Inflation Worries

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September 2, 2022

The price level in the U.S. today (July 2022) is 8.5 percent above its level in July 2021 and 15.5 percent above its level in July 2019. How worried should we be about inflation persisting? Until recently, the answer from financial markets and the Federal Reserve was clear: very little. In the words of Gabriel Chodorow-Reich, the Fed and financial markets believed in "immaculate

disinflation."² Disinflation would be immaculate, since it was expected to neither involve large increases in interest rates nor a significant increase in unemployment.³ More recently, the Fed has

¹ FRED series CPIAUCNS

² See Chodorow-Reich, Twitter, 3/17/22.

³ The median forecast from the August 2022 Survey of Professional Forecasters was for an annual average unemployment rate of 3.9 percent in 2023 and 2024, and headline and core consumer price index (CPI) inflation (Q4 to Q4) slightly above 3 percent in 2023 and 2.5 percent in 2024 (SPF). These forecasts are similar to those made by Federal Reserve board members and Federal Reserve bank presidents in June 2022. The median forecast in the June Summary of Economic Projections was for an unemployment rate of 3.9 percent in the fourth quarter of 2023 and 4.1 percent in in the fourth quarter of 2024. The median forecast was for headline and core personal consumption expenditure (PCE) inflation (Q4 to Q4) equal to 2.6 and 2.7 percent in 2023 and 2.2 and 2.3 percent in 2024. Markets and the Fed also agreed that interest rates would not need to rise much. On 10 August 2022, the two-year government bond yield was 3.2 percent (FRED series DGS2) slightly below the Fed's June Survey of Economic Projections which had a median forecast for the federal funds rate of 3.4 percent at the end of 2022, 3.8 percent at the end of 2023, and 3.4 percent at the end of 2024.

moved away from its prediction of immaculate disinflation, at least in its rhetoric.⁴ At the Fed's annual Jackson Hole conference on 26 August, for instance, Jay Powell noted that the labor market is "clearly out of balance" and that reducing inflation will "bring some pain" (Powell, 2022). As I write this on September 2nd, the extent to which the Fed's rhetorical shift will be accompanied by a change in its quantitative forecasts and / or its actions is unclear. The Fed has yet to convince financial markets that its rhetorical shift will translate into significantly tighter policy.⁵

I shall argue the task ahead of the Fed is a difficult one, more difficult than the Fed's recent hawkish rhetoric acknowledges. I start by arguing that inflation is likely to remain high in the short-run. High inflation in the short-run will then collide with political obstacles to tight monetary policy. As a result, I suspect that there is a good chance that neither the Fed nor the Federal government more broadly will be willing to implement the contractionary policy necessary to return inflation to low levels (2 to 3 percent). The U.S. may thus face a prolonged period of high inflation akin to that in the 1970s. I hope I am wrong, since high inflation would almost certainly have unfortunate economic and political consequences.

1. The Short Run

Over the three months from April to July 2022, the core consumer price index (CPI) rose at annualized rate of 6.8 percent. From June to July, core CPI inflation slowed to an annualized rate of 3.8 percent, but it is unclear how much to make of this one month reading.⁶ Rent increases, supply-side, and demand-side factors all point to inflation remaining high.

Start with rents. One-third of the CPI is shelter. Most of this is "owners-equivalent rent," what the Bureau of Labor Statistics (BLS) guesses one would pay in rent for a house that one owns.⁷ The BLS measures what households on average pay in rent, not the rent one would pay if one signed a new rental contract today. Thus the shelter component of the CPI lags changes in rents

⁴ For more on the Fed's shift away from faith in immaculate disinflation, see Chodorow-Reich, Twitter, 8/30/22.

⁵ Jay Powell's Jackson Hole speech led to only a small increase in the yield on two-year government bonds: two-year government bonds yielded 3.35 percent on 8/25, the day before Powell's speech, 3.37 percent on 8/26, and 3.42 percent on 8/29 (FRED series DGS2).

⁶ In July, core PCE inflation also fell (FRED series PCEPILFE). But reasons for caution in concluding that the July data was a signal of a durable decline in core CPI inflation to below four percent include that both trimmed mean and median inflation were higher than core CPI inflation. See Jason Furman, Twitter, 8/10/22

⁷ See CPI Weights.

charged in new contracts. If the goal is to measure the cost of living, the BLS method is roughly correct. Changes in rents in new contracts only affect Americans' cost of living as existing rental contracts are renegotiated. In any case, this way of measurement means that one can expect the shelter component of the CPI to contribute perhaps a percentage point to CPI inflation through 2023. The effect is large because rents in new contracts have risen rapidly since early 2020; data from Zillow and Apartment List show rents on new contracts up about 25 percent since February 2020. By contrast, the shelter component of the CPI rose by only 9 percent over this period. The shelter component of the CPI will catch up to new rents as rental contracts roll over. Thus the large expected effect on CPI inflation going forward.

Rents alone would not be an an insurmountable barrier to achieving low (say 3 percent) inflation in the short-run. But both supply and demand factors add to the challenge. Two of the most obvious supply shocks are high natural gas prices resulting from Russia's invasion of Ukraine and the computer chip shortage. The computer chip shortage is reflected in the fact that the U.S. produced 12 percent fewer cars and light trucks in the first seven months of 2022 than it did in the first seven months of 2019.

Covid itself is also an ongoing supply shock pushing up inflation. Hundreds of thousands of infections a day mean many workers missing work, limiting the supply of goods and services.

Long covid cases have shrunk (and will continue to shrink) the labor force.¹³ Covid-mitigation efforts also constrain supply. Childcare centers may limit hours and thus limit hours worked by parents because of measures to keep children and staff in pods. Covid-protocols (e.g. san- itizing surfaces, plexiglass barriers) may reduce productivity in some service industries. And Covid border restrictions (e.g. the closure of China) may make producing goods abroad more

⁸ It is only roughly correct, because the BLS uses rental data from month t - 6 through month t to calculate the shelter component of the CPI in month t. For more on BLS measurement of shelter, see BLS shelter.

⁹ Lansing, Oliveira, and Shapiro (2023) argued in February 2022 that "Our panel model predicts that future rent inflation could increase by about 3.4 percentage points (pp) in both 2022 and 2023 relative to the pre- pandemic five-year average. This prediction translates into an additional 1.1pp increase in overall CPI inflation for both 2022 and 2023" (p. 1). See also Bolhuis, Cramer, and Summers (2022).

¹⁰ See the figure from Jason Furman, Twitter, 8/13/22.

¹¹ FRED series CUSR0000SAH1

¹² FRED series MVAAUTLTTN. For more on the impact of the chip shortage on the auto industry, see JP Morgan.

¹³ See Brookings.

difficult.14

Predicting future supply shocks, positive or negative, is impossible. But I see little reason for supply to be a reason for optimism about inflation. Both rosy and bleak scenarios are plausible. On balance, the existing supply shocks are likely to diminish, but new ones may occur. The war in Ukraine might end, lowering energy prices. And there are glimmers of hope that the computer chip shortage will become less acute. But economic disruption from Covid could increase rather than decrease. And a lesson from the past two years is that new, unexpected, supply shocks can easily occur. Candidates include natural disasters (e.g. a hurricane in the U.S. disrupting Gulf of Mexico energy production), and the end of China's zero covid policy. Economic recovery in China could lead to a large increase in global commodity prices. Inflation itself may also induce supply shocks, as inflation lowers real wages leading to worker strikes.

Unfortunately, supply shocks are colliding with an overheated economy. Indeed what are reported as indicators of supply shocks may instead be indicators of high demand. Widely reported congestion at U.S. ports, for instance, might be better seen as an effect of high demand rather than as a shock to supply. Real goods imports in 2021 were 8 percent above their 2019 level. Ports were congested because more imports were passing through them.¹⁷

Indeed, indicators of high demand are everywhere. Most obviously, the labor market is extraordinarily tight, with the unemployment rate at 3.7 percent. The ratio of job openings to the number of unemployed implies that the labor market is even tighter than the unemployment rate suggests (Domash and Summers, 2022). Given firms' difficulty hiring, it is unsurprising that over the 12 months from June 2021-June 2022, private sector wages and salaries rose 5.7 percent. This was the most rapid 12-month increase since 1982. In the decade from the end of 2009 through 2019, annual private sector wage and salary growth averaged 2.3 percent. Thus

¹⁴ In December 2021, I wrote about the relationship between covid and inflation at more length in *The Atlantic*. Relative to my views then, I now think that Covid is playing less of a role in driving inflation, with high aggregate demand playing a larger role.

¹⁵ See JP Morgan.

¹⁶ On the effect of demand in China on commodity prices, see Matthew Klein, *Financial Times*, 8/16/22.

¹⁷ NIPA table 1.1.6. Using data on port volumes, Jason Furman has also made this point about port congestion being an indicator of high demand. See Furman, Twitter, 10/15/21. The influence of demand on port congestion, of course, does not rule out some additional role for supply factors

¹⁸ This is the unemployment rate in August 2022 (FRED series UNRATE)

¹⁹ Employment cost index, series ID CIU2020000000001 and ECU20002I.

returning to pre-Covid inflation rates is likely to require a significant decrease in nominal wage growth. This matches the conclusion of Jason Furman, who argues that the employment cost data are consistent with a 4 percent inflation rate.²⁰ Unfortunately, as Domash and Summers (2022) convincingly argue, both theory and empirical evidence suggest that nominal wage growth is unlikely to decrease without a substantial weakening of the labor market and a recession.

Continued shortages of goods and services ranging from childcare to new cars reflect a combination of high demand and constricted supply. It is difficult to find childcare because childcare centers are struggling to hire the workers they need.²¹ It is difficult to buy a new car because car computer chips are in short supply. Shortages are evidence of high demand relative to supply, but they may also forecast future inflation. Firms are unlikely to persistently fail to meet demand without raising prices. A car manufacturer that cannot provide its customers with the car they want at the existing price will eventually raise that price. Some empirical evidence supports this view. Lamont (1997) finds that in the 1970s, newspaper mentions of shortages forecast inflation.

2. The Policy Response

Inflation's persistence beyond 2023 will depend both on luck—unforeseen shocks to supply and demand—and policy. My guess is that there a good chance, call it 50 percent, that both monetary and fiscal policy are expansionary enough that inflation remains above three percent for several years. In this prediction, I find myself out of step with the Fed, financial markets, and many economists.

Jay Powell and other FOMC members have said clearly that they will take whatever actions are necessary to lower inflation. At the Fed's annual Jackson Hole conference, Jay Powell concluded his speech by saying: "We are taking forceful and rapid steps to moderate demand so that it comes into better alignment with supply, and to keep inflation expectations anchored. We will keep at it until we are confident the job is done" (Powell, 2022). Financial markets and professional forecasters believe these statements. Thus long-run inflation expectations from professional forecasters and from financial markets are near two percent. In the August 2022 Survey of Professional Forecasters, forecasters expect inflation over the next decade to average

2.8 percent (CPI) or 2.45 percent (PCE).²² On 1 September 2022, expected inflation over the

²⁰ Furman, Twitter, 7/29/22. Jason Furman argues that the more recent average hourly earnings data are also consistent with 4 percent inflation (Furman, Twitter, 9/2/2022).

²¹ See, e.g., U.S. News & World Report.

²² See SPF.

next ten years from inflation-linked bonds (TIPS) was 2.45 percent.²³ Given higher expected inflation in the near term, these forecasts imply that inflation will be even lower in the long run. The TIPS forecast for 5-year inflation, 5 years ahead is 2.38 percent.²⁴

I do not share the confidence of professional forecasters and markets. Let me suggest three reasons for doubt. First, the 1970s provide reason to doubt that professional forecasters are good at forecasting inflation when the economy switches from a low to a high inflation regime. During the entire decade of the 1970s, actual inflation in every year was the same or higher than that forecast in the Survey of Professional Forecasters (DeLong (1997), p. 266-267). The 1970s look more consistent with high actual inflation leading to high expected inflation, rather than low expected inflation leading to low actual inflation.

A second reason for doubt is that the Fed's actions thus far do not inspire confidence. July was the 14th consecutive month in which 12-month core CPI inflation was above 4 percent and the 10th consecutive month in which core PCE inflation was above 4 percent.²⁵ Yet over this time, the Fed has done relatively little to tighten policy. It increased the nominal federal funds rate by 2.25 percentage points, from a range of 0-0.25 percent to a range of 2.25-2.5 percent. The increase in the real interest rate was less, however, since inflation expectations rose.²⁶ Consistent with the view that the Fed did little to tighten policy, the unemployment rate fell 1.5 percentage points between August 2021 and August 2022.²⁷

The 1970s are often taken as an example of a decade in which the Fed responded insufficiently to inflation. But the Fed responded far more in the 1970s than it did in 2021-22. Figure 1 compares the path of 12-month core CPI inflation and the Federal Funds rate around three dates when core inflation rose above four percent: January 1968, October 1973, and June 2021. For comparison, the figure also shows the path of core inflation and the federal funds rate around August 1979, when Paul Volcker become Fed chair. 2021 stands out relative to the 1970s for both the low level of nominal rates relative to inflation and for the small change in nominal rates after the increase in inflation. That the current Fed has done so little in comparison to its actions

²³ FRED series T10YIE.

²⁴ FRED series T5YIFR.

²⁵ FRED series CPILFENS and PCEPILFE.

²⁶ Expected inflation over the next year from the Michigan Survey of Consumers increased from 4.7 percent in July 2021 to 5.2 percent in July 2022 (FRED series MICH). In the August 2021 Survey of Professional Forecasters, the expected change in the headline CPI between the fourth quarter of 2021 and the fourth quarter of 2022 was 2.4 percent (SPF Q3 2021); in August 2022, the expected change in the headline CPI between the fourth quarter of 2022 and the fourth quarter of 2023 was 3.2 percent (SPF Q3 2022).

²⁷ FRED series UNRATE.

in 1968 and 1973-74 or to Paul Volcker's actions in 1979 may cast doubt on whether the Fed today will follow through on its hawkish rhetoric.

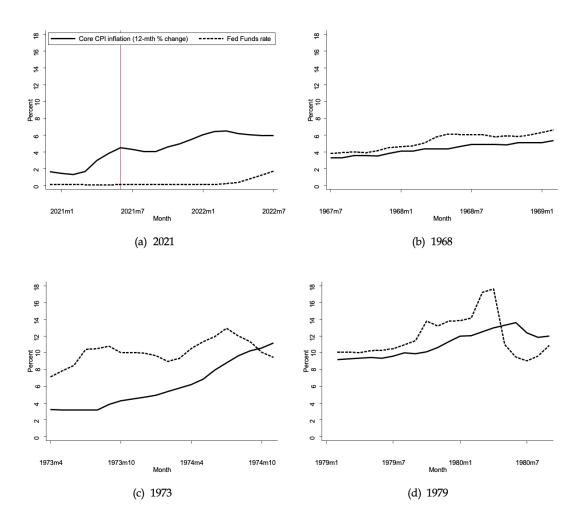


Figure 1 – Notes: The figures compares the path of core inflation (the 12-month percent change) and the effective federal funds rate around three dates (indicated by vertical lines) when core inflation rose above four percent: June 2021, January 1968, and October 1973. For comparison, the figure also shows the path of core inflation and the federal funds rate around the month when Paul Volcker become Fed chair, August 1979. Sources: Core CPI - FRED series CPILFENS; Federal funds rate - FRED series FEDFUNDS.

Such doubts are increased by the fact that the Fed will almost certainly soon face strong political pressure to stop tightening. Indeed, such pressure has already begun. Senator Elizabeth Warren told Jay Powell at a hearing on June 22, 2022:

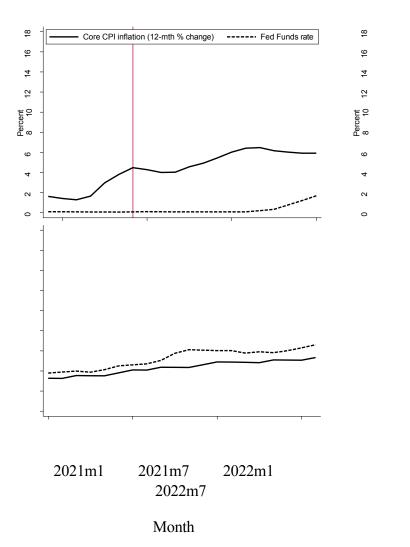
The reason I'm so concerned about this is rate increases make it more likely that companies will fire people and slash hours to shrink wage costs. Rate increases also make it more expensive for families to do things like borrow money for a house - and so far this year, the cost of a mortgage has already

doubled.

Inflation is like an illness. And the medicine needs to be tailored to the specific problem. Otherwise, you could make things a lot worse.

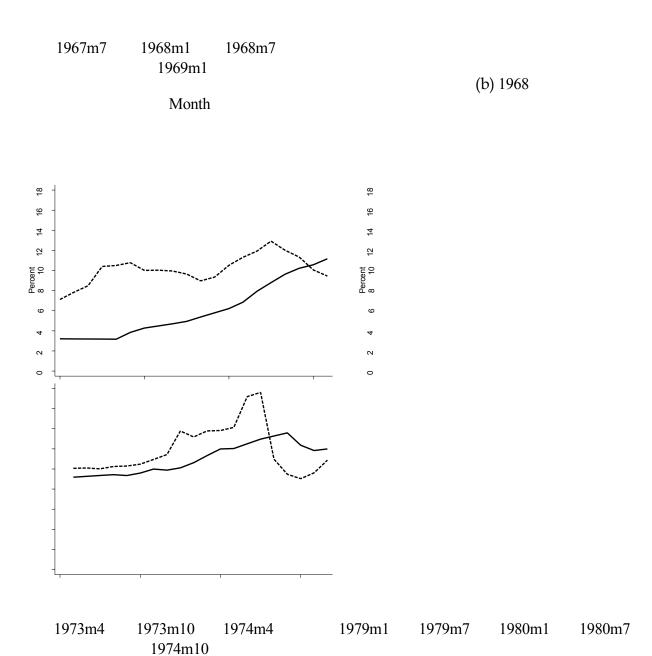
And right now, the Fed has no control over the main drivers of rising prices, but the Fed can slow demand by getting a lot of people fired and making families poorer. And while President Biden is working to increase energy supplies and straighten out supply chain kinks and break up the monopolies and bring down prices, you could actually tip this economy into a recession.

So, I just want to say, you know what's worse than high inflation and low unemployment? It's high inflation and a recession with millions of people out of work. And I hope you'll reconsider that before you drive this economy off a cliff.²⁸



(a) 2021

²⁸ Senataor Warren Press Release, 6/22/22.



(d) 1979 (c) 1973

Month

Month

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I quote this at length, since it captures the sort of criticism that the Fed will almost certainly receive more of in the near future. Suppose it is a year from now, August 2023, and inflation is five or six percent, the unemployment rate five percent and rising, mortgage rates are seven percent, and housing and stock prices down five to ten percent. In this plausible situation, the Fed will face enormous pressure to lower interest rates. That the Biden administration currently supports the Fed's tightening efforts tells one little about what political support will look like when or if the unemployment rate is high and rising and when or if Fed actions look likely to endanger the Democrats' chance of holding the White House in 2024.

More broadly, the current U.S. political environment may be inconsistent with low inflation. High inflation in the 1970s ended because Jimmy Carter was willing to risk his political career to end it; appointing Paul Volcker as Fed chair led both to the end of the Great Inflation and contributed to Carter losing the 1980 election. It is unclear that either the Republicans or

Democrats would be willing to make such a political sacrifice today.²⁹ If winning elections is (perhaps correctly) regarded as existentially important, then committing to tight monetary policy will be difficult.

Of particular concern is the Republican party and specifically Donald Trump's willingness to pressure the Fed for looser policy. Any unconditional forecast of inflation must put substantial weight on the path of inflation in a second Trump administration. (On 29 August 2022, the online betting market PredictIt had Trump with a 24 percent chance of winning the 2024 election.) Against a background of an unemployment rate below 4 percent and a recent cut in the Federal Funds rate, Donald Trump tweeted on 23 August 2019 "My only question is, who is our bigger enemy, Jay Powel [sic] or Chairman Xi."30 This was one of numerous tweets from Donald Trump criticizing the Fed. Given the volume of criticism in 2019, when unemployment was historically low, it is likely that a second Trump administration would strongly oppose tight Fed policy. The Fed does have substantial independence, of course, but this independence is not written in the constitution; a congressional majority has complete control over the Fed. Thus the Fed's ability to resist strong political pressure is limited.

My doubts about future Fed policy are likely to meet with skepticism from economists. I suspect there is more agreement with my prediction that a substantial fiscal contraction is unlikely. Unknowns suggest betting on larger rather than smaller future deficits. Inflation

²⁹ How much Jimmy Carter understood of what Paul Volcker would do to the economy and his election chances is unclear (DeLong (2022), p. 440). But regardless of whether the appointment of Paul Volcker was a deliberate effort to tighten policy, his appointment came amidst an environment of administration support for tighter monetary policy (DeLong (1997), p. 274). For the more on the current politics of Fed tightening, see Timiraos, WSJ, 8/26/22.

³⁰ See screenshot here: CNBC.

itself may lead to more expansionary fiscal policy, as voters demand tax cuts and / or transfer payments to offset higher prices. And while the debate surrounding what became the Inflation Reduction Act suggests that the Democratic party is unlikely to entirely ignore budget deficits in making policy, it hard to find evidence that a Republican administration would have any similar concern about the deficit. The worry is that budget deficits will both raise aggregate demand directly through Keynesian mechanisms and constrain monetary policy. Monetary policy could be constrained, since high real interest rates would make financing U.S. government debt expensive. The U.S. government in 1980 had little debt, so in this respect controlling inflation now could be more difficult than it was for Volcker.³¹

3. Conclusion

I have made the case for pessimism about U.S. inflation. In the short-run, the feeding through of new rents to existing renters, and supply and demand factors will likely keep inflation high. In the longer-run, there is a substantial probability that political pressure will prevent the Fed from doing what is necessary to lower inflation.

Persistent high inflation could be a disaster for the U.S. As an economic problem, the costs of moderate inflation may be small. A year with a ten percent inflation rate is much better than a year with a ten percent unemployment rate. The higher inflation becomes, however, the larger a recession will need to be in order to lower inflation. Thus the costs of unemployment become costs of inflation. Inflation can also have unfortunate political effects. Voters hate inflation, and high inflation would contribute to dysfunctional U.S. politics.

I would like to be wrong in my worries about inflation. I hope Brad DeLong convinces me that I am.

³¹ See Hanno Lustig, Twitter, 4/2/22. A further difficulty is that relative to 1980, much more of U.S. debt is now held abroad; thus high real interest rates would mean large real payments to foreign bondholders. This could cause political difficulties. See Chodorow-Reich, Twitter,4/2/22.

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Response to Hausman

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September 16, 2022

Josh ends his article with "I would like to be wrong in my worries about inflation. I hope Brad DeLong convinces me that I am." No. I don't think he is wrong. No, I cannot fulfill his hope.

Moreover, I think that there is a very important downside to moderate inflation that Josh does not highlight: he mentions it only at the very end, in an aside that: "Inflation can also have unfortunate political effects."

High unemployment is a worse tragedy than moderate inflation, and makes those who suffer from it angry. But high unemployment directly reflects only a small proportion of the population. Inflation, even moderate inflation, affects everybody: everybody sees the economy as having broken its social compact with them. Everybody finds themselves unable to purchase at the prices they had expected and had thought reasonable. Everybody is consequently annoyed. When politics stands on the knife-edge of catastrophe—as it does now—near-universal annoyance is more of a danger than is justified anger against the system on the part of relatively few.

John Maynard Keynes put his finger on the problem back in 1919, in his *The Economic Consequences of the Peace*:

Lenin is said to have declared that the best way to destroy the Capitalist System was to debauch the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. By this method they not only confiscate, but they confiscate arbitrarily; and, while the process impoverishes many, it actually enriches some. The sight of this arbitrary rearrangement of riches strikes not only at security, but at confidence in the equity of the existing distribution of wealth.... Lenin was certainly right. There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose. (Keynes, 1920, ch. VI)

The prose is overly purple. And Keynes (2020) was thinking of high and variable inflation, in which: "The currency fluctuates wildly from month to month, all permanent relations between debtors and creditors, which form the ultimate foundation of capitalism, become so utterly disordered as to be almost meaningless; and the process of wealth-getting degenerates into a gamble and a lottery" (ch. VI).

But it does apply to even the moderate inflation we are currently undergoing, and even if this inflation turns out to be transitory. A perceived-by-everyone breaking of the social compact is a weighty thing. Getting inflation "under control" ought to be a very high priority.

THE CURRENT STATE OF INFLATION

Let me reset. Compare the situation today to what people feared two years ago would be the case today. How are we doing? The answer is: we are doing very well indeed. Jay Powell and his Federal Reserve (and Joe Biden and his administration) ought to be taking victory laps.

Let me ask you to back up a little more than a decade. Two and a half years after the start of the Global Financial Crisis in 2007, the U.S. unemployment rate was kissing 10 percent, the Federal Reserve had found that it had no traction to speed recovery, and the Obama administration had just thrown away its ability to use fiscal policy to speed recovery by promising to veto spending and tax bills that were insufficiently austere. It would, after that moment in late 2009, take six years for the U.S. economy to approach full employment. The cumulative pointless and unnecessary economic losses of \$7 trillion from deficient employment alone, plus a multiple from investments not made, business models not experimented with, and workers not trained during the decade of anemic recovery. Take that multiple, and add on the shadow cast on the economy after 2015 by the anemic recovery. Guess that multiple to be three.

The key thing to hold on to is this: this time, we have avoided all of that.

Relative to the Bernanke Fed, therefore, the Powell Fed are public benefactors to the residents of the United States to the tune of \$21 trillion dollars. We could afford to make each of the 19 voting and alternate members of the Powell FOMC as rich as Elon Musk was at his peak, and that would only eat up 1/10 of the good they have done relative to the Fed, Congress, and President of a decade ago.

But we do now have an inflation problem.

So after it finishes taking its victory laps, and after the cheers the Powell Fed deserves—but that somehow I am not hearing right now?—die down, what should the Powell Fed do to deal with the current inflation problem?

A standard economist would start to think about this question by asking themself: What does macroeconomic theory tell us?

Unfortunately, macroeconomic theory tells us nothing.

Macroeconomic theory is a historical analogy dressed up in a leotard, a tutu, and pointe shoes. I do admit that there are a very few macroeconomists—Paul Krugman comes to mind—who are able to successfully use macroeconomic theories as intuition pumps. But for the rest of us,

macroeconomic theories are nothing but boxes into which we can file historical analogies, or perhaps a better analogy would be that they are distilled and crystalized versions of memories of historical events—distilled and crystalized versions adulterated with ideology, and you better hope the adulterant is simply oregano.

HISTORICAL ANALOGIES TO THE CURRENT TREND IN RISING INFLATION

So what historical analogies are there? The U.S. has faced five—or maybe six, depending on whether you count the 1970s as one or two episodes—inflation problems in the past century and a bit. One, the WWII inflation brought under control by wartime price controls, is not relevant to our situation. That leaves four (or maybe five) historical parallels.

- (1) The first is the WWI-era inflation, brought under control when the newly-installed Fed raised its discount rate from 3.75 percent to 7 percent, and triggered a short but very deep recession accompanied by substantial deflation. Milton Friedman (1963) judged that the Fed had moved too late—should have started raising interest rates a year or more before it did—but moved too far when it did move.
- (2) The second is the post-WWII inflation. Inflation peaked at 16.7 percent on a trailing annual basis in May of 1947 as the U.S. economy reoriented itself from its wartime to its post-war structural configuration. The Federal Reserve did nothing. It was focused on propping up the value of all the U.S. Treasury bonds that had been issued to fight World War II. Inflation then declined over the next two years to 8 percent, and then went negative in 1949, when a minor recession came.
- (3) The third is the 1951 inflation. Inflation peaked at 8.6 percent on a trailing annual basis in May 1951 as the U.S. geared up to fight the Korean War and, perhaps more important, to build up the full Cold War military prepared to instantly project power anywhere on the globe. Again, the Fed did nothing. And the inflation wave passed. By May 1952 it was below 2 percent. And recession was avoided until a minor one in late 1953.

In both 1947 and 1951, we found ourselves wheeling the structure of our economy in a different direction—demobilization from World War II and the firing-up of the civilian economy in 1947, remobilization for the Cold War in 1951—with remarkable speed. There needed to be some wage inflation: cutting nominal wages in contracting industries is devastating for worker morale, and thus businesses do not do it; in order to have market signals poll workers into expanding industries, the wages in those industries have to rise—hence some wage inflation. There needed to be some bottleneck-driven cost inflation: it is the rise in prices around bottlenecks that the market needs to incentivize firms to correct them by economizing on the scarce and adding to supply. That is how the market undertakes the Hayekian price-discovery and subsequent activity-reorientation process. The natural rate of inflation—the rate of inflation that allows the economy

to reach not just a full-employment equilibrium but the best full-employment equilibrium—is elevated whenever we need to wheel the structure of the economy into a new configuration.

By how much is it elevated? We do not know. We do not have good models here.

Is this a problem? It should not be. A good central bank works to build credibility precisely so that it has enormous freedom of action to follow the policies in the short run that are best for the economy, even if that means it does not hit its long-run inflation target in the short run. And the Federal Reserve has spent generations building credibility, so it ought to have considerable short-run freedom of action to allow for higher inflation now without creating expectations of a prolonged inflationary spiral.

(4) The fourth, or the fourth and fifth, are the 1965 to 1984 experience, when inflation rose from 2 percent at the start of 1966 to 4.4 percent on Richard Nixon's inauguration in January 1969, reached a trough of 2.8 percent in August 1972, roared to 10.9 percent in November 1974 with the Oil Crisis, declined to 4.5 percent in December 1976, and then came roaring back to a peak of 12.8 percent in March 1980.

The Federal Reserve wished and washed. Arthur Burns, Fed Chair from 1970 to 1978, was too interested in having a strong economy while his friend and patron Richard Nixon ran for reelection in 1972, and did not believe that Congress would let him keep interest rates high enough for long enough to cure inflation by monetary policy. The Fed raised interest rates after the Yom Kippur War oil shock to control inflation; then, after inflation peaked, it lowered them to try to restore full employment. Then came the year when, as the late Charlie Schultze told me at one of our lunches, "our forecasts of nominal income growth were dead on, but inflation came in 2%-points high and real growth 2%-points low."

G. William Miller, Fed Chair over 1978 to 1979, was out of his depth.

And then came the Volcker disinflation. In his post as Fed Chair, Paul Volcker raised interest rates to a peak of 16.9 percent in December of 1980, and did not lower them below 10 percent until August of 1982, when he realized that he had bankrupted Mexico. He decided to declare a fall in inflation to the 4 to 5 percent/year range as complete victory. That 4 to 5 percent target lasted for a decade, followed by the opportunistic disinflation down to and Alan Greenspan's declaration of the 2 percent/year inflation target—a declaration that it is difficult today to argue was appropriate, given the extraordinary amount of time global north economies have spent with interest rates at their zero lower bound since.

The problem in that 1970s was that expectations of inflation had become deanchored and unsettled. Instead, the expectations embedded in the economy were that wage inflation next year would be about what wage inflation had been this year—and perhaps a percentage point per year or so more

History does not repeat itself. But it does rhyme. Which of these past historical episodes is most likely to rhyme with today?

IMPLICATIONS FOR THE CURRENT INFLATION TREND

The economy today is undergoing another great wheeling: 6 percent less relative to trend in personal consumption expenditures on services, and 20 percent more relative to trend in personal consumption expenditures on goods. Not all of that is going to stick into the post-plague economy, but a good deal of it will. We have an economy in which nominal wages and some nominal prices are really sticky downward. That means that if market prices are to do their job as signals of where the value is, prices and wages in industries that need to expand must rise relative to prices and wages in industries that need to contract. With prices and wages in industries that need to contract sticky downward, that means: inflation.

Now it is certainly true that we do not want the inflation now, which we want, and which is an essential part of a rapid restoration of general prosperity, to stick around once we arrive at whatever our new normal is going to be—we do not want the 1970s to become the relevant rhyming episode. But at the moment, at least there seems to me considerable reason to hope that it is the second and third episodes, 1947 and 1951, that are relevant. Long-term inflation expectations implicit in the bond market are still trading at their normal "in the long run bet that inflation will be about 2.5% range." Thus it seems to me likely that the most immediate thing to fear is that this is like 1920—that the inflation rate would have passed on its own, but the Federal Reserve is in the process of tightening too much right now.

But there is the other real fear: that this is indeed like the 1970s, and that the important thing is to scotch any expectations of an inflationary spiral before they are even formed.

And there is one very big reason to worry about an inflationary spiral: for many people, the salient indicator of inflation is the price they pay for gasoline at the pump. Disturbances in oil markets exercise a strong and independent influence over expectations that all the credible commitments and policy actions from the Central Bank cannot override. The price of gasoline at the pump is heavily influenced by how much natural gas flows out of Russia to Western Europe.

Larry Summers has been fearing for nearly two years that fiscal stimulus excessive *ex post* and a Federal Reserve unwilling to derail recovery ran the risks of the anchoring inflation. But not even he expected Vladimir Putin to send his army to convince Ukrainians that they were not Ukrainians at all, but Russians, and for Russia and Western Europe to then try to weaponize their energy dependence.

Thus whether our inflation problem turns from a minor annoyance—a side-effect of the good thing that is a rapid, appropriate, and now nearly-complete recovery—into a wicked problem may well depend on decisions made in Moscow's Kremlin.

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I Am Still Worried Inflation Worries

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October 2, 2022

The editors hoped that Brad and I would disagree. But I find myself agreeing with much of Brad's piece. I agree that as an economic problem (though perhaps not as a political problem) inflation is to be much preferred to unemployment. And I agree that historical analogies are a useful way of thinking about how the current inflation can end. Where I disagree is in which historical analogy is most relevant. Brad argues that 1947 and 1951 are relevent analogies for inflation today. In 1947 and 1951 inflation fell without tight monetary policy and without large increases in unemployment. If these years are the relevant analogies for today's inflation, then disinflation might involve little pain. I shall argue, however, that the 1970s are likely a better analogy, suggesting a bleaker outlook.

The black line in figure 1(a) shows 12-month consumer price index (CPI) inflation from 1946-48.³² Inflation peaked at 19.7 percent in March 1947, and remained high for 18 months thereafter.³³ But it then quickly disappeared. Little economic pain accompanied the disappearance of inflation in 1948-49. The NBER dates a recession as beginning in November 1948, but by this time prices were already falling.³⁴ The dashed line in figure 1(a) shows theu nemployment rate; it did eventually rise to a peak of 7.9 percent in October 1949. Inflation had disappeared a year prior, however, so it is doubtful that the weak labor market caused the decline

³² Food and energy prices are volatile and may be uncorrelated with underlying inflation dynamics. So it would better to look at core inflation, inflation excluding food and energy. Unfortunately, however, these data do not begin until January 1957.

³³ Month-over-month (seasonally adjusted) inflation was 0.1 percent in August 1948 and negative for several months starting in September 1948 (FRED series CPIAUCSL).

³⁴ Month-over-month (seasonally adjusted) inflation was zero or negative for the fourteen months beginning in September 1948 (FRED series CPIAUCSL).

in inflation. Indeed, the timing suggests that causality could have worked in the opposite direction, with deflation in late 1948 and early 1949 causing economic weakness.

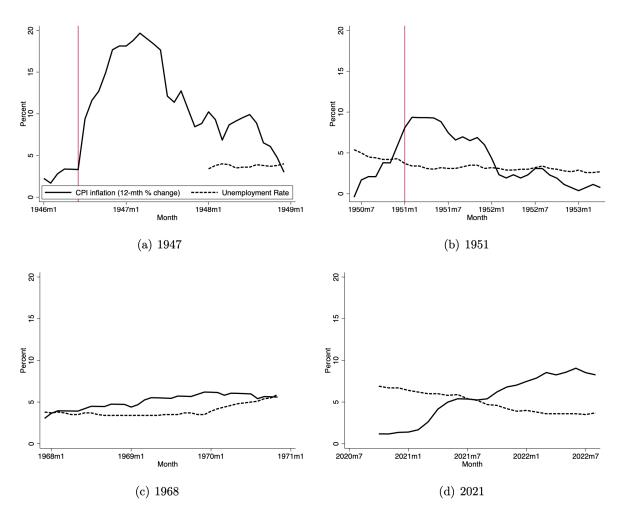


Figure 1: Notes: The figures compares inflation (the 12-month percent change) and the unemployment rate around four dates when inflation rose above four percent: July 1946, December 1950, June 1968 and April 2021. The vertical line in figure 1(a) indicates June 1946, when World War Two price controls were lifted. The vertical line in figure 1(b) indicates January 1951 when Korean War price controls were implemented. Sources: CPI - FRED, CPIAUCNS; Unemployment rate - FRED, UNRATE. Unemployment rate data begin in January 1948. Price control dates - Rockoff (1981).

Unfortunately, I expect that the inflation experience in 1946-48 is a poor analogy for inflation today. First, some of measured inflation in 1946-48 was the result of the end of World War Two price controls (Friedman and Schwartz, 1963). Many price controls expired on June 30, 1946,³⁵ indicated by the vertical line in the figure. The end of price controls explains the jump in

³⁵ See Truman Speech.

inflation from June to July 1946. How much of the overall inflation from 1946-1948 is explained by the lifting of price controls is unclear. But the influence of price controls on inflation dynamics suggests caution in analogizing from this episode to the present day.

Second, unlike today, fiscal policy in 1946-48 was contractionary. The federal budget deficit as a share of GDP shrank from 21 percent of GDP in 1945 to 7 percent of GDP in 1946. By 1948, the government was running a 4 percent of GDP surplus.³⁶ It is unclear how to quantify the effect of this enormous fiscal contraction on inflation. Since the unemployment rate rose little before 1949, contractionary fiscal policy could not have done much to lower inflation by weakening the labor market. Still, as Friedman and Schwartz (1963) argue (p. 583), contractionary fiscal policy must have pushed inflation lower.

Inflation expectations are one possible mechanism through which contractionary fiscal policy may have helped to quickly bring the 1946-48 inflation to an end. Contractionary fiscal policy may have contributed to low, or negative inflation expectations in 1946-48. Between December 1946 and December 1948, in four of the five Livingston surveys of economists' expectations, the median forecast was for deflation.³⁷ This matches Friedman and Schwartz (1963) judgment (p. 583) that there "was a continued fear of a major contraction and a continued belief that prices were destined to fall." Friedman and Schwartz (1963) (p. 585) argue that it mattered in 1946 that consumers remembered both deflation during the Great Depression and the deflation that followed the post World War I inflation.

In sum, the end of price controls, contractionary fiscal policy, and expected price declines are all features of the 1946-48 episode that make it quite different from the situation today. Thus I hesitate to draw much reassurance from the quick, painless end of the 1947 inflation.

Figure 1(b) shows the path of inflation from 1950-1952. The figure shows how brief inflation was; month-over-month seasonally adjusted CPI inflation exceeded a 4 percent annual rate for only 14 months, from May 1950 to February 1951, and from September to December 1951. Unlike 1946-48, in 1950-51—like today—fiscal policy was expansionary. The federal budget swung from a surplus of 1.8 percent of GDP in 1951 to a deficit of 1.7 percent of GDP in 1953.³⁸ Also unlike in 1946-48, expectations of inflation were initially positive. From June 1950 through December 1951, the median forecasts from the Livingston Survey were for positive inflation. Likewise, Friedman and Schwartz (1963) (p. 583) judge that inflation expectations were positive in 1950, and Binder and Brunet (2022) find that early in 1951 most respondents in the Survey of Consumer Finances expected prices to rise.

³⁶ FRED series FYFSGDA188S.

³⁷ See Livingston Data. This statement is based on a comparison of the variables CPI_12M and CPI_BP.

³⁸ FRED series FYFSGDA188S.

Still, two differences between 1951 and today may limit the usefulness of this historical analogy. First, the cause of inflation in 1951 was rather different from that today. In 1950-51, demand for goods increased as people feared that the Korean war would be associated with shortages and inflation (Binder and Brunet, 2022). Insofar as inflation was induced by panic buying, it may have been more likely to be brief. There is a limited quantity of goods that households and businesses can store. Second, the end of inflation was associated with the January 1951 imposition of price controls (the vertical line in figure 1(b)). Annualized inflation averaged 11.2 percent in the six months before the imposition of price controls and 4.2 percent in the six months after.³⁹ Price controls were not lifted until February 1953, by which point there was likely no longer panic buying.

The final analogy is the more than a decade of inflation beginning in 1968 (figure 1(c)), the so-called Great Inflation. Unfortunately, I see striking similarities between this historical episode and today. Then like now inflation was driven both by expansionary fiscal policy and supply shocks. And then, like now, memories of high unemployment made it difficult to tighten policy. DeLong (1997) convincingly argues that in the 1970s, memories of the Great Depression made it difficult for the Fed to raise the unemployment rate enough to lower inflation. Arguably memories of the Great Recession, of high unemployment after 2008, have played a similar role today. The large difference between the 1970s and today, of course, is that policymakers today know what happened in the 1970s. But as I argued in my initial piece, in 2023 and after political pressures may come to constrain the Fed.

So I remain worried. Imperfect though it is, I see the 1970s as a better analogy for inflation today than 1946-48 or 1950-51. I expect the current fight against inflation to be won neither quickly nor easily.

³⁹ Seasonally adjusted CPI data from CPIAUCSL

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