corporate governance: indexing, private equity, and globalization. These trends threaten to permanently entangle business with the state and create organizations controlled by a small number of individuals with unsurpassed power.” Professor John C. Coats, Harvard Law School.  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=324733](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=324733)

information and has contributed for over a decade to a massive misallocation of resources, an inefficient stock market in which markets do not clear efficiently, and the weakest economic recovery in U.S. history.

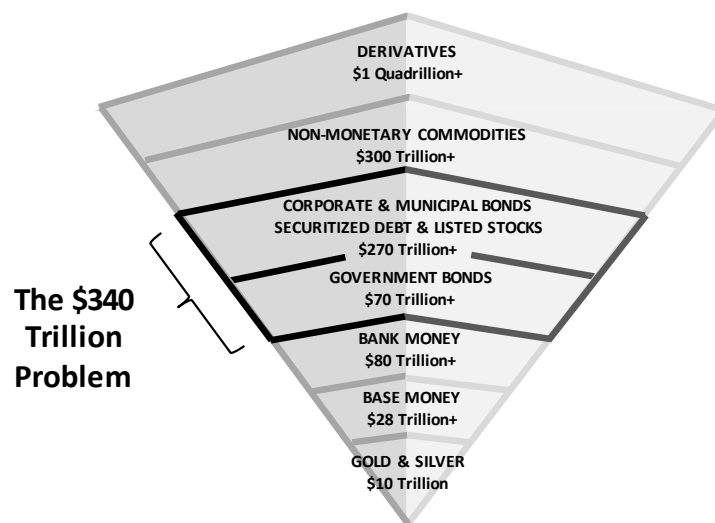
### **The \$340 Trillion Problem Revisited: A Page from John Exter's Deflationary Thesis**

With the help of Exter's Liquidity Pyramid, updated for today, we can visualize in context the \$340 trillion problem of government bonds, securitized debt, and listed stock in context.<sup>40</sup> The pyramid below dramatizes how, in a fractional reserve fiat system, debt is the raw material from which money is created in an inverse hierarchy of obligations – from base money up to modern derivatives.

The size and scope of the pyramid has become much larger since John Exter's days as a Federal Reserve economist in the mid-20<sup>th</sup> century. However, Exter's argument remains relevant to us today. As a good Keynesian who lived through the Great Depression, he did not believe that that deficit spending by government would automatically lead to hyper-inflation. Instead, **he argued that the more debt**

**money is created, the more severe would be the ultimate deflation in a fractional reserve fiat system** which prints money through debt creation.

As we have discussed above, QE and zero interest rate policy have driven an unprecedented formation of cheap debt invested in overvalued and increasingly unproductive assets. As a result, the nominal values of financial assets have ballooned dramatically, favoring the wealthy segment of the US economy. Average households, on the other hand, have borne the brunt of a weak capital investment cycle with stagnant real wages.<sup>41</sup> The bottom 50% of Americans still had negative net personal wealth in 2019 and are essentially living paycheck to paycheck.<sup>42</sup> We also believe that slow employment recovery from the GFC, the rise of the gig economy, job disruption by automation technology, and the disappearance of employee benefits have not convinced middle-income employees that the US is out of the 2008-2009 recession. Businesses have also hung onto cash mainly because of the political uncertainty and trade tensions with China, as well as the fear of the new congress' potential pullback of the 2017 corporate tax overhaul (prompting many companies to reinvest their cash in stock buybacks.



<sup>40</sup> John Exter was an economist on the Board of Governors of the Federal Reserve System who drew a similar pyramid to the one shown over 50 years ago to illustrate his view of the dynamics of deflation. The \$340 trillion is the sum of \$250 trillion in total global debt and approximately \$90 trillion in global equity capitalization. [https://www.cnbc.com/2019/11/15/global-debt-surge-to-a-record-250-trillion-in-the-first-half-of-2019-led-by-the-us-and-china.html#:~:text=The%20IIF%20states%20that%20global,surge%20in%20U.S.%20federal%20debt;](https://www.cnbc.com/2019/11/15/global-debt-surge-to-a-record-250-trillion-in-the-first-half-of-2019-led-by-the-us-and-china.html#:~:text=The%20IIF%20states%20that%20global,surge%20in%20U.S.%20federal%20debt;https://www.cnbc.com/2019/12/24/global-stock-markets-gained-17-trillion-in-value-in-2019.html)

<https://www.cnbc.com/2019/12/24/global-stock-markets-gained-17-trillion-in-value-in-2019.html>.  
<https://www.businessinsider.com/heres-how-much-money-there-is-in-the-world-2017-10#:~:text=According%20to%20the%20Bank%20for,popular%20currency%20in%20use%20worldwide.>

<sup>41</sup> <https://www.pewresearch.org/fact-tank/2018/08/07/for-most-us-workers-real-wages-have-barely-budged-for-decades/>

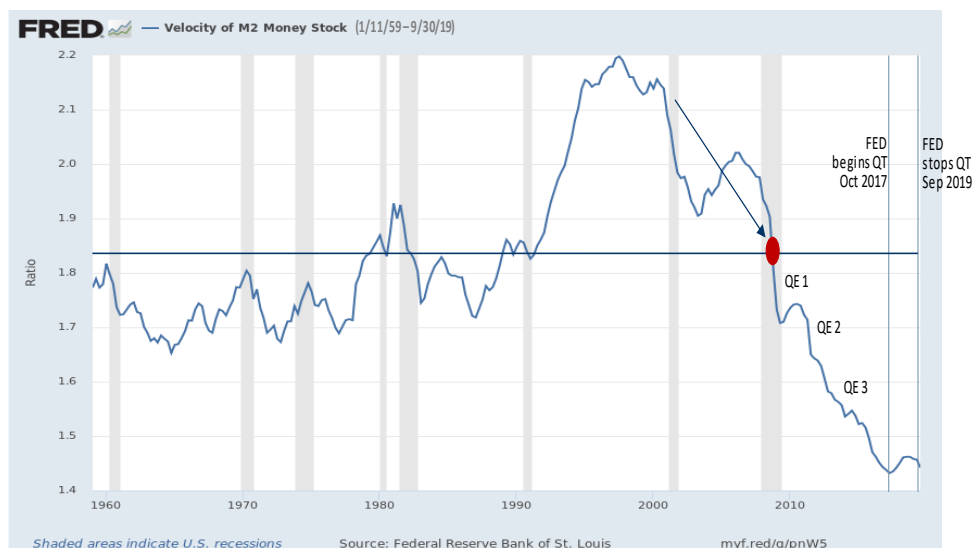
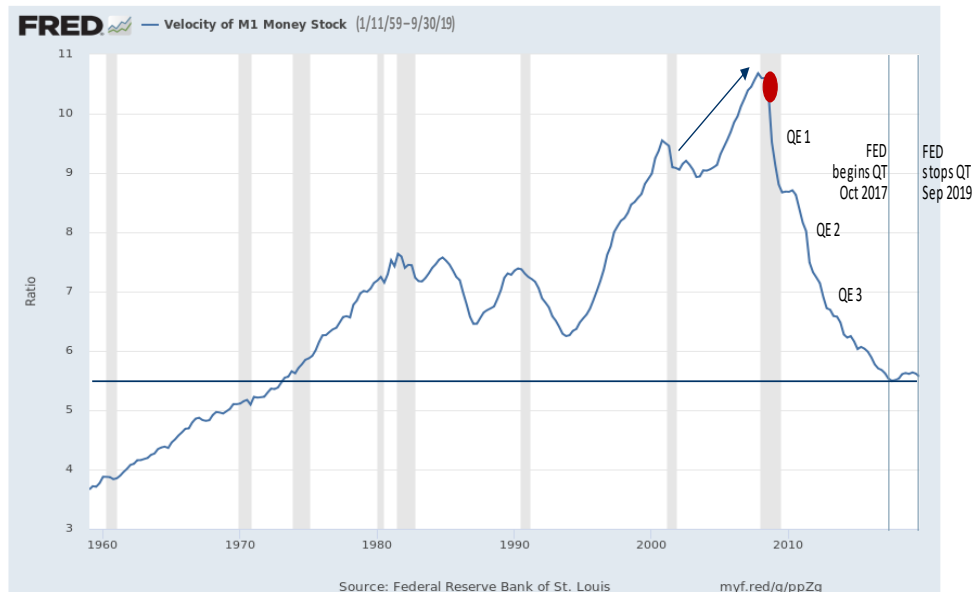
<sup>42</sup> [https://www.iif.com/Portals/0/Files/content/GDM\\_Aug2019\\_vf.pdf](https://www.iif.com/Portals/0/Files/content/GDM_Aug2019_vf.pdf)

With all of these dynamics, households and businesses have expressed their uncertainty by holding onto money. This is entirely consistent with the plummeting velocity of money in the US economy (how rapidly money turns over, a measure of transaction activity), which is at record lows.

The top right graph of M1 money velocity reflects the statistics which show that, since 2008, America's middle class is shrinking, with a large proportion of Americans hoarding what cash they have (or building up debt simply to buy food and gasoline for their cars).<sup>43</sup> M1 velocity is at its lowest since the US went off the gold standard in the early 1970s.

Comparing M1 velocity with M2 velocity in the bottom right graph supports this assessment. Since the calculation of M2 money stock includes savings as an additional component, it shows that Americans began hoarding their savings since Q3 of 1997 until about 2008, at which point M2 velocity accelerated below its lowest point in the last 60 years of available Fred data (as a reference point, M2 velocity is estimated to have dropped to 0.8 at its lowest in the Great Depression).<sup>44</sup>

As described in previous sections, low interest rates (as well as the narrowing interest rate spreads across the risk-spectrum and flattening of the interest rate yield curve) also encourage people and businesses to hoard cash because the opportunity cost of holding cash appears relatively low. In addition, expectations of interest rate increases (a logical assumption given negative and near zero interest rates) also encourage holding cash rather than buying bonds at top prices.



**Although the direction of money velocity gives an indication of improving or slowing economic activity, we believe it is also a significant variable in explaining why this debt cycle is deflationary for now.** The massive printing of money driving the QE programs has been offset by an roughly equal contraction of dollar turnover in the economy.

<sup>43</sup> M1 = currency + checkable deposits + traveler's checks. A decreasing velocity of M1 might indicate fewer short-term consumption transactions are taking place. We can think of shorter-term transactions as consumption we might make on an everyday basis. M2 = M1 + all near moneys (small-time and savings deposits, money market accounts, REPOs, overnight

Eurodollar deposits).  
[https://staffwww.fullcoll.edu/fchan/macro/4measures\\_of\\_money.htm](https://staffwww.fullcoll.edu/fchan/macro/4measures_of_money.htm)  
<sup>44</sup> [https://www.frbsf.org/economic-research/files/S04\\_P1\\_JohnVDuca.pdf](https://www.frbsf.org/economic-research/files/S04_P1_JohnVDuca.pdf)





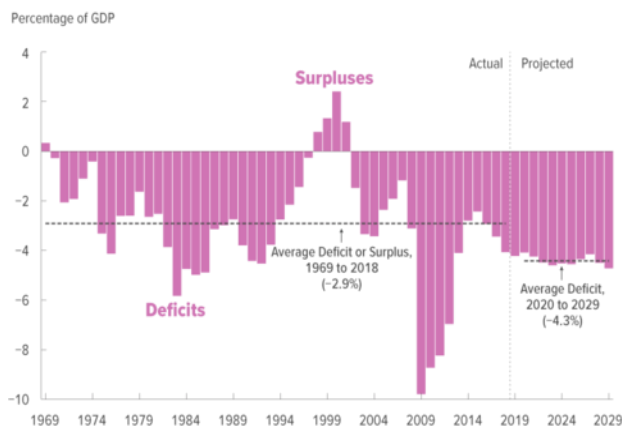
### **The Current Account Deficit is Captive to the Intractable US Budget Deficit**

By definition, the US national current account deficit – which is primarily the trade deficit with the rest of the world (or the excess of US imports over US exports) – has been financed by net capital flows from overseas.<sup>45</sup> **By running a persistent current account deficit illustrated in the above chart, the US has relied on foreign flows into US debt and dollar overseas reserve accounts for over 25 years.**

One way that the US could lessen its dependence on foreign dollar flows would be to conduct fiscal operations by lowering its use of domestic funds by either reducing its budget deficit or the level of national private investments; or, alternatively, by increasing sources of domestic funds by encouraging personal savings.<sup>46</sup> Since it is generally not a good idea to constrain private investment (sacrificing future living standards), the keys to reducing the current account deficits is to **encourage savings** and **reduce the budget deficit**. Both, however, are going in the wrong direction.

After increasing their savings rates to about 12% of disposable net income at the end of 2012, Americans

have again lowered their savings rate to about 8% in September 2019, in effect spending more of their savings to fuel our consumption-driven economy.<sup>47</sup> Similarly, the government budget deficit has soared amid tax cuts and political gridlock during the Trump administration. After coming off of an all-time high budget deficit of \$1.4 trillion in 2009 to \$442 billion in 2015, the budget deficit rose to a heady \$984 billion in 2019.<sup>48</sup> The following chart is from Congressional Budget Office showing budget deficits in the U.S over the past 50 years. Projections are for the US to continue to run a budget deficit of 4.3% of GDP over the next decade:<sup>49</sup>



<sup>45</sup> These net capital flows are either private flows (foreign direct investment into US, foreign purchase of US stocks and bonds, or bank flows into US dollars) or official flows (principally US dollar reserves held by foreign monetary authorities, who stockpile dollars to mainly manage the value of their currencies, maintain liquidity and confidence of business in their countries, and/or to receive a yield on US securities, especially federal debt).

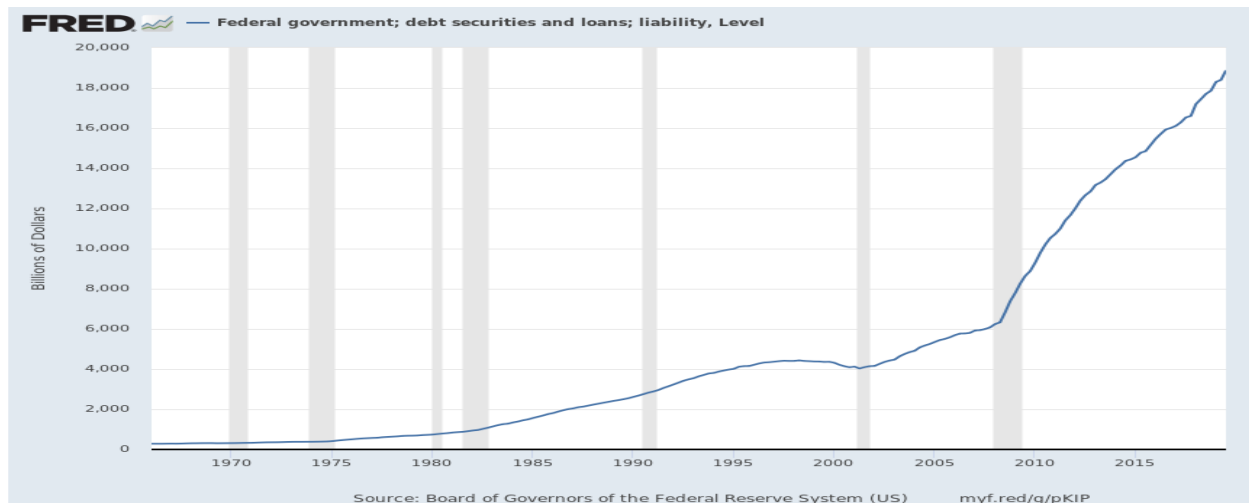
<sup>46</sup> This is based on the macroeconomic accounting identity that relates domestic private savings (S), domestic investment (I), the budget deficit (BD), and net capital flows from abroad (NC), whereby:  $I + BD = S + NC$ . The two domestic uses of funds (I and

BD) must equal the two sources of funds (S and NC). If domestic uses of funds ( $I + BD$ ) exceed the domestic sources of funds (S), the excess must be borrowed from NC abroad. This relationship can be seen in equation:  $NC = I + BD - S$ . Since the current account deficit (CAD) equals NC, the equation can be re-written as  $CAD = I + BD - S$ , which is used for the purposes of our analysis above.

<sup>47</sup> <https://fred.stlouisfed.org/series/PSAVERT>

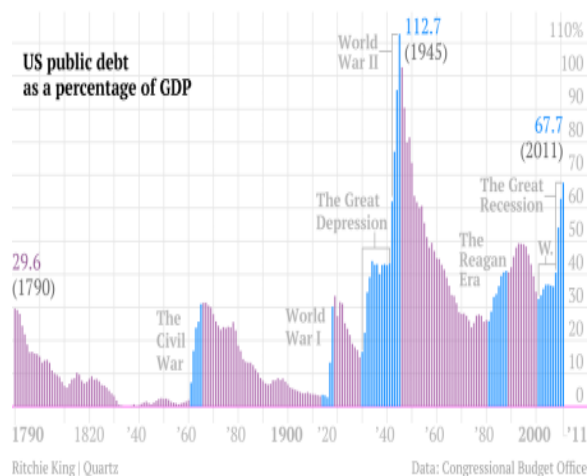
<sup>48</sup> <https://fred.stlouisfed.org/series/FYFSD>

<sup>49</sup> <https://www.cbo.gov/publication/55151>



As illustrated in the chart above, the Federal debt – which is the net accumulation of the annual budget deficits – tripled from just over \$6.3 trillion or 64% of GDP in Q2 2008 to nearly \$19 trillion or 105% of GDP in 3Q 2019, with no sign of slowing given the deficit projections from the Congressional Budget Office.<sup>50</sup>

For additional context, the Congressional Budget Office presents the history of US debt-to-GDP ratio from 1790 in the following chart.<sup>51</sup>



**There was only one year in US history when federal debt to GDP was higher than in 2019.** And that was 1945, the last year of WW II when defense spending was 40% of GDP! We now have the 2<sup>nd</sup> largest public debt burden in US history after the longest expansion in US history, when defense spending never exceeded 5.7% of GDP at the height of the global war on terror.<sup>52</sup>

***“The federal budget is on an unsustainable path, with high and rising debt.... Over time, this outlook could restrain fiscal policymakers’ willingness or ability to support economic activity during a downturn.”***

**Jerome Powell, Testimony before Congress Joint Economic Committee, November 2019<sup>53</sup>**

Despite the fact we are arguably facing the prospect of a downturn, embarking on a US austerity program of reducing the budget deficit through cuts in healthcare, social security, and defense appears politically infeasible in the current environment in Washington.<sup>54</sup>

<sup>50</sup> <https://fred.stlouisfed.org/series/GFDEGDQ188S>

<sup>51</sup> <https://qz.com/26062/one-chart-that-tells-the-story-of-us-debt-from-1790-to-2011/>

<sup>52</sup> Defense spending was 41.1% of GDP in 1945 and 5.65% of GDP at the height of the global war on terror spending in 2011. [https://www.usgovernmentspending.com/spending\\_chart\\_190\\_Q\\_2020USp\\_XXs2li111tcn\\_30f\\_20th\\_Century\\_Defense\\_Spendin\\_g](https://www.usgovernmentspending.com/spending_chart_190_Q_2020USp_XXs2li111tcn_30f_20th_Century_Defense_Spendin_g)

<sup>53</sup> Paul Davidson, “Powell: U.S. debt is ‘on unsustainable path,’ crimping ability to respond to recession,” USA Today,

November 13, 2019.

<https://www.usatoday.com/story/money/2019/11/13/interest-rates-powell-tells-congress-federal-debt-unsustainable/2582302001/>

<sup>54</sup> For the only time since the GFC, the Great Depression, and World War II, the combination of Consumption and Government is currently greater than 86% of GDP: 2018 GDP = Consumption (69%) + Investment (18%) + Government (17%) + Net Exports (-5%)

## **The US Economy is now Wholly Dependent on Foreign Demand for the Dollar**

Without room to cut interest rates, without productive balance sheet easing, and without viable fiscal policy tools, **the US has no choice but to attempt to defend the attractiveness of the US dollar as a reserve currency and to entice foreigners to invest in US Treasuries to fund the US budget deficit.** Without this sustained foreign demand, the alternative is a devaluation of the dollar to correct the large imbalance in the US current account deficit. The primary challenges to the dollar's status as the reserve currency is the China *status quo* and the world's loss of confidence in the US capacity to keep its sovereign debt attractive.

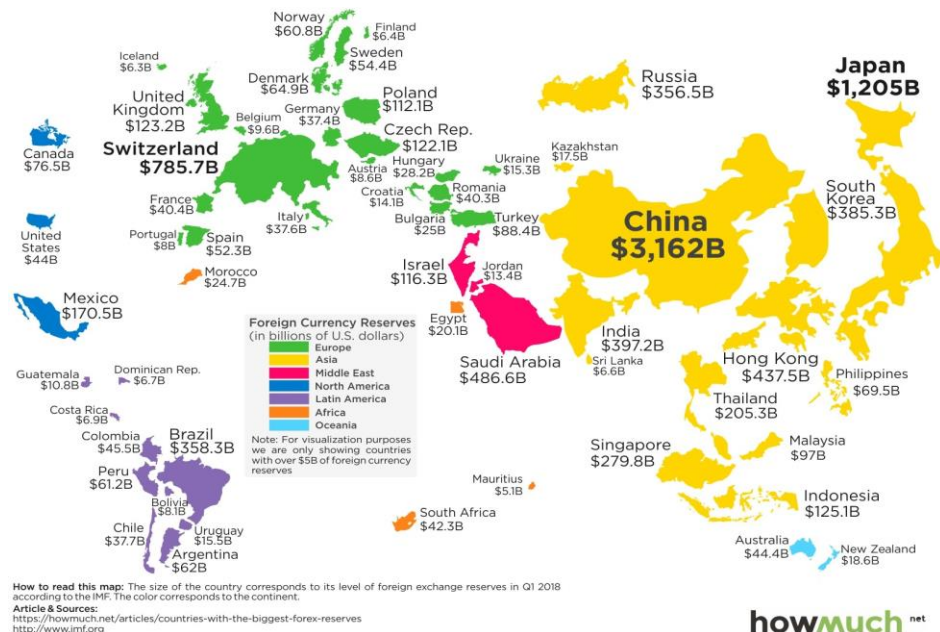
## **China's Challenge to the Reserve Status of the US Dollar**

Since there is no evident domestic fiscal policy reprieve to be found for the US current account deficit, **it should not be a shock that the Trump administration is tackling the trade deficit directly and encouraging foreign direct investment into the US.**

The administration has sought trade concessions with our major trading partners through import tariffs and/or liberalization for US exports. But this is a desperate short-term measure and a risky strategy since it leads to a trade war and could hasten a global recession. Although the administration went after our closest allies on trade tariffs first, China is by far the most intractable problem because it alone represents approximately 68% of the US global trade deficit.<sup>55</sup>

We believe the trade deal with China, however, is less about tariffs than it is about getting out from under the Chinese *status quo*: a hold-up which has the potential of ending the dollar's status as the world's reserve currency.<sup>56</sup> The US has been able to run budget deficits and trade deficits for years, and yet the dollar has remained strong because of the coordinated central bank interest rate regime, quantitative balance sheet policies, and coordinated exchange rates – all of which have maintained the dollar as the indispensable reserve currency as global medium of exchange and safe harbor of liquidity. On that premise, the world and global monetary authorities have been willing to i) buy US sovereign debt to fund the US current account deficit and ii) hold US dollars as monetary reserves overseas. But it is not clear that they are willing to continue, particularly as we have noted, the US budget deficit continues to climb.

The chart below shows the relative size of countries based on their volume of foreign currency reserves.<sup>57</sup> As the *de facto* reserve currency used in most global transaction, the dollar accounts for over 60% of all allocated global reserves. China is by far



<sup>55</sup> <https://ustr.gov/countries-regions/china-mongolia-taiwan/peoples-republic-china>

<sup>56</sup> In the wake of the financial crisis of 2007–2008, the governor of the People's Bank of China explicitly named the Triffin Dilemma as the root cause of the economic disorder, in a speech titled Reform the International Monetary System. Zhou Xiaochuan's speech of 29 March 2009 proposed strengthening

existing global currency controls, through the IMF. This would involve a gradual move away from the U.S. dollar as a reserve currency and towards the use of IMF special drawing rights (SDRs) as a global reserve currency.

<sup>57</sup> <https://howmuch.net/articles/countries-with-the-biggest-forex-reserves>; [www.imf.org](http://www.imf.org)

the largest holder of foreign currency reserves which, at \$3.2 trillion, are larger by a factor of 2.5x over the next largest holder, Japan.<sup>58</sup> Because virtually all of China's reserves are denominated in US dollars, **China holds approximately 45% of the \$6.8 trillion in dollar denominated reserves around the globe.**<sup>59</sup>

We believe, China's primary economic goal is to maintain export-led economic growth to employ its 1.4 billion people, which it does by pegging the yuan to the dollar at an artificially depreciated level, making its exports more competitive.<sup>60</sup> China's massive reserves result from its exchange rate controls. Because a free-floating yuan could likely appreciate relative to the dollar (estimates vary by how much), China has capped the yuan's rise by using dollars (which it receives from its exporters) as reserves and to buy US treasury securities.

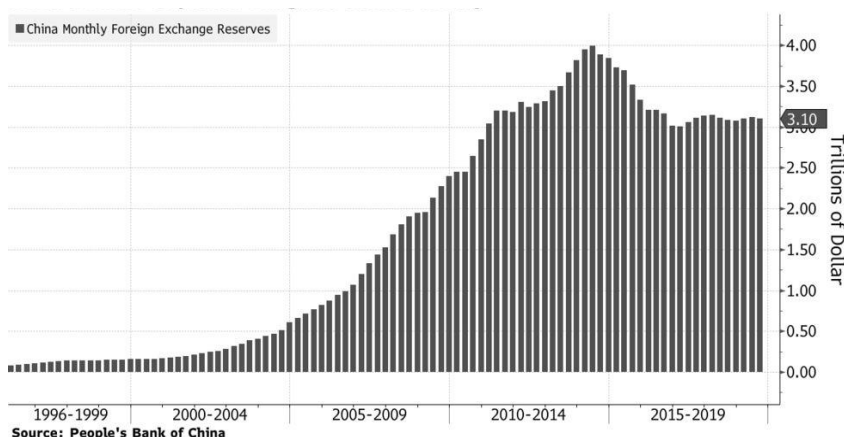
As China's economy began to slow in late 2014, individuals and companies in China began swapping yuan for dollars, which worked to depreciate the yuan and allowed the People's Bank of China (PBOC) to start selling US dollars. Chinese dollar reserves dropped from close to \$4 trillion in 3Q 2014 to about

\$3 trillion, its current level since 1Q 2017, allowing the yuan to appreciate slightly in a controlled float.<sup>61</sup>

As a result of China's US dollar reserve exposure, China is also one of the US' biggest bankers, owning \$1.2 trillion, or 18%, of the \$6.6 trillion of Federal debt held by foreign countries.<sup>62</sup> As such, China has been an important funder of the Federal deficit. **But we believe China's ownership of US debt is shifting the economic balance of power in its favor, particularly since most of US economic growth is consumption driven and, as we have seen, the US capital spending cycle in the US has been remarkably unproductive.** The Chinese, by contrast, have used their large cheap debt formation to invest in large infrastructure projects. Given the opacity of Chinese GDP numbers and the solvency of its own very large debt overhang, it is difficult to conclude how well PBOC debt is performing.

China's position as America's largest banker has given it political leverage too. China occasionally threatens to sell more of its US debt holdings and often calls for a new global currency to replace the dollar as reserve currency.<sup>63</sup> China has done this whenever the United States allows the value of the

dollar to drop, making the US debt China holds less valuable. China would not likely call in its debt all at once. If it did, we believe the demand for the dollar would plummet and massively disrupt international markets. China's economy would suffer along with everyone else's. China could only start the process of selling more US treasuries fully if it lessens its export dependency on the US by further expanding its exports to other Asian countries and increasing domestic demand.



<sup>58</sup> Chart and calculation from <https://www.visualcapitalist.com/countries-most-foreign-currency-reserves/>

<sup>59</sup> IMF: <http://data.imf.org/?sk=E6A5F467-C14B-4AA8-9F6D-5A09EC4E62A4>

<sup>60</sup> China also prefers to take in foreign direct investment but with the requirement of a Chinese majority partner.

<sup>61</sup> <https://qz.com/904718/china-now-has-less-than-3-trillion-in-foreign-reserves-as-it-spends-dollars-to-defend-the-value-of-its-currency-the-yuan/> China has been very cautious about the

re-evaluation of the yuan, fearing the lesson from the 1985 Plaza Accord – which was an agreement to depreciate the dollar to stem the US current account deficits with Japan and Europe in the early 1980s. The subsequent 200% depreciation of the yen against the dollar from 1985 to 1995 contributed to a prolonged deflationary period in Japan and a lost decade of economic growth.

<sup>62</sup> <https://fred.stlouisfed.org/series/FDHBFIN>

<sup>63</sup> <https://www.cfr.org/blog/fall-foreign-treasury-holdings-trump-dump>

The ability of China to maintain this *status quo* is the fact that, despite having the second largest economy in the world, it is still an outsider to the international monetary regime. As an emerging market currency pegged to the dollar, the yuan is not a member of the group of main reserve currencies (USD, Euro, Yen and UK Pound).<sup>64</sup> The PBOC is not at the table when the Fed, ECB, BOJ, and BOE coordinate global monetary policy. **As an outsider, China has incentives not to upend the current *status quo*, but it has challenged the viability of the US dollar as a “safe haven.”** We believe the credibility of that challenge is based on the intractable US budget deficit and the Fed’s monetary policies, which has put into question the intrinsic value of the dollar.

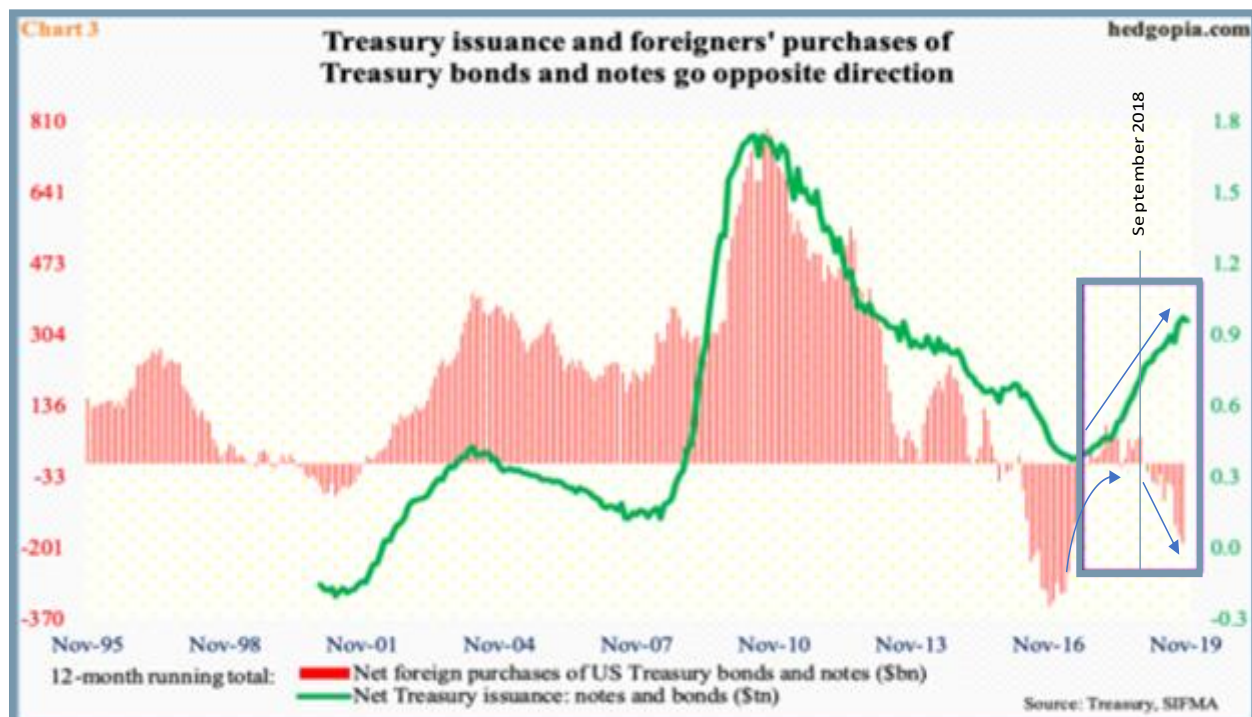
### **The Declining Attractiveness of US Federal Debt Yields on a Currency-Hedged Basis**

On a global basis, the amount of foreign funding of the US federal debt soared over 180% from \$2.2 trillion in Q1 2007 to \$6.6 trillion in Q3 2019.<sup>65</sup> However, there is evidence that the rapidly

expanding US budget deficit – which is not driving US economic productivity – and, now, the liquidity crunch in the Repo market are weakening the demand for US debt.

As illustrated in next chart at the bottom of the page,<sup>66</sup> **which shows rolling annual net Treasury issuance compared to rolling annual net foreign purchases of Treasuries**, issuance and foreign demand have historically moved together – up and then down from the post-GFC federal deficit peak in February 2010.

Since late 2016, when the Trump tax cuts took effect, the Treasury Department dramatically increased its net issuance, which has not abated. From late 2016 to the end of 2018, the increase in issuance was met with increases in net foreign (principally private) purchases. **However, in the 12 months to September 2019, foreign ownership of US treasuries has not kept pace with issuance as foreigners net-sold \$171 billion in Treasury notes and bonds.**<sup>67</sup>



<sup>64</sup> <https://www.wsj.com/articles/china-is-pitting-the-yuan-against-the-dollar-so-far-its-not-going-to-plan-11568649663>

<sup>65</sup> <https://fred.stlouisfed.org/series/FDHBFIN>

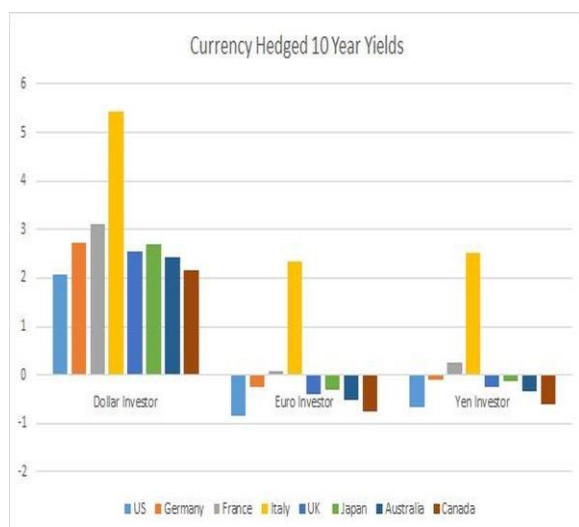
<sup>66</sup> This chart is attributed to the analysis by FFTT, LLC, “The Forest From the Trees” Report, December 19, 2019, which it sourced

from: <https://hedgopia.com/us-stocks-at-new-highs-with-help-from-foreigners-who-have-been-selling-treasuries/>

<sup>67</sup> <https://hedgopia.com/rapid-rise-in-budget-deficit-and-treasury-issuance-met-by-foreign-selling-of-us-bonds/>



A major reason for this is the fact that US Treasury yields are negative in other currencies. The cost of hedging US dollars in other currencies is high, driven by the high cost of carry (the difference between US interest rates and rates in other currency) and the premiums that investors have to pay to borrow dollars in cross-currency markets (the result of the shortage of US dollars due to the relentless pace of Treasury bill issuance and the limited capacity of the market to take on such a growing amount).<sup>68</sup> The chart below shows the currency-hedged yields of 10-year government bonds of eight countries from the perspective of dollar, euro, and yen investors. Even though every country in this list has a much lower un-hedged yield than the US treasury (the lone exception is Italy), the hedged yield for every



country's bonds is higher than the yield of the US 10-year Treasury.<sup>69</sup>

We believe the effective nationalization of the US Repo market on September 17, 2019, confirmed that funding of unsustainable deficits had likely crowded out the availability of US dollars. **According to the Treasury Department, demand by foreign investors**

**at September's US Treasury auctions was the lowest since before the financial crisis.**<sup>70</sup>

In summary, the alligator jaws opening up by this divergence between the foreign demand for US treasuries and the insatiable issuance of US treasuries to fund massive deficits can be shut by the Fed only when:

- 1) US deficits begin shrinking, which we believe is unlikely, or
- 2) US dollar falls enough to make FX-hedged US treasury yields positive again, thereby improving the foreign private sector's bid on US treasuries.<sup>71</sup>

*"For years I've wondered when we get to the point where the sheer size of the Federal deficit financing requirement overwhelms the ability of any market in the world to supply the marginal cash required to finance the gigantic numbers involved. We are there. We are now financially totally overwhelmed by the US government's borrowing requirement."*<sup>72</sup>

### The Minsky Moment?

**With foreigners' net-selling US Treasuries, the funding of federal deficits has resulted in the US banking system buying US Treasuries at the expense of commercial and industrial loan growth.**

As can be seen in the top chart on the next page, bank holdings of public debt have traditionally increased at the bottom of economic cycles as private debt holdings decline – in a counter-cyclical relationship. By contrast, the economic recovery after the GFC was not accompanied by a levelling off of government debt holdings in the US banking system. When hedged US treasury yields turned negative for foreigner investors in September 2018, the increase of government debt holdings in the US banking system accelerated rapidly.<sup>73</sup>

<sup>68</sup> <https://www.bloomberg.com/news/articles/2019-08-01/a-dollar-funding-squeeze-is-spreading-across-global-markets>

<sup>69</sup> <https://www.forbes.com/sites/vineerbhansali/2019/06/17/trading-sardines-the-case-of-currency-hedged-negative-yielding-bonds/#31a751a15f70>

<sup>70</sup> <https://www.wsj.com/articles/foreign-holdings-of-u-s-government-debt-fall-by-most-since-2017-11574187524>

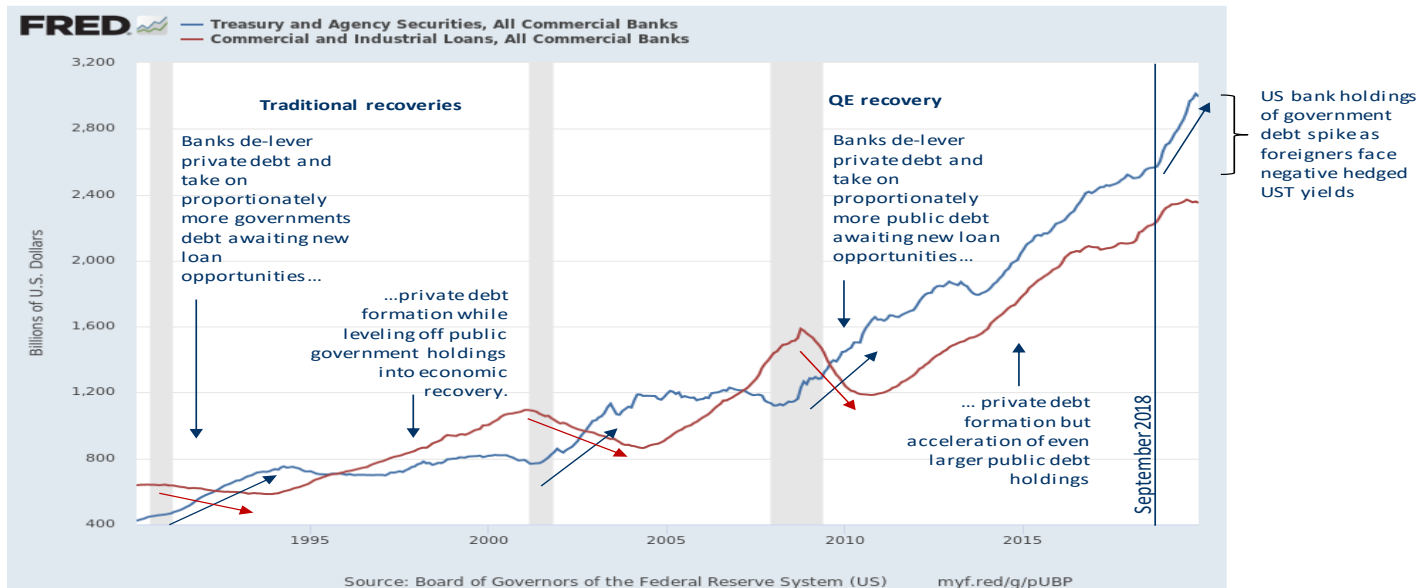
<sup>71</sup> The US Treasury Secretary, Steve Mnuchin, anticipated this problem and re-introduced his proposal for issuing long-dated 100-year US bonds on September 12, 2019, aimed at "de-

risking" the government's \$22 trillion of debt and locking in low interest. <https://www.reuters.com/article/us-usa-economy-mnuchin/mnuchin-says-100-year-treasury-bond-possible-idUSKCN1VX2SQ>.

<sup>72</sup> FFTT, LLC, "The Forest from the Trees" Report, December 19, 2019, p.1, attributed to anonymous veteran investor trader on 12/12/19. A statement with which we agree.

<sup>73</sup> The evidence that this crowding out has led to QE4 is attributed to FFTT, LLC, "The Forest from the Trees" Report, January 10,



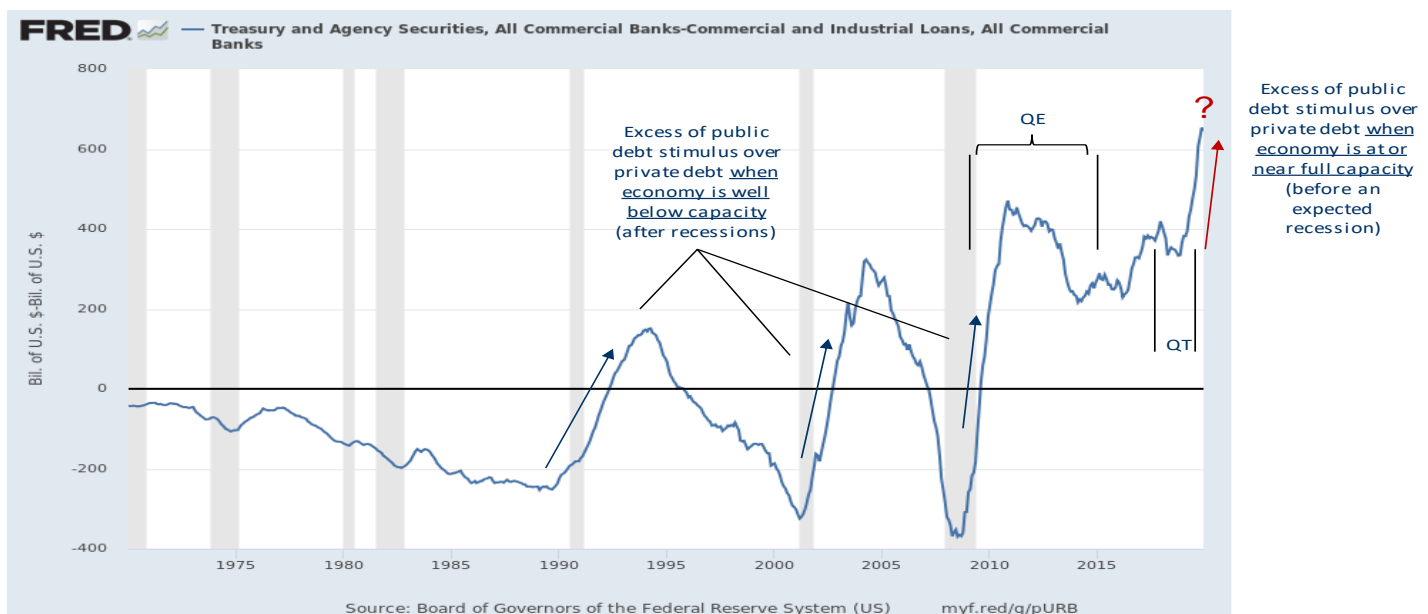


By September 2018, government debt appears in the chart to have steadily crowded out US private commercial and industrial loans, increasing by over \$400 billion (up nearly 16%) compared to private loans of just over \$138 billion (up nearly 6%).

Although QT set the stage for the Repo crisis by shrinking bank reserves, we believe **the massive Treasury debt issuance absorbed by the US banking system starting in September 2018 contributed to the freezing of the Repo market on September 17,**

**2019. From that date to the end of 2019, the chart shows that commercial and industrial loans at banks contracted by approximately -\$12 billion while government debt holdings increased by \$26 billion.<sup>74</sup>**

To put this large crowding-out phenomenon in perspective, the graph below uses the graph above to show **the dollar excess of commercial and industrial loans over Treasury securities held in the US banking system since 1970.** The excesses of



2020. We also attributed it to the Repo market failure in particular.

<sup>74</sup> <https://fred.stlouisfed.org/series/USGSEC>

government debt over private debt held by banks has historically accelerated rapidly during and after recessions – which is when banks have de-levered their private debt exposure and bought government securities while waiting for attractive loan opportunities to develop.

In the past, large holdings of government debt in the US banking system coincided with monetary stimulus at the beginning of an economic recovery, when the economy was well below capacity with high unemployment; by stark contrast, we believe the current massive holdings of government relative to private debt is not only unprecedented but coincides with late-cycle money printing with the economy at full capacity and low unemployment.

***We believe the unique feature of the current QE economic cycle at the end of 2019 is that the economy is running at full capacity and full employment, yet the sheer size of government debt has created competition for scarce dollar resources in the private sector – a textbook “crowding out” scenario.***

The banking system’s behavior is consistent with our view that the US economy is at the end of a very weak capital investment cycle with few available lending opportunities across the risk spectrum to spur new economic growth. Ultimately, it was this government crowding out of the banking system that forced the Fed to make loans in the Repo market. **We believe the Repo liquidity problem is therefore not likely to be a short-term technical problem**, as evidenced by the underwriting of the staggering \$4.3 trillion in transactions from September 17, 2019, through the end of 2019.<sup>75</sup>

In little publicized actions, the Fed has also apparently begun to monetize its debt directly by buying back T-bills it had issued earlier in the day

through an intermediary.<sup>76</sup> **This underscores the Fed’s commitment to printing money to protect its principal role as the governor of the price of money. We believe the Fed is between a rock and a hard place, and it is preparing for the worst the only way it can.**

### **Another Thing: The Instability of Current Inflation**

Our earlier review of John Exter’s deflationary thesis was to point out that the unprecedented plummeting velocity of money – the rate at which money is spent on goods and service per unit of time – has been a critical variable in understanding how a massive increase in the US domestic M1/M2 monetary base has kept inflation in check over the past decade. There is a fairly tight relationship between short-term interest rates and velocity of money. Lower interest rates increase people’s demand for fiat money (increasing their preference for liquidity and lowering velocity) and higher interest rates decrease the demand for fiat money (decreasing liquidity preference and increasing velocity).<sup>77</sup>

**We believe that inflation is very unstable now because the massive stock of US base money is essentially being kept in check by very low interest rates.** The Fed will likely need to resume nominal interest rate cuts from an already low base of 1.75% to accommodate further expansion of the monetary base to keep the velocity of money and inflation down. Conversely, any normalization of interest rates higher would need to be accompanied by a massive contraction in the monetary base to avoid inflation.

<sup>75</sup> As calculated from Federal Bank of St. Louis (FRED) source: <https://fred.stlouisfed.org/series/RPONTSYD>

<sup>76</sup> On November 15, 2019, the Fed bought \$4 billion of an 8-week US T-Bill it had issued earlier that day. It did the same for \$5.5 billion in December and twice more in January for \$6.4 billion and \$4.1 billion.  
<https://www.peakprosperity.com/the-federal-reserve-is-directly-monetizing-us-debt/>;  
<https://www.zerohedge.com/markets/helicopter-money-here-how-fed-monetized-billions-debt-sold-just-days-earlier>;  
<https://www.zerohedge.com/markets/fed-just-monetized-64-billion-debt-sold-earlier-week>;

<https://www.zerohedge.com/markets/and-again-fed-monetizes-41-billion-debt-sold-just-days-earlier>

<sup>77</sup> Low short-term interest rates propagate further downward pressure on rates throughout the economy: Low interest rates encourage companies to issue bonds; the increase in demand for bonds increases their prices and lowers their yields, which decreases the demand for loanable funds, thereby propagating the decrease interest rates throughout the economy. Likewise, purchases of stock can also lower general interest rates, because companies that obtain funding by issuing stock will have a lower demand to borrow money.  
<https://thismatter.com/money/banking/money-demand-money-velocity.htm>

This is another important reason the Fed must control short-term interest rates at all costs – including the recent nationalization of the Repo market: under the weight of the massive monetary base, the collapse of the preference for liquidity due to interest rates approaching 10% would have triggered the collapse of the purchasing power of cash.

The circular irony is that to control interest rates the Fed has been forced to deploy its balance sheet again, intervene in the Repo market, and eliminate market-driven price discovery of short-term money.

**Given its sensitivity to record low velocity at record low interest rates, inflation could be a big negative surprise.**

### **The Run-Up to a Potential Sovereign Debt Crisis: Inflation and Devaluation?**

We believe that the Fed's attempt to deflate the monetary bubble with QT and to reduce the monetary base of the US economy **ended with a surprise failure and the subsequent Fed acceptance that past mistakes are now irreversible.**

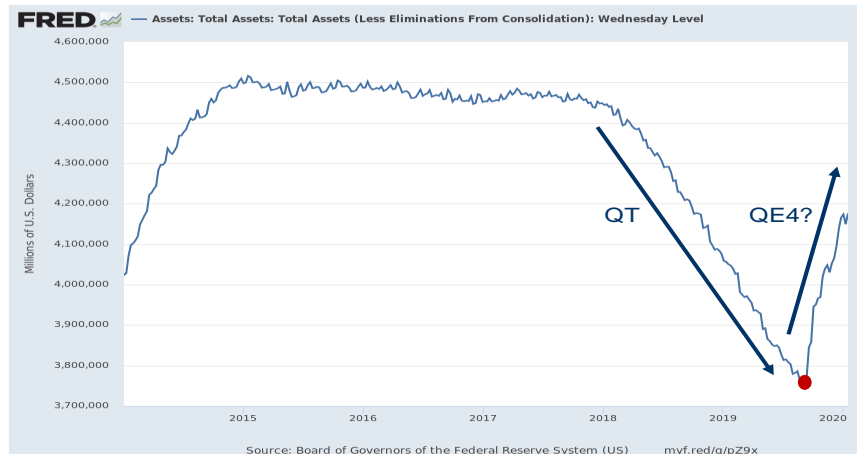
**"Right now people think central banks around the world can do whatever they want. They can't....**

**I think it's very hard for central banks to forever make up for bad policy elsewhere. And that puts them in a trap...."**<sup>78</sup>

**Jamie Dimon, CEO of JP Morgan Chase  
Davos Economic Forum 1/22/2020**

We believe that the Fed, by virtue of its extreme and prolonged monetary policy, will have no option but to increase its balance sheet with a round of QE4, which, as illustrated in the chart at upper right has already begun.<sup>79</sup>

We believe the Fed will have to keep expanding its balance sheet until one or a combination of events occur, allowing the Fed to escape from the trap of its own making:



#### **1. The US economy grows rapidly and productively**

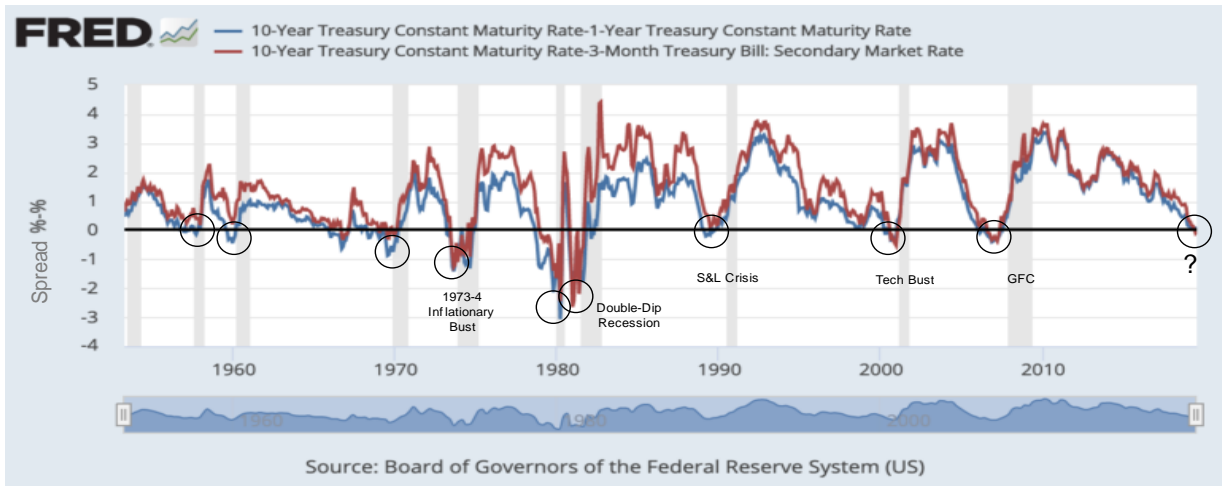
Monetary policy has a very poor track record of stimulating productive economic growth when economies are at full capacity. If negative interest rates and QE boosted the real economy, Europe and Japan would be experiencing rapid expansion instead of stagnation.

As we have discussed, our belief is that risk does not have an accurate pricing mechanism in the Fed Funds or Repo markets and that passive investing has largely removed price discovery from the US debt and equity capital markets. The Fed's hope is that it can stave off a recession and grow the economy out of the excess and distortions created by the nationalization of the US money machine and distortions in the capital allocation markets. This means that the economy would have to keep growing productively while asset prices remained essentially unchanged while markets cleared. We doubt it will do so.

At the very least, if the Fed does not want to burst the debt and equity market bubbles of its own making, then it will need to keep cutting the Fed rate and continue QE. This may continue to inflate asset bubbles for a while – especially the US stock market – while extending the hope that the US and global economies will defy economic cycles and extend a very late

<sup>78</sup> <https://www.cnbc.com/2020/01/22/jamie-dimon-at-davos-2020.html>

<sup>79</sup> <https://fred.stlouisfed.org/series/WALCL>



economic cycle even further. But, again, we doubt it.

A very strong indicator of a coming recession is the inversion of the yield curve which occurred this year as shown in the graph above. We believe that this indicator will be no different this time.

Adam Posen, who was a monetary policy maker at the Bank of England, said at the recent Jackson Hole conference of central banks that he didn't think the Fed had the tools to combat the next recession, remarking that the central bank will need fiscal policy to lift the economy out of any imminent downturn.<sup>80</sup>

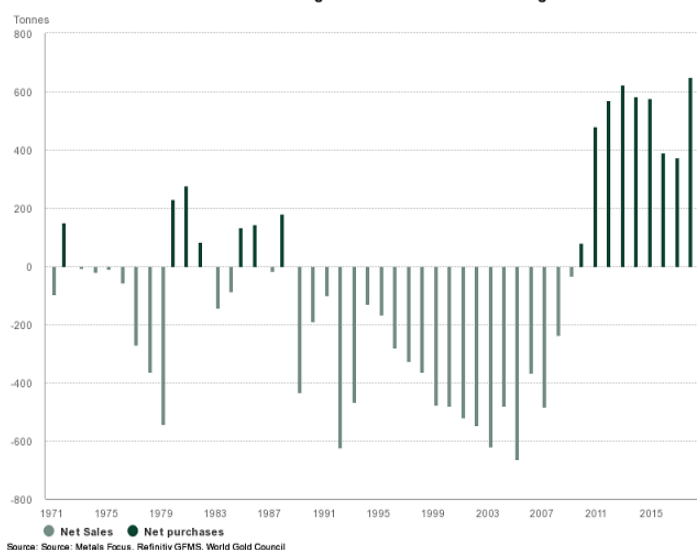
## 2. US spending on entitlements, defense, and interest payments shrinks significantly

The divided government in the US and the geopolitical commitments around the globe make any progress in controlling the budget deficit appear very unlikely. Addressing the structural drivers of the deficit – entitlements on burgeoning demographics and national defense – is a non-starter in an election cycle, which we believe is well within the timing of a very large correction in asset markets.<sup>81</sup>

## 3. Foreign monetary authorities begin growing their holdings of US Treasuries fast enough

Given the size and unrelenting growth of US deficits, it is likely that there are not enough current account surpluses abroad to buy US treasuries at the current value of the dollar. Global central banks – which ceased buying US treasuries in line with the growth of the Federal deficit in 2013<sup>82</sup> – have instead hedged their fiat money reserves by purchasing gold.<sup>83</sup>

Central bank demand in 2018 was the highest since Nixon closed the gold window



<sup>80</sup> <https://www.marketwatch.com/story/jackson-hole-notebook-talk-of-full-fledged-trade-war-growing-us-recession-risk-2019-08-24>

<sup>81</sup> <https://www.pgpf.org/the-fiscal-and-economic-challenge/drivers>

<sup>82</sup> <https://www.bloomberg.com/news/articles/2019-06-18/markets-say-u-s-doesn-t-need-china-or-fed-to-buy-its-debt>

<sup>83</sup> Sources for chart: Metals Focus, Refinitiv GFMS, World Gold Council

Central banks purchased a record \$15.7 billion of gold in the first six months of 2019 in an effort to diversify away from the US dollar as global trade tensions with China went unresolved.<sup>84</sup> In a survey of central banks conducted by the World Gold Council and YouGov, 54% of respondents expect global holdings to climb in the next 12 months amid concerns about risks in other reserve assets, particularly the US dollar; two-thirds expect gold's share of reserves staying the same or rising in five years' time to diversify their reserves.<sup>85</sup>

The Dutch central bank, De Nederlandse Bank, recently stated in a report that gold was a critical asset: "If the entire system collapses, the gold stock provides a collateral to start over. Gold gives confidence in the power of the central bank's balance sheet. That gives a safe feeling."<sup>86</sup> The Dutch central bank is saying what others are not saying: we may have to "start over" if the dollar fails as reserve currency.

#### 4. The US dollar falls significantly, making currency-hedged US treasury yields attractive to foreign private buyers

The only way that the Fed can get out of the cycle of printing money and lowering interest rates is to resume the dependence on foreign private buyers of US treasuries to fund the US deficits. We do not hold out much confidence that this will happen at the current value of the dollar because the devaluation of the dollar is already priced into the hedging costs that make currency-hedged US treasury yields uncompetitive and there are likely not enough current account surpluses abroad to buy US treasuries at the current value of the dollar.

We believe that the China trade negotiation is not only an attempt to reduce the trade deficit directly, but primarily a negotiation of

coordinated devaluation of the dollar and the yuan.

**"Over the last century, the US has gone through a long-term debt crisis twice—once during the boom of the 1920s and the Great Depression of the 1930s, and again during the boom of the early 2000s and the financial crisis starting in 2008."**

**Ray Dalio, *Principles for Navigating Big Debt Crises***

As we have seen in this paper, unprecedented increase in the monetary base and zero percent interest rate policy over since 2008 have created massive imbalances in the US economy...

- debt growing at orders of magnitude faster than GDP for years,
- liquidity and strong dollar enabling a massive consumption economy,
- destruction of the pricing mechanism in the markets for money and sovereign debt
- massive secondary market failure bubbles in the debt and equity securities markets
- unprecedented plummeting of money velocity, creating inflationary instability
- high current account deficit that cannot be financed by foreigners

...which have, in combination with massive budget deficits, left little room for monetary or fiscal policy to function effectively now. **The numbers associated with these imbalances are simply too big. Without foreign buying of US bonds, the major imbalances in the US economy will be corrected by the currency markets.**

**"Do you know anyone who's actually bought a negative interest rate bond...? I would never buy a negative rate bond. Not unless I was forced...."**

**In history, whenever you see something like that, it doesn't necessarily end well."<sup>87</sup>**

**Jamie Dimon, CEO of JP Morgan Chase  
Davos Economic Forum 1/22/2020**

<sup>84</sup> <https://www.ft.com/content/b62ebb1a-b3a6-11e9-bec9-fdcab53d6959>

<sup>85</sup> <https://www.bloomberg.com/news/articles/2019-07-19/central-banks-gold-buying-spree-is-far-from-over-poll-shows>

<sup>86</sup> <https://etfdailynews.com/2019/10/23/why-do-central-banks-keep-buying-gold/>

<sup>87</sup> <https://www.cnbc.com/2020/01/22/jamie-dimon-at-davos-2020.html>

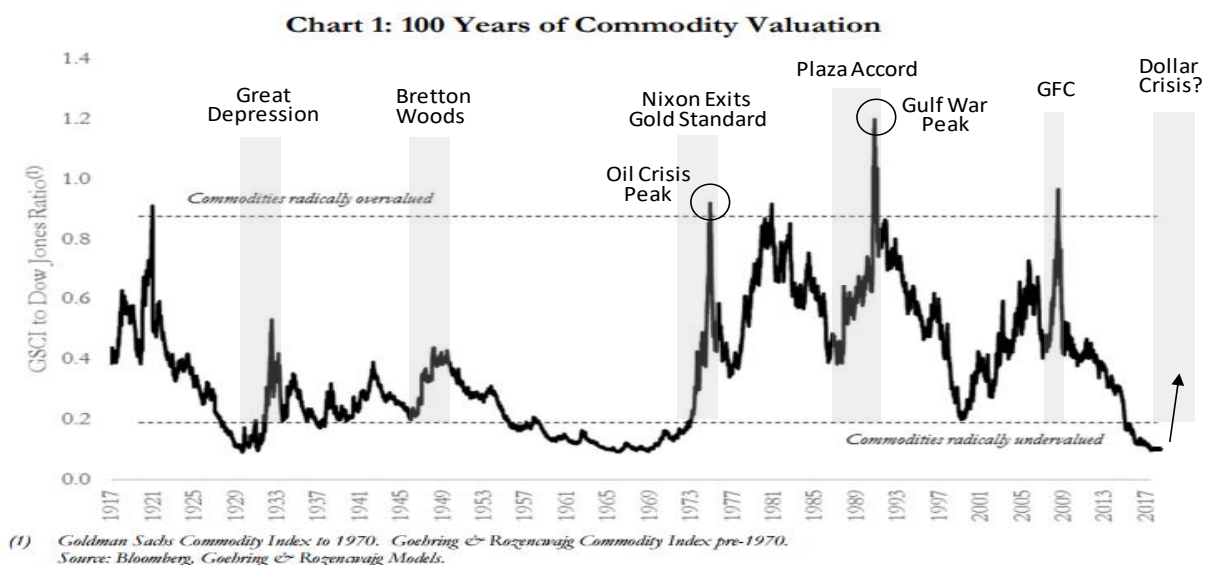
**We believe that we are at the top of a secular debt crisis cycle, featuring US sovereign debt.** Ultimately, as the correction of these imbalances unfolds and more and more assets become insolvent, a tipping point is reached in which the monetary system reverses as it did in the 1930s Great Depression and more recently in the 2008-09 GFC.<sup>88</sup> The 2008-09 Lehman Brothers event launched the start of the deflationary dynamics of Exter's inverse pyramid which has persisted to this day – the unprecedented 2009-2015 money explosion by the Fed and other central banks staved off the problem for the time being, but at the cost of massive global debt and the hard landing of zero interest rates.

**We believe that the repudiation of sovereign debt can either happen through money base deflation and a growing economy, which the Fed attempted with QT, or with devaluation and inflation. We believe the Fed is short the US dollar and has committed to the latter course of action.**

Ben Bernanke, in a speech before the National Economics Club in November 2002, prophesied that

the US always had a last line defense against deflation:

*"Thus, I want to be absolutely clear that I am today neither forecasting nor recommending any attempt by U.S. policymakers to target the international value of the dollar. Although a policy of intervening to affect the exchange value of the dollar is nowhere on the horizon today, it's worth noting that there have been times when exchange rate policy has been an effective weapon against deflation. A striking example from U.S. history is Franklin Roosevelt's 40 percent devaluation of the dollar against gold in 1933-34, enforced by a program of gold purchases and domestic money creation.... The devaluation and the rapid increase in money supply it permitted ended the U.S. deflation remarkably quickly.... The economy grew strongly.... If nothing else, the episode illustrates that monetary actions can have powerful effects on the economy, **even when the nominal interest rate is at or near zero, as was the case at the time of Roosevelt's devaluation [emphasis added]**."*<sup>89</sup>



<sup>88</sup> In these corrections, one default begets another and another as the margin clerk requires payment of debt. As assets are liquidated to repay debt, credit contracts and prices collapse as assets are sold in mass to raise cash. Banks go into default as loans cannot be repaid by asset values below the value of the loans used to fund them. In this process business profits collapse, workers are fired and default on their loans, and a

massive negative feedback loop is created. When that happens, the speculative and overvalued assets at the top of the pyramid are sold through a process of de-levering – with people essentially rushing down the pyramid into Treasury Bills, Federal Reserve notes, and currency.

<sup>89</sup><https://www.federalreserve.gov/boarddocs/speeches/2002/20021121/>



**Once QE4 and devaluation is fully digested in the investment market as consensus, we believe that the bubbles created in the \$340 trillion financial asset markets will deflate massively.**

A useful historical measurement for the convergence of both financial asset bubbles and an overvalued dollar is illustrated by the chart on the prior page showing the values of commodity assets relative to financial assets. As can be seen in the chart, commodities now are at a 100-year “radical low” relative to financial assets. Not only are financial assets at historically overbought valuations, but commodities are at historically low prices. Because the dollar is the reserve currency of the world and is used as benchmark pricing against commodities, a strong dollar is a deflationary force – making commodities more expensive in other currencies – which drives down demand and prices for commodities relative to financial assets.

The chart also shows that the only other times in the twentieth century when commodities were so radically undervalued – before the Great Depression and prior to the US exit from Bretton Woods gold standard – the dollar was subsequently devalued as a matter of deliberate policy followed by periods of deflation and inflation, respectively. In both cases, large and rapid spikes in commodity prices occurred as a result of the devaluation.

As we have reviewed in this paper, we believe the current bubbles have been inflated by an unprecedented excess of money creation and by what can only be described as a systemic tolerance of classic market failures in US capital markets. **Self-governing market participants have allowed themselves to profit from practices that essentially separate the underwriting of risk from the financing of risk.**

In the tech bubble of 2001-2002, we believe opaque venture capital risk was securitized and sold to unsophisticated investors by trusted investment banks through years of hyped IPOs. In the GFC of 2008, US mortgages were securitized and packaged

into opaque CDO and MBS vehicles, rated by what we believe were incompetent and conflicted agencies, and sold to global investors by trusted banks and insurance companies. In the current impending crisis, we believe the securitization of venture risk has been compounded by the packaging of debt and equity securities into passive index and momentum vehicles, such as ETFs, and sold to unsophisticated investors by the doyens of the investment management industry without any assessment of the underlying risk of the constituent securities.<sup>90</sup> The distinguishing feature of current markets is that sovereign debt itself is a bubble and the trusted Fed is now printing money to pay for its own debt issuance. Fiat money, as well as properly functioning markets, rely on institutional trust – which we believe is under severe strain if not broken from years of bad monetary policy.

As we write this, the US stock markets have reached new highs and hedge funds and wealthy investors are piling into the bull thesis in a classic melt-up.<sup>91</sup>

**Whenever you find yourself on the side of the majority, it is time to pause and reflect."**

**Mark Twain**

We believe that the coming devaluation of the dollar, as in other periods, will be another major turning point in the US economy, which offer unusually attractive entry points – now and in the future – for investors who understand how macroeconomic dynamics affect the intrinsic cashflows of underlying securities in their portfolios.

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<sup>90</sup> David A. Levy, “Bubble or Nothing: How long Term Swelling of Household and Business Sector Balance Sheets Has Increasingly Forced Lenders, Investors, and Borrowers to Sacrifice

Prudence, Financial Rewards or Both,” The Jerome Levy Forecasting Center LLC, September 2019

<sup>91</sup> <https://www.cnbc.com/2020/01/18/why-wealthy-investors-are-increasingly-bullish-on-economy-to-start-2020.html>

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