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Post-Pandemic Economic Risks¹

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During World War II, the Federal Reserve (Fed) agreed to place a floor under the prices of Treasury bills and bonds by purchasing large amounts of such securities. Because yields move inversely to prices, this was equivalent to capping the yield-to-maturity on newly issued bills and bonds. Holdings increased approximately 10-fold, from \$2.3 billion at year-end 1941 to \$24.3 billion at year-end 1945. Although holdings decreased slowly thereafter, falling to \$18.9 billion at year-end 1949, the bulk of purchases were not reversed, permanently increasing the Fed's balance sheet—that is, “monetizing” war debt.

Deposits of banks held at the Fed (“reserve balances”) increased from \$12.5 billion at year-end 1941 to \$16.6 billion at year-end 1949, while currency in circulation increased from \$8.2 billion at year-end 1941 to \$23.5 billion at year-end 1949. This increase in money supply supported higher inflation and brought conflict between the Treasury's desire to minimize the cost of government debt finance and the Fed's need to moderate inflation by policies increasing market interest rates. In 1951, the Treasury and Fed negotiated an “Accord,” which released the Fed from further obligation to sustain a ceiling on the yields on Treasury securities.

My fear is that the worst aspects and incentives of the pre-Accord policy environment have returned during the pandemic. On April 28, 2021, the FOMC said that it would continue purchasing, for an unspecified period, “at least” \$80 billion per month of Treasury securities and “at least” \$40 billion per month of agency mortgage-backed securities. A moderately skeptical person might suspect the effort is to place a floor under weakening Treasury bond prices, thereby capping their yields. Previously, on December 16, 2020, the FOMC said it would buy \$120 billion per month of Treasury and federal agency issues “until further notice.”

¹ We are grateful to Richard Anderson, Peter Ireland, and Lawrence Goodman for helpful comments on this article.



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Between January 6 and April 21, 2021, Federal Reserve holdings of Treasury and agency securities increased by more than \$500 billion to an unprecedented \$7.2 trillion. Earlier, on March 15, 2020, the FOMC said it would buy at least \$700 billion in Treasury and agency securities over “the coming months.” The result, between mid-March and early December 2020, was a 54 percent increase in the Fed’s portfolio of Treasury and agency securities.² Consequently, during these same periods, the money supply has increased rapidly, and yields on Treasury securities have remained near historic lows.

Much of the Fed’s purchases of Treasury securities are likely to be permanent, thereby monetizing that amount of new Treasury debt. Yes, taxpayers are obligated to pay interest to the Federal Reserve on those securities held by the Fed—but Fed earnings beyond expenses are returned to the Treasury, so that effect is of secondary concern.

The risk to the economy is future inflation. How will the Fed respond to growing inflationary pressures, when the pandemic ends and consumer spending rebounds? Will the Fed increase interest rates? The Treasury would object, as interest on new Treasury debt would grow. In addition, what would the Fed do about the interest that it pays on banks’ reserve deposits? When economic activity strengthens, what rate must be paid on deposits at the Fed?

The Fed’s payment of interest on reserves is a relatively new policy, likely to play an increasingly important role, now that reserve requirements have ended. This new instrument of policy has worrisome potential consequences. Banks have accumulated enormous reserve balances, much of which otherwise would have been lent to borrowers. To the degree that banks are holding deposits in reserves, rather than lending the deposits out to borrowers, the banks are serving as vaults for depositors, not as financial intermediaries between depositors and borrowers.

If interest rates on primary market loans increase, without a corresponding increase in interest paid on reserves, there will be an explosion of bank lending from banks’ abnormally high levels of reserves. The Fed surely would have to increase the interest rate paid on reserves to prevent an explosion in lending and the consequent surge in inflation.

A primary harbinger of inflationary pressures would be a surge in liquid monetary assets held in the economy. As the surge could materialize in a variety of different monetary assets, there will be increasing need for state-of-the-art data on monetary aggregates as the economy recovers from the pandemic. Although such data are available from the Center for Financial Stability

² See the Fed’s H.4.1 balance sheet and the Treasury’s statement of public debt about the correlation between Treasury new debt issues sold to dealers and Fed purchases of Treasury debt from dealers in the open market. Also see Richard Anderson’s Maxwell Fry Global Finance Lecture online at <https://www.mmf.ac.uk/maxwell-fry/>.



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(CFS) in New York City, there has been a steady decline in the quality and quantity of money market data available from the Fed.

This decline includes ending publication of the broad M3 and M4 aggregates, containing highly liquid, negotiable money market securities. The still-published narrower aggregates, M1 and M2, omit the entire negotiable money market, while including highly illiquid, nonnegotiable small certificates of deposit. On December 17, 2020, the Fed announced a further reduction: weekly data will no longer be published. In addition, the St. Louis Federal Reserve Bank has discontinued its adjusted monetary base. These decreases in monetary data availability from the Fed are occurring precisely at a time when increasing availability is needed.

Of further concern is the Fed's continued reliance on monetary aggregates computed as the sum of their component assets.³ For example, the Fed adds together currency and nonnegotiable certificates of deposit, as if adding apples to apples instead of apples to oranges. In contrast, the Bank of England officially publishes Divisia M4 (DM4), based on competent index number theory, as advocated by the International Monetary Fund (*Monetary and Financial Statistics: Compilation Guide*, 2008, sections 6.60-6.63). The famous Divisia index⁴ properly weights the components of an aggregate.⁵

According to the May 3 CFS monthly data release, DM4 grew by 24.0% in March on a year-over-year (YOY) basis, while Divisia M3 (DM3) grew at an 18.8% rate YOY. Divisia M2 (DM2) grew at a 25.5% rate YOY, while Divisia M1 (DM1) grew at a startling 36.9% YOY rate.⁶

Those monetary growth rates are potentially alarming, but Figures 8 and 9 in the latest CFS data release [displayed below] provide a somewhat more sober view, in terms of long run trends. The broad aggregates, DM3 and DM4, dropped to lower growth paths at the time of the Great Recession and now have returned to their longer run paths, which existed prior to the financial crisis. The lowered paths after the Great Recession are relevant to understanding why inflation has been so low for nearly a decade, despite low interest rates.

³ This procedure violates the fundamental criterion for simple sum aggregation: component assets must be perfect substitutes.

⁴ See, e.g., https://en.wikipedia.org/wiki/Divisia_monetary_aggregates_index.

⁵ The failure of the Fed to adopt competent aggregation and index number theory is, at least partially, a reflection of the fact that, unlike the Commerce Department and the Labor Department, the Fed does not have a data bureau, such as the Bureau of Economic Analysis or the Bureau of Labor Statistics, employing experts in aggregation and index number theory. In contrast to the Federal Reserve, the Shadow Open Market Committee does have that kind of expertise from its member, Peter Ireland, who uses data provided by the Center for Financial Stability, which has been partially filling this void.

⁶ While shocking, the DM1 surge may not have been caused entirely by a supply side phenomenon.



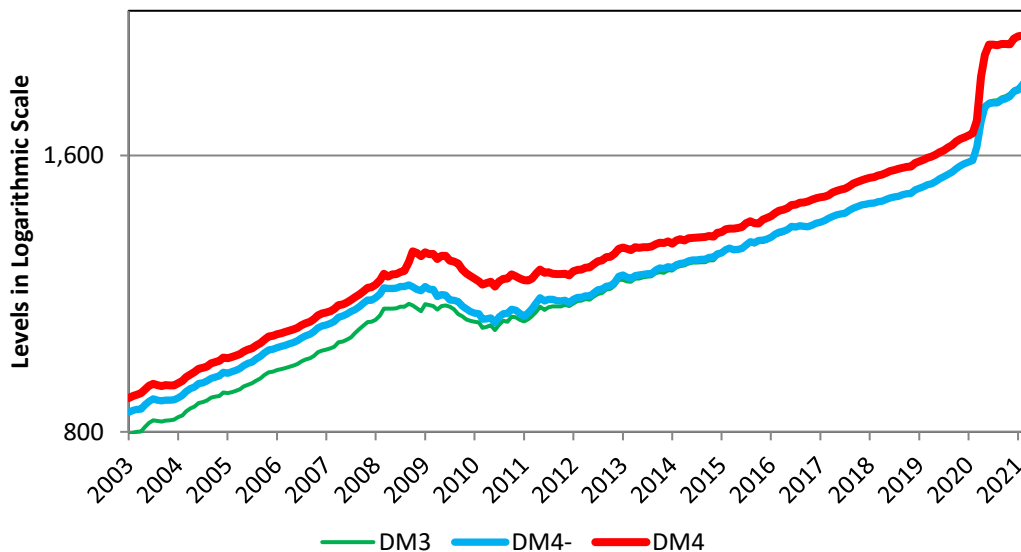
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In short: the 2008 financial crisis and subsequent Great Recession produced slack in money long-run growth --- but that slack is now gone. As a result, inflationary consequences of continued rapid growth in money supply should concern us all. The narrower aggregates, DM1 and DM2, have already moved above their long run paths, providing warnings of future inflationary risks. How the Fed would control such risk, while at the same time holding down interest costs on Treasury debt, is a conundrum that needs to be addressed.

CFS Broad Divisia Monetary Aggregates Levels Normalized to Equal 100 in Jan. 1967 Logarithmic Scales

2003 to Present



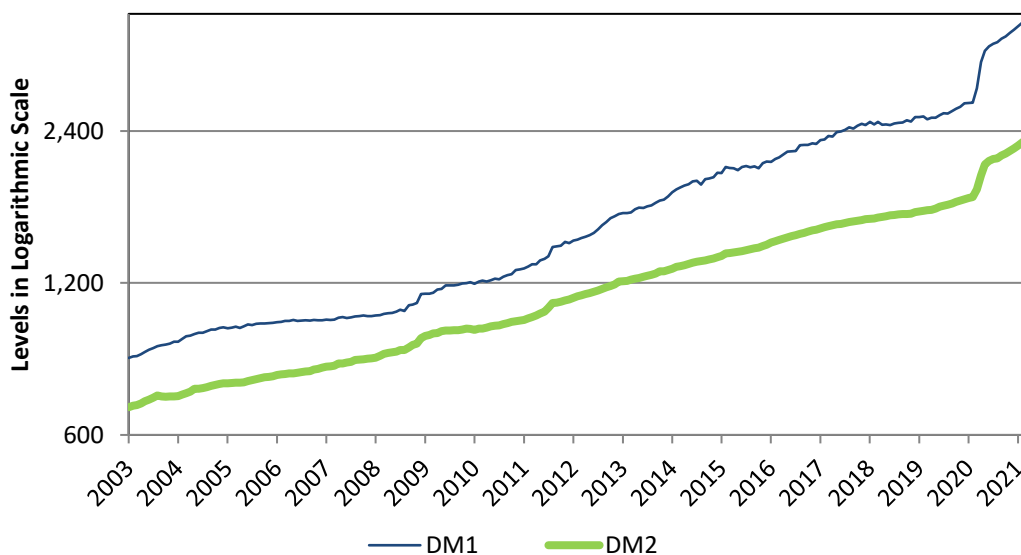


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Narrow CFS Divisia Monetary Aggregates Levels Normalized to Equal 100 in Jan. 1967 Logarithmic Scales

2003 to Present



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