WHAT ASSETS SHOULD THE FEDERAL RESERVE BUY?

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I. Introduction

For the first time in memory, large federal budget surpluses have led to a substantial paying down of federal government debt. It is even possible that most of the Treasury debt could be retired sometime before the end of the decade if the economy continues to grow steadily as it has in recent years.[1]

The possibility that the stock of Treasury debt could be reduced substantially in coming years presents the Federal Reserve with an important policy dilemma. The Fed implements monetary policy by buying and selling Treasury securities. Over time the Fed is a net buyer of these securities, since it must provide for the growth of the monetary base — currency and bank reserves — needed to support a growing economy. As a consequence, the Fed has acquired a portfolio of around $500 billion of marketable Treasury debt, about 15 percent of the roughly $3 trillion of marketable Treasury debt outstanding. If the stock of Treasury debt outstanding were retired, the Fed would be forced to replace its current holdings of Treasury securities with other assets. Moreover, to provide for growth of currency and bank reserves in the future, the Fed would have to acquire additional assets other than Treasury securities.[2]

This essay has two objectives. First, we provide a context for thinking about the broad asset acquisition policy of the Federal Reserve. Second, working within this context, we propose that the Fed and the Treasury cooperate to ensure that the Fed can continue to acquire and hold Treasury securities as fiscal surpluses reduce the stock of Treasury securities outstanding.

Fundamental principles of central banking guide our thinking. In Section 2, we distinguish between Federal Reserve monetary and credit policies. Monetary policy is concerned with the *overall size* of the Fed's balance sheet and involves the management of the Fed's aggregate liabilities: currency plus bank reserves. Credit policy, in contrast, involves the *composition* of the assets that the Fed acquires when it creates money.

From an operational perspective, the assets that the Fed buys matter little for monetary policy; asset acquisition is merely the vehicle by which the Federal Reserve injects money into the economy. Therefore, the Fed must look beyond the operational requirements of monetary policy in setting policies regarding the assets it holds. In Section 3, we argue that the Fed's asset acquisition policies should support monetary policy by protecting the Fed's independence. We assert two closely related principles. First, the Fed's asset acquisitions should respect the integrity of the fiscal policymaking process by minimizing the Fed's involvement in allocating credit across sectors of the economy. Second, assets should be chosen to minimize the risk that political entanglements might undermine the Fed's independence and the effectiveness of monetary policy.

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As we explain below, the Fed's current practice of dealing in Treasury securities satisfies these two principles in a quite natural manner. As additional Treasury debt is paid down, however, the Fed can no longer count on the existence of a large outstanding stock of Treasury securities to satisfy its needs. The Fed could replace Treasury debt in its portfolio with assets such as discount window loans to depository institutions, repurchase agreements with private counterparties, securities of private businesses, debt of state, local or foreign governments, and liabilities of federal agencies or federal government sponsored enterprises, to name several possibilities.[3] In Section 3 we stress that these alternatives risk drawing the Federal Reserve into potentially compromising and politically sensitive disputes involving the allocation of its credit.

We regard the design of its asset acquisition policy as part of the unfinished business of building the modern, independent Federal Reserve. The Fed's roots as a modern central bank can be traced back to the 1951 Treasury-Federal Reserve Accord. This agreement between the Truman administration and the Federal Reserve freed the Fed from its World War II commitment to support Treasury bond prices and enabled the Fed to pursue monetary policy independently of the Treasury's fiscal concerns. As it happened, the huge wartime increase in Treasury borrowing and the recurring budget deficits thereafter created a stock of Treasury debt large enough to satisfy the Fed's asset needs.

In retrospect, the crucial role played by the availability of Treasury debt in supporting the Fed's monetary policy independence appears to have been taken for granted. Without it the Federal Reserve would have had to look elsewhere for assets to acquire in implementing monetary policy. In Section 4 we argue that the nation should recognize the advantages of continuing to provide the Fed with Treasury debt for its portfolio. In particular, we propose that the Treasury cooperate with the Federal Reserve to ensure that the Fed can always satisfy its asset needs with Treasury securities. In the final section we evaluate our proposal from the perspective of the fiscal authorities — the Treasury and Congress in its fiscal role.

In effect, we are proposing that the Fed and the Treasury arrange an accord for credit policy to supplement the 1951 Accord for monetary policy.[4] Our proposed credit policy accord would complete the institutional foundation of the modern, independent Federal Reserve and help to ensure its effectiveness as a central bank in the years ahead.

II. The Distinction between Monetary Policy and Credit Policy

Any analysis of the Fed's asset acquisition practices must begin by distinguishing between monetary and credit policy.[5] The distinction between monetary and credit policy is straightforward. *Monetary policy* is undertaken in pursuit of the Fed's overall macroeconomic objectives — the maintenance of low inflation in order to facilitate economic growth and efficient use of the nation's resources. Monetary policy involves changes in the monetary base (currency plus bank reserves) accomplished through open market operations. For example, the Fed might take an expansionary monetary policy action by deliberately purchasing securities in order to expand aggregate bank reserves and the money supply. In practice, the Fed implements monetary policy using the federal funds rate — a key overnight interest rate in the national money market — as its policy instrument. The Federal Open Market Committee (FOMC) announces a target for the funds rate. It then holds the actual funds rate close to the target by adjusting the overall size of the Fed's balance sheet with open market operations to satisfy the public's demand for bank reserves and currency at the targeted funds rate.

From the standpoint of conducting monetary policy, the *composition* of the Federal Reserve's portfolio is largely a matter of indifference. There are two operational requirements for monetary policy purposes. First, the Fed must be prepared to acquire liquid assets to satisfy a temporary need for currency and reserves that would otherwise put undesired upward pressure on its federal funds rate target.[6] Second, the Fed must hold a portion of its portfolio in liquid securities that can be sold quickly to drain currency or reserves on short notice whenever market forces put undesired downward pressure on the FOMC's federal funds rate target.[7]

Credit policy, as distinct from monetary policy, involves the choice of Federal Reserve assets, i.e., the allocation of Federal Reserve credit, given the overall size of the Fed's balance sheet. For example, the Fed takes a credit policy action when it funds a discount window loan to a commercial bank with proceeds from selling Treasury securities. In this case, the Federal Reserve would be redirecting credit from the Treasury to a private bank. The important point is this: Monetary policy determines the quantity of the monetary base and, as a by-product, establishes the aggregate amount of credit that the Federal Reserve will extend. Federal Reserve credit policy, on the other hand, determines how this given aggregate amount of credit will be allocated across alternative assets.

III. Guiding Principles for Fed Asset Acquisition

It is now widely recognized that central bank independence strengthens the conduct of monetary policy and improves its effectiveness. Federal Reserve asset acquisition practices have the potential to strengthen or weaken the Fed's independence. We begin this section by describing three aspects of Fed independence and their importance for the conduct of monetary policy. Then we propose two principles to guide the Fed's acquisition of assets: acquisitions should respect the integrity of fiscal policy and protect the independence of the Federal Reserve. We explain why restricting the Fed's asset purchases to Treasury securities satisfies both principles. We also explain how the acquisition of assets other than Treasury securities could undermine the independence of the Federal Reserve and, with it, the effectiveness of monetary policy.

THE CRUCIAL IMPORTANCE OF FEDERAL RESERVE INDEPENDENCE

The birth of the modern, independent Federal Reserve is generally dated to 1951 when the famous Accord between the Fed and the Treasury restored the Fed's *instrument independence* after the wartime interest rate peg.[8] Ever since, the Fed has independently employed the instruments of monetary policy — currently the federal funds rate — to achieve its macroeconomic policy objectives.

In the 1950s monetary policy was committed to supporting the fixed dollar price of gold as part of the Bretton Woods fixed exchange rate system. The nation left the gold standard when this system collapsed in 1973. After several years of rising inflation and no clear guidance from Congress regarding a replacement for the gold standard, the Fed in 1979 asserted the high priority it attached to low inflation as a longer-term objective for monetary policy. The Federal Reserve took responsibility publicly for high inflation and subsequently brought it down. Today, the public broadly understands that Fed monetary policy determines the trend rate of inflation over any substantial period of time. In effect, and importantly, the Fed's *independent commitment to low inflation* has come to substitute for the gold standard as the nominal anchor for U.S. monetary policy.

Beyond these first two aspects of Fed independence, Congress early on recognized that the Fed needed *financial independence* in order to conduct monetary policy effectively. The Fed is allowed to fund its operations from interest earnings on its portfolio of securities, and the FOMC is given wide discretion regarding the size and composition of its portfolio.[9] The Fed was exempted from the congressional appropriations process in order to keep the political system

from abusing its money creation powers and to enable the Fed to react quickly and independently to unanticipated short-run developments in the economy.

Financial independence is the bedrock institutional foundation of effective monetary policy. In its absence, Congress and the Treasury could become more influential in the conduct of policy. In that event, the Fed's instrument independence would be weakened, and possibly its low inflation commitment as well, with adverse consequences for the economy.[10]

ASSET ACQUISITION SHOULD RESPECT THE INTEGRITY OF FISCAL POLICY

With these points about Fed independence in mind, we assert as a first guiding principle that Federal Reserve asset acquisition should respect the integrity of fiscal policy.[11] Congress has bestowed financial independence on the Fed only because it is essential if the Fed is to do its job effectively. A healthy democracy requires full public disclosure and discussion of the expenditure of public funds. The congressional appropriations process enables Congress to evaluate competing budgetary programs and to establish priorities for the allocation of public resources. Hence the Fed — precisely because it is exempted from the appropriations process — should avoid, to the fullest extent possible, taking actions that can properly be regarded as within the province of fiscal policy and the fiscal authorities.

When the Fed purchases Treasury securities, it extends Federal Reserve credit to the Treasury. Doing so, however, leaves all the fiscal decisions to Congress and the Treasury and hence does not infringe on their fiscal policy prerogatives. When the Fed extends credit to private or other public entities, however, it is allocating credit to particular borrowers, and therefore taking a fiscal action and invading the territory of the fiscal authorities.[12] Except where banking or foreign exchange policy dictates the acquisition of particular assets — namely, loans to depository institutions or foreign exchange — any such fiscal incursion by the Fed should be regarded as a violation of the integrity of the fiscal policymaking process.[13]

The huge quantity of Treasury debt issued during World War II and the recurring deficits throughout the postwar era have enabled the Federal Reserve to satisfy the bulk of its asset acquisition needs by purchasing outstanding Treasury debt. When the Fed holds Treasury securities, it remits the interest earned to the Treasury.[14] The Fed's open market purchases in effect enable the government as a whole to buy back interest-bearing debt and replace it with non-interest-bearing monetary liabilities of the central bank.[15]

The Fed's *Treasuries-only* asset acquisition policy has worked exceedingly well in respecting the integrity of fiscal policy.[16] By acquiring primarily Treasury securities, the Fed has extended the bulk of its credit to the Treasury and therefore minimized its participation in private credit markets. Doing so has enabled the Fed to steer clear of credit allocation decisions and has minimized its exposure to credit risk while providing sufficient liquidity to meet its needs. The use of the Federal Reserve's credit policy powers to lend more widely would have amounted to fiscal policy inessential to central banking that is properly left to the fiscal authorities.

To sum up, we think that respect for the primacy of the regular appropriations process should figure prominently in the choice of Federal Reserve assets. The Treasuries-only policy has been highly desirable because it has reinforced the integrity of the fiscal policymaking process. Equally importantly, it has protected the Fed's financial independence by shielding the Fed from charges that it has usurped the authority of Congress by making independent fiscal policy decisions.

ASSET ACQUISITION SHOULD SUPPORT FEDERAL RESERVE INDEPENDENCE

As a second guiding principle, we assert that the Fed's asset acquisition policy ought to give priority to preserving public support for the Fed's independence by insulating the central bank as much as possible from potentially damaging disputes regarding credit allocation. This second principle is closely related to — in fact, inseparable from — the first, since choosing assets to respect the integrity of the fiscal policy process also minimizes the opportunity for the Fed to become ensnarled in contentious disputes over its portfolio. Clearly, the Treasuries-only policy satisfies the second principle as well as the first.

Since the Federal Reserve can no longer depend on a large pool of outstanding Treasury securities to draw on, alternative approaches using other assets will naturally be considered. It is important, however, to appreciate the difficulties the Fed would confront if it were forced to depart from Treasuries-only. At a minimum, the Fed would have to decide whether to allocate its credit more widely to depository institutions through discount window loans; to private counterparties by engaging in repurchase agreements or purchasing their securities; or to state or local governments, foreign governments, or federal government agencies and federal government sponsored enterprises.[17]

In these circumstances, because all financial assets other than Treasuries carry *some* credit risk, the Federal Reserve would be responsible for judging risk relative to return in order to decide whether prospective asset acqui-

sitions were priced appropriately and whether assets in its portfolio were worth retaining.[18] There would be costs associated with assessing asset value and creditworthiness, whether the Federal Reserve hired staff to make those judgments internally or hired independent portfolio management. Further, the extension of even a small amount of Federal Reserve credit to a particular entity might be interpreted as conferring a preferential status enhancing that entity's creditworthiness. The status of a particular asset or loan could deteriorate while in the Fed's portfolio, requiring it to be sold, or not rolled over, in order to avoid taxpayer losses. It might be difficult, however, for political or bank supervisory reasons, for the Fed to sell such an asset or call such a loan.

In any case, the Federal Reserve would be held accountable by Congress for its investment returns and would have to defend its asset allocations. Needless to say, for purposes of accountability, if nothing else, the Fed's asset holdings and its portfolio actions would need to be completely transparent. If the Fed were routinely choosing among non-Treasury securities, ongoing congressional oversight would open the door to political interference in its particular asset choices. If the Fed were holding a variety of assets other than Treasury securities, there would be considerable scope for misallocation of Fed credit. Particular forces in Congress might be tempted to exploit the Fed's off-budget status to circumvent the appropriations process. The Fed could be subjected to pressure from private entities, directly and through Congress or the administration. Relatively small and seemingly innocuous requests from Congress or the administration might be difficult for the Fed to resist.

Although the Fed is independent in the three senses described above, it needs cooperation from Congress and the administration on banking, financial, and payments system policy matters to function effectively within the government. This interdependence could expose the Fed to political pressure to make undesirable concessions with respect to its asset acquisitions in return for support on other matters. Worse, the Fed could be pressured to make concessions to particular interests in conducting *monetary policy* in order to deflect pressure regarding asset acquisitions.[19]

In short, a forced departure from Treasuries-only would create significant challenges for the Federal Reserve. Acquiring assets other than Treasuries would inevitably confront the Fed with difficult, politically charged decisions regarding the management of its asset portfolio. It might be possible to design an asset acquisition policy relying on non-Treasury securities that would surmount these difficulties to some extent. However, restricting asset acquisition to Treasuries alone is the only *credible, bright line* policy because all other assets would involve the Fed in the allocation of credit to one degree or another. Crossing that line *at all* would create significant problems.

IV. Treasuries-only with the Cooperation of the Treasury

As fiscal surpluses diminish the stock of Treasury debt, the Fed's first priority in choosing an asset acquisition strategy in the new environment should be to uphold the principles of independent central banking presented above. This suggests that before the Fed broadens the range of assets that it acquires beyond Treasury securities, it should explore how the Treasury might tailor its debt management to help meet the Fed's needs. As we propose below, it would be straightforward for the Treasury and the Fed to agree to a new accord for Fed *credit* policy in the form of a cooperative arrangement that would allow the Fed to meet its asset acquisition needs with Treasury securities alone.

Our proposed arrangement would work as follows. Even if federal budget surpluses enabled the Treasury to pay down all of its debt outstanding, the Treasury would still maintain an outstanding stock of securities large enough to accommodate the Federal Reserve's needs.[20] Over time, maturing securities in the Fed's portfolio could be reissued by the Treasury, which would also issue additional securities to accommodate the secular growth in the monetary base.[21] The Fed would purchase the newly issued securities both to replace the maturing issues and to meet the growing demand for base money.[22] In order to help the Treasury accommodate its needs, the Fed could project the likely growth of its balance sheet, and any adjustments in the desired liquidity or maturity composition of its portfolio, and report these to the Treasury in advance. The Treasury would incur no interest cost by providing debt for the Fed to buy since the Fed would remit the interest to the Treasury.

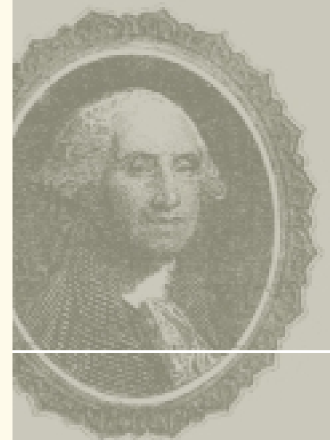
It is important to recognize that even if — in contrast to our proposal — the Fed accommodated the demand for base money by purchasing securities other than Treasury debt, the Fed would still remit to the Treasury the earnings on its portfolio after expenses. This implies that, for the Treasury, the choice between the Fed following a Treasuries-only policy or purchasing non-Treasury assets is a choice as to how it will realize the revenue from money creation. With a Treasuries-only policy, the revenue from money creation would be realized when the Treasury issues debt that the Fed would buy — in effect, the Treasury would capitalize the flow of earnings on non-Treasury investments that the Fed otherwise would have held. If, instead, the Fed abandoned Treasuries-only and held non-Treasury assets, the Treasury would receive the revenue from money creation as a flow of earnings on the Fed's portfolio.

The Treasury's choice between these two alternatives would have *no direct budgetary consequences*. The overall federal budget position (combining the Federal Reserve and the Treasury) would be the same whether the Treasury enabled the Fed to continue its Treasuries-only policy by issuing additional

debt or not. Without a change in tax or expenditure policy, the projected federal surpluses imply that eventually either the Fed or some other government entity must acquire non-Treasury assets. In that case, the only question is how the government will choose to manage its investment portfolio.

From this perspective, then, the central issue is whether the Fed should meet the public's growing demand for base money by acquiring assets other than Treasury debt and remitting the earnings to the Treasury, or the Treasury should capitalize the flow of remittances by issuing debt which the Federal Reserve would buy. By capitalizing the Fed's remittances, the Treasury would immunize the Fed from having to acquire assets other than Treasury securities. Moreover, in doing so the Treasury would lodge the responsibility for choosing how to utilize the revenue from money creation completely and appropriately with the fiscal authorities.

Thus, under our proposed cooperative arrangement the Fed would satisfy its current and secular asset acquisition needs with cooperation from the Treasury. Seasonal, cyclical, or emergency fluctuations in the demand for base money could be provided for in a number of ways. The Fed could meet temporary increases in money demand or offset sales of foreign exchange by purchasing non-Treasury financial instruments.[23] Since such acquisitions of private assets would be self-reversing and relatively limited in size, they would involve the Fed only minimally in credit allocation. Even in these temporary instances, however, the Fed would need to buy non-Treasury securities only if the stock of liquid securities that the Treasury was willing to maintain in the markets was too small to meet the Fed's needs. The Treasury could, of course, routinely maintain an outstanding stock of short-term debt large enough to accommodate reasonable projections of the Fed's prospective short-term needs above and beyond its secular requirements. Alternatively, the Treasury could agree to meet the Fed's temporary needs with additional supply. There might be good reason for the Treasury to maintain a floating liquid debt in any case to sustain a market presence and market expertise, to serve as a shock absorber for its own fiscal financial needs, and to provide the financial markets with a stock of highly liquid, safe securities. If the Treasury chose to support an active market for its securities, the Fed could readily sell Treasury securities from its portfolio to offset discount window lending or foreign exchange purchases; otherwise, the Fed could establish a facility to borrow from the public as a means of draining base money temporarily.



V. Evaluating the Proposal from the Perspective of the Fiscal Authorities

It is worth pointing out that the Treasury and Congress in its fiscal role would benefit from our proposal as would the Fed. Presumably, the fiscal authorities would prefer to consolidate fiscal (credit) policy decisions fully under their control in order to ensure the integrity of the fiscal policymaking process. The fiscal authorities would presumably favor having the *exclusive* power to invest the revenue from money creation, even if there were other surplus funds to invest. By freeing the Fed from having to acquire non-Treasury securities, our proposed arrangement would preclude the Federal Reserve from investing *any* of that revenue.[24] Consequently, our proposal is not simply a request for the fiscal authorities to do a favor for the monetary authority. By granting full control of the revenue from money creation to the fiscal authorities, our proposal would clarify the relationship between monetary and fiscal policy with respect to asset acquisition, helping to avoid conflict and strengthen both.

The above point notwithstanding, one might well ask whether our proposal is just a way to shift the burden of investing in private assets from the Fed to the fiscal authorities. In response, we would emphasize that nothing requires the government to accumulate assets with the revenue it receives from money creation. The government could, if it so chose, use the revenue to reduce other taxes or increase expenditures. So, if the government does choose to accumulate private assets with the revenue from money creation, it would have to be for fiscal reasons unrelated to monetary policy. Therefore, such investments ought to be carried out and managed by the fiscal authorities independently of the Federal Reserve.

A second question, closely related to the first, is this: If the government decides to accumulate private assets, for whatever reason, shouldn't it take advantage of the Fed's independence to minimize the risk of political interference in the choice of assets? (This question will more likely be asked by people who think the Fed's independence is secure, rather than by people like us who think it is fragile.) The answer to this question is the same as the answer to the first. It is not necessary for the government to acquire private assets permanently in order to implement monetary policy, so the Fed should not be made the instrumentality for doing so.

A final concern is that, as a practical matter, it might be difficult for the Fed to persuade Congress and the Treasury to cooperate in a Treasuries-only policy. We would point out, however, that there could be adverse financial consequences for the fiscal authorities if the Fed were forced to depart from Treasuries-only. As a prudent, independent central bank following the two principles set out above, the Fed would properly purchase liquid, low-risk assets. Precisely because of their desirable properties, such assets would pay a relatively low return.[25] Remember, though, that this return would be the gov-

ernment's revenue from money creation under any alternative where the Fed purchases private assets. Therefore, acquiring assets because of their desirable features from the Fed's point of view would limit the government's revenue from money creation. In essence, the Fed would be using a part — perhaps a sizable part — of the revenue from money creation to buy liquidity services and insure the Fed's assets against credit and price risk, thereby denying the government the use of this revenue for other purposes.[26]

We believe that if it were understood that a forced departure from Treasuries-only would be costly to the government, then Congress and the Treasury, *in their own narrow budgetary interest*, ought to prefer that the Fed stick to Treasuries-only. To reiterate, Treasuries-only would enable the Fed to transfer directly to the fiscal authorities *all* the revenue (net of the Fed's operating expenses) that the government gets from the creation of additional base money in a growing economy. The fiscal authorities could then utilize that revenue in whatever manner they deemed appropriate.

VI. Conclusion

The core of this essay is our proposal that the Federal Reserve and the Treasury cooperate to enable the Fed to continue acquiring Treasury securities in its operations supporting the growth of the monetary base, even if prospective federal budget surpluses reduce the stock of these securities outstanding in the future.

Our proposal — and, indeed, the whole subject of Fed asset acquisition — may at first glance appear to be in the realm of lower-level operational details in implementing monetary policy. As we have tried to show, however, Fed asset acquisition policies can profoundly affect the Fed's conduct of monetary policy. To formulate and carry out monetary policy effectively, the Fed must maintain a high level of independence within the government, and its asset acquisition practices must support and reinforce that independence. With this in mind, we proposed two related principles to guide Fed asset selection: (1) that acquisitions respect the integrity of fiscal policy by precluding the use of the Fed's off-budget status to allocate credit across various sectors of the economy, and (2) that they insulate the Fed from political entanglements that could undermine its independence. We showed that the Fed could

conform to both of these principles by restricting its asset portfolio to Treasury securities. While we did not discuss alternative acquisition policies in detail, we warned that *all* alternatives would present significant risks to the integrity of fiscal policy and to the Fed's independence, and hence to the quality of U.S. monetary policy.

In addition, we emphasized several points. First, there is no need for the Fed or the government as a whole to acquire private assets, except maybe temporarily, to implement monetary policy. Second, it is feasible for the Fed to follow a Treasuries-only policy with the cooperation of the Treasury, even if the Treasury has no other reason to issue debt. Third, there would be no interest cost to the government to provide debt for the Fed to buy. Fourth, since the government would forego revenue if the Fed held a portfolio of safe, liquid non-Treasury assets, it is in the financial interest of the fiscal authorities to cooperate with the Fed in a Treasuries-only approach. Fifth, and similarly, Treasuries-only enables the Fed to transfer directly to the fiscal authorities *all* the revenue (net of the Fed's operating expenses) from money creation. Sixth, the government could reduce taxes or raise expenditures as an alternative to acquiring private assets with the revenue from money creation. Finally, and in accordance with the first point in this list, any decision to acquire private assets with that revenue would be for fiscal purposes unrelated to monetary policy; hence, those assets should be managed independently of the Federal Reserve.

In sum, we believe that a Treasuries-only policy is both feasible and by far the best approach to Fed asset acquisition despite the impact of the federal budget surpluses on the stock of outstanding Treasury debt. The Fed has been fortunate indeed to be able to pursue a Treasuries-only policy for so long. We urge the Fed and the Treasury to find a way to cooperate, under the auspices of Congress if need be, to ensure that the Fed can continue to restrict its assets to Treasuries in the future.

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ENDNOTES

1. The Congressional Budget Office (2001) forecasts that, given current projections of the federal surplus, all Treasury debt available for redemption will be retired by the end of the decade. The debt may disappear more slowly, of course, if the cumulative surpluses turn out to be smaller than currently forecast. This would be the case if economic growth slowed, if Congress reduced federal tax rates, or if Congress increased federal spending.

The CBO estimates that in 2001 about $1 trillion of Treasury debt will be unavailable for redemption, primarily 30-year bonds that will not mature until after 2011. The Treasury began to buy back long-term debt in 2000. However, the buyback program will be limited because it seems likely that many holders will not choose to sell at prices that the government is willing to pay. Debt held in nonmarketable form (for example, savings bonds or securities issued to state and local governments) and debt that serves other purposes besides financing government activities also adds to debt unavailable for redemption. See Congressional Budget Office (2001), pp. 14-15.

2. The Congressional Budget Office (2000) suggests that the disappearance of Treasury debt will be temporary. For instance, one CBO forecast, assuming on-budget balance through 2010 and that the surpluses in the Social Security trust fund are saved, predicts that the government will begin to accumulate private assets within the decade and that net federal debt will reach zero shortly thereafter. Growing expenditures projected for health and retirement programs associated with aging baby boomers then push the budget back into deficit. In this forecast the stock of private assets is drawn down by 2027, and Treasury debt begins to grow rapidly thereafter.

In light of the likely temporary nature of the problem, some might argue that the concerns raised in this article are exaggerated. We think otherwise. Even if Treasury debt returns, the Fed could be denied the use of Treasury securities for decades — plenty of time for the problems highlighted in the article to emerge. Moreover, the acquisition of private assets by the Fed would inevitably benefit certain market participants who would then have a financial stake in preventing a return to Treasuries. Consequently, political pressure might make it difficult for the Fed to exit private asset markets even after Treasury securities again became widely available.

3. The legal issues are complex, and legislation may be required for the Fed to meet its asset needs with at least some of the possible alternatives to Treasury securities. For instance, the Fed is not authorized under current law to purchase private bonds or securities. See Small and Clouse (2001) for a thorough discussion of the assets the Fed is authorized to acquire under the Federal Reserve Act.

4. The policy prescription advanced here builds on Goodfriend (1994).

5. This distinction was used initially in Goodfriend and King (1988).

6. See, for instance, Meulendyke (1998), especially pp. 168-69.

7. Alternatively, the Fed could establish a facility to borrow from the public in order to drain currency and reserves from the economy.

8. See Stein (1969) for an account of the dramatic events leading up to the 1951 Accord.

9. The Federal Reserve also receives significant revenue from depository institutions and the Treasury in return for the provision of financial services.

10. See Blinder (1998), Chapter III; Fischer (1994), Sections 2.7 and 2.8; and Meyer (2000) for central-banker perspectives on independence. For formal theoretical and empirical analysis, see Cukierman (1992), Part IV; Drazen (2000), Part 5.4; Persson and Tabellini (2000), Part V, Section 17.2, and references contained therein.

11. Hetzel (1997), Section 5, develops this point in detail.

12. In principle, the Fed could consider purchasing and maintaining a "neutral" portfolio of non-Treasury financial assets mirroring the aggregate outstanding stock of financial assets in some way. Defining and maintaining such neutrality in practice, however, would be exceedingly difficult if not impossible, especially in the short run.

13. There are good reasons for the Fed to limit its discount window lending and foreign exchange operations. See Goodfriend and King (1988), Broaddus and Goodfriend (1996), and Goodfriend and Lacker (1999).

14. In keeping with its financial independence, the Federal Reserve remits the interest earned on its portfolio after expenses. Since interest earnings run well over expenses, all interest on the marginal acquisition of Treasury securities is remitted to the Treasury.

15. As an accounting matter, Treasury securities held by the Federal Reserve are regarded as outstanding because the Federal Reserve Banks are independent of the government.

16. The Federal Reserve generally has restricted its asset acquisitions to U.S. government securities, i.e., the bills, notes, and bonds of the U.S. Treasury. For convenience, we refer to this practice as *Treasuries-only*. The main exceptions have been discount window loans, holdings of foreign currency denominated assets, and modest holdings of the debt of federal agencies.

A major exception occurred in order to satisfy the enlarged temporary demand for currency around the century date change. The FOMC voted on August 24, 1999, to suspend several provisions of its "Guidelines for the Conduct of System Operations in Federal Agency Securities" in order to enlarge temporarily the pool of securities eligible as collateral for the Federal Reserve Open Market Desk's repurchase agreements. The principal effect of this action from the perspective of this article was the inclusion of pass-through mortgage securities of the Government National Mortgage Association (Ginnie Mae), Freddie Mac, and Fannie Mae. See Federal Reserve Bank of New York (2000), p. 3.

17. Dudley and Youngdahl (2000) discuss some of these alternatives and their drawbacks. Recall also footnotes 3 and 12 above.

18. Credit risk is an issue for all practical alternatives to Treasuries except gold and some classes of non-Treasury securities that carry the full faith and credit of the U.S. government. Ginnie Mae is the only such entity whose securities are issued on a large scale.

19. See Meyer (2000) for a discussion of the relationship between the Federal Reserve and the executive and legislative branches of the federal government.

20. Actually, the outstanding stock of Treasury debt would become insufficient to meet the Fed's needs well before the entire stock was paid down. See the discussion in Dudley and Youngdahl (2000).

21. The Fed's balance sheet must expand over time to satisfy the public's need for additional base money (mainly currency) as the economy grows; otherwise, the growing real demand for base money would create deflation. Note that the Fed must also meet the demand for U.S. currency abroad.

22. If the Treasury maintained a sizable stock of floating debt, and there continued to be a relatively liquid market for its securities, then the Treasury periodically could auction securities (above and beyond the floating debt), which the Fed could buy in the secondary market as it does today. Liquidity would be enhanced, in turn, by the Fed's participation in the market for Treasury securities.

The Treasury could issue securities for the Fed to buy even if its securities were relatively illiquid. Financial entities could continue to bid for Treasury debt at auction and sell it to the Fed in the secondary market. In this case, however, transactions costs might be higher in equilibrium to compensate market makers for dealing in relatively illiquid Treasury debt.

Alternatively, arrangements could be made for the Treasury to place its debt directly with the Fed. To implement this arrangement, Congress would have to repeal a provision in the Federal Reserve Act that prevents such direct placements. The mechanics and safeguards for arranging direct placements would have to be worked out carefully. In particular, legislation would have to require unequivocally that direct placements would be undertaken *only at the Fed's request*.

23. See footnote 13.

24. Alternatively, Congress could provide legislative direction regarding how the Fed should invest the revenue from money creation. It would be difficult, however, for Congress to anticipate the many particular issues the Fed would confront in managing its investments, let alone provide guidance for all these contingencies in advance. Therefore, difficult decisions would have to be made on an ongoing basis under congressional oversight, with all the adverse consequences for monetary and fiscal policy warned of in this article.

25. Repurchase agreements, for example, have these properties. RP credit is doubly protected by the counterparty and the underlying collateral. RPs are short-term self-liquidating assets that would allow the Fed to exit situations discretely where credit quality had deteriorated. Moreover, RPs would present little price risk. RP collateral could be arranged on a wide variety of securities of short- or long-term maturity with an appropriate haircut from the market price for purposes of valuing the collateral. See Lumpkin (1993).

While RPs might raise fewer obvious credit allocation issues than other alternatives, however, we believe that over time they would pose the same kind of credit allocation problems for the Fed outlined in Section 3.

26. Treasury security yields are also relatively low because of their liquidity and safety. But if the Fed maintained Treasuries-only, its holdings of securities would not represent a positive asset position for the government as a whole.

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