How Should The Central Bank Participate
In The Nation's Payments System?

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My task today is to share a vision of the Federal Reserve's participation in the nation's payments system during the next century. The Federal Reserve does many things, and most of these affect the payments system in one way or another. A partial list of activities includes: Issuing currency and monitoring its quality; providing the deposits at Federal Reserve Banks that are used by depository institutions to settle interbank payments; regulating banks, bank holding companies and related institutions; operating check-processing centers and automated clearing houses; and enforcing a wide range of consumer protection regulations, including those that govern credit-card transactions and banks' checking-account rules.

My focus will be on how the Federal Reserve's monetary liabilities—currency in circulation and deposits held by depository institutions at Reserve Banks—provide a foundation for our payments system. In some respects, this is a review of a basic lesson we all learned in Economics 101. But it's an important lesson, and since my time is short, I want to focus on it because of the perspective it provides for viewing policy choices about changes in the payments system.

For our nation to achieve maximum sustainable economic growth, users of the payments system must have confidence in the monetary authority; issuers of payment instruments must be effectively regulated to promote the safety and integrity of the system; and, the payments system must be efficient and easily accessible to a wide variety of users. The Federal Reserve and the Treasury Department together are the U.S. monetary authority. In addition, Congress has delegated to the Federal Reserve responsibility for the safety and soundness of the payments system. With that in mind,
let's look first at what the payments system is, and then at the role of the monetary authority in that system.

**The Payments System as a Communications Network**

Fundamentally, a payments system is a *communications network*. Using this network, households, businesses, depository institutions and the government send instructions that transfer ownership of deposits at banks and thrift institutions. Each of these instructions discharges a debt associated with the purchase (or sale) of a good, a service or a financial asset.

Payments system instructions take many forms. They may be written on paper, as in the case of a bank check, and delivered by truck or plane; they may originate with a plastic card, such as a debit or credit card, and be delivered by telephone; or they may be created by keystrokes on a computer and delivered over a computer network. Although technological advances will continue to change the form of these instructions, the fundamental concept of the payments system as a communications network will continue in the next century.

**The Role of the Monetary Authority**

Our economy operates with a *fiat money* standard. In this type of monetary system, the monetary authority’s liabilities provide a vehicle for final settlement of debts arising from the purchase and sale of goods and services. Economists refer to the sum of these monetary liabilities—currency plus deposits at Federal Reserve Banks—as the *monetary base* or *base* money.
It is important to appreciate that the role of the monetary base in our payments system is not due to any backing in precious metals. Under a fiat money standard, the only direct obligation of the monetary authority is to exchange currency and deposits at Federal Reserve Banks for more of the same. Accordingly, it is a system that is built on faith that the monetary authority will maintain the purchasing power of the monetary standard.

The Role of Currency

The largest component of the base is currency in the hands of the public, and its use as an anonymous, hand-to-hand payment medium is likely to continue. All U.S. currency today is issued by the monetary authority and, hence, is a monetary claim on the federal government.

Currency can circulate for an indefinite period, with ownership transferred simply by handing it from one party to another. Further, because currency is a liability of the monetary authority, settling a debt in currency can be described as “final payment.” Discharge of the underlying debt is not contingent on the liquidity or solvency of any additional person or depository institution, nor on any further sequence of payments. Transfers involving checking accounts and credit cards, in contrast, require payment instructions to be recorded on a check or credit-card voucher, and third parties must make additional, intermediate payments to discharge the debt fully.
The Role of Deposits at Federal Reserve Banks

Besides currency, deposits held by depository institutions at Federal Reserve Banks are the other part of the monetary base. Because Federal Reserve Banks accept deposits only from depository institutions, not from the general public, the fundamental role of such deposits in the payments system is largely invisible to households and firms. Depository institutions, through the Federal Reserve’s Fedwire and net settlement systems, use these deposits to settle checks and make other interbank payments among themselves.

Deposits at Federal Reserve Banks are the wholesale analog of currency. Like payments made with currency, payments via the Fedwire system are final and irrevocable, which is profoundly important. No further payments by third parties are necessary to discharge the debt. On Fedwire, the Federal Reserve bears the risk that the sender of a payment might later have insufficient funds to cover its wire transfers; the size of the risk is attenuated by the Federal Reserve’s role as a regulator of depository institutions. Deposits at Federal Reserve Banks are similar to currency in one additional respect: Depository institutions may convert the deposits into currency, as their needs require.

The “Foundation” Role of the Monetary Base

Economists estimate that currency is used to complete more than 80 percent of all transactions in our economy. Most of these—at least the legal ones—are small. Weighted by value, checks and credit cards, however, are the most important means of retail payment in the economy. How, then, does the monetary base provide a
foundation for the payments system when relatively few goods, in terms of actual value, are purchased with currency, and deposits at Federal Reserve Banks are held only by depository institutions? The answer, as you might guess, is that base money is special.

Perhaps the most publicly visible example of the monetary authority’s special commitment to base money is combating counterfeiting. The Federal Reserve processes currency as a part of this monitoring process, and the Secret Service investigates counterfeit notes. The success of the monetary authority in these tasks has caused U.S. currency to become widely accepted, here and around the world.

This role in ensuring the integrity of currency is widely supported and appreciated. More important, however, is the monetary authority’s influence on the value of currency, that is, its purchasing power. In a fiat money system such as ours, the growth of the monetary base is a key determinant of the economy’s long-run price level. Overly rapid, sustained growth of the monetary base is likely to lead to an acceleration of inflation, as we experienced during the 1960s and 1970s. Like most economic goods, the monetary base depreciates in value when its supply grows more rapidly than its demand. At the same time, the level of the monetary base cannot be held fixed. An expanding economy needs growth in base money, or ways to economize on its use, to support increases in payment activity.

The growth of the monetary base is determined solely by the Federal Reserve’s actions. Households, firms and depository institutions cannot change the size of the monetary base. In turn, the growth of the monetary base constrains the growth of credit money, such as checking deposits, issued by depository institutions. Depository institutions that issue liquid deposits must stand ready to redeem them, at any time, in
base money. Such redemption might be furnishing currency on request to a customer at a teller window, or transferring deposits at a Federal Reserve Bank to another institution. If the depository's base money holdings are inadequate, it may be forced to borrow from other depository institutions or, ultimately, from the Federal Reserve's discount window, assuming it is creditworthy. If it can do neither, it very likely will be closed by its government regulator.

The moral of this story is simple: In the long run, a symbiotic relationship exists between the Federal Reserve’s payments system and monetary policy roles. Appropriate growth of the monetary base is essential for price stability, which fosters maximum economic growth. In turn, price stability improves the payments system’s efficiency by reducing the incentive for households and firms to organize their payments in a way that maximizes float, thereby wasting real resources. In my judgment, developments in automation and communications technology are unlikely to change this interaction.

Electronic Money

We all appreciate that improvements in electronics are affecting the payments system. Popular discussions abound with stories of “exchanging” electronic money on stored-value cards or “downloading” electronic money to computer disk drives. In these stories, the magnetic computer bits that store electronic money are seemingly transformed into electronic gold coins. The truth is less glamorous: Electronic money, including stored-value cards, is not a new form of money. Rather, it is simply a way to exchange ownership of credit money, such as a bank deposit. Electronic money simply represents a transferable claim on its issuer, similar to the balance printed on your bank statement.
Some types of electronic money are designed to allow anonymous, hand-to-hand transfers between stored-value cards. In this respect, these monies resemble the privately issued currency that comprised the not-altogether-successful payments system in the United States before the Civil War. Such monies may displace, to some extent, Fed-issued currency as a payment instrument. Because such instruments do not provide final settlement, however, the monetary base will continue to represent the standard.

The potential for widespread use of privately issued currency raises a number of public policy issues. Today’s economy differs significantly from that of the antebellum United States. As a result, it is conceivable that a high-quality, self-regulating system of privately issued electronic money might develop. If it does, we must recognize the increased risk of a payments system breakdown. How do we protect the payments system if the public loses confidence in an issuer? As lender-of-last-resort, the Federal Reserve might be called upon to furnish liquidity to an issuer. Does this suggest that issuers of electronic money should be required to obtain banking charters and be regulated accordingly? Or, should the issuance of electronic money be relegated only to the monetary authority, as currency is now? And what should be the role of deposit insurance? These are just a few of the policy questions the nation must address if privately issued electronic money becomes widely used.
A View of the Future

There are, of course, many ways to answer these and other questions, and each answer has its pros and cons. Yet, one thing is certain: The answers will affect both the demand for the monetary base and the operation of our payments system.

I don’t believe the fundamental role of the Federal Reserve in setting the quantity, and by implication the value, of the monetary standard will change during the next century, even though automation and technical innovation will continue to affect the payments system. Payments for all goods and services will be expressed in terms of that monetary standard, both in spot markets and in longer-term contracts. Changes in the purchasing power of money—that is, the inflation rate—will continue to be influenced by the Federal Reserve’s control over the supply of base money.

But the major point I want to make today is this: Every potential change to the payments system must be evaluated as to whether the holder of a particular payment instrument can convert that instrument into base money on demand. The answer to this question depends on how the solvency and liquidity of the issuer are assured. Potentially hanging in the balance, of course, is the integrity of our payments system.

The operation of a large, complex economy requires the purchase and sale, each day, of millions of goods and services. Each such trade requires the exchange of some payment instrument. The participants in these trades must be confident that instruments issued by private depository institutions are sound, namely, that they are convertible, on demand, into payments instruments that are liabilities of the monetary authority. Moreover, to enable the economy to reach its full growth potential, these participants
must also be confident that the monetary authority will maintain the purchasing power of the monetary standard.

Thank you.