# Treasury tax and loan accounts and Federal Reserve open market operations

Treasury management of its cash balances is significant for Federal Reserve open market operations because changes in the Treasury's balance at the Federal Reserve Banks directly affect the reserves available to the banking system. All participants in the financial economy find it necessary to maintain a cash balance, given the impossibility of achieving precise balance each day between receipts and expenditures. Unlike most other entities, however, when the Treasury pays out to or receives funds from the public, aggregate bank reserves are affected and not just the distribution of those reserves among banks.

The Treasury's working balance is maintained at the Federal Reserve Banks, the Government's fiscal agents, and most of the Treasury's expenditures are made through checks paid by the Reserve Banks. However, the Treasury receives most of its funds through transfers from commercial banks. These receipts must flow through the Treasury's balance at the Reserve Banks in order to reenter the banking system as expenditures. As funds flow from the public to the Reserve Banks, commercial bank reserves are reduced while Treasury expenditures from the Reserve Bank balances generate reserve increases. Without a procedure to neutralize the effects of these transfers, abrupt reserve adjustments would be forced on the banking system—leading to large-scale swings in credit availability and attendant volatility in the money and securities markets.

The Treasury tax and loan account system was designed as a mechanism for minimizing the dislocations on bank reserves and the money market arising out of the sizable and irregular transfers between the Government and the public. Under this system, Treasury funds remained in the banking system until needed for disbursement, and procedures were developed so that withdrawals to meet those disbursements were effected with minimum disturbance of bank reserves. For many years it was felt that the value of these deposits to the banks was roughly equivalent to the value of services which the banks provided the Treasury. In more recent years, however, the Treasury's average cash holdings rose as did the average level of interest rates, and following a reexamination of the tax and loan account system in 1974 it was found that the value of the balances to the banks—and implicit costs to the Treasury—far exceeded the value of the services provided.

After this study, the Treasury sought legislative authority to invest its operating cash in a way that would provide an appropriate return to the Treasury on its cash balances while at the same time making it possible for banks to be reimbursed for services performed for the Treasury. In the interim, the Treasury altered its cash management procedures, shifting the bulk of its balances to the Federal Reserve where a return could be obtained indirectly since net System earnings are turned over to the Treasury. The new legislative authority, enacted in October 1977, will once again permit Treasury funds to remain in the banking system. Depositaries will have the opportunity to retain Treasury funds at a market-based interest rate. Moreover, the new system should alleviate the scale and complexity of Federal Reserve open market operations—and perhaps reduce some market misunderstandings about those operations—that arose from the Treasury's interim procedure of holding the bulk of its balances at the Reserve Banks. The investment program will become effective following appropriation of funds by the Congress to cover the reimbursement to depositaries for

services deemed compensable—those provided specifically for the benefit of the Government.

**Historical background**

The system of special depositaries for Treasury funds originated during World War I, when the scale of the Government's financial operations was stepped up sharply. The principal purposes were to reduce the impact of the Government's growing operations on the banking system and to foster the distribution of the large loans necessary to finance the war. The first Liberty Loan Act of 1917 provided that banks purchasing securities issued under the terms of the act, for themselves or for account of their customers, could deposit the proceeds of such purchases in special accounts called war loan accounts. Payment for the securities was thus effected by debiting an account in a commercial bank and crediting an account of the Treasury at the same bank, with the Treasury holding the funds in that account until needed to pay Government checks. At that time, the Treasury arranged, through "call" procedures, for the transfer of funds into the Reserve Banks where checks would be presented and paid, thus returning the funds at once to the banking system. Destabilizing effects on bank reserves were thereby avoided, while the value of the deposits provided an incentive for banks to purchase and distribute new Treasury securities. Greater use of the war loan accounts was necessitated by the heavy financing needs of World War II. After the war, the Congress provided for wider uses of the system by authorizing the payment of certain taxes through the accounts and, from 1948 on, the kinds of taxes eligible for deposit in these accounts have been broadened. The war loan accounts were renamed tax and loan accounts in 1950, and today the bulk of the funds flowing through the accounts arises out of tax payments.

In using these accounts for the purposes of cash management, the Treasury sought to keep its balance at the Reserve Banks relatively stable and allowed the bulk of the variation in its balances to occur in the banking system. This involved some redistribution of reserves among banks but left the aggregate amount of reserves approximately steady. The Treasury accomplished this by calling from, or redepositing with, the depositaries funds sufficient to preserve a relatively stable Reserve Bank balance. Every incorporated bank and trust company and every United States branch of a foreign banking corporation authorized by the state in which it was located to transact commercial banking business could be designated as a special depositary and maintain a tax and loan account by applying for qualification at its district Reserve Bank and by pledging collateral, deemed acceptable by the Treasury, to cover its deposits. To facilitate the schedule of withdrawals from such accounts, banks were administratively divided into three groups (A, B, or C), based on the total deposits credited to their tax and loan accounts during the previous calendar year. Most banks were in Group A which included the smaller banks. Calls on these banks were the least frequent, and they were provided with the most advance notice of intended withdrawals. At the opposite end were the Group C banks, the largest in tax and loan account size but the smallest in number, on which calls were scheduled with the greatest frequency. These banks were also subject to accelerated calls or redeposits on same-day notice to provide the Treasury greater flexibility in dealing with unanticipated developments.

Over time, the view developed that the Treasury's cash balances in the commercial banks resulted in a subsidy to the banking system. This view led to several studies by the Treasury in the early 1960's in which it concluded that the earnings value to the banks of the tax and loan accounts approximately compensated the banks for the specific services they performed for the Federal Government, services for which no direct compensation was received. (After meeting demand deposit reserve requirements, the depositaries could invest the remainder of the balances in earning assets.) The Treasury studies found that the services provided by the banks—among others, for example, the handling of tax deposits or issuing and redeeming savings bonds—had a value similar to that of the interest-free deposits.

**Reappraisal of the tax and loan account system**

In 1974, the Treasury undertook another study of the tax and loan system and reached different conclusions, based on developments in the intervening years. In the ten years following the previous study, taxes flowing through the accounts had increased fourfold and the higher level of receipts and expenditures by the Government in the interim had also led to an increase in the size of the tax and loan balances. Moreover, interest rates had risen considerably, providing significantly greater earnings potential on tax and loan balances—earnings foregone by the Treasury. Finally, the Treasury found that fewer "compensable" services were being provided. As a result, the study concluded that the implicit costs to the Treasury of maintaining the accounts had risen substantially beyond the value to the Treasury of the applicable services provided by the banks. The Treasury estimated the excess of annual earnings value to the banks at $260 million. The study concluded that the system of maintaining temporary excess cash with the commercial banks was useful for money management and should be retained,

but in a way that would allow the Treasury to capture the return on the balances while reimbursing banks for certain services with fees from appropriations.[1]

Legal prohibition against payment of interest on demand deposits precluded the obvious way for the Treasury to realize a return on its balances with the banks. Yet time deposits were of little use since their minimum maturity is thirty days, compared with the average life of a tax and loan deposit of about ten days. The Treasury concluded that the best solution would be to invest excess balances on a day-to-day basis in some kind of short-term money market instrument, preferably with the banks holding the tax and loan balances to minimize churning in the money market that would result from actually entering the market to invest balances of the magnitude involved. Congressional legislation authorizing this investment technique was required, however.

As an interim solution to the problem of earning a return on its working balances, the Treasury began in 1974 to reduce its tax and loan accounts at commercial banks while at the same time increasing its balances at the Federal Reserve. This had the effect of reducing commercial bank income on the tax and loan balances and at the same time increasing Federal Reserve Bank income and, eventually, Treasury income. This followed since the Federal Reserve earns a return on the securities acquired to offset the reserve-draining impact of the higher Treasury balance and since the Federal Reserve turns over the great bulk of its net earnings to the Treasury. From the survey data compiled in connection with the 1974 study, the Treasury calculated that a reasonable equilibrium between the value of balances at commercial banks and the value of services would be achieved by an average balance of about $1.5 billion or so in the tax and loan accounts. Since mid-1974, the Treasury has followed a policy of making calls on its accounts in a manner that would result in approximately that level (chart).

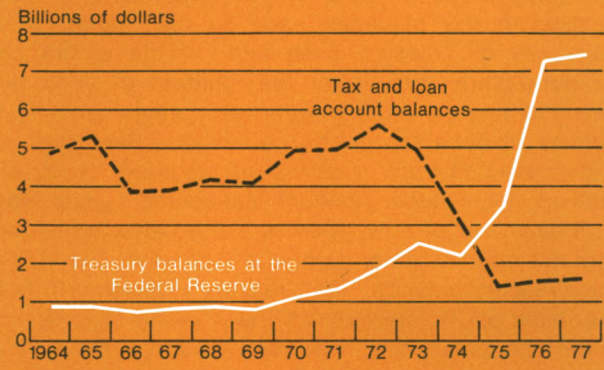
**Impact of swings in Treasury cash on reserve management**

While the interim arrangement described above, in effect, served the purpose of providing the Treasury with income on its balances and avoided any possibility of a "windfall" to the banks, it considerably complicated the execution of monetary policy. Frequent and sizable System open market operations became necessary to offset the sharp fluctuations in bank reserves that would otherwise have resulted from the variations in

[1] Report on a study of tax and loan accounts, Department of the Treasury, June 1974.

**Distribution of Treasury Cash Holdings**

Annual averages




Source: United States Department of the Treasury.

**Average Weekly Change in Treasury Balance**

In millions of dollars

| Year | At the Federal Reserve | At the Federal Reserve and in tax and loan accounts |
|---|---|---|
| 1967 | 177 | 1,074 |
| 1968 | 172 | 1,434 |
| 1969 | 222 | 1,493 |
| 1970 | 124 | 1,360 |
| 1971 | 241 | 1,346 |
| 1972 | 329 | 1,592 |
| 1973 | 478 | 1,781 |
| 1974 | 533 | 1,623 |
| 1975 | 1,416 | 1,915 |
| 1976 | 2,018 | 2,496 |
| 1977 | 2,110 | 2,601 |

Source: Board of Governors of the Federal Reserve System.

Treasury balances at the Reserve Banks. Substantial changes in the balances arise from the concentration of expenditures, tax collections, and debt operations in certain months and on certain days of each month. For example, social security payments cause a sharp decline in the balances early in the month, while increases in Treasury cash later in the month can be particularly large after the fifteenth of each tax-payment month. Such large cash swings amount to billions of dollars over the course of a few days.

In managing bank reserves for monetary policy objectives, the System Account Management must work with estimates of how reserves will be affected by factors not directly under its control, including the size of the Treasury balance. The Treasury's decision to hold the bulk of its balance at the Reserve Banks has made the balance a dominant—and the most volatile—factor. The exact timing of receipts to and expenditures from the Treasury's balance is not known in advance, of course, and dealing with the size and timing of Treasury balance fluctuations has been the principal complication in the management of bank reserves. The magnitude of the fluctuations has been very large, not only from week to week but also within a week, and predicting their impact on bank reserves has been difficult and prone to error. The large weekly changes in the Treasury balance (table) have been accompanied by a substantial rise in the System's average weekly provision or absorption of reserves, from around $300 million in 1967 to around $2 billion in 1977. The scale of these operations has added a highly cumbersome dimension to the execution of monetary policy. The successful implementation of the Treasury's new investment authority should lead to a material improvement of this situation.

**The new cash management procedures**

The intent of the new legislative authority—Public Law 95-147 of October 1977—is to permit the Treasury to earn interest by the investment of its operating cash and to pay fees for certain services which were not previously compensable. The enabling legislation provides that "the Secretary of the Treasury is authorized, for cash management purposes, to invest any portion of the Treasury's operating cash for periods of up to ninety days in (1) obligations of depositaries maintaining Treasury tax and loan accounts secured by a pledge of collateral acceptable to the Secretary of the Treasury as security for tax and loan accounts, and (2) obligations of the United States and of agencies of the United States". In addition to incorporated banks and trust companies, the legislation makes certain savings and loan associations and credit unions eligible to participate in the tax and loan account system.

Treasury tax and loan account depositaries will administer their accounts under either a note option or a remittance option. The sources of deposits in the tax and loan accounts represent payments of certain Federal taxes and payments for United States savings bonds. Both options require that balances be secured by the pledge of acceptable collateral. Under each option, depositaries may have interest-free use of the funds for one business day (although balances on this interest-free day are subject to demand deposit reserve requirements). Thereafter, the accounts will function differently, depending on the option selected.

The Treasury will invest funds in obligations of depositaries selecting the note option. Such investments will take the form of open-ended interest-bearing notes reflected on the books of the district Reserve Bank. Under this procedure, the depositary will, as of the first business day after crediting deposits to its tax and loan account, debit the tax and loan account in the amount of these deposits and simultaneously credit the note. The Federal Reserve Board has exempted note balances of member banks from reserve requirements and interest rate ceilings under the provisions of Regulations D and Q, respectively. A note option depositary may also be allowed to add directly to its note balance payments made for allotments on tenders and subscriptions for new United States Treasury securities when so provided in Treasury offering circulars. In addition, other funds from the Treasury's operating cash will be offered directly to certain note option depositaries. These direct investments, analogous in concept to former redeposits, will provide an important degree of flexibility for managing Treasury cash balances in a way that prevents undesirable fluctuations in the balance at the Reserve Banks from the standpoint of reserve management.

Note balances are payable on demand without previous notice. In practice, the Treasury expects that the timing and amount of call actions for the withdrawal of funds will follow a regular pattern reflective of the intramonthly and monthly patterns of its cash flow. The A, B, or C group classifications will be retained for note option depositaries.

The notes will pay interest equal to the weekly average effective Federal funds rate published by the Federal Reserve less 25 basis points,[2] a formula which gives recognition to costs of alternative collateralized

[2] Interest is payable monthly by charges to the depositary's reserve account or through the reserve account of a member bank correspondent. The amount of interest due will be computed by applying the weekly interest rate factor to the daily average amount of the note balance in each week of the reporting cycle. A reporting cycle begins on the first Thursday of each month and ends on the Wednesday preceding the first Thursday of the next month.

borrowings by banks and to the depositaries' short-term investment potential for such funds. Each depositary may establish a ceiling on the amount of Treasury funds held by providing written notice to its district Reserve Bank. Note balances in excess of the specified ceilings will be automatically transferred immediately to the Treasury's account at the Reserve Banks. It is expected that such maxima would be set in relation to the depositaries' collateral-pledging ability.

Depositaries that do not wish to hold Treasury funds may select the remittance option, in effect acting as channeling agents in the tax collection system. Under this procedure, deposits credited to the tax and loan account will be automatically withdrawn by the district Reserve Bank immediately on receipt of the credit advices supporting such deposits. Depositaries electing this option will be subdivided into two classifications: Class 1 depositaries are those with $1.5 million or more in credits to their tax and loan accounts during the preceding calendar year, while Class 2 depositaries are those whose credits were less than $1.5 million. To limit the interest-free use of the funds to one business day, remittance option depositaries will be subject to assessments on advices received after designated cutoff times, with the method of assessment based on the applicable classification.

Each depositary is subject to the requirements of the option it has selected. Changes in options will be permitted after appropriate notice to the Reserve Bank, a provision intended to afford depositaries with an opportunity to change options on an occasional basis.

All depositaries will be reimbursed for services deemed compensable. The Treasury will compensate depositaries for Federal taxes at a uniform fee of 50 cents for each Federal tax deposit form processed, a fee intended to cover the costs of maintaining the account as well as the handling of Federal tax deposits. Reimbursement to qualified agents for the issuance of savings bonds will be made for each savings bond issued during a calendar quarter. The fee schedule depends on the method of issuance and inscription and ranges from 10 cents to 70 cents per bond. Paying agents will receive reimbursement of 30 cents for each bond redeemed during the calendar quarter.

**Concluding observations**

The Treasury's investment authority may be viewed as the natural outgrowth of a trend more actively pursued by financial institutions, corporations, and state and local governments generally: the productive employment of cash balances and use of explicit service pricing. The new program will be implemented following appropriation by the Congress of funds to cover the fee payments. From the Treasury's viewpoint, the implementation of the program will satisfy its need for obtaining a satisfactory return on its balances, while also allowing incentive for depositaries to participate in the system. From the perspective of both the Treasury and the Federal Reserve, facilitating the execution of monetary policy is a major goal of the program. Under the new investment authority the Treasury will directly obtain a return presently achieved indirectly via net Federal Reserve earnings, without the current operational complications to Federal Reserve open market operations. In addition, since the Treasury will earn a return on balances held by the depositaries in excess of one business day, the Treasury will be able to capture a return on funds in transit between the depositaries and the Reserve Banks not previously available.

For the depositaries, the new facility provides an opportunity to acquire the temporary use of Treasury funds at a money market-based rate. Presumably, each bank or other depositary will make its selection of options dependent on whether the funds can be employed profitably. In turn, this will hinge on the relationship of the Federal funds rate to alternative borrowing costs and investment opportunities, as well as on the adequacy of existing collateral. Most large banks are expected to elect the note option. On the fee side, each depositary will be compensated on an individual basis in direct proportion to the volume of services it provides, in contrast to the current practice of reimbursement through balances which are not directly related to the volume of services.

Conclusions on the impact of the program will have to await the test of time. For the depositaries, spreads between short-term interest rates may, at times, make it advantageous to enlarge collateral holdings in order to retain Treasury funds for profitable investment. Individual depositaries may sometimes find it cost effective to use holdings of United States Government securities as collateral for Treasury funds rather than for use in repurchase agreements. It is questionable, however, whether these substitutions would be of such magnitude as to affect rate levels in the RP market generally. This market has become an efficient and attractive source of funds to banks (see *Quarterly Review,* Summer 1977) while meeting the short-term investment needs of their customers. Similarly, there could be an impact on flows in the Federal funds market. The retention of Treasury funds by many depositaries could lead to a reduction in net demands in the Federal funds market, but there could also be a reduction in the volume of reserves provided by the Federal Reserve. Thus, although some impact on flows in the Federal funds market could develop, it is not clear that

rate levels would be affected. The source of reserves to the banking system would be different than at present but not necessarily the overall supply of such reserves.

For the Federal Reserve, once the extent of participation in the note option is known, experience will be needed in projecting the rate of remittance flows and their impact on reserves. The ceilings set by the note option depositaries may complicate the task of putting reserves back on course, at least initially. As observed above, note balances in excess of the specified maxima will be automatically transferred immediately to the Reserve Banks. Since these ceilings will vary among depositaries and will be approached at different times by different depositaries, experience also will be needed in monitoring the pattern of these flows and their reserve impact. It is hoped that this would be only a transitory impediment to reserve management since, from the Federal Reserve's standpoint, the success of the program will be diminished or negated if the present difficulties in managing reserves are merely supplanted by other complications.

No doubt, there will be some uncertainties during the transition period, while the Treasury, the Federal Reserve, and the depositaries gain experience with the new program. In recognition of this, the Treasury plans to follow a gradual approach in reducing its balances at the Reserve Banks.

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