Commentary: Inflation as a Fiscal Limit

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It is a great pleasure to discuss this interesting, timely, and provocative paper by Bianchi and Melosi, which attempts to gauge how close we are to the inflationary limits to fiscal policy. It is a very good fit for the agenda of the symposium.

The paper builds on a tradition that posits that the primary causes for inflation are fiscal in nature. I will call this view “It’s Mostly Fiscal” (IMF, relation to the international financial institution with the same acronym entirely coincidental). Sargent and Wallace (1981) formulated this view in their celebrated “unpleasant monetarist arithmetic”; it was further elaborated and embedded in fully fledged Dynamic Stochastic General Equilibrium (DSGE) models by Leeper (1991), Sims (1994), and Woodford (1995); and Cochrane’s (2023) forthcoming book summarizes the literature. Francesco Bianchi and his co-authors have made several contributions that quantify the importance of fiscal policy in causing U.S. inflation, using structural methods to estimate models of this sort (cf. Bianchi and Ilut 2017 and Bianchi and Melosi 2019).

A simple formulation of the IMF view is as follows. Money is merely one of many government liabilities. The price level is then not only the relative price of consumer goods to money but also the
relative price of goods to the face value of all nominal government debt. The fiscal authority provides the ultimate backing of this debt. The fiscal—not only the monetary—authority decides how the long run consolidated government budget constraint is cleared, i.e. will debt be repaid through future surpluses or via inflationary finance. A good equilibrium is one where the monetary authority targets inflation and refuses to submit to pressures for inflationary finance; the fiscal authority begrudgingly raises revenues or cuts spending to finance its debt. But a bad equilibrium also exists where the fiscal authority devises no credible plan to repay the public debt and the budget constraint can only be cleared through inflation.

It is this bad equilibrium that Bianchi and Melosi see as the cause of the Great Inflation of the 1970s. An important contribution of their paper is to quantify the relative importance of this fiscal channel relative to cost-push shocks such as the oil shocks of that decade. They argue that supply shocks caused only short-lived inflationary surges and that persistent inflation as in the ’70s is necessarily fiscal in nature. These conclusions are founded on a body of research by Bianchi and co-authors and consistent with a popular view that the inflationary ’70s were caused by unfunded spending for the Vietnam War and the Great Society programs.

More speculatively, the authors posit that a substantial portion of the inflationary surge of 2021-2022 was caused because the U.S. federal government has lost its long-run credibility following the COVID-era spending programs, and the market is “pricing in” the possibility that federal debt will be inflated away. I will challenge this conclusion shortly, but first I’ll outline two alternatives to the IMF view. These theories aren’t mutually exclusive and exist in tandem in most DSGE models, but their relative importance is still debated.

**Alternative Views**

I will outline two competing views of the drivers of inflation (Castillo Martinez and Reis, 2019, provide a useful overview). First is the monetary view, which I will call “It’s Mostly Money” (IMM). This view harks back at least to David Hume and is commonly associated with Milton Friedman. Under this theory, the price level is under the central bank’s control. In earlier formulations, inflation was
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always and everywhere a monetary phenomenon, fully determined by
the supply of money. In modern theories, the central bank’s interest
rate rule anchors inflation. Fiscal policy is merely a sideshow, which
affects inflation if and only if the central bank finances fiscal excesses.
This view puts the full responsibility for controlling inflation at cen-
tral banks’ doorsteps.

Bianchi and Melosi have an interesting rejoinder to this view. They
show that when public debt levels are elevated, the central bank may
be unable to control inflation and may have no choice but to submit
to the finance ministry’s fiscal excesses, regardless of central bank in-
dependence. Perversely, interest rate hikes may be inflationary when
public debt is elevated. This is because interest rate hikes increase the
cost of public debt service, leading to further borrowing, by the irre-
sponsible Treasury, leading to yet higher inflation. Chris Sims (2016)
previously made a similar observation in this forum, citing the case
of Brazil in Loyo (2000), but Bianchi and Melosi flesh out the details
more formally in this paper.

A second alternative hypothesis views inflation through the lens
of the Phillips curve, which I will call “It’s Mostly Real,” or IMR. In
New Keynesian frameworks, the Phillips curve derives from an
upward-sloping aggregate supply relation and inflation arises when
demand expands or supply contracts. Monetary and fiscal policy
affect inflation primarily by shifting aggregate demand. Expectations
still matter and could lead to inflation, because the Phillips curve
is forward looking, but this view attributes the recent inflationary
surge to the global shock to oil prices, supply chain and labor market
disruptions in the COVID-19 recovery, and possibly to excessively
expansionary fiscal policy during the COVID pandemic.1

Is it Mostly Fiscal?

Bianchi and Melosi attribute a substantial share of the current infla-
tionary surge to market expectations that fiscal policy has become un-
sustainable absent inflationary finance. Their analysis is competently
executed, but I’d like to give some countervailing narratives.

Chart 1 shows estimated breakeven inflation rates at different
horizons. This gives the bond market’s implied expectations of average
annual inflation over horizons ranging from two to 20 years. Inflation is expected to revert remarkably quickly to below 3 percent. Of course, investors might be wrong, new crises may emerge, and Hilscher, Raviv, and Reis (2022) suggest that a careful evaluation of options data paints a slightly grimmer picture. (Gopinath 2022 showed similar evidence in her commentary.) But these caveats are neither here nor there when evaluating the IMF hypothesis. The bond market investors who are pricing these breakeven rates are precisely those whose elevated inflation expectations are causing the current inflationary surge, according to the fiscal hypothesis. However, these very bondholders themselves are putting their money on very transient inflation, consistent with the cost-push IMR hypothesis.\(^2\)

International trends are also illuminating. Chart 2 presents inflation in the U.S., EU, the U.K. and Japan in the aftermath of the COVID pandemic. Inflation has followed remarkably similar patterns in Europe and the U.S. but is yet to surpass 3 percent in Japan. The IMF
hypothesis requires that expectations of fiscal policy have become un-anchored in concert in all high-income countries, except for the one with the highest debt to gross domestic product (GDP) ratio by far at 260 percent. Coincidentally, this is also a country with one of the lowest tax intakes among high-income countries at 31 percent of GDP (compare with 39 percent in Greece). I see no suggestion that the Japanese government has more serious plans to fund its debt with surpluses than its counterparts. I can think of reasons why the bond market may be more forgiving to the Japanese finance ministry than to others, but the IMR view provides a far more parsimonious explanation. Japan was affected far less by the COVID pandemic than other countries, with unemployment peaking at merely 3.2 percent, and is therefore suffering less from some of the labor market constraints of the COVID recovery; and Japanese firms have so far sheltered consumers from large energy price hikes.

Returning to the 1970s, Chart 3 (based on Ilzetzki, Reinhart, and Rogoff 2020a) shows inflation in the U.S. and the median high-income country. The two overlap nearly perfectly. The great inflation was a global phenomenon. The Vietnam War and President Lyndon Johnson’s Great Society programs can explain fiscal policy in one
country alone. The fiscal view requires synchronized fiscal excesses in dozens of separate finance ministries. To paraphrase Tolstoy: Each finance ministry was irresponsible in its own way. While this is possible, Occam’s razor is kinder to the IMR and IMM hypotheses. On the real side, the oil price shocks were a global phenomenon and, on the monetary side, the end of Bretton Woods left countries around the globe scrambling to devise alternative monetary frameworks.³

Missing Demand in the Fiscal Theory

Why is the fiscal theory a ticking time bomb that (so far) refuses to detonate? There are some lessons for fiscal theorists from 1970s monetarism. The velocity of money was always the weakest link in the quantity theory of money. Econ undergraduates learn that \( MV=PY \) but are quickly told to assume that velocity is constant. In other words, money supply would be a sufficient statistic for long-run inflation if money demand were stable. But money demand turned out to be extremely volatile and unpredictable, making monetary rules based on the quantity of money difficult to implement.
Similarly, the fiscal hypothesis presumes that demand for public bonds is determined primarily by arbitrage conditions and expectations of intertemporal budget constraints. Chart 4 shows a familiar figure of a rising U.S. debt-to-GDP ratio alongside declining nominal and real yields on (5-year) U.S. Treasuries. A rising quantity of debt alongside declining yields suggests that demand shifts have been far more important than supply in pricing government debt. That medium-term German and Japanese bonds traded at negative nominal returns last decade also indicates that expected returns are only part of the reason sovereign bonds are held. The fiscal theory could benefit from attention to drivers of demand for safe assets.

The demand side of the equation presents different limits on fiscal policy, complementing the fiscal-monetary interactions discussed here. In Ilzetzki, Reinhart, and Rogoff (2019, 2020b, 2022), we discuss some of the factors leading to the U.S. dollar’s global dominance, with the commensurate global demand for dollar-denominated assets. We also warn that this demand risks outstripping U.S. fiscal capacity to back these assets. Farhi and Maggiori

Note: U.S. debt as a percent of GDP (right axis) and nominal and real yield on 5-year U.S. Treasuries. Real yield is the ex-ante yield, with inflation expectations taken from the Michigan survey of consumers.
(2018) evaluate the factors that could shift the global economy from its current equilibrium to a multipolar system of anchor currencies. The U.S. federal intertemporal budget constraint remains a factor to consider in this analysis, but global demand-side factors intervene as well. Bassetto and Cui (2018); Brunnermeier, Merkel and Sannikov (2022); and Jiang et al (2022) have made recent theoretical progress in considering convenience yields and liquidity consideration in the fiscal theory of the price level. These theories may explain why unfunded public debt has risen—and could continue to rise—for some time to come.

To be clear: I am concerned about the sustainability of U.S. public debt in the long run. I am also not sanguine about current inflationary trends. However, I don’t see the two concerns as having as intimate a link as do Bianchi and Melosi.

Conclusion

The paper is an important contribution to the debate on the limits on fiscal policy and the causes for the recent inflationary surge. Further empirical work and further consideration of international factors will help shed further light on this debate. Finally, I suspect that the developments of the upcoming year will make us all a little wiser at next year’s symposium.

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Endnotes

1 Di Giovanni et al (2022) estimate that one-half of EU inflation and one-third of U.S. inflation dynamics during the COVID era of Q4 2019 to Q4:2021 can be attributed to supply shocks mainly in the form of supply chain bottlenecks. This was before the massive shock of the war in Ukraine.

2 Lest one think that inflation expectations extracted from Treasury yields are distorted due to Federal Reserve asset purchases, Chart 1 also shows that the median responses in the survey of professional forecasters paint a similar picture.

3 The discussion here focuses on high-income countries. Unsustainable fiscal policies and the IMF view may have played a role in the hyperinflationary experiences of low- and middle-income economies in that decade.

4 Krishnamurthy, He, and Milbradt (2019); Jiang, Krishnamurthy and Lustig (2021); Krishnamurthy and Li (2022); and Mian, Straub and Sufi (2022) have made related contributions.
References


Hilscher, Jens, Alon Raviv and Ricardo Reis, “How Likely is an Inflation Disaster?,“ mimeo, London School of Economics.


