Superstitions, Conjectures and Refutations: Inflation, High Debt and the Public Interest.

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A growing number of economists hold the view that the U.S. government's growing debt should not worry us. Real interest rates are not only much lower than in the past but are also forecast to stay at current low levels for a long time. As such, the government can carry much higher debt levels without worrying about debt sustainability. In addition, some economists argue that in countries where real interest rates and the interest rate-minus-growth differential is sustained over time, the government can increase primary deficits without worrying about future costs.[1]

While this new fiscal paradigm is interesting, it rests on assumptions that don't apply to the fiscal issues facing the US.[2] It also requires immense faith in the willingness of legislators to spend money in ways that produce high and consistent economic growth. Yet a review of the literature on the impact of government spending on growth reveals that, generally, such spending crowds out private-sector spending.[3] The same is true of the relationship of debt to growth.[4] In other words, even if interest rates stay low forever, growth could slow so much as to make the starting assumption moot. Finally, it is simply imprudent to count on low interest rates lasting forever.

However, there is a deeper fact that should worry economists more than it now does – namely, it is hard to have good policies when government swells to be so large that it has little practical choice but to depend on annual deficit financing. In particular, if inflation ever gets out of control, it's more difficult to deal with in a high rather than low debt environment. Furthermore, most of the discussion about the risk of inflation focuses on the risk posed by the Federal

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[1] Olivier Blanchard (2019). Public debt and low interest rates. American Economic Review, 109(4), 1197-1229. Also, see Jason Furman and Lawrence Summers. (2020). "A Reconsideration of Fiscal Policy in the Era of Low Interest Rates." Harvard University Discussion Paper.

[2] John Cochrane (2021). Low Interest Rates and Government Debt. Hoover Institution IGIER policy seminar and Cochrane, John H. "Comments on "The constraint on public debt when r < g but g < m"." National Bureau of Economic Research: Conference Paper, 2021. http://conference.nber.org/confer/2021/EFGw21/cochrane_comments.pdf

[3] Veronique de Rugy and Garett Jones. "Keynesian Stimulus: A Virtuous Semicircle?" Mercatus Center at George Mason University, 2021

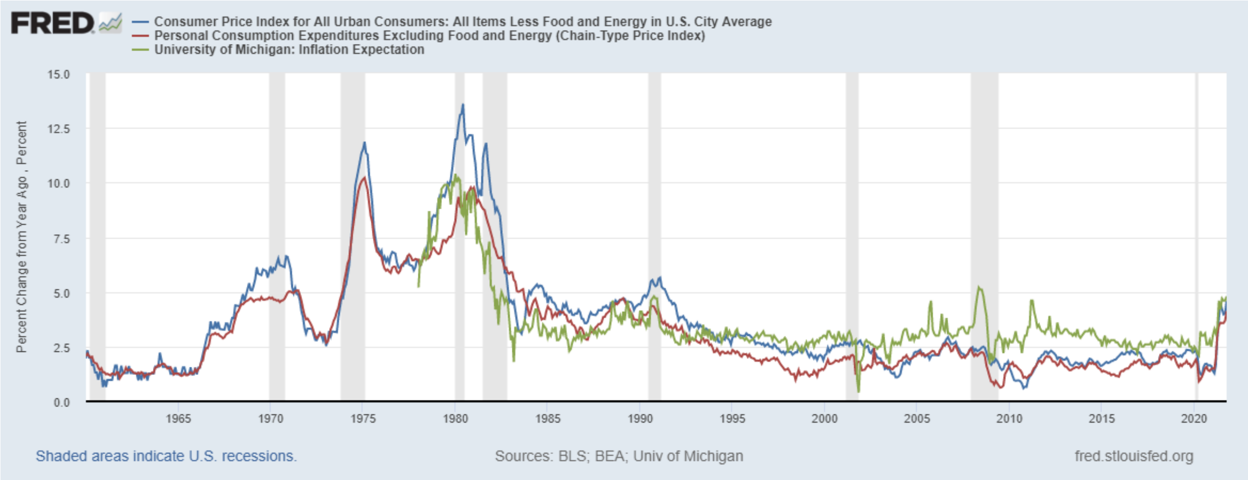
[4] Jack Salmon (2021). The Impact of Public Debt on Economic Growth. Cato Journal, 41(3), 487-509.

Reserve policies while overlooking the fact that the federal government's enormous debt and deficits could themselves spark substantial inflation.

“The End of Inflation” Era Has Ended

In his 1970 lecture “The Counterrevolution in Monetary Theory," Milton Friedman made his now-famous observation that "Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output."[5] One can’t help but think about this observation when faced with the now 25-year puzzle of low and relatively stable levels of inflation in spite of large deficits, higher debt, a significant expansion of the Fed’s balance sheet, and over a decade of accommodative monetary policy. In fact, as figure 1 shows, inflation has been in such a downward trend that since 2012 (the year the Federal Reserve adopted its 2 percent inflation target), inflation has rarely reached 2 percent.[6]

Figure 1:



This phenomenon, not being unique to the United States, led some to declare that inflation had been conquered, the Phillips Curve is flat, and a central bank could run an economy hot without too much risk of stagflation.

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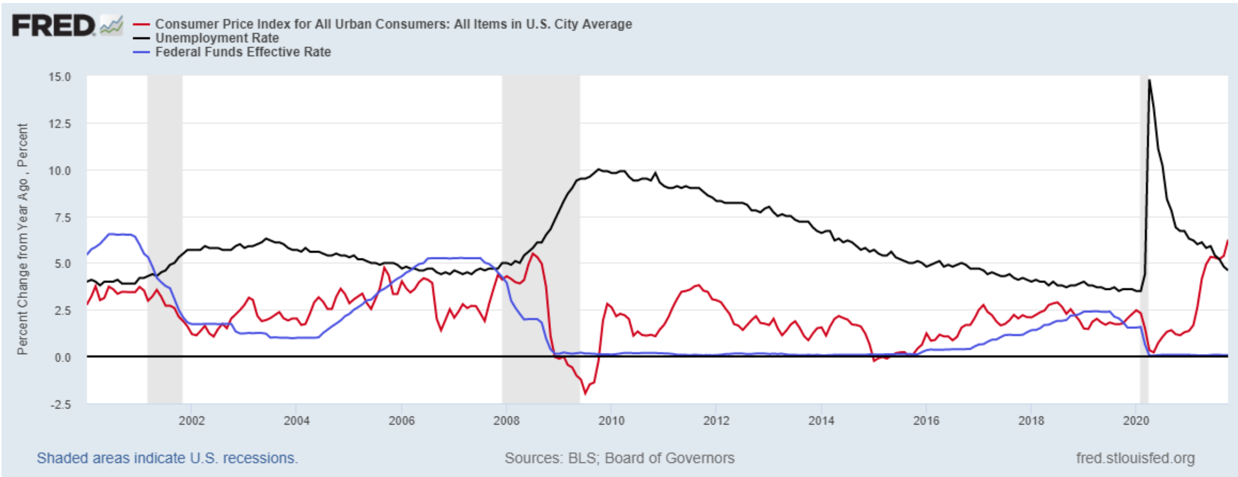
[5] Milton Friedman. The Counter-Revolution in Monetary Theory. Explorations in Economic Liberalism pp 3-21| https://link.springer.com/chapter/10.1007/978-1-349-24967-1_1

[6] Juan M Sanchez and Hee Sung Kim. Why Is Inflation So Low? Federal Reserve Bank of Saint Louis, February 02, 2018. https://www.stlouisfed.org/publications/regional-economist/first-quarter-2018/why-inflation-so-low

That is, until now. Figure 2:



As of the time of this writing, the Consumer Price Index rose 6.2 percent in the 12 months through October 2021, the highest inflation rate since 1990 and a jump from the annual price growth rate of 1.9 percent over the previous decade. Both the Federal Reserve and experts were caught by surprise, and as a result they have been wrong about inflation. First, many experts said that there would be no inflation. Then, when inflation emerged, the claim became that this inflation was transitory.[7] When it persisted, they said prices were just catching up to pre-pandemic levels.[8] Then the rising price level was blamed on problems with the supply of the likes of lumber or used car, on a drought in Taiwan, and then on overall supply-chain tangles. And when the American people finally started really to notice the inflation, experts argued that there was nothing that the Federal Reserve could do to address supply-chain issues, and in fact, that any scaling back of the Fed's policies needed to be delayed to eliminate "shortfalls" in economic activity.

All or some of these factors may play a role in the current situation, but it seems that a better way of thinking of inflation is to follow economist Arnold Kling definition of it "as spending rising faster than production. And spending is rising faster than production primarily because the government has injected a lot of paper wealth into the economy through unprecedented levels of

[7]Mark Gongloff. We Need to Talk about What Transitory Inflation Means. Bloomberg November 10, 2021. https://www.bloomberg.com/opinion/articles/2021-11-10/october-cpi-report-what-is-transitory-inflation-anyway?sref=R8NfLgwS

[8] White House's Council of Economic Advisors. Twitter Thread. April 12, 2021. https://twitter.com/WhiteHouseCEA/status/1381579655703105543

deficit spending."[9] In other words, while we can't dismiss supply-chain issues and shifts in consumer habits from services to goods, government boosted demand played a key role in this burst in inflation.

Regardless, it doesn't inspire confidence that no one really knows how long the inflation will last or how high prices will go. In fact, there are reasons to worry that we are bound to repeat some of the mistakes of the past since the Federal Reserve's new policy framework (wait to see inflation, allow inflation to run hot to fill the output gap, promise to keep rates low to stimulate the economy, and target inclusive growth) and its representatives and supporters' talking points are transporting us back to the 1970s. They all seem to have forgotten the painful lessons of that experience.

Among these lessons is that there is no permanent tradeoff between inflation and unemployment. As then-chairman of the Federal Reserve, Paul Volker, noted in early 1980 after he was appointed to tame inflation, "[M]y basic philosophy is over time we have no choice but to deal with the inflationary situation because over time inflation and the unemployment rate go together.… Isn't that the lesson of the 1970s?"[10] We have also learned since then that microeconomic efficiency brought about by better incentives and well-functioning markets is better equipped than monetary policy to address issues of sustained growth and wages. We learned that a delay in the Federal Reserve response when inflation is present could be devastating.

However, the most important lesson we learned from the 1970s is that, when it comes to inflation, expectations matter. The general dynamics of inflation are a mix of expected inflation plus inflationary pressures that exist in the present moment. In today's world these pressures include forces such as pent-up demand, tight labor market, and supply-chain constraints. The result is that inflation is hard to predict because inflation today depends in large part on what people expect inflation in the future will be above and beyond whatever might be produced by existing pressures. If workers expect higher prices next year, they will demand higher wages now. If businesses believe input prices and wages will go up next year, they will increase their prices today. If consumers expect prices to go up tomorrow, they will buy what they need today.

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[9] Arnold Kling. Inflation and History. In My Tribe. November 15, 2021. https://arnoldkling.substack.com/p/inflation-and-history-1115

[10] Federal Reserve History. Recession of the 1981-1982. https://www.federalreservehistory.org/essays/recession-of-1981-82

Whether inflation will persist depends on what happens to expectations when today's inflationary pressures fade away. If people believe that inflation over the long run will remain low, when inflationary pressures disappear so will inflation. But if they believe that inflation will rise, then inflation could persist long after the immediate inflationary pressures have gone away. Concretely, if businesses expect long-run prices to stabilize once the supply-chain problems get resolved, they are less likely to adjust prices and wages upward, and inflation will subside. But if their expectation is that prices will continue to rise even after the supply constraints are eased (i.e., expectations get unanchored), then they will increase prices and wages today, triggering the beginning of a potentially dangerous cycle if the fed does tighten its monetary policy.

What anchors expectations in the conventional framework is the belief that the Federal Reserve has the tools to control inflation and is willing to raise rates and endure a recession to get it done if needed. For instance, the CEA recently explained that "If inflationary expectations become untethered from that target, prices may rise in a lasting manner. This sort of inflationary, or 'overheating,' spiral might then lead the central bank to raise interest rates quickly which then slows the economy and increases unemployment." In this model, the Fed's announcement of its inflation targets and its commitment to act should *by itself* be enough to "coordinate expectations."

This explanation seems questionable. The next section will offer an alternative precondition for stable inflation: a reasonably sound fiscal policy. As John Cochrane explains in a piece back in 2011, "Major explosions of inflation around the world have ultimately resulted from fiscal problems, and it is hard to think of a fiscally sound country that has ever experienced a major inflation. So long as the government's fiscal house is in order, people will naturally assume that the central bank should be able to stop a small uptick in inflation."[11]

All that said, there is no doubt that in spite of the inflation hike we are currently experiencing, interest rates remain low with the nominal annual rate on 5-year Treasury bonds set at about 1.2%, while the real return on 5-year TIPS remains negative 1.9%.[12] Another reassuring sign, we were told, was that survey-based measures of medium to long run expectations didn't seem to

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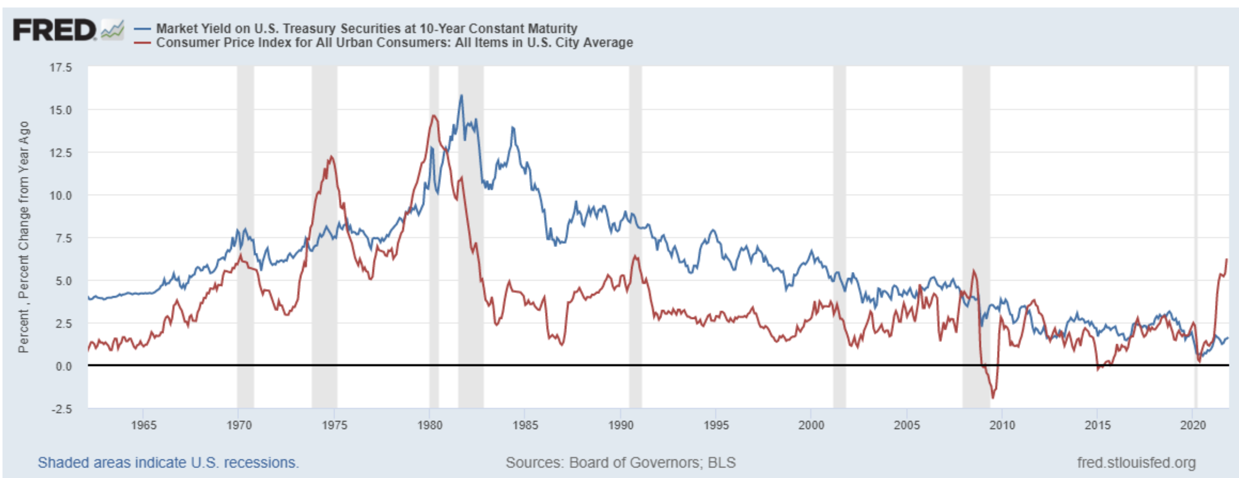
[11] John Cochrane. Inflation and Debt. National Affairs. Number 49. Fall 2011. https://www.nationalaffairs.com/publications/detail/inflation-and-debt

[12] https://fred.stlouisfed.org/series/DGS5 and https://fred.stlouisfed.org/series/DFII5 . To the question why are interest rates so low, economists have offered a series of explanations such as technological progress, demographic transition, central banks focused on low inflation, the anchoring of inflation expectations (i.e. inflation has been so low for so long that most Americans see persistent inflation as ancient history), lower growth rates or a mix of all these factors.

foresee an increase in inflation either. As the Council of Economic Advisors reassuringly tweeted back in April 2021: "A monthly composite measure that summarizes 22 different market- and survey-based measures of long-run inflation expectations suggests higher expectations, but the levels of these expectations remain well within historical levels."[13]

However, historically these survey-based measures of long-run expectation forecasts and interest rates have a terrible track record of predicting inflation. As seen in figure 3 below, the interest rate on ten-year Treasury notes and the inflation rate over the five decades. As you can see, we do not see interest rates rise before increases in inflation.

Figure 3:



In other words, the market can get surprised by inflation. As economist John Cochrane noted "Greek interest rates were low right up until they weren't. Interest rates did not signal the inflation of the 1970s, or the disinflation of the 1980s. Nobody expects a crisis, or it would have already happened."[14] What it means is that inflation, like the typical bank run, is very unpredictable precisely because it's so conditional on expectations, and expectations can change very fast.

Controlling Inflation In Times of High Debt

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13 https://twitter.com/WhiteHouseCEA/status/1381581349312675847

14 John Cochrane. Debt Denial. The Grumpy Economist Blog. December 2020. https://johnhcochrane.blogspot.com/2020/12/debt-denial.html

While the country is not at risk of experiencing the sustained high annual inflation rates of the 1970s, almost everyone now admits that heightened levels of inflation are persisting. As in the past, the inflation has surprised the Fed, survey measures, and expectation forecasts. After a slow start, the 5-year break-evens, which measure the market's expectations of inflation over the next 5 years, started to rise rapidly. In November 2021, they were the highest they've been since we started measuring them two decades ago. While worrisome, most economists still believe that if inflation persists the Federal Reserve can and will act in a timely manner by raising rates to maintain its credibility as an inflation fighter.

But what does it mean concretely? When and how much should the Fed raise rates if inflation persists? On this important question different people offer different answers. For instance, Stanford economist John Taylor – after whom the Taylor Rule is named – suggests that if inflation rises from 2% to 5%, interest rates should rise by 4.5 percentage points (one and half times the gap between the two rates). If you then add 2% for the inflation target and 1% for the long-run real rate of interest, the rule recommends a central-bank rate of 7.5%. Others disagree and think a much lower rate will be necessary.

Correctly answering this question is of great importance. On one hand, contractionary monetary policy lowers aggregate demand which can lead to lower output and employment, especially in a world of sticky wages and prices. We saw this, for instance in the early 1980s.[15] In other words, there is a tradeoff between controlling inflation and risking an economic slowdown. How the Fed stands on this tradeoff could decide a lot of how it responds to rising prices. On the other hand, a lack of decisiveness in raising rates during the 70s, along with fiscal factors, meant that the interest rate hike that was required to tame inflation in the 80s was steep (the chairman of the federal reserve Paul Volker in the 1980s had to raise interest rates from 9% to 19% and slowed money growth through 1982).[16]

That's where our debt level may make things harder than in the past. A few fiscal facts are important to bear in mind. Federal debt held by the public now is 100 percent of GDP, or $23 trillion, and the Fed and the Department of Treasury fund this debt by rolling over short-term bonds. Therefore, any increase in interest rates will quickly explode the federal budget. If rates have to increase to by 1 percent, it will add roughly $250 billion a year to the deficit. An increase to 5 percent, it will add $1 trillion to the deficit. If rates must rise by 20 percent, it would be $4 trillion.

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[15] Michael Bordo and Mickey Levy. Do Enlarged Fiscal Deficits Cause Inflation? The Historical Record. NBER Working Paper 28195. https://www.nber.org/system/files/working_papers/w28195/w28195.pdf

[16] Michael Bordo and Mickey Levy. https://www.nber.org/system/files/working_papers/w28195/w28195.pdf

Needless to say, these large increases to the deficit will not be politically popular. In addition, significant increase in debt service will eventually crowd out other spending in theory leaving no choice for legislators to implement fiscal consolidation. This is important for fiscal reason but also to help tame persistent inflation. Without fiscal consolidation, when prices are sticky, rising nominal rates to lower aggregate demand and inflation may end up having the opposite effect of rising real rates and in turn increasing aggregate demand via income and wealth effects. In this scenario, inflation increases.[17] According to Eric Leeper, it is "the difference between a Brazilian-style interest rate and inflation spiral and a successful reigning in of inflation."[18]

Empirical work confirms that fiscal contraction is a key element to reducing persistent inflation. For instance, legislators implemented fiscal consolidation (by raising revenue, decreasing spending, or both) during each of the last three latest victories over inflation: in the late 1940, in the 1980s, and in mid-1990s.[19] In other words, stable inflation expectations are anchored, not by the toughness of the Fed, but by sound fiscal policy. Unfortunately, this link between fiscal and monetary expectations is too often overlooked in our conventional inflation debates, with fiscal authorities acting as though inflation outcomes are independent of fiscal policy.

While the short-run danger of such debt triggered inflation is smaller than some claim, the medium to long-run risks are larger. Here are three reasons why.

Our debt projections aren't set to improve, and debt is funded by rolling over short-term bonds

The Congressional Budget Office's annual Long-Term Budget Outlook is looking red. Annual deficits will run at about 4 percent of GDP for the next ten years. About 20% of all federal spending is borrowed. And, again, federal debt held by the public is today 100 percent of GDP. The CBO projects that the debt held by the public will still rise to 106% percent of GDP in the coming decade. Then it's uphill from there with a projected debt to GDP of 203 percent by 2050 (see figures 4 and 5).

Figure 4:

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[17] Eric M. Leeper. Shifting Policy Norms and Policy Interactions. Kansas City Federal Reserve. https://www.kansascityfed.org/documents/8357/Leeper_JHPaper.pdf

[18] Leeper. https://www.kansascityfed.org/documents/8357/Leeper_JHPaper.pdf

[19] Bordo and Levy. https://www.nber.org/system/files/working_papers/w28195/w28195.pdf

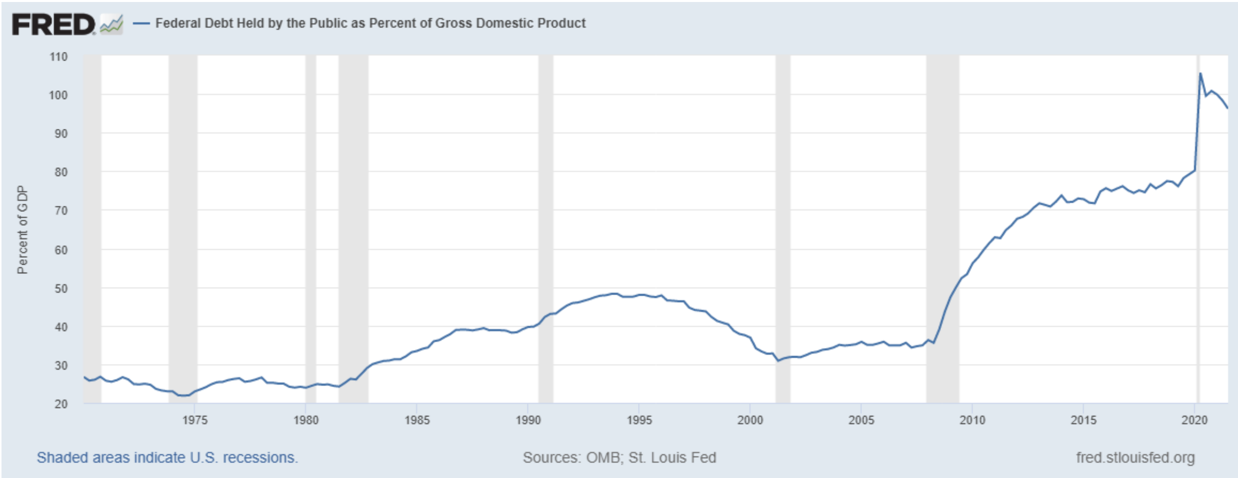
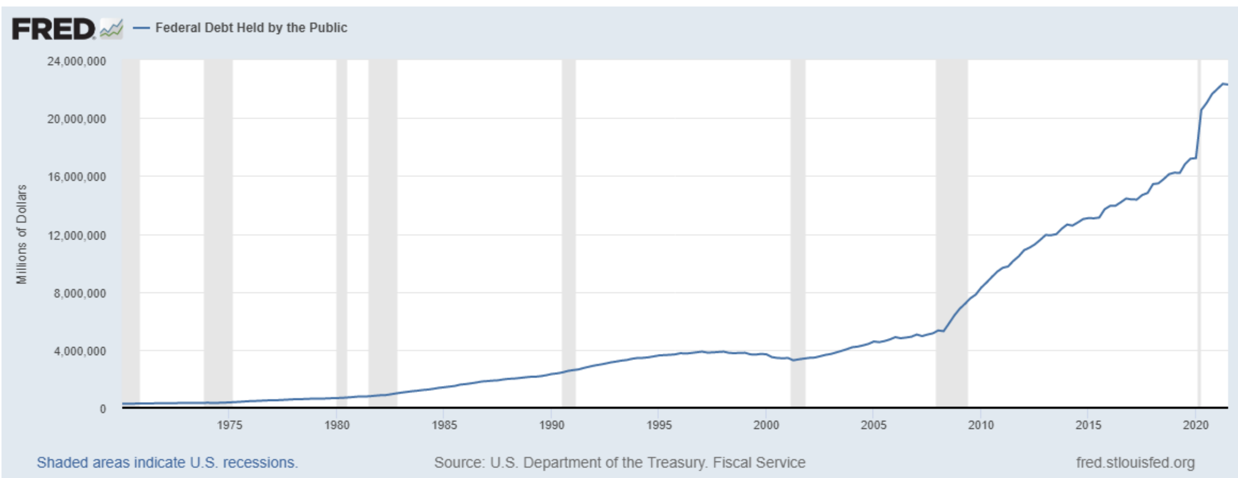


Figure 5:



All of this, of course, is assuming no new emergencies, no new major government programs, and no future recessions. It also omits our unfunded liabilities – specifically, the promises made to seniors that the federal government has no coherent plan to finance. In other words, a large debt and sustained future deficits put us in an unfamiliar danger zone and, thus increase the likelihood that investors will believe that bonds held today will be paid off in the future by printing money, leading to future inflation.

However, worries about *future* deficits can also cause inflation *today*. That's because a large share of U.S debt held by the public is very short term. Currently, over $6 trillion, or 25 percent, of the debt has a maturity of one year or less. Almost 60 percent, $14 trillion, of the U.S. debt has a maturity of four year or less. If we account for coupons, not just principal maturity, the US debt suffers an even bigger maturity mismatch. As a result, the risk we face isn't that the country reaches a certain percentage of debt to GDP ratio that will automatically trigger higher rates or a run on the dollar followed by a debt crisis. What is more likely to happen is that sometime down the road, during another emergency that sparks massive spending and borrowing, we will face a roll-over crisis started by short-term investors worried that the Fed will print money to accommodate fiscal policy and let inflation get out of control.[20]

If investors believe they might not be repaid in a year, all of a sudden short-term investors will try to get rid of what they own and new investors will require a higher rate of return to hold debt. In other words, the longer and larger risk we face is an inflation-driven rollover crisis that occurs when people fear that debt won't be repaid.

Domestic actors are increasingly the ones financing our debt.

Before we even take under consideration the current legislation going through congress, annual budget deficits are forecast to average more than 4 percent of GDP for the next ten years. This is high by historical standards. While we did the same thing during the 2008-09 financial crisis, there was a major difference with the current situation. During the financial crisis, a large and growing demand for dollar-denominated assets and government liabilities meant that foreign investors financed most of our debt. This demand was in part the product of a flight to quality and safety. Moreover, high foreign demand for safe US assets had the effect of putting downward pressures on interest rates and inflation.

However, as figure 6 below demonstrates, the same isn't true this time around. Now it's the Fed, banks, state and local governments and money market mutual funds (Figure 7), all domestic actors, are increasingly the ones financing this growing government indebtedness. If this trend persists, there is a risk that over time, the U.S won't be able to count on foreign demand to absorb whatever debt the government issues, which could mean that the country will face higher inflationary pressure.

Figure 6:

[20] Bordo and Levy. https://www.nber.org/system/files/working_papers/w28195/w28195.pdf

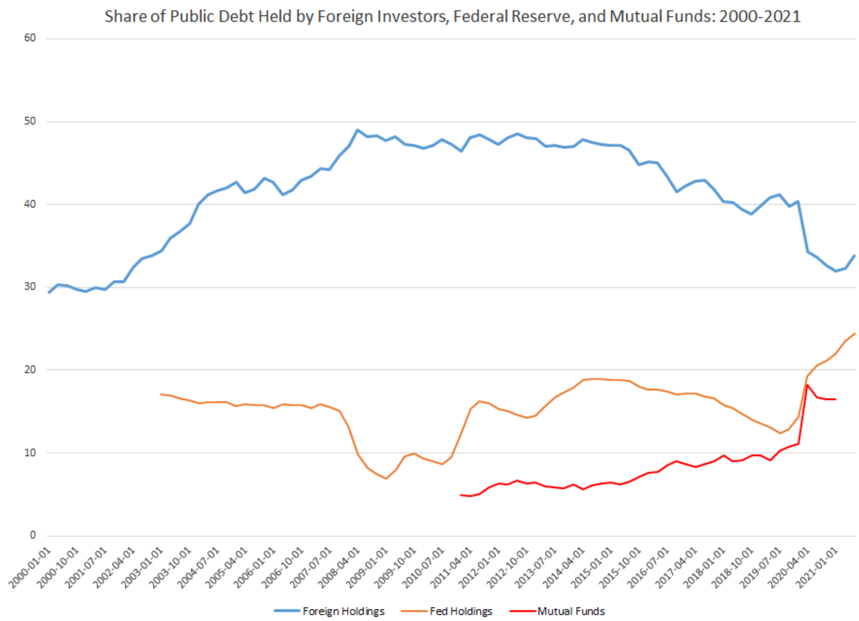


Figure 7:

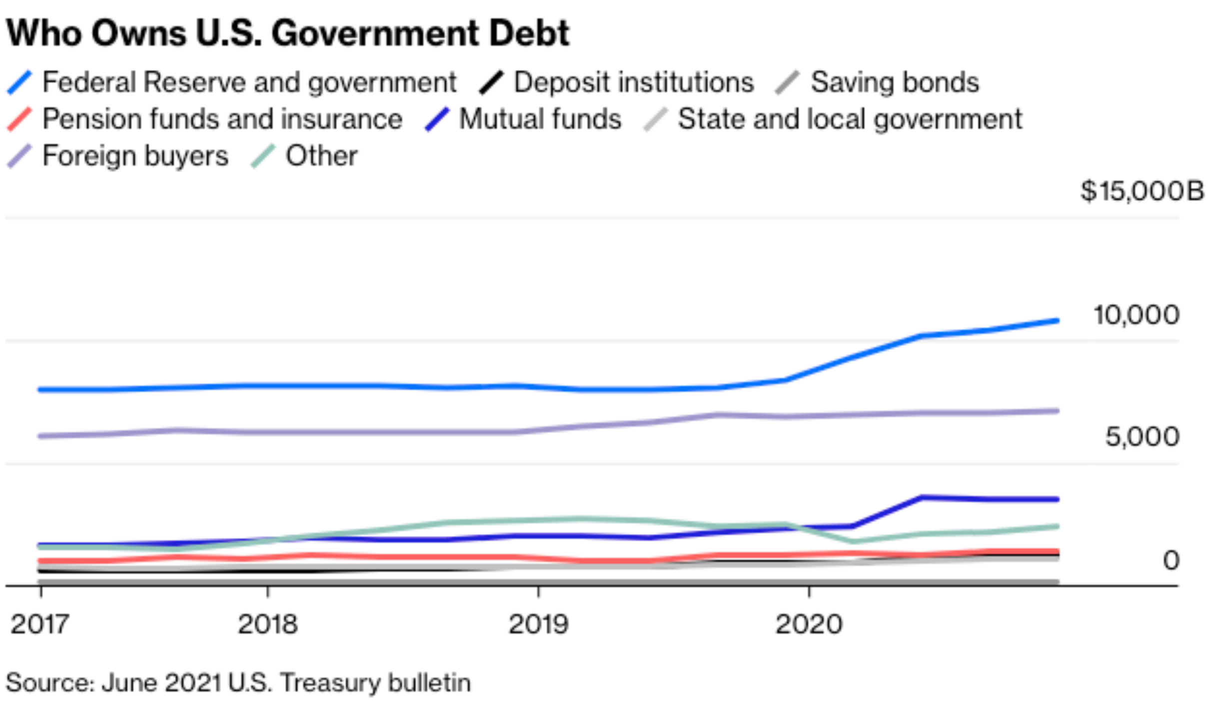


Chart made by Allison Schrager.[21]

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21 Allison Schrager. The Dearth of Safe Assets Era is Over. https://www.fa-mag.com/news/the-dearth-of-safe-assets-era-is-over-63277.html

Heightened inflationary pressures would mean that the Federal Reserve will have to sell bonds as opposed to buying them at a time when foreign investor demand is lower will ultimately result in higher interest rates and subsequent growth in debt service payments.

Shifting Fiscal Norms

The federal government seems to have adopted an open-ended attitude that our debt will not be repaid with higher taxes or spending cuts. That is a fundamental break from the last crisis when the government rhetoric was more debt today but fiscal consolidation later. This new attitude toward debt could be a serious challenge to some of the fiscal norms, defined as patterns of behavior that are relatively stable or change in predictable ways over time, that have prevailed in the U.S. for decades such as the idea that deficits begetting surpluses to repay debt in full or that fiscal consolidation occurs when interest payments on outstanding debt become a sufficiently large fraction of federal expenditures.[22] If investors believe that there is no broad consensus about these norms, it is likely that going forward deficits will be more inflationary.

The Risk of Fiscal Dominance:

There is little doubt that the path for the Fed to control inflation isn't easy. Adding to the difficulty is the question of fiscal dominance. Fiscal dominance occurs when the fiscal authorities demand that the Federal Reserve sets its monetary policy to suit the government's own preferred outcome. While central banks are relatively independent, theory and experience tell us that this independence can be put to the test. This concern is non-trivial concern since the surge in federal debt outstanding creates a situation in which the Fed could be compelled to keep interest rates low for the foreseeable future in order to make the government's debt-service costs manageable.[23]

Adding to the concern of fiscal dominance is the difficulty faced by Fed officials, at any point in time, when they have to implement a policy that creates a risk of recession, or a slowdown followed by an increase in unemployment likely concentrated among the most disadvantaged

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[22] Eric M. Leeper. Shifting Policy Norms and Policy Interactions. Kansas City Federal Reserve. https://www.kansascityfed.org/documents/8357/Leeper_JHPaper.pdf

[23] James A. Dorn. Fiscal Dominance and Fed Complacency. Cato@Liberty. April 2021. https://www.cato.org/blog/fiscal-dominance-fed-complacency Also, see James Dorn. Maintaining Distance between Monetary and Fiscal Policy Adopting a rules-based approach to the conduct of monetary policy would help safeguard central bank independence and promote both monetary and financial stability. November 18, 2020 • Pandemic and Policy. https://www.cato.org/publications/pandemics-policy/maintaining-distance-between-monetary-fiscal-policy?queryID=b6e04e433f6ae4fd29051ce7365c8d10

workers. This difficulty is looming large today considering the Fed's new framework seeking to eliminate shortfalls of employment from its maximum level as opposed to simply minimize deviations when employment is too high as well as too low as the previous approach prescribed. Furthermore, in a speech earlier this year, Vice Chair pick Laeh Brainard explained that "the long-standing presumption" that "accommodation should be reduced" when the economy is running at full steam "may curtail progress for racial and ethnic groups that have faced systemic challenges in the labor force."[24] It means that the fed may allow an overshoot above its average inflation rate of 2% per annum when these goals are not met or to avoid curtailing minority progresses. How much and how long an overshoot will be tolerated is unclear, but it does leave room for a lot of discretion on the part of the Fed. However, it does explain why the Fed was reluctant to talk about tapering and or raising interest rates despite the surge of inflation, low unemployment rates and widespread worker shortages. It felt there was still room for labor market conditions to improve.

Finally, there is an additional factor that could hinder the Fed's inflation-fighting credibility. This is the fact that since the last financial crisis, the Fed has pursued policies geared towards supporting asset prices and compressing risk premia to boost investments, the availability of credit and consumption. The results have been high asset prices, low interest rates even as economic growth was relatively weak and hypersensitive markets to any uptick in policy rates.

As Luis Garicano, Jesus Saa-Requejo, Tano Santos explained recently it puts central banks, and the Fed in particular, "in a difficult position: they are holding the lion of financial stability by the jaws without being able to let go even when a second lion, inflation, may approach."

Conclusion:

It is hard to say whether inflation will continue to increase. However, the probability that it will is not negligeable. At minimum, it is likely that a onetime increase in price level produced by the most recent helicopter drops and supportive monetary policy has still a way to go since trillions of dollars of extra savings remained to be spent.

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[24] Laeh Brainard. How Should We Think about Full Employment in the Federal Reserve's Dual Mandate? Federal Reserve, February 24, 2021. https://www.federalreserve.gov/newsevents/speech/brainard20210224a.htm

So far, the bond markets do not seem worried about inflation as evidenced by the still low interest rates. Whether it stays this way depends on what the fiscal and monetary authorities do next. Will Congress continue to send money to people? Will the Fed continue to print money to accommodate the spending? Will there be fiscal consolidation? These are important questions since they will decide whether people believe that 1) monetary authorities will be willing to take the required steps to control inflation if needed, and 2) fiscal authorities have a plan to pay down the debt. If they lose faith in both, their fear that the Fed will let inflation go to accommodate a growing debt in the future could led inflation to spiral out of control sooner than we think. When that happens, there will be little the Fed can do.