



20-5 Reviving the Potency of Monetary Policy with Recession Insurance Bonds

Julia Coronado and Simon M. Potter

April 2020

This Policy Brief is part 2 of a two-part series.

OVERVIEW

There is a growing understanding that in a world of persistently lower interest rates, existing conventional and unconventional monetary policy toolkits may not be sufficient to stabilize the macroeconomy in the event of large negative demand shocks. This recognition has led to calls for more active use of fiscal policy and coordination between fiscal and monetary authorities. This Policy Brief discusses how the system of digital payment providers (DPPs) proposed in our first Policy Brief on this topic (Coronado and Potter 2020) adds a new weapon to the monetary toolkit that could be implemented in a timely, effective, and inclusive manner.

The creation of DPPs allows the Federal Reserve to make direct payments to consumers to stabilize household income and shore up confidence in the event of a recession. We are far from the first to describe such an approach. Our contribution is to describe how a digital currency backed by the Fed could augment automatic fiscal stabilizers and—more importantly—harness the power of “helicopter” money or quantitative easing (QE) directly to consumers in a disciplined manner.

To implement QE directly to consumers, we propose the creation of recession insurance bonds (RIBs)—zero-coupon bonds authorized by Congress and calibrated as a percentage of GDP sufficient to provide meaningful support in a downturn. Congress would create these contingent securities; Treasury would credit households’ digital accounts with them. The Fed could purchase them from households in a downturn after its policy rate hits zero. The Fed’s balance sheet would grow by the value of RIBs purchased; the initial matching liability

Julia Coronado is the president and founder of Macropolicy Perspectives and clinical associate professor of finance at the University of Texas at Austin.

Simon M. Potter has been a nonresident senior fellow at the Peterson Institute for International Economics since September 2019. Prior to joining the Institute, he was head of the Markets Group and manager of the System Open Market Account (SOMA) at the Federal Reserve Bank of New York. They thank colleagues at the Peterson Institute and more broadly for numerous helpful comments and feedback on this proposal.

would be deposits into the DPP system. The mechanism is easy for consumers to understand and could boost inflation expectations more than a debt-financed fiscal stimulus could.

Unlike some earlier advocates of a central bank digital currency, we do not attempt to abolish cash or give the Fed the power to set deeply negative rates (Bordo and Levin 2017). Indeed, we believe that our approach would allow the Fed to avoid resorting to negative interest rates as a policy tool. Our focus is on how a Fed-backed digital currency, potentially including the issuance of a stablecoin by the DPPs, backed by reserves held at the Fed, could be used to increase the amount of unremunerated Fed liabilities as its balance sheet expanded, creating a more efficient method of financing direct payments to consumers over the medium term than fiscal policy could. Special features of RIBs would support Fed operational independence and Treasury's right to control the outstanding structure of its debt over the medium term, better aligning incentives for an aggressive response to negative demand shocks at the zero lower bound. But unlike automatic fiscal stabilizers, which need to be fully designed in advance, our approach preserves the nimbleness of monetary policy to adjust the policy response to incoming information about the magnitude of the negative demand shock.

We start this Policy Brief by examining why the existing conventional and unconventional monetary policy toolkits may not be sufficient and describing some of the new thinking on automatic stabilizers, fiscal and monetary coordination, and proposals for monetary-financed fiscal expansion. Turning to our proposal, we then outline the division of responsibility between fiscal and monetary authorities, describe the properties of RIBs, and provide some illustrations of how the system might work in practice.

WHY WE NEED TO UPDATE MONETARY POLICY FOR A MODERN MACROECONOMY NOW

Interest Rates Are Likely to Remain Lower

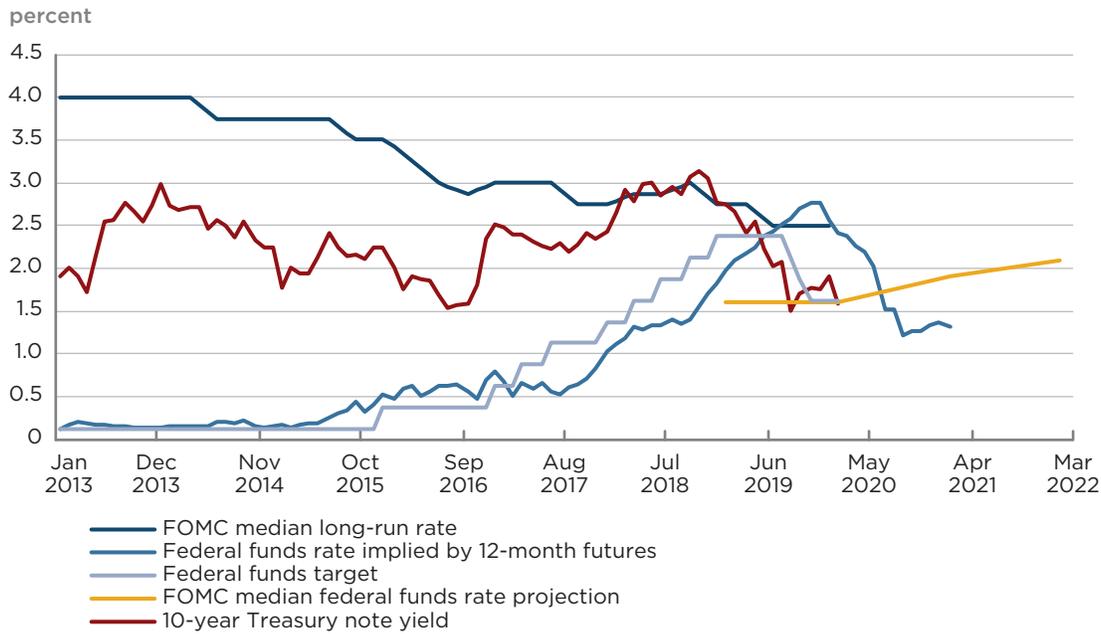
For the foreseeable future, interest rates around the world are likely to remain considerably lower than their historic averages. One workhorse estimate from the Fed's Laubach-Williams model shows that the long-run equilibrium real interest rate dropped from above 2 percent in the 1990s to below 1 percent over the past two years, implying a nominal equilibrium interest rate of less than 3 percent.¹ A recent paper by Michael Kiley (2019) suggests that the equilibrium real interest rate in the United States could be below zero.

The median estimate of the Federal Open Market Committee (FOMC) of the long-run federal funds rate dropped from above 4 percent as recently as 2012 to 2.5 percent at the December 2019 FOMC meeting (figure 1, panel a). Consistently lower rates are of concern because the Fed has cut its policy rate by an average of 5 percentage points in postwar recessions. Such monetary policy ammunition will not be available in the future, as hitting the zero lower bound on interest

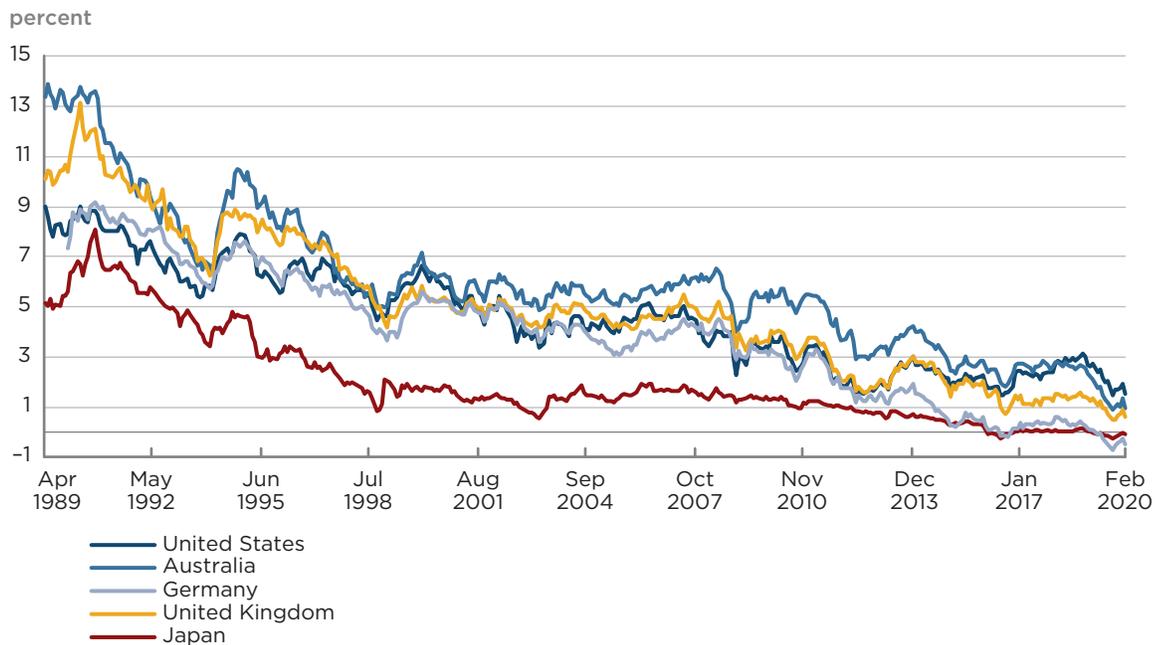
1 See Federal Reserve Bank of New York, "Measuring the Natural Rate of Interest," www.newyorkfed.org/research/policy/rstar (accessed on March 6, 2020).

Figure 1
Interest rates have fallen around the world and are expected to remain low

a. Interest rate expectations in the United States



b. Yields on 10-year government bonds by selected country



FOMC = Federal Open Market Committee
 Sources: Federal Reserve; Haver Analytics.

rates becomes a regular occurrence in downturns.² Market yields on benchmark 10-year sovereign bonds around the world have dropped even lower than central bank estimates of short-term equilibrium rates (figure 1, panel b); \$15 trillion to \$19 trillion of sovereign debt regularly trades with negative yields.

Demographics, High Debt Levels, and Tighter Regulation Reduce Interest Rate Sensitivity

Slower population growth is at the heart of estimates of lower equilibrium growth and interest rates. The aging populations that accompany lower birth rates imply not only slower trend growth but also a reduced sensitivity to interest rates, for several reasons:

- Young, growing societies respond to temporary declines in interest rates by borrowing against future income, opportunistically bringing forward future spending (the substitution effect).
- Older, slower-growing economies have less future growth to borrow against, and older consumers are more likely to be negatively affected by a reduction in interest income from lower interest rates (the income effect).
- The older the society, the less the substitution effect will outweigh the income effect and the more insensitive consumers are to interest rate changes. In addition, as interest rates remain low and stable, even young, growing households and firms will see less of a need to opportunistically borrow when the Fed lowers interest rates.

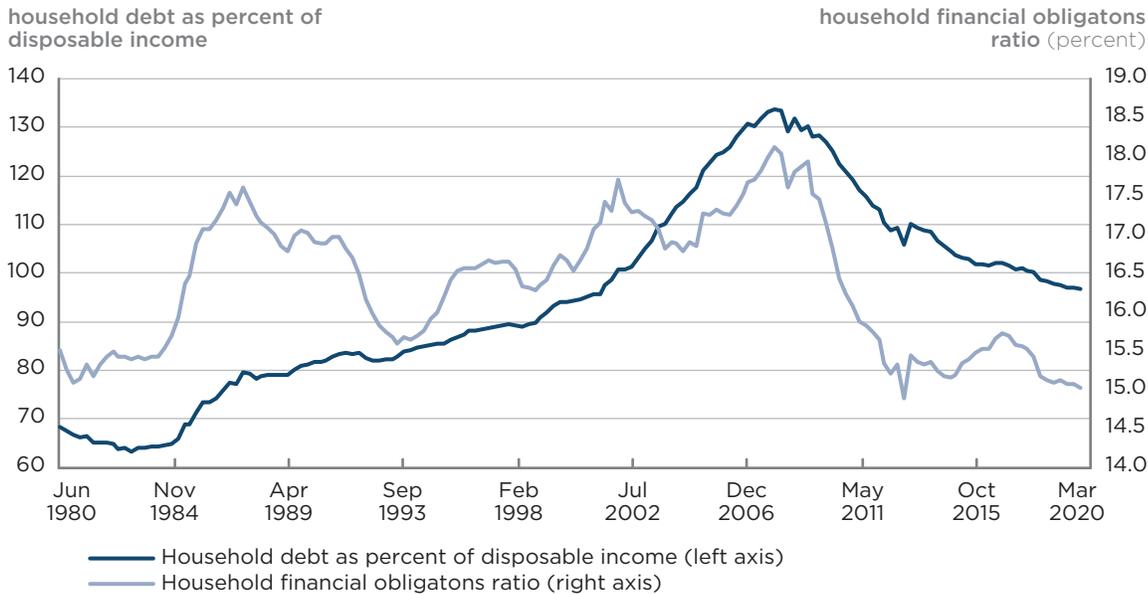
The United States also still carries several legacies from the credit boom and financial crisis that dampen responsiveness to interest rates. Research by the Federal Reserve confirms that high student loan burdens have reduced access to mortgages and homeownership among younger households. Enhanced regulation and supervision of the financial system comes with more prudent but tighter credit standards for households interested in borrowing (Federal Reserve Board 2019). This enhanced safety and soundness are critical from the perspective of long-run stability but further attenuate the credit channel.

The combination of demographic and postcrisis legacies has led the household sector—which powers 70 percent of GDP—to continue reducing debt relative to household income despite low interest rates (figure 2, panel a). Although a record low fraction of income is required to service their debt, households continue to borrow less than they earn. Interest rate policy has not been rendered powerless; lower debt service frees up spending power, keeping consumer spending stable. Housing is again contributing to growth, after contracting for a year and a half in response to the 100 basis point decline in mortgage rates over the past year. But although mortgage demand still responds positively to lower rates, the response will likely be smaller than in previous decades, because of the older, slower-growing population.

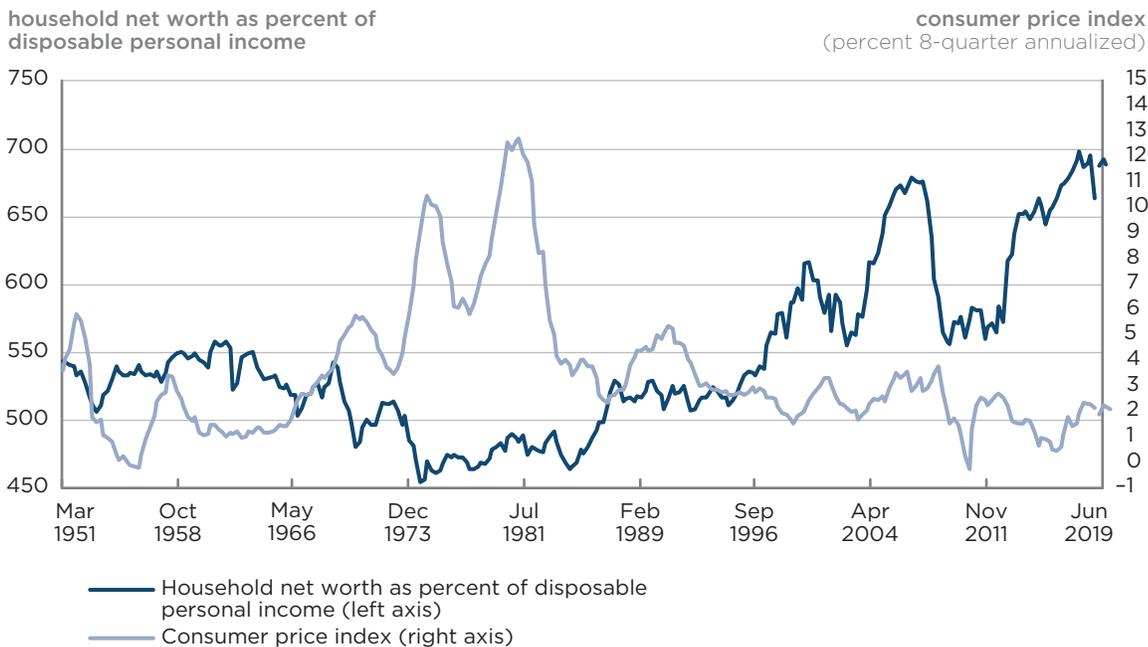
2 For an assessment of the firepower currently available, see Gagnon and Collins (2019). David Reifschneider and David Wilcox (2019) show that changes to the Fed's approach to meeting its inflation goal are unlikely to add much firepower.

Figure 2
Households lowering their debt, less responsive to interest rates and asset prices

a. Household debt, 1980-2020



b. Consumer inflation and household net worth, 1951-2019



Sources: MacroPolicy Perspectives; Federal Reserve Board; Haver Analytics.

The dampened impact of monetary policy through the credit channel has led to greater reliance on the wealth effect from the asset price channel. Lower rates and QE help boost asset valuations, leading to increased spending and investment. But the asset price channel also appears to be less effective than in the past. Households have maintained persistently higher saving rates despite

record highs in net worth from rebounding stock and home prices. Increased wealth concentration likely explains some of the reduction in wealth effects on spending, as wealthy households have lower propensities to consume. Households may also be more risk averse after the last two cycles' booms and busts in asset prices and view asset price booms with greater skepticism. Panel b of figure 2 highlights that as consumer prices have become less cyclical, asset prices have become more cyclical. Households may be more reluctant to borrow and spend against appreciated assets partly in recognition of their increased cyclical.

Calls for Increased Use of Fiscal Policy in Downturns Are Understandable but Problematic

Many observers have concluded that monetary policy is running out of ammunition and that fiscal policy will need to carry more of the burden in stimulating the economy in the next downturn. Lawrence H. Summers revived the notion of secular stagnation in recent years, defining it as “a prolonged period in which satisfactory growth can only be achieved by unsustainable financial conditions.”³ In an essay coauthored with Anna Stansbury (Summers and Stansbury 2019), he urged central bankers to declare monetary policy “impotent,” stressing the need to shift the burden to fiscal policymakers. Persistently low interest rates have led mainstream economic thought leaders like Olivier Blanchard to conclude that deficit spending may not be as problematic as previously thought and caused less orthodox schools of thought, such as Modern Monetary Theory, to gain traction.⁴

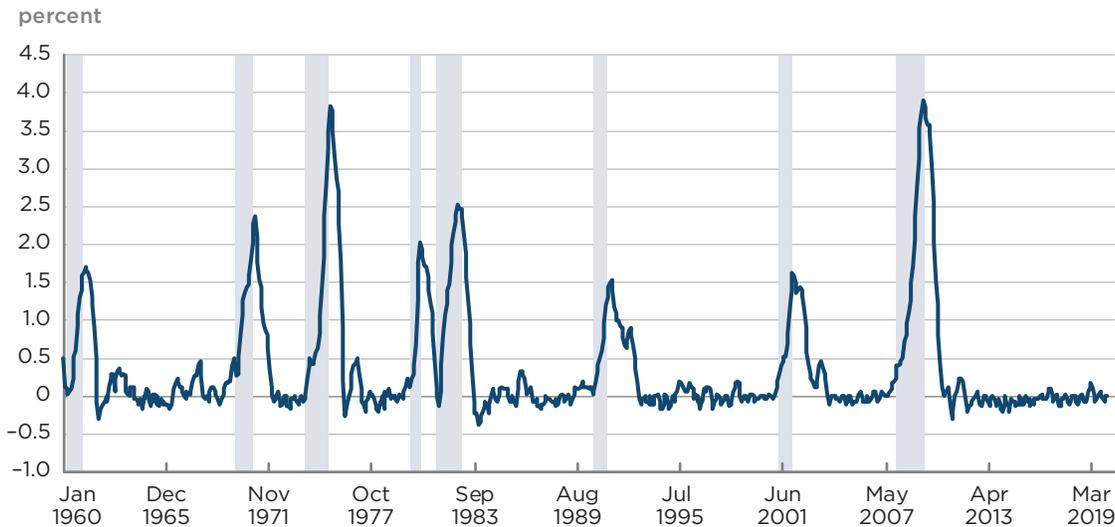
A more forceful, automatic fiscal response during business downturns is indeed a sensible response to an economy characterized by lower equilibrium interest rates and reduced sensitivity to rates and asset prices. One promising approach to the inherent latency involved in legislating stimulus is to expand automatic fiscal stabilizers, which kick in without the delay of a political process. An example is Claudia Sahm's (2019) proposal of a system of direct stimulus payments to individuals when the unemployment rate rises 0.5 percent from the cycle low, a trigger known as the Sahm Rule (figure 3). Sahm provides an accumulation of empirical evidence that shows that consumers respond to direct stimulus payments, particularly during a downturn, confirming that such payments are a potent channel for cyclical policy.

Instrument-independent central banks emerged as stewards of the business cycle in part because they can implement policy in an agile and timely fashion above the political fray, with an eye on medium-term stability. In contrast, a fiscal process can be polarized and slow to react to the specific circumstances of a demand shock. We agree with the conclusion of Elga Bartsch and a bevy of former central bankers affiliated with Blackrock who argue in a recent note that an expansion of the monetary policy toolkit is as important as a reconsideration of fiscal policy (Bartsch et al. 2019).

3 See Lawrence H. Summers' webpage on Secular Stagnation, <http://larrysummers.com/2017/06/07/secular-stagnation/> (accessed on March 6, 2020.)

4 Olivier Blanchard, “Public Debt and Low Interest Rates,” American Economic Association Presidential Address, January 4, 2019, www.piie.com/commentary/speeches-papers/public-debt-and-low-interest-rates.

Figure 3
The Sahm Rule: A 0.5 percent increase in the unemployment rate from the cycle low is coincident with recessions



Note: Vertical grey bars indicate recessions.

Sources: Bureau of Labor Statistics; Haver Analytics.

An important advantage of monetary policy is that the central bank alone can print new money; fiscal policy must go through a budgetary process and relies on debt financing. If monetary expansion is expected to be at least partly a permanent increase in unremunerated central bank liabilities, it can more directly raise expectations of nominal growth. In *The Optimum Quantity of Money*, Milton Friedman referred to this type of monetary expansion as “helicopter money.” The example he used was direct money grants to consumers, with the helicopter aspect allowing the central bank to, in theory, not be concerned about having to make a distributional decision, at least in the flight path of the helicopter.⁵ The challenge for central banks is to harness their powerful instrument independence without making distributional decisions, which are the purview of fiscal policy.

Monetary financing faces another practical challenge in the current system. In the United States and many other monetary areas, control over interest rates is achieved by remunerating some but not all central bank liabilities. Automatic fiscal stabilizers can be linked to monetary financing in a way similar to Ben Bernanke’s idea of a special Treasury account funded by the Fed. Such a link could reduce the independence of the central bank. But, perhaps more importantly, it would not directly address the future fiscal cost of the money-financed fiscal expansion when overnight rates increase from zero. If all central

5 Helicopter money is often described in the context of a central bank-financed fiscal stimulus, as described by Adair Turner (2015), Ben Bernanke (2016), and the recent Blackrock proposal of Bartsch et al. (2019). Bernanke first visited the concept in a 2002 speech that won him the moniker Helicopter Ben (see “Deflation: Making Sure ‘It’ Doesn’t Happen Here,” remarks before the National Economists Club, Washington, November 21, www.federalreserve.gov/boarddocs/Speeches/2002/20021121/default.htm#f8). Frances Coppola (2019) also proposes providing QE directly to consumers. Similar proposals have been put forward for the United Kingdom (Dyson and Hodgson 2016) and for the United States (Hockett 2019).

bank liabilities that support the fiscal expansion are expected to be remunerated in the future, monetary financing is no more than a discussion about the optimal composition of government debt.⁶

We are looking to establish a new tool that preserves the traditional separation of monetary and fiscal authorities, can be activated quickly, and is more effective than existing tools at increasing nominal demand in both the short run and the medium term.

THE PROPOSAL: A FED-BACKED DIGITAL CURRENCY THAT CAN ENHANCE THE CYCLICAL POWER OF MONETARY POLICY

Recession Insurance Bonds: A Direct Helicopter Drop to Consumers

We propose the creation of a new security called recession insurance bonds (RIBs) that would facilitate QE directly to consumers during downturns. RIBs would be zero-coupon bonds authorized by Congress as a percent of nominal GDP and held in custody as a contingent digital asset of the household sector. When the Fed's policy rate has been cut to zero and the FOMC judges that the economy needs additional stimulus, some or all RIBs would be activated by depositing money into consumers' accounts. The more households and firms believe that the new money created will remain in DPP accounts (or in the stablecoin), the more stabilizing the purchases would be over a standard fiscal transfer. Indeed, the presence of the custody accounts and households' familiarity with the initial seeding of the digital account should stabilize expectations and behavior before the need for activation in the face of negative demand shocks.⁷

The structure of the RIBs should maintain the separation of responsibilities and authority between fiscal and monetary authorities. The aggregate size and the way in which the RIBs are distributed across households are decisions for Congress and the administration. The Fed should provide expert advice and analysis on the appropriate aggregate size for successful macroeconomic stabilization against large negative demand shocks.

For the central bank, the responsibility for maintaining stable prices and maximum employment is combined with the ability to act independently and quickly without the explicit consent of the administration or Congress. In the case of activation of RIBs, we suggest a structure similar to the one advocated by Joseph Gagnon (2019) in a *Cato Journal* article. First, the Fed's policy rate should be at zero. Second, the Fed should inform the Treasury secretary of its decision to buy some or all of the RIBs. The secretary would have 24 hours to seek further clarification. As we discuss below, the secretary would have an effective veto if he or she wanted to exercise it.

Ensuring the Stability of the New System

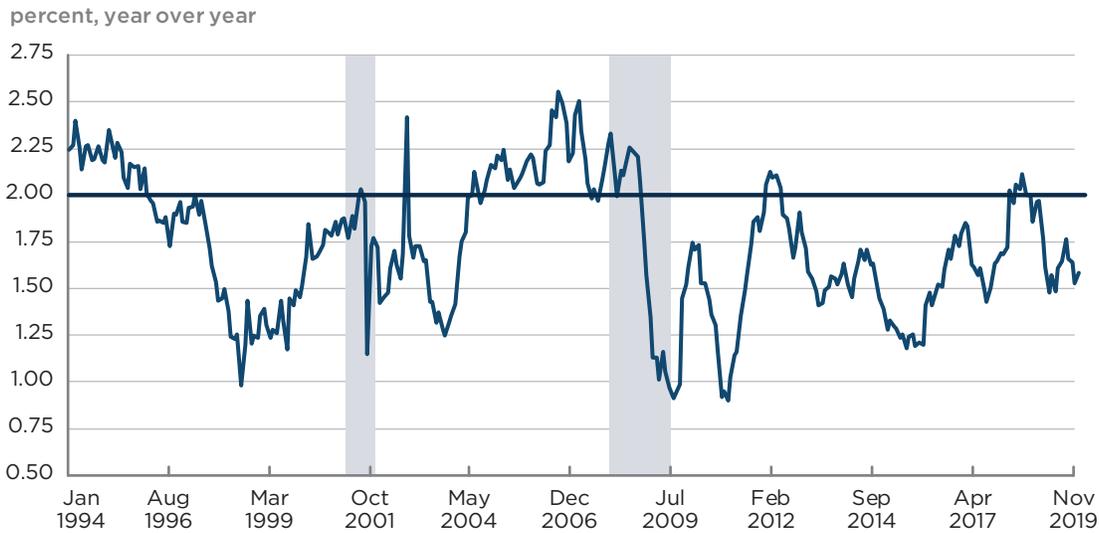
The purchase of RIBs must strike a balance between being large enough to generate confidence in their stabilizing power, on the one hand, and including enough guardrails that they do not produce inflation well above target, lead to unanchored inflation expectations, or threaten the operational independence

6 Claudio Borio, Piti Disyatat, and Anna Zabai (2016) explain the issue in detail.

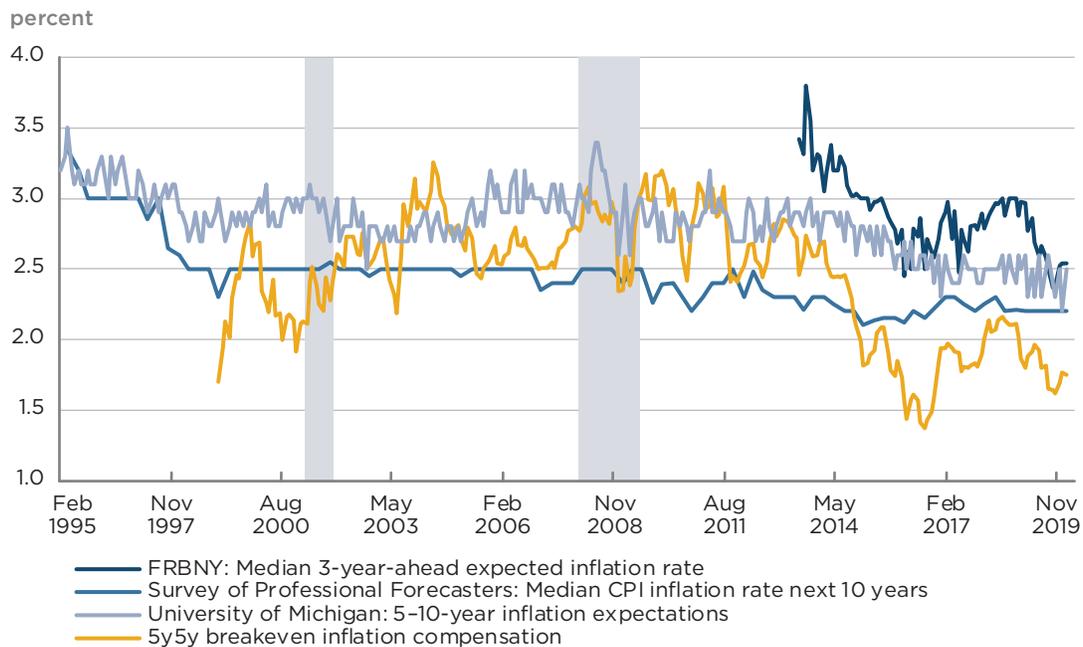
7 One way to maintain this stabilizing effect would be to run small test operations each year (to maintain the real value of the initial seed amount, for example).

Figure 4
The challenge confronting the Fed is inflation and inflation expectations that are too low

a. Core personal consumption expenditure inflation, 1994-2019



b. Measures of inflation expectations, 1995-2019



CPI = consumer price index

Note: Vertical grey bars indicate recessions.

Sources: Bureau of Labor Statistics; Federal Reserve Bank of New York (FRBNY); University of Michigan; Federal Reserve Board; Haver Analytics.

of the central bank, on the other. The challenge facing the United States and other advanced economies is that inflation and inflation expectations are too low (figure 4). In contrast to the beliefs of a number of observers at the time, QE did not lead to runaway inflation or expectations that became unmoored

to the upside on fears that central banks were monetizing debt. The lack of inflation might reflect public confidence in the commitment of the central bank to its objectives, or it may reflect the care and caution exercised by the Fed in planning its exit strategy and ensuring that it had the tools to lift rates even with a large balance sheet. It also may reflect the fact that QE simply did not generate a sufficient demand response because of the attenuated credit and wealth responses to monetary policy described above. Regardless of the reason inflation remained low, we would want to exercise the same degree of prudence in designing the RIB system as processed through the DPPs that was undertaken in designing earlier forms of QE. The proposed system does not affect the Fed's ability to raise rates and has no implications for capital market functioning, but as with QE there may be concern over central bank losses and the usurpation of debt management.⁸

To align the incentives facing the central bank and the fiscal authority, we propose two special features of RIBs. First, the Fed would have the right to put back to the Treasury enough RIBs that the Treasury's income would be nonnegative: If the Fed's interest income is less than its interest expense and operating costs, it would return RIBs to the Treasury to receive funds to cover the operating loss. The goal would be to preserve the Fed's operational independence. Second, the Treasury could call some or all of the RIBs if it viewed the consolidated maturity structure of public debt (including remuneration on Fed liabilities with that of the Treasury) as inefficient. This provision would essentially give the Treasury secretary a veto over the use of the RIB tool if he or she wanted to exercise it.

If either option were exercised, the central bank balance sheet would decline in size; whether the effect would be contractionary would depend on the circumstances. The puttable nature of the RIBs would reduce fears of political backlash against negative income, emboldening the Fed to deploy RIBs and other tools in sufficient size during downturns. The potential for negative income would occur only once rates were lifted from zero and the liabilities of the central bank moved toward reserves in the traditional financial system and away from cash, DPP accounts, and the stablecoin. This scenario is most likely to occur in a world with strong nominal output growth, the goal of the policy intervention.

Treasury's decision to call some of the RIBs preserves its control over the structure of its debt. As short-term rates move up from zero, the assessment of whether to exercise the option could be determined in a manner similar to that outlined in the Treasury Borrowing Advisory Committee (TBAC) presentation to the Treasury in the first quarter of 2020. It will depend critically on how sustainable the increase in non-interest-bearing liabilities has been.⁹

8 It can be argued that QE direct to consumers could enhance capital market functioning, as there would be less need for the Fed to engage in large-scale purchases of marketable securities.

9 See US Department of the Treasury Quarterly Refunding Announcement Q1, 2020, www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Pages/Latest.aspx.

What might the aggregate size and distribution of RIBs look like?

The fiscal authority would need to approve a sufficient amount of RIBs that households, firms, and market participants would have a high degree of confidence that a robust recovery would take hold. One metric to assess sufficiency could be the Great Recession of 2007–09, during which real GDP fell about 5 percent. The volume of RIBs approved should be able to cushion demand in a shock as large as the Great Recession, although a smaller amount might be deployed in more typical recessions. It is important that the public does not reach the conclusion that the central bank or fiscal authority has run out of policy space. We think a total capacity of 10 percent of current GDP would be sufficient to boost expectations that the Fed has the tools to support growth and inflation even in the face of a very negative demand shock. Such an allocation would currently amount to just over \$2.5 trillion and would be an authorized capacity for money creation rather than new government debt. Ensuring that the aggregate amount of RIBs increased with nominal GDP would maintain their real potency over time.

Central banks should avoid making explicit distributional decisions, which are the purview of fiscal policy. Making RIB deposits equal lump-sum allocations would be easy to administer and be highly progressive, as the deposits would represent a much larger percentage increase in disposable income for lower-income households, which would contribute to effective cyclical policy, as lower-income households have a higher propensity to consume than wealthier households. For example, if RIBs were granted to all 262 million US residents 16 and over, an aggregate capacity of RIBs of 10 percent of nominal GDP would allow for deposits up to \$7,500 per person (in current dollars) in a recession. This sum is substantial—representing almost 25 percent of household income for the median household—but still considerably less than the value of securities purchased by the Fed during the Great Recession. Furthermore, the initial fiscal cost of the purchase of the RIBs would be zero, as no interest would be paid on any of the new reserves created.¹⁰

How might the Fed purchase RIBs?

The Fed would have the option of buying RIBs when its policy rates hit zero. If the public has great confidence that there are sufficient RIBs for the Fed to stabilize the economy, their enactment, along with the active DPP system, should stabilize expectations and reduce amplification of negative demand shocks even before many traditional tools are deployed. If the Fed is confronted with an economic downturn and has already cut rates to zero, it could purchase RIBs at a fixed monthly pace until inflation and unemployment reach particular goals. Another approach might be to put a substantial initial deposit into consumer accounts followed by a state contingent monthly or annual pace as suggested by Sahm. In the structure we propose, these policy choices would be the Fed's alone, reflecting its instrument independence and deep knowledge of the

¹⁰ With the DPP system in place, we view the appropriate effective lower bound setting of interest on reserves and other remunerated accounts as zero.

economy. It is possible that the presence of the large contingent size of RIBs would be sufficient to stabilize the economy against most shocks, with only small actual purchases of RIBs.¹¹

Use of this new stabilization tool would be complementary to existing tools; real interest rates would need to be kept low to incentivize households from saving most of the RIB windfall. In addition to holding the overnight policy target rate at zero for a time, it might also be useful to use large-scale asset purchases to keep longer-term real rates low. We view this system as removing any desire to gain policy space by pushing nominal interest rates into negative territory. If new automatic stabilizers were put in place (similar to Sahm's proposal) that also took advantage of the timely and inclusive implementation capacity of the DPP system, the Fed would be the appropriate institution to assess the impact such stabilizers would have on the outlook and the need for further monetary stimulation.

How might stablecoin increase the capacity of the digital currency and avoid disrupting the traditional banking system?

In our first Policy Brief (Coronado and Potter 2020), we discussed some mitigants to concerns that the issuance of a central bank digital currency might negatively affect the traditional banking system and its credit formation function, particularly in times of stress. The main mitigants are a restriction on the size of individual DPP accounts at \$10,000 and limits on the issuance and growth of the stablecoin. If RIBs are activated, then, as with the initial seed allocation to start the DPP system, the first impact would be growth in the Fed's balance sheet, without any crowding out of the traditional banking system.

With the restriction that RIBs are activated at the zero lower bound on interest, there are two main ways the reserves created might move to the traditional banking system. First, some consumers might run up against the \$10,000 account limit. Allowing them to receive their direct payments in the form of a stablecoin would give them the option of staying within the DPP system. Second, as consumers spend their direct QE transfers, some of that money would likely end up in the traditional banking system. Increased issuance of the stablecoin would allow firms and wealthier households to hold large deposits in the stablecoin. Given banks' reluctance to charge negative rates on consumer deposits, this substitution into the DPP system would reduce the burden for banks and money market funds in a zero-rate environment, where net interest margins on many accounts can be very low or negative.

For the stablecoin to be used in this way, the Fed would have to lift the cap on its total issuance of \$130 billion. It could allow total issuance in some proportion to the amount of RIBs that had been purchased, perhaps with some restrictions on fast growth in stablecoins outstanding.¹² Recall that QE direct to

11 This outcome would be almost ideal, as it implies that most of the existing RIBs would be available for the next recession.

12 Many of the scenarios in which the Fed puts some of the RIBs back to the Treasury involve the movement of reserves from the DPP system to the traditional banking system. In these cases, the DPP account balances or stablecoin holdings will decline, and lowering the cap on total stablecoin issuance proportional to the decline in RIBs on its balance sheet would have no negative effects.

consumers is more effective the stickier the growth in DPP accounts and the stablecoin. As the increase in DPP accounts and stablecoin is accompanied by an increase on the asset side of the Fed's balance sheet with the addition of RIBs, such stickiness has no negative impact on the traditional banking system. Indeed, given that the proposed system would be a more efficient funding of payments to consumers, it would improve the macroeconomy relative to standard fiscal expansions, without the interest costs of servicing the debt. This improvement would benefit all in the economy, including the traditional banking system, where loan growth and net interest margins would be higher.

A Radically Conservative Approach

Disruption is the buzzword of our times; it has become an inevitable part of every industry, thanks to rapid advances in technology. Without radical changes to address the new frontiers of currency and payment processing and the challenges of persistently low interest rates, the stability of the US and global monetary systems is at risk.

Disruption also creates opportunity. The proposal presented in this Policy Brief combines some longstanding and newer ideas into an operationally realistic proposal that can address the key challenges confronting the monetary system and shore up its stability and effectiveness. A Fed-backed digital currency available through a DPP system and the provision of QE direct to consumers through RIBs represents a radical departure from the current system, yet its goal remains to maintain and enhance the stability of the financial system. The proposal is still broad brush in nature; with the right design and implementation, it is eminently feasible.

Extending access to a Fed-backed digital currency through a regulated system of providers could encourage competition and innovation while ensuring safety and soundness. Low-cost DPPs could also reach a segment of the population that has been left behind by the current banking system, extending the benefits of low-cost but secure technology to everyone. Rather than leaving the Fed to struggle to provide support in the next recession or relying on a divided and slow-moving political process, we propose arming the Fed—and, if new automatic stabilizers are enacted, the Treasury as well—with the ability to stimulate consumer demand directly, boosting growth and inflation expectations and taking the risk of negative interest rates off the table. Developed together, a backed digital currency, low-cost accounts and payment processing, and RIBs can provide institutions with the tools necessary to support the monetary and financial system in improving household welfare in the current environment.

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