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FEDERAL RESERVE BANK OF PHILADELPHIA

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IN THIS ISSUE . . .

Should the Fed be permitted to pay interest on member bank reserves and charge for services it provides to the nation's banks? That is the issue discussed in the two articles in this issue. These articles, when taken together, raise the possibility that a change in the current operating procedures of the Fed could make for a more effective monetary policy as well as a more efficient use of society's resources.

Currently, when the Fed conducts monetary policy it does so largely through affecting bank reserves. While this special role for bank reserves benefits society, it can be costly for banks. The Fed is prohibited from paying interest on member bank reserves which means that these banks forego potential income. Partly in order to offset this loss, the Fed provides member banks with services "free" of charge. However, this offset may not be sufficient as more banks continue to leave the Federal Reserve System. Perhaps more important, both the lack of interest payment on reserves and the provision of "free" services can be inefficient and generally inequitable. Paying member banks interest on reserves and charging them for the services they use, the authors argue, would not only alleviate these problems but would be in keeping with the tradition of a free enterprise economy.

On our cover: Construction of the new headquarters building for the Federal Reserve Bank of Philadelphia at Sixth and Arch Streets in Philadelphia has reached the midpoint. Shown here is an artist's conception of the eight-story structure that is scheduled for completion in early '76.

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Why Not Pay Interest on Member Bank Reserves?

By Ira Kaminow

When monetary policy swings into action, banks are thrust into the front lines. For it is largely through the creation of bank reserves that the Fed has a handle on the money stock and interest rates. The special role that bank reserves play can be extremely valuable to society but costly to banks and their customers. The law prohibits the payment of interest on member bank[1] reserves, so every dollar of reserves a member holds means a loss of potential interest income.

Last year, member banks were required to hold about $36 billion of reserves. At current interest rates, that sum could have earned interest in the neighborhood of $3 billion for the year. This $3 billion is like a "tax" on banks, especially because the Fed invests the funds made available and turns the lion's share of the interest earned over to the Treasury.

The special "tax" may cause some inefficiencies in the economy and is widely viewed among bankers as unfair. Moreover, removal of the "tax" by Congress need not impair the Fed's ability to conduct monetary policy and might well set the stage for some improvement. Therefore, a good case can be made that the law should be changed to allow the payment of interest on reserves. Such a change, of course, would mean a drop in revenues to the Treasury unless Congress chose an alternative source of income to compensate for the loss.

NO-INTEREST RESERVES: UNFAIR?

Member bankers can get upset when they think of the interest lost because of reserve requirements. After all, making funds available is the business of banks and interest from these funds is banking's major revenue. So member bankers think that the law that requires them to give up interest on billions in assets is unfair, especially when their competitors—including nonmember banks—don't have similar requirements. (See Box 1 for a discussion of the view that bankers are not entitled to this interest.)

Bank customers are also affected. Because banks must forego some interest, the cost of

[1]Member banks are commercial banks that are members of the Federal Reserve System and hence subject to Fed reserve requirements. Membership carries advantages (for a discussion of some advantages, see Lee Hoskins's article in this issue) and disadvantages and is compulsory for nationally chartered banks, but voluntary for state-chartered banks.

BOX 1

ARE NO-INTEREST RESERVES REALLY A TAX ON BANKS? ANOTHER VIEW . . .

We have taken the view that requiring banks to hold no-interest reserves is like a tax in the sense that the Government, through due process, deprives banks of interest income that otherwise would rightfully be theirs. There is another view that the banks are in no sense entitled to interest on reserves.

The argument that banks are not entitled to interest on reserves first makes the observation that member bank reserve assets are the liabilities of the Federal Reserve (every financial asset, of course, is someone's liability) and in that sense they are "issued" by the Fed. The argument then forks in two directions. For one thing, reserves are issued or "produced" by the Fed under authority of the Congress and in the pursuit of the public welfare. The proceeds earned from such a process should rightfully be turned over to the Treasury. We should note, however, that the Department of Defense procures weapons under Congressional authority in the pursuit of the public welfare. Wouldn't the argument that banks are not entitled to interest on reserves also suggest that profits earned by enterpreneurs and wages earned by workers in the process of producing weapons for national defense should likewise be turned over to the Treasury? Reserves are important for an effective monetary policy but that hardly means that banks are not entitled to a return on their assets.

The second part of the two-pronged argument notes that banks need reserves in order to expand profitable loans through the multiple credit-expansion process. Therefore, the argument goes, rather than a "tax" on banks, reserves are profit-makers. To put this argument in perspective, suppose that some steel companies (not all steel companies and no other industry) were prohibited from earning a return on 10 percent of their assets. In this example, would it be convincing to tell steel producers that they are not entitled to the profits that are taken away because (by law) they were "allowed" to earn a return on the other 90 percent of their assets? Therefore, they should view construction of the no-profit part of their plants as an opportunity to make profits on the other 90 percent rather than as a cost.

banking goes up and at least some of the higher cost is passed on. So, for example, if banks are required to keep 15 cents of no-interest reserves for every dollar of checking deposits, these deposits are 15 percent less profitable. Banks will have that much less incentive to attract deposits so they will provide fewer services or levy higher service charges to checking account customers. In the case of savings deposits they may pay lower interest than otherwise.

An argument against paying interest is that banks and their customers receive special protections or privileges from Government and so should pay a supplemental tax or fee. Two common examples are the protections provided by the Federal Reserve's commitment to provide a stable financial environment and the banks' "franchise" or "license" to issue demand (checking) accounts. Bankers reply that they should not have to pay extra for special services. Many other firms and individuals who receive special protections or privileges aren't asked for a special payment. Tariffs provide many industries protection from foreign competition, publishers receive the protection of copyright laws,

and physicians have licenses to provide medical services. Yet, none pays supplemental taxes or fees.

Another justification for not paying interest on reserves is that since the Federal Reserve provides banks with free or subsidized services such as check clearing and currency distribution, it is fair that banks pay for these services through no-interest reserves. Commercial banks frequently pay other banks for services for making interest-free funds called correspondent balances available. So, the argument goes, it seems well within banking tradition for the Fed to "charge" for services by requiring banks to keep no-interest reserves.

The counter argument to this position, however, is that when commercial banks compensate one another with interest-free loans, the quantity of funds loaned, quite expectedly, depends on the volume of services performed. (You expect to pay more for a hundred apples than you do for one). But the volume of reserves required by the Fed depends on each bank's deposits, and not on the quantity of services it "buys".[2] Moreover, the cost of the services exceeds the foregone interest by a wide margin. In 1973, when member bank reserves could have earned in the neighborhood of $3 billion, the total operating cost of the Fed was about $500 million.[3]

This large differential, incidentally, may explain part of the reluctance of some to change the law. If the Fed were permitted to pay interest on reserves, its net earnings would decline so that it would have less money to turn back to the Treasury. Others would have to make up the difference by paying higher taxes. Proponents of interest on reserves offer a rebuttal to this. While it is true that someone's taxes might rise if interest were paid, the tax would be explicit rather than implicit. Legislators would then be able to raise the revenue through taxes that are based on the common criteria of fairness and efficiency.

Member bankers might be right in arguing that no-interest reserves are unfair. But, paradoxically, to change the law and start paying interest on reserves after so many years would also be unfair. No-interest reserves are now part of the rules of the banking game. Businesses, individuals, banks, and other financial institutions have all made adjustments because of it. Changing the law now would be changing the rules during the game and that can be unfair.

Take, for example, a well-publicized objection to payment of interest. Because no-interest reserves have made member banks costlier and less profitable to operate, stock in those banks is cheaper. A switch to payment of interest would drive up the price of member bank stock and leave the owners of banks with a windfall. The windfall would not be as large as many believe because competition would force banks to pass much of the cost reduction on to customers. (This would be especially true if proposals to pay interest on reserves were linked with an end to ceilings on rates banks pay to their customers.[4] Nevertheless, the point is still well taken. And this is not the only example of windfall gains and losses that would result from an unexpected reduction in banking costs.

Some, of course, will justify these gains and losses as being among the unforeseen risks and rewards of doing business and so quite fair. Others will argue that risks of nature and the market are unavoidable and fair, but risks of

[2]There is some loose connection between the volume of reserves and services. Large banks on an average use more services (and hold more reserves) than small banks. But this linkage ignores individual bank differences. For an alternative and direct method of charging for Fed services, see Lee Hoskins's article in this issue.

[3]This large difference raises interesting questions. What are the Fed's profits and what does it do with them? In 1973 the Fed earned a profit of $4.4 billion of which $4.3 billion was turned back to the Treasury. The remaining $100 million was divided roughly equally between addition to the Fed's surplus and payment to member banks of the 6 percent return on their capital paid into the Federal Reserve Banks.

[4]Interest ceilings currently make it illegal for banks to pay more then a stated maximum rate to depositors. For a discussion of this important point and the case for removing the ceilings see James O'Brien "Interest Ban on Demand Deposits: Victim of the Profit Motive?" *Business Review* of the Federal Reserve Bank of Philadelphia, August 1972, pp. 13–19.

sudden changes in Government policy are unfair and should be compensated.

Fairness, like beauty, is in the eye of the beholder. Whether the inequities of keeping the old rules outweigh the inequities of changing them depends on individual judgment and individual self-interest. The case for payment of interest on reserves, though, does not rest on fairness alone.

NO-INTEREST RESERVES: INEFFICIENT?

No-interest reserves may contribute to a waste of scarce resources. Remember that banks can pass on some of the cost of holding reserves by lowering the interest they pay (in the case of time deposits) or by raising the charges and reducing services to depositors (especially in the case of demand deposits). This, of course, discourages the use of bank deposits in favor of other assets. So no-interest reserves may lead to underutilization of bank deposits (as do ceilings on interest rates banks can pay on deposits). Checking accounts will provide a good illustration. Checking accounts are useful and keeping them near the empty mark can be as inconvenient and wasteful as filling your gas tank only half way. Keep a low checking balance and you run the risk of running out of money or running down to the bank to fill 'er up when unexpected expenses pop up, not to mention the added risk that an error in arithmetic will turn into a rubber check. So it doesn't pay to run checking balances too low.

How low is too low? A person's (average) checking balance is too low if the added convenience of increasing the balance would repay the cost of holding the larger balance. And the net cost of holding a larger balance is the interest that could have been earned from, let's say, a bond less any rewards the bank provides for holding the larger balance.[5]

If the economy is working "right" the depositor's cost of holding a checking balance will reflect the "true" costs of servicing and maintaining the account. That way the depositor will have the appropriate incentive to keep the right balance. No-interest reserves impose an artificial cost on member banks which is passed on to depositors. The cost is artificial because it is not compensation for a true sacrifice someone must make to provide bank services. Wages and rent, for example, are genuine costs because they compensate for time and space diverted from other uses. Because no-interest reserves push the costs of holding deposits artificially high, the public is unduly discouraged from using bank deposits and it does not take maximum advantage of checking account services.

Some may argue that the case is not as simple as this. In addition to no-interest reserves, other sorts of imperfections are at work and some of these may counterbalance no-interest reserves by pushing in the direction of overutilization.

The clearest reasons for overuse of bank deposits can be found in restrictions on other forms of money and "near money". Currency performs much the same functions as checking accounts. Both are used primarily to make payments and as a result both are considered "money". Yet, while we get services or reduced charges (in lieu of interest) from banks for holding checking balances, we get nothing but convenience from currency. Technical difficulties would make it extremely costly to pay interest on currency. This clearly puts currency at a disadvantage, and so we are likely to be overutilizing checks relative to currency. Similarly, Government regulations that keep interest rates low on some "near monies" (such as savings bank deposits) may give an artificial boost to commercial bank accounts. However, this "advantage" is uncertain since similar and perhaps more stringent limitations are placed on commercial banks.

While it is difficult to tell whether bank deposits are overutilized relative to other forms of money and near money, it seems that money and near money in general (whether currency, checking accounts, savings accounts or U.S. savings bonds) are at a disadvantage in the race for people's assets. The disadvantages include not

[5]More generally, the cost is the difference between the rate of return on the most desirable alternative to a checking account and the rate of interest on checking deposits. Explicit interest is prohibited on demand deposits, but banks pay implicit interest in the form of more services or reduced service charges.

only no-interest reserves but other factors such as the artifically low interest on savings and checking accounts. The result: we probably hold too little of these highly liquid assets and too much of the other kinds of assets. Paying interest on bank reserves (as well as relaxing interest rate ceilings) would help shift the balance back toward a more efficient mix and improve the allocations of financial assets.

NO-INTEREST RESERVES AND MONETARY POLICY

Member bank reserve requirements are important for controlling the money supply. Basically, that's why we have them. That they are also effectively a tax on banks should be incidental. The problem is that the secondary tax feature of reserves gets in the way of the primary policy aspect.

Control of the money stock (currency plus demand deposits) is easier if required reserve ratios (the ratio of required reserves to deposits) on demand deposits are *high* and if they are the *same* for all banks (see Box 2). Reserves that carry a cost burden encourage *low* reserve ratios on member banks and *different* ratios from one class of bank to another. They encourage lower reserve requirements on member banks because

BOX 2

RESERVE REQUIREMENTS AND MONEY STOCK CONTROL

Over the years, the Fed has been able to count on a fairly stable relationship between the money stock (currency plus demand deposits) and member bank reserves. If historical experience is a guide, every dollar increase in member bank reserves will eventually lead to growth in money of about $7.80. Money and reserves are chained together by two links.

Link 1: Banks generally issue about $6 in demand deposits for each dollar of reserves.

Link 2: The public mixes money about 1 part demand deposits to .3 part currency. So, $6 of demand deposits means about $7.80 worth of money ($6 + .3 × $6 = $7.80).

If the links held tight, the Fed could simply inject one dollar in reserves for every $7.80 in money it desired. Unfortunately, the links hold together only loosely, especially in the short run.

The impacts of slippages in the links could be reduced by changing the reserve requirements structure. Two examples are closely related to the discussion in the text: in general, (1) higher reserve requirements on checking deposits and (2) uniform reserve requirements on checking deposits give better control of these deposits.

Higher Reserve Requirements. The Fed does not have perfect control of bank reserves. So even if it could (and it can't) count on $7.80 in money for every dollar increase in reserves, the Fed can never really be sure what reserves and therefore for money stock will be.

Suppose, for example, reserves turned out to be $30 million higher than expected. Based on link 1, this would mean deposits $180 million above expectations and based on link 2, the money stock would be $234 million above plans.

Errors in the money stock resulting from miscalculations in bank reserves would fall if the ratio in link 1 could be cut from six to one to let's say four to one. Then a $30 million miss in bank reserves would mean unexpected checking deposits of only $120 million (instead of $180 million under six to 1) and therefore an unexpected use in the money stock of only $156 million (as opposed to $234 million).

In general, the deposit to reserve ratio will fall if reserve requirements rise. The higher reserve requirements the more reserves the banks need per dollar of deposits. Or, turned around the fewer deposits per dollar of reserves. Thus errors from miscalculations of bank reserves can be

reduced if reserve requirements would increase.

Uniform Reserve Requirements. Not only is the volume of reserves variable, but so too is the six to one ratio, and fluctuations in this ratio lead to problems in money stock control. For example, if the Fed wanted the money stock to be $234 billion, it would shoot for $180 billion in checking accounts (based on link 2) and $30 billion in reserves (based on link 1). But suppose that instead of the anticipated six to one ratio the actual ratio turned out to be 6.1 to one. $30 billion in reserves would then mean $183 billion in checking accounts (link 1) and $237.9 in money, $3.9 billion above target. One important reason for fluctuations in the deposit to reserve ratio is nonuniformity in bank reserves.

Small member banks, for example, are required to hold only 7½ cents in reserves for every new dollar in customers' checking accounts. Or, turning it around, they can issue up to $13.33 of checking deposits for every dollar of reserves. Large banks are required to keep up to 16½ cents in reserves for every new dollar of checking deposits; that is, they can add no more than $6.06 in checking accounts for every dollar of new reserves.

So, for example, if a withdrawal from a small ($13.33 to 1) member bank and a subsequent redeposit in a large ($6.06 to 1) member bank can reduce the deposit creation power of the banking system by $7.27 ($13.33–6.06) with no change in bank reserves. If reserve requirement ratios were uniform the potential for this problem would be eliminated.

The problem can be even more serious in the case of a shift in reserves from a member bank to a nonmember. Using the Fed's definition of acceptable reserve assets, nonmembers have about $25 of checking accounts outstanding for every dollar of reserves. (In addition, nonmembers hold other reserve assets as defined by state law but these are not issued by nor under the control of the Fed). This means that a shift in Fed-type reserves from a nonmember to a member could greatly expand checking accounts with no change in reserves outstanding. Attracting more member banks by paying interest on member reserves could reduce this problem substantially.

the Federal Reserve Board must set requirements on the basis of all relevant factors. Because no-interest reserves are considered unfair and because they may lead to inefficiencies, reserve requirements are probably lower than they should be or would be if member banks earned interest on them.

Burdensome reserves encourage varying reserve ratios from bank to bank in part because of voluntary membership in the Federal Reserve. The Fed determines the reserve requirements only of banks that choose to join the System. Banks that do not choose System membership are subjected to one of the fifty sets of state reserve requirements.[6] If interest were paid on member reserves, the burden of membership would be reduced or eliminated so more banks would join or stay in the Federal Reserve and be subject to national rather that state requirements. Increased membership would clearly contribute to uniformity of reserve requirements across all banks.

However, even if every bank in the country joined the Fed, there would still be different reserve ratios. Reserve ratios among member banks are graduated according to bank size (see box). One reason for this may be a feeling on the part of monetary authorities that small banks should carry a smaller reserve burden than large banks. If reserve requirements cease to be burdensome, one possible reason for treating small and large banks differently would vanish.

Of course, just as the burden of no-interest reserves keeps reserve requirements from being

[6] Altogether, about 8,500 of the nations 14,000 banks are nonmembers. They account for about 26 percent of all checking deposits.

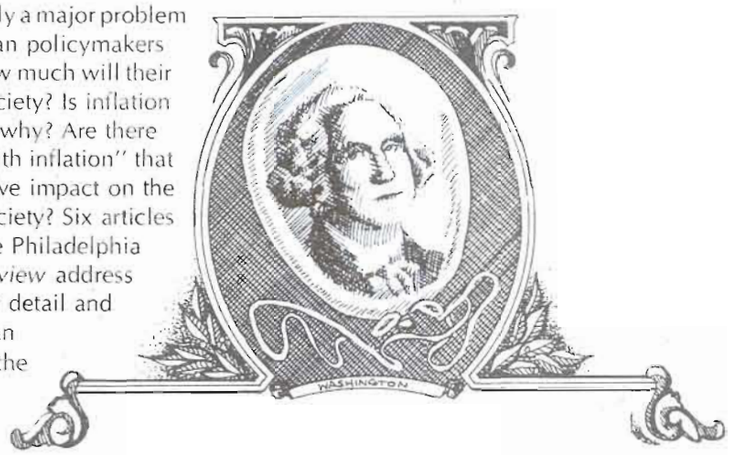
a more effective policy tool, the policy aspect probably keeps them from being a good tax or fee—even if we did want to take the suggestion of some that we use reserve requirements for one of these purposes. It would take us too far afield to discuss the factors that make for a good tax or fee. But whatever they are, it would only be a very fortunate coincidence if a reserve requirement structure designed to give good monetary control would also provide a fair and efficient tax of fee. If we give any weight to good policy, we would have to compromise our standards for a good tax. In short, the reserve requirement structure is a single tool. If we ask it to do several different jobs at once, it may do none of them well.

SUMMING UP

Reserve requirements lead a double life. They are an important tool of monetary policy and in effect act as a tax on bank deposits. Linking taxes or fees and monetary policy through no-interest reserves leads to compormise. You can't get a good tax or fee because of policy considerations, and you can't get the strongest policy tool because of cost considerations. So the question remains, why not change the law and pay interest on member bank reserves?

ECONOMICS of INFLATION

Inflation is currently a major problem facing the U.S. Can policymakers curtail it? If so, how much will their actions "cost" society? Is inflation "bad," and if so, why? Are there ways of "living with inflation" that cushion its negative impact on the individual and society? Six articles reprinted from the Philadelphia Fed's *Business Review* address these questions in detail and seek to promote an understanding of the problem for both policymakers and the general public.



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