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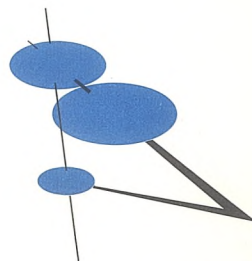
FEDERAL RESERVE BANK OF PHILADELPHIA

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January 1969

Mechanics of Management

... A decade of deficits has forced the Treasury's debt managers to face a number of problems in meeting their borrowing needs.

Annals of the Decade

... Financing difficulties have arisen in each period as the nation has moved from recession to full employment to wartime boom.

Editor: William Burke

Managing the Debt of the '60s

I. Mechanics of Management

While the enactment last June of the income-tax surcharge may have caused some households to make undesired changes in spending and saving plans, there is at least one group of Americans for whom, as a result, life promises to become easier: the Treasury debt managers. With a Federal budget surplus now officially in prospect for the current fiscal year (as compared with the postwar record deficit of fiscal 1968), the task of financing government expenditures will be eased quite considerably.

However, the Treasury is not free from deficits as such. Under the tax system prevailing in this country, a seasonal fiscal cycle must be handled each year. Because spending is fairly evenly spread over the year while tax collections are not, there is regularly a deficit in the first half of the fiscal year (July-December) and a surplus in the second (January-June). The regularity and short-run nature of this problem make it a relatively simple one for the Treasury to handle, but the financing arrangements must nonetheless be made.

Borrowing money

The Treasury can obtain the funds for redeeming maturing securities and for meeting shortfalls in revenues in several different ways: by using up previously accumulated cash balances; by seigniorage; or by borrowing.

Seigniorage—Treasury absorption of the difference between the circulating value of coins and their minting and bullion costs—is a very limited device, given our system of

currency and coinage, and does not play an important role. Ordinarily, cash balances represent a much larger financial resource for any given moment, but these are of limited size and can only be depended upon for short-run adjustment. The bulk of Treasury deficit financing must be accomplished through borrowing.

The Federal government borrows funds through a variety of channels—through the Treasury itself and through a number of semi-autonomous agencies. Treasury borrowing represents the largest part, so attention is focused here on that type of borrowing rather than on flotations by Federal agencies.

The Treasury sells a number of debt instruments—some marketable and some not. Savings bonds are a prime example of instruments which the Government stands ready to redeem rather than permit to be negotiated in a market. At the end of June 1968, outstandings of such nonmarketable issues totaled \$51.9 billion. Savings bonds have not played an important role in Treasury financing during recent years, however, as savers have been increasingly attracted to investments carrying higher yields (and more risk, in many cases).

Special issues to government agencies and trust funds are also nonmarketable and are a major source of funds. Technically, increases in special issues represent surpluses of trust funds administered by the Treasury rather than net cash borrowings of the Treasury. Nevertheless, the \$59.5 billion of these issues outstanding last June does represent a lowered Treasury demand for borrowed funds from the general public.

Marketing debt

The source of most of the government's borrowed funds continues to be the sale of marketable bills, certificates of indebtedness, notes and bonds. Outstanding marketable issues totaled \$226.6 billion at the end of June 1968, of which \$91.1 billion were in Treasury bonds (typically maturing in over 5 years), \$64.4 billion were in bills (typically maturing in one year or less), and \$71.1 billion were in notes (typically maturing in 1 to 5 years). Most issues are sold directly to the public, but some are sold also to government agencies and trust funds.

Once the decision has been made to sell a marketable security, the debt managers must consider several complex questions: 1) whether to offer a discount issue (bills) or one with a fixed coupon yield; 2) what maturity to offer and, if a coupon issue, what yield; and 3) under what terms the offering should be made. Prevailing (and future) economic conditions, along with the limitations placed upon the range of possible actions by legal statutes, are the major determinants in the Treasury's deliberations.

Government officials sound out various advisory groups in the financial community in order to ascertain what sort of issue would be best received by various types of buyers, this knowledge being necessary because the

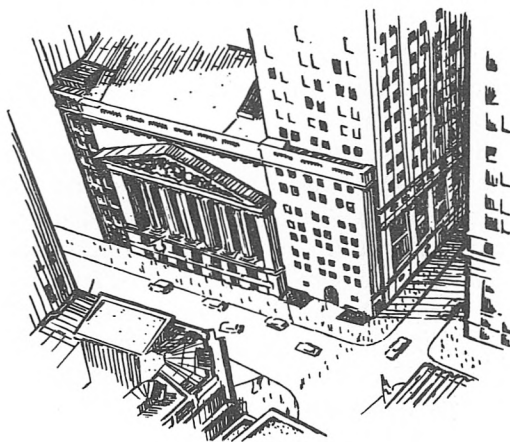
Treasury must compete with other borrowers in the money market for the funds of potential lenders. To be sure, the Treasury is in many ways a unique institution in the market—its obligations being immune to risk of default, for example—but the fact remains that other securities increasingly have proved effective competitors for the investor's dollar.

The yield and maturity of the issue are, of course, of primary importance. But these are not determined independently of other features of an offering—the entire package of price and non-price terms must be designed to conform with the objectives of the financing operation. The attractiveness of an issue in the primary market is greatly affected by such factors as the following: the deposit required with subscriptions (or with bids, if the issue is sold at auction); the limit, if any, put upon subscriptions from commercial banks; the allotment procedure; the terms of payment; the call features; and the tax characteristics. A brief examination of each of these will reveal the complexity of the debt manager's problem.

Deposit requirements

In all Treasury cash offerings, those tendering subscriptions or bids are required to put up deposits. Commercial banks are nearly always exempted from such requirements, but other lenders must deposit amounts that vary with the type of security offered.

For Treasury bills, trust companies and "responsible and recognized" securities dealers receive an exemption (along with banks), but all other bids must be accompanied by payment of two percent of the face amount of bills applied for or by an express guarantee of payment by an incorporated bank or trust company. For coupon securities the exemptions go to banks and, on many occasions, to certain preferred lenders such as states and pension funds; deposit requirements for other subscribers have varied during the last two decades from two percent on many note is-



sues to as high as 25 percent on some bond issues. (For one bond issue, the 3¼'s of 1985 sold in 1958, there were no exemptions and everyone was required to deposit 20 percent.)

The significance of the deposit requirements—especially for longer-term issues, which show wider price fluctuations in the secondary market—has to do with their effect on potential speculation. The percentages are varied from operation to operation in part to meet the varying likelihood of speculation. It would be difficult to gauge the effectiveness of this procedure, though some critics argue that deposit ratios normally are not high enough to prevent the invasion of speculative buyers. Deposit requirements are not, however, the total arsenal in the battle against disruptive speculation—correct pricing of an issue can play a major role in discouraging “free riders” and other like-minded traders.

When a coupon is considered more than ample and the expectation becomes widespread that the security will therefore quickly rise to a premium, the low deposit requirement is an invitation to speculators to subscribe to an issue. This may well have been the case with the 3¼'s of 1978-83 sold in 1953; the result then was great congestion in the secondary market as the issue moved out of weak hands.

The Treasury's efforts to prevent speculative activity are related to its attempt to place its debt in the hands of “permanent” investors. Thus, the deposit requirements are intended to increase the stability of the markets for Government securities, encouraging market confidence and resiliency and enhancing the Treasury's credit against the possibility of some future stress.

Commercial-bank limitations

Another manifestation of the desire to locate securities as early as possible in “per-

manent” hands is the limitation on commercial-bank subscriptions that usually accompanies coupon offerings. Commercial banks hold government securities as a secondary reserve; when demand for bank loans outruns available funds, the bank may sell off some of its portfolio of securities to replenish its reserves and permit the continued extension of loans. Thus, banks frequently tend to sell securities at those times when the increased demand for funds in the market for securities is driving bond prices down and interest rates up.

Consequently, bank management of securities portfolios often tends to increase cyclical variations in prices of governments. These activities, like speculative activities, may deter investors who are looking for a reliably liquid asset. The fewer the Treasury securities that originally move into commercial-bank holdings, the less the potential for this particular type of disruptive pressure in the markets. (Of course, if commercial banks are to operate with secondary reserves, any limitations by the Treasury on commercial-bank subscriptions merely shift this potential market pressure to other types of securities.)

As noted below, monetary-policy considerations also influence the Treasury to avoid financing through the commercial banks. These considerations, however, are frequently overridden by the advantages that accrue to the Treasury from the underwriting support of commercial banks, and special features are often added to an issue to attract commercial-bank interest.

Allotments

The allotment procedure followed in cash offerings also evidences the Treasury's desire to place debt with “permanent” investors. Because subscriptions can exceed the size of the issue in cash operations, a method of allotting the available securities is necessary—whereas, in exchange offerings, all sub-

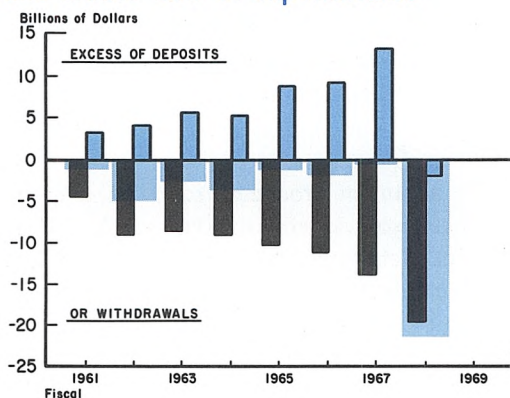
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scriptions of "rights" (that is, maturing securities) are accepted in full.

Through the years a fairly standard pattern of terms has evolved, with the Treasury rendering full allotments on all subscriptions under a certain amount (the amount varying with the maturity and size of the offering) and on subscriptions for coupon issues from certain preferred customers (such as states, public pension funds, government investment accounts and the Federal Reserve). The remainder of the issues are allotted on a fractional basis, with the allotment ratios sometimes differing for various classes of investors. "Savings-type" investors, such as pension funds, insurance companies, and mutual savings banks, are frequently assigned higher allotment ratios than commercial banks.

Though the allotment system may, indeed, work to distribute the new securities to firm holders, it still arouses occasional criticism, with some critics claiming that the system can actually encourage speculative activity. According to this argument, the uncertainty of allotments causes large investors to "pad" their subscriptions, guessing at what the ratio will be; when these expectations are unfulfilled, they often must enter the market to alter their holdings.

Seasonal fiscal pattern reflects large variation in tax collections and stable flow of expenditures



For instance, when ratios are lower than expected, investors may enter the secondary market to round out allotments; this can raise prices directly and also may encourage speculation. When ratios are higher than expected, the excess placed on the secondary market can lower prices unduly. In addition, of course, there may be some inconvenience to buyers who have to go into the secondary market.

Despite this argument, the market is seldom far off the mark in its projections of allotment ratios, as any perusal of the leading financial newsletters would testify. Moreover, for some issues, it is possible to enter non-competitive bids which will be filled at the average price determined by the auction.

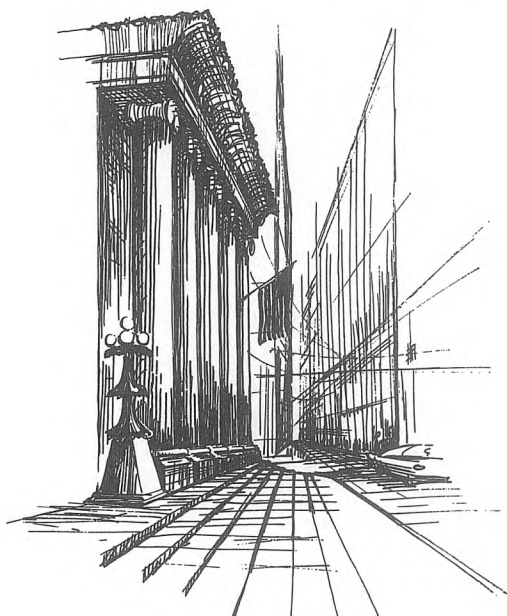
Terms of payment

Carrying further its distribution objectives, the Treasury varies from time to time the terms it specifies with regard to payment for securities—witness the provisions it has made for extended payment in several of its bond offerings over the last two decades. In each of these cases, installment plans were offered to individuals and/or savings-type buyers or to subscribers in general. The announced purpose of these provisions was to enable the Treasury to tap the savings of such investors as their funds accumulated over a period of several months.

One interesting payment feature is the permission—or lack thereof—for banks to credit their Treasury tax-and-loan (T & L) accounts. Depositories of such Treasury funds may be granted the right to pay for a portion or all of their allotment through this procedure. This is clearly an advantage to the commercial banks because it enables them to pay in credit instead of in Federal funds—at least until the Treasury calls its funds into the Federal Reserve. (Federal funds are the uncommitted reserves of commercial banks with the Federal Reserve.)

The tax-and-loan privilege can increase the attractiveness of an issue because a bank can increase its reserves by first subscribing to the issue and then selling part of its allotment. The reserves it thus receives may be put to income-earning uses until the T & L call requires their transfer to the Federal Reserve. A bank in this way can often take a capital loss on its purchase and subsequent sale and still make a profit on the total operation. Thus, even in tight-money periods, when the reserve position of the banking system is tight, it is possible for the Treasury to attract willing buyers through this device.

The tax-and-loan privilege may therefore be regarded as a means of finding initial buyers for Treasury securities at lower interest costs. Some evidence of such cost savings is provided by the stronger tendency on T & L-privilege issues than on other issues for lower prices to prevail in the secondary market than in the primary release. Further evidence is provided by the tendency for banks to outbid other competitors in tax-anticipation bill auctions, where the T&L privilege is available.



When the Treasury does not wish to rely on the informal underwriting provided by government securities dealers, it may occasionally choose to encourage commercial banks to act as the temporary underwriters of its cash offerings. The granting of tax-and-loan account privilege—usually for up to full payment—was the rule rather than the exception in the 1950's. During the current decade, however, the Treasury has been more selective. Because the creation of deposits by banks paying by credit may sometimes run counter to the general objectives of stabilization policy, the Treasury in each case must weigh the importance of the banks' underwriting support.

Call options

Call options are yet another feature which may increase or decrease the attractiveness of Treasury issues. Call options are of two types—those which permit the Treasury to call in the security for payment at some time before the final maturity date, and those which give such an option to the security holders.

The latter type has been offered on only one security sold for cash during the last two decades—the 4-percent notes of 1960-62. This must be considered an attractive feature for the buyer who is uncertain of being able to hold the security until final maturity, because it cuts down his risk of capital loss from a cyclical decline in securities prices. But how valuable the option might be is difficult to gauge, because of the difficulty of knowing the level of interest rates at the call date.

The Treasury call option works in an opposite manner; it has been historically common on some very long bond issues, but again with quite variable consequences. Ordinarily, an issue containing a call option, protecting the Treasury from being locked into relatively high rates if yields decline, would be less attractive to potential buyers than the same issue without the call option.

Two tax characteristics also merit brief discussion. One involves tax-anticipation securities, which usually mature about a week after a mid-month tax date, but may be submitted at par value for payment of income and profits taxes on the earlier date. These are, therefore, convenient abodes for the tax-destined funds of individuals and corporations, as well as a major support to the Treasury in its effort to even out its seasonal cash flows. Finally, there are the so-called "flower bonds," which are acceptable at par for estate-tax purposes. Deeply discounted bonds that carry this privilege are in special demand in the secondary market, but the strength of their impact on the primary market is hard to judge.

Maturity: basic feature

Basically, however, the Treasury concentrates on yield and maturity, even though it gives due consideration to all the other characteristics mentioned above. Given a certain set of economic conditions, the Treasury decides on a certain combination of price and non-price terms that is estimated to result in a successful sale—that is, one which meets with a fairly enthusiastic response from the public at a price reasonably close to the going rates in the market for the same maturity, and one which meets the Treasury's objective regarding maturity distribution.

Within tolerable expected-yield limits, the maturity is chosen to satisfy the Treasury's desired maturity structure—one that does not concentrate repayment obligations so heavily in a short period of time as to build in a difficult future financing problem for the Treasury. There are certain limitations, however, on the Treasury's freedom to select the maturities it desires. The archaic (1917) statutory ceiling of $4\frac{1}{4}$ percent on long-term Government issues is an anachronism in these days of 6-percent money, yet it has

effectively precluded the Treasury from selling new issues in, say, the ten-year maturity range on some occasions when such an extension of the debt would have been desirable. It has also stimulated the practice of refunding debt through the exchange of maturing issues for longer-term issues.

Though the Treasury might be able to get around the coupon-rate ceiling by selling new securities at a discount, it is loath to issue bonds at the large discounts necessary to bring a long-term bond up to what is, under present conditions, a competitive yield. The Treasury is not just another borrower in the market: its securities play a special role in the economy as a riskless abode for savings.

Some critics argue that the sale of long-term bonds at the large discounts necessary to bring a $4\frac{1}{4}$ -percent coupon up to a yield of, say, 6 percent could undermine investors' confidence; especially that of investors holding outstanding long-term issues. In fact, of course, holders of low-coupon bonds during high-interest periods are already aware of the heavy discount in the capital value of these assets; the quote sheets provide the market a daily reminder of this fact. Yet new issues continue to be floated successfully, and high yields—which should raise questions of credit-worthiness every bit as much as deep discounts—seem, thus far, to attract rather than repel investor interest.

Ease of selling

Another basic consideration in selecting a maturity for a new offering is the relative ease with which it can be sold, considering the current phase of the business cycle. Most apparent of the problems of this kind are the difficulties encountered in selling bonds, rather than bills, during expansionary periods when interest rates are rising—that is, when securities prices are falling—and when the Federal Reserve is attempting to maintain

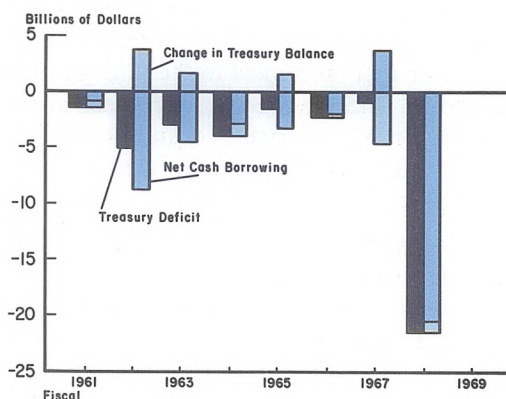
a tight-money atmosphere. Although an offering of long-terms can be sold when the market is tight by granting commercial banks the privilege of paying for securities through crediting of the Treasury's tax-and-loan account rather than through payment in Federal funds, the consequent growth in bank reserves may run counter to Federal Reserve policy.

In contrast, selling long-term securities during a particular phase of recessionary periods is a relatively simple matter. When interest rates are falling, marketable securities are attractive because of the potential for capital gains as prices rise. Many investors have loanable funds available at such times because negative expectations about business conditions deter them from holding equities.

Once, however, business conditions turn around and interest rates start moving up, bonds become less attractive than equities and short-term securities, and the Treasury finds it more difficult to undertake bond financing. This phenomenon has probably become more important in recent years because of the tendency for interest rates to make a fast turn-around at peaks and troughs of the business cycle, partly reflecting money marketeers' expectations of changes in Federal Reserve policy.

Short-term securities present minimal problems at any time. Though they are easier to sell when interest rates are falling or low, they can also be sold during boom periods because of the demand for liquid assets during tight-money periods. (Short-term securities may come into favor as a way of holding funds in anticipation of a reversal of the upward trend of interest rates; the short maturity of the Treasury bill, for example, makes it fairly immune to the risk of appreciable capital loss.) Moreover, the auction technique makes the process of bill financing easier, at all times, for the Treasury.

Heavy Treasury borrowing dominates fiscal '68—and most earlier years as well



Yield: basic feature

The yield which the market would produce on a proposed coupon security slated to mature on a given date can be estimated on the basis of the existing pattern of interest rates for issues of varying maturities close to that date, allowing for certain qualifying considerations. One such consideration is the positive or negative contribution of the security's other features to its overall attractiveness, and another is the extent to which the market for issues of that general maturity may be relatively saturated. In order to attract investors and assure the success of a flotation, issues are usually "sweetened" by offering a slightly higher yield than is currently prevailing in the market for similar securities.

A coupon issue might be priced to sell slightly above or below par, in order to permit closer pricing than can be achieved with the standard eighths of a percentage point. For bills, or for other securities sold at auction (such as two 1963 bond issues), the Treasury need not worry about selecting a price—the bidders do it themselves, and competitive pressures keep the yield close to the market.

Techniques of timing

During the 1960-61 period, two unique refinancing techniques were introduced by the Treasury—advance refunding and cash refunding. These innovations represented departures from the traditional exchange operation—the first, in respect to the timing of the refunding, and the second, in respect to the elimination of the “rights” feature of maturing securities as the exclusive means of obtaining newly offered issues.

The first of these innovations, advance refunding, involves the offer of a new (or reopened) and relatively longer maturity for outstanding securities that are still months or years from final maturity. (In October 1960, for example, 3½-percent bonds of 1980, 1990, and 1998 were offered for outstanding 2½-percent bonds first callable in 1962, 1963, and 1964.) The Treasury has a number of objectives in conducting an advance refunding, but the principal goals are the extension of the outstanding debt and the alteration of the debt's maturity, by opening up short or intermediate slots in the maturity structure in which the Treasury may place new issues in subsequent cash or exchange offerings.

The term “pre-refunding” eventually came into use in connection with advance refundings where the eligible issues for which new securities have been issued have less than one year to run to final maturity. On occasion, a regular exchange-refunding operation may include securities with a few months of remaining maturity along with the issues falling due immediately.

The second financing innovation, cash refunding, involves the selling of new securities in order to pay off maturing issues in such a

way as to diminish the danger of attrition associated with the traditional exchange technique. Attrition frequently results from the tendency of security holders to cash in all or part of their securities at maturity, no matter what the exchange offering includes. The Treasury has difficulty knowing precisely beforehand what proportion of any outstanding issue will be turned in for cash, and thus it has difficulty in projecting its cash needs adequately.

The success of an exchange offering depends on the mood of the market—on such factors as whether security prices are rising or falling—and on the distribution of the maturing issue among different types of investors. Any security as it nears its maturity date becomes a highly liquid short-term instrument, and thus it often moves into the hands of individuals who need or desire such instruments.

Since many of these individuals require cash at the time their holdings mature, the success of a straight exchange offering is sometimes sharply limited. Moreover, to the extent that other holders wish to stay on the liquid end of the maturity spectrum, the range of possible maturities the Treasury can successfully offer in an exchange is further limited. But by raising cash to pay off a maturing issue, the Treasury can approach a broader class of investors and perhaps choose from a greater range of maturities, as well as maintain better control over the maturity structure of the debt.

So much for the technical tailoring of a proposed issue to the market in which it is to be sold. The next section highlights some of the specific practical problems faced by debt managers during the deficit decade of the '60s.

II. Annals of the Decade

The nation's debt managers have faced a wide range of problems during this decade of uninterrupted growth in the American economy. Beginning in 1961, the nation has moved from recession to recovery to full employment, and then on to wartime boom and inflation. Each stage implies its own particular difficulties in the way of financing Federal deficits—and there has been a deficit in each of these years, building up to the postwar record deficit of fiscal 1968.

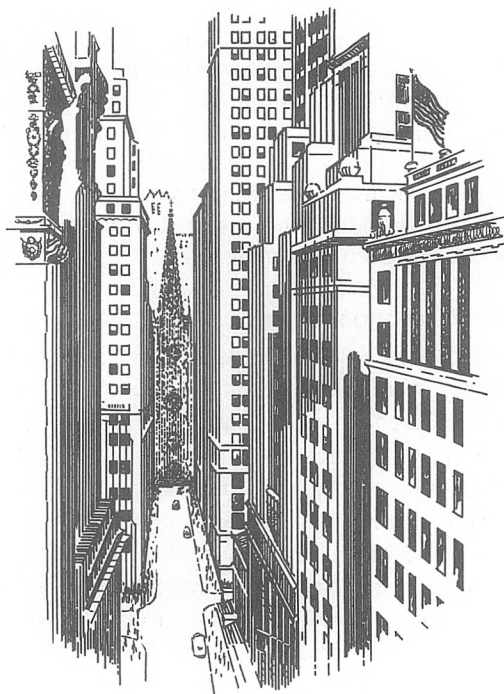
Initially the deficits were caused by automatic stabilizers acted upon by recessionary forces; with given tax rates Federal revenues declined as incomes fell away, while Federal expenditures increased for such commitments as unemployment compensation. Later the deficits were associated with a discretionary fiscal policy aimed at stimulating economic growth. Most recently, however, the Treasury's problems have been compounded by high government spending in a rapidly expanding economy which, however, failed until June 1968 to generate offsetting tax revenues.

Thus, the internal configuration of the economy has influenced the nature of the Treasury's task. Throughout the current decade, moreover, the urgent problems of the external balance of payments have also had a bearing on debt-management policy.

May 1960 saw the peak of the recovery from the 1957-58 recession and the commencement of the mildest of the postwar recessions. The debt managers' task was eased by the absence of inflationary pressures, but it was complicated by the existence of international financial pressures. Specifically, the movement of short-term capital abroad in response to the pull of relatively high

short-term interest rates in foreign money centers aggravated the U.S. balance-of-payments deficit.

In this situation, debt-management policy sought to maintain a supply of short-term instruments sufficient to keep domestic short-term interest rates high relative to those of our competitors in the international money market. The Federal Reserve's role meanwhile was to try to keep long-term rates relatively low, in order to stimulate capital investment in the domestic economy, while maintaining short-term interest rates at a high enough level to assist in the amelioration of our international payments difficulties.



FY '61: innovations

As a consequence of these "Operation Twist" policy specifications, the Treasury in 1961 concentrated its financing in the short end of the money market; most of the cash financing consisted of bills with maturities ranging from 3 to 12 months. Devotion to short-term money-market instruments was imperfect, however, as indicated by the resort, during the year, to three notes with maturities ranging up to two years.

The 1961 financings were of added importance because of the adoption of two financing innovations. The cash-refunding technique, described above, was introduced in early 1961, and has accounted for a large part of the Treasury's cash-financing operations ever since.

In June, the Treasury adopted the year's second innovation, the strip-of-bills technique, with one auction of an additional \$100 million of each of the outstanding regular weekly bills maturing August 3 through November 30. In this auction, unlike the regular weekly auction, banks were permitted to use tax-and-loan account credit in payment. By using this technique, the Treasury was able to raise a large amount of money quickly instead of through gradual additions to the regular bill series. In consequence, the strip-of-bills procedure was resorted to on several occasions during ensuing years.

FY '62: longer terms

In October, the precepts of "Operation Twist" were further diluted when the Treasury offered an additional \$2 billion of the 3¼-percent notes maturing May 15, 1963. This came on the heels of a change in Treasury financing plans because of the expectation that the usual seasonal cash surplus would not appear in the second half of fiscal 1962. So, instead of relying primarily on a June tax-anticipation bill, the Treasury was forced to do some of its financing in longer

maturities. The notes were sold at a slight discount from the original par price, and banks were allowed to make up 70 percent of payment through tax-and-loan account credit. The new notes were oversubscribed and, with a 37 percent allotment ratio, total allotments were also permitted to exceed by \$295 million the amount originally announced.

In January 1962, in an environment characterized by a monetary policy of decreasing ease, the Treasury made its first cash offering of a bond since April 1960. Response to this \$1-billion reopening of the 4s of 1969 was not overly enthusiastic, as the relatively high (60 percent) allotments indicate. Although the issue sold at a discount and carried an attractive tax-and-loan account privilege, potential buyers may well have been viewing the future likelihood of higher interest rates—already foreshadowed by a recent increase, to 4 percent, in permissible ceiling rates on savings deposits.

In the earlier (recession) situation, most pressures on policy had been in the direction of short-term financing. As the economy moved upward, however, the debt-management problem became more complicated. Anti-inflationary considerations emerged and led to the usual recommendation that financing of the deficit should be done through tapping the savings of the public rather than through the expansion of bank credit. On the other hand, the domestic expansionary part of Operation Twist's objectives precluded the Treasury from pushing ahead too far with long-term financing.

A balance had to be struck between the risk of feeding inflation by promoting overliquidity and the risk of stunting the expansion before the economy reached "full employment." Financing through longer-term securities would minimize the first but increase the second risk. Financing in the short end of the market—and thus avoiding competition for long-term funds that might other-

wise go into private investment—would minimize the second but increase the first risk. That alternative would also have the virtue of holding up short-term rates.

As a consequence of these somewhat conflicting considerations, the Treasury continued to raise new cash through the sale of short-term securities in an attempt to keep the pressure off long-term markets until the recovery progressed further. And even so, it tried to maintain the debt structure through the use of advance refunding and pre-refunding techniques.

FY '63: bond auctions

One of the major innovations during this period was the development of the auction method for selling bonds, which was attempted first in January and then in April 1963. The offerings involved competitive bids by underwriting groups which agreed to make a bona-fide public reoffering. Each group made a single bid for the total amount, and the

entire issue went to the highest bidder. In each case there was a choice offered as to coupon rate, but the award was based on the net yield.

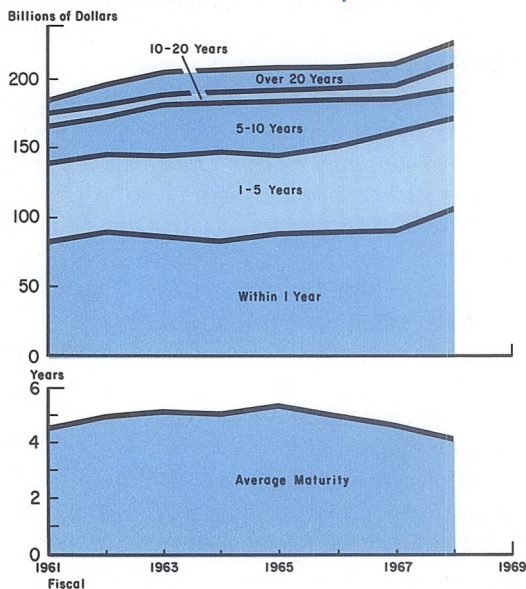
The sales were a great success from the Treasury's viewpoint of minimizing interest costs; the technique lent itself to the pricing of an issue very close to the state of the market. On the other hand, the two issues met considerably different receptions when reoffered to the public. The first issue was picked up immediately and went to a premium of more than $\frac{3}{8}$ point; the second issue came into a somewhat unsettled market and some of the underwriting partners had difficulties disposing of their allotments at the original resale price. Thus the underwriter-auction method did not turn out to be quite the optimal solution to the Treasury's continuing problem of issuing securities.

FY '64: debt lengthening

The money-managers' policy objectives in fiscal 1964 were roughly the same as in the previous year: to finance the deficit in a non-inflationary manner while keeping the economy expanding toward "full employment" and, at the same time, while keeping short-term rates competitive with those abroad so as to prevent the outflow of volatile funds. The urgency of the payments constraint was evidenced by the July 1963 discount-rate increase, which was aimed primarily at stemming the outflow of short-term capital—and more directly, by the adoption of the interest-equalization tax. Yet, Administration pronouncements that the line would be held on long-term interest rates evidenced a concurrent attempt to wrangle both horns of the dilemma.

During fiscal 1964, net cash borrowings by the Treasury amounted to \$3.9 billion—a marked decline from the performance of the two preceding fiscal years. Once again, however, the emphasis was on financing through regular bill issues: during the year, regular

Average maturity of debt drops during Vietnam period, with financing heaviest in short end of spectrum



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weekly and one-year bill maturities rose by \$3.5 billion, and \$2.5 billion of that increase occurred in one-year offerings as these bills moved to a monthly schedule from their former quarterly dates. By this step and by avoiding one-year coupon issues, debt managers were able to put more of the one-year debt on an easily-handled rollover basis.

The enlargement of bill issues — and the expansion of the national economy—helped hold up the short-term interest rate during most of the year, despite the heavy reduction of outstanding issues (other than bills) maturing within twelve months. Indeed, to avoid over-liquidity in the economy, the Treasury reduced such issues by \$7.4 billion and thus brought about a net decline in the total marketable debt in this maturity range. Pre-refundings were used to this end; in two separate operations, holders of \$5.9 billion in issues due within a year accepted pre-refunding offers of issues ranging in maturity from 5 years 2 months to over 30 years.

FY '65: more advance refundings

During 1964 and 1965, the balance of payments showed signs of improvement and the economy, under the stimulus of the 1964 tax reductions, moved to its interim goal of 4-percent unemployment. Yet, with the approach to “full employment,” the inflationary tendencies of the economy became more pronounced and interest rates began to rise more rapidly. Then, of course, the Vietnam war began to exert a major impact on financial markets by late 1965.

During fiscal 1965, long-term securities became increasingly difficult to sell as interest rates rose to levels that made the 4¼-percent statutory limit an effective deterrent to bond offerings at par. This forced the Treasury to rely on exchange-refunding operations in its efforts to maintain the debt structure—and in this it was fairly successful. Each of the two major advance-refunding operations (July 1964 and January 1965) placed large

amounts of debt in long-term sectors. At the same time, a substantial increase occurred in the within-one-year category, while an even more substantial decline took place in the one-to-five year class.

FY '66: escalation impact

Treasury objectives were re-weighed in mid-1965 as the Vietnam conflict became the main influence on the economic climate. Interest rates began to climb, and budget deficits began to expand, with increasing rapidity. The Treasury was forced to modify its debt-lengthening goals, and Operation Twist ceased to be a functioning policy as “conditions” came to rule actions. The aim of the debt managers came to be that of selling longs whenever possible—but this was simply not possible.

In fiscal 1966 and later, Treasury bills increasingly became the mainstay of the cash-raising process. Previously this was a matter of choice, but now it was a matter of necessity: “In the period prior to June 1965 Treasury bill issues were increased in part to keep U.S. short-term rates competitive with those abroad, but during fiscal year 1966 the bill market was used because this area could most readily absorb the added borrowing.” (*Treasury Annual Report*)

The difficulties involved in selling longer-term debt instruments went beyond the booming private demands for funds, since agency issues also competed with Treasury issues for available financing. During the last half of fiscal 1966, Federal agencies borrowed over \$5 billion in new money. These obligations, many of which had fairly short maturities, were able to draw off a substantial amount of investment funds, especially since they could boast both attractive yields and a minimum of risk.

Net cash borrowing by the Treasury during fiscal 1966, totalling \$2.6 billion, was down to its lowest level since 1961, with \$1.3 billion in new cash being raised by additions

to regular weekly Treasury bill sales and most of the remainder being raised by tax-anticipation bills (TABs). In order to attract commercial-bank buyers in an uncertain market, the Treasury allowed them to make full payment for TABs in tax-and-loan account credit. The Treasury thus obtained some savings in the form of lower interest rates, but at the cost of furious competition for Treasury deposits in a tightening monetary environment.

Two short-term cash offerings were made in this period, one involving an 18-month, 4¼-percent note and the other involving a 10-month, 4¾-percent certificate with tax-and-loan account privilege. The strong reception accorded the latter attests again to the importance of the T&L privilege during periods of monetary restraint and rising interest rates.

The note offering (November 1965), which was conducted to pay off \$9.7 billion of maturing securities, utilized the cash-refunding technique because of the fear that an exchange refunding might result in a high rate of attrition. Although Treasury-preferred lenders (such as states and pension funds) held a large proportion of the maturing issues, the new offering came to market just at a time when business was vigorously expanding and interest rates were trending sharply upward.

This 4¼-percent coupon issue was sold at a discount to yield 4.37 percent—roughly 10 basis points above current market yields and the highest yield paid on a Treasury coupon security since 1960. Moreover, the Treasury offered to allot in full subscriptions up to \$200,000—an unusually high figure. With all that, the offering failed to elicit a vigorous subscription response. The allotment on the nonfavored subscriptions was 48 percent, a figure far higher than market expectations and unequalled or even closely approached in recent experience. As a result, the government market sagged until rescued by Federal Reserve purchases of the “when-issued” se-

curities. (“When-issued” trading consists of purchases and sales in advance for the delivery of securities after they are issued.)

The 10-month certificates of January 1966, in contrast, were sold with tax-and-loan account privilege granted for as much as full payment. The offering was small, \$1½ billion, and priced to yield 4.85 percent on a 4¾-percent coupon—and it received an enthusiastic response despite the uncertain tone of the market. Subscriptions totaled over \$10 billion and resulted in a 14½-percent allotment ratio with a \$50,000 cut-off on full allotments.

Despite the difference between a \$9.7-billion 18-month offering yielding 4.37 percent and a \$1.5-billion 10-month offering yielding 4.85 percent, the dissimilarity of market response to the two issues was so evident as to suggest the overriding influence of the T&L-account privilege. On general grounds, the certificate offering should probably have evoked a much weaker response. The announcement of that offering mentioned future additional financings to meet the unexpected costs of Vietnam, thus confirming many fears of future deficits and inflationary pressures, and an upward trend in interest rates had already been signaled by the December rise in the discount rate. Though the market might have previously discounted all of these possibilities, the certificates’ better reception was probably due to more than just a stronger market.

FY '67: mixed trends

In fiscal 1967 (and 1968 as well), Treasury policy in essence continued along the lines set forth during fiscal 1966. A major part of the new cash needed to meet wartime deficits was raised through additions to regular three-month, six-month and one-year bill series, and through monthly auctions of a new nine-month series along with the usual one-year bills.

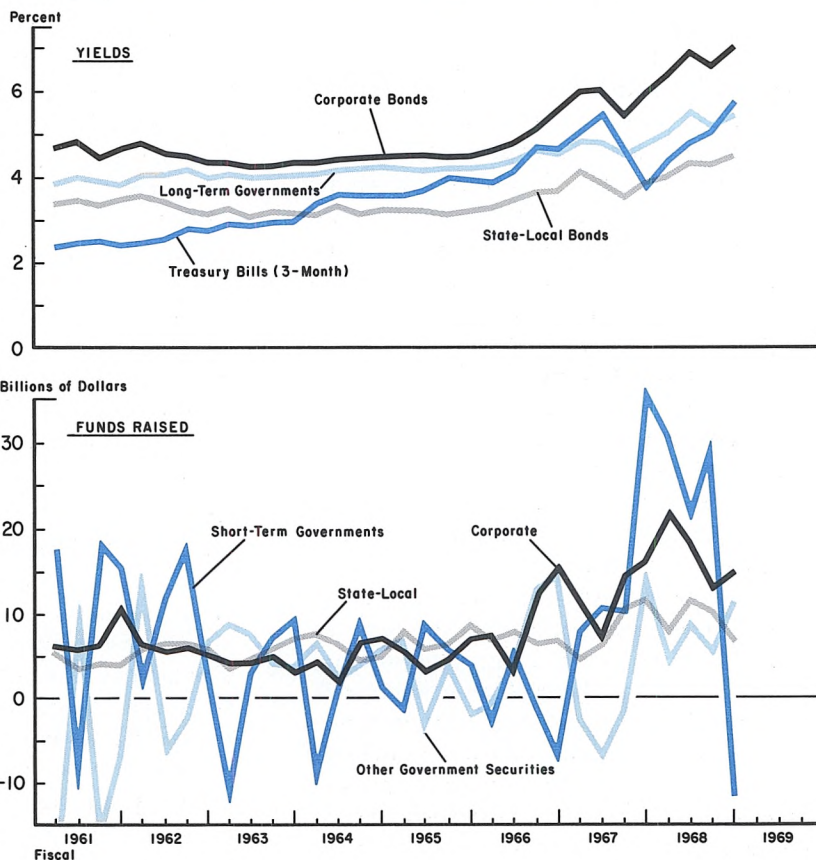
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Throughout this period, the Treasury forsook some of its aims with regard to the debt structure in order to get money whenever it possibly could, but meanwhile it tried to take maximum advantage of the course of short-term movements in interest rates and money-market conditions. With all securities markets in continual states of tumult, debt management was a difficult task at best.

Even so, fiscal 1967 financings were generally successful, reflecting the gradual easing in the money market after September. The Treasury decided to take advantage of this situation and, in October 1966, announced a cash refunding involving \$2.5 billion of 5½-percent 15-month notes and \$1.6 billion of 5¾-percent five-year notes. This offering met with an enthusiastic response, and oversubscription led to allotments of 10 percent on the five-year issue and 30 percent on the shorter security.

The cash refunding of February 1967 maturities was also successful. The offering again consisted of a 15-month note and a five-year note, but considerably more (\$7.5 billion) was to be raised, and considerably less was to be paid for the offering, with 4¾-percent coupon rates equalling effective yields of 4.85 percent for the short note and 4.84 percent for the long note. During this

Sharp increases in interest rates reflect intense pressures on security markets from Treasury, other borrowers



period when fears of current or impending recession were rife, money-market conditions had eased and the outlook for fixed-yield equities was bullish. The yields on the notes thus were considered generous, and, in fact, dips in the market just before the offering aroused fears that speculators might be attracted by the premium yield.

Despite the lack of tax-and-loan account privilege for either issue, the subscription was very heavy; allotments were 10 percent on the 15-month note and 7 percent on the five-year issue. The notes opened at substantial premiums in "when-issued" trading, and they remained above their original prices even

though the market was moving downward under the pressure of a heavy calendar of corporates and municipals.

This heavy pressure from corporate and municipal securities led to declining prices for longer-term governments from January 1967 on. Prices on new Treasury bills, on the other hand, did not begin to decline until the end of the fiscal year, after which time they began to move parallel to the prices of other Treasury issues. The six-month divergence in the direction of price movements of short- and long-term securities reflected, to an important degree, speculation in financial markets that tight money would return in the fall or winter. In order to provide a liquidity hedge against such a contingency, a considerable amount of long-term borrowing was undertaken in the spring months and warehoused temporarily in Treasury bills.

FY '68: record deficit

With the beginning of fiscal 1968, the Treasury stepped up its borrowing as it tried to deal with the heavier-than-expected costs of Vietnam and Congress' unwillingness to pass the President's requested tax increase. Facing a net transactions deficit of \$19.5 billion in July-December 1967, the Treasury found it necessary to go into the market with \$8.5 billion in tax-anticipation bills, with \$2.9 billion in additions to regular bill series, and with two note offerings for \$4.5 billion of new cash. Most of the rest of the transactions deficit was met by a moderate decrease in the Treasurer's account and by sales of \$2.5 billion of agency securities and participation certificates.

The fiscal '68 note offerings failed to meet with the success of the several preceding operations. With prices of governments in a general decline during this period, the Treasury could not sell any substantial quantity of intermediate-term notes — much less long-term bonds, which it undoubtedly would

have preferred to sell if the statutory interest-rate ceiling had permitted.

The \$9.6-billion refunding of August maturities was handled through a cash offering of a like amount of 15-month 5¼-percent notes, yielding 5.30 percent at the discounted price. The cash-refunding method was used—most probably out of the wish to avoid attrition, and also out of the hope that heavy subscriptions might take place, permitting an over-allotment to raise some net new cash.

Entering the market at the end of July, the Treasury received subscriptions totaling only \$15.7 billion. After full allotment of small subscriptions and exchanges for preferred lenders, the allotment ratio was 35 percent, near the high end of the range of market expectations, and the over-allotment was but \$300 million. The offering was followed immediately by a decline in prices of governments, including the new issue.

The 3½-year 5¾-percent notes offered later in August to raise \$2.5 billion in new cash were even less successful. Though banks had the privilege of paying for the securities through tax-and-loan account credit, subscriptions were not heavy and a 38-percent allotment resulted. This issue also moved quickly to a small discount. Here the T&L privilege proved to be only a limited enticement because the funds were not expected to remain long with the banks; even so, commercial banks still became the major subscribers, as the notes seemed to be priced sufficiently below the market to permit profitable underwriting.

The November 1967 refunding of \$10.2 billion in securities would have greatly tested the ingenuity of the debt managers, faced as they were with a descending trend in market prices, even if they had not needed more new cash. They decided on a cash offering because it could be geared to raise the additional funds required and, as usual, because it

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would avoid attrition. Two notes were offered: a 15-month \$10.7-billion issue carrying a 5½-percent coupon, and a unique seven-year \$1.5-billion note with a 5¾-percent coupon.

The latter was the first note issued under recently approved legislation extending the "note" range up to seven years, thus avoiding the continued ban against sales of "bonds" with coupon rates greater than 4¼ percent. Though the amount involved was small, it represented the Treasury's first effort in some time at reversing the shortening trend of the debt structure. But with this issue, as with the August 1967 offering, it was not possible to offer tax-and-loan privilege due to the refunding character of the operation.

The seven-year note attracted considerable speculative interest due to its novelty and to its 5¾-percent coupon. The attractiveness of this high rate created fears that the issue might draw substantial funds out of savings institutions — and thereby weaken the residential-construction industry, which is heavily dependent on savings institutions for mortgage financing. But the generally negative tone of the market eventually prevailed, following allotments of 36 percent on the short note and 7½ percent on the long one, and the securities fell to significant discounts in when-issued trading. In fact, the government market sagged in all maturity sectors

during November, largely because of the tightening monetary policy necessitated by the British devaluation.

The market rallied from the mid-November lows until mid-January, when it began a zig-zag, slightly downward pattern. During this brief period of relative stability, the Treasury made an exchange offering of \$5.1 billion of another 5¾-percent, 7-year note, and attempted to meet new cash needs by issuing \$4 billion of 15-month, 5½-percent notes, along with almost \$1 billion obtained from additions to weekly and monthly bill series. This stability proved all too ephemeral, however, in the light of the nation's domestic and international problems, including the problem of a burgeoning Federal deficit.

The 5½-percent notes issued in February carried 100-percent tax-and-loan privilege, thus stimulating commercial-bank underwriting of the issue. The privilege was worth perhaps 15 basis points of yield for the average bank, and probably more than that for smaller banks, with their lower reserve requirements and longer periods of holding deposits. The 39-percent allotment on subscriptions exceeding \$200,000 was generally in line with expectations. Moreover, the issue maintained its price in the after-market — which prevails after the security is issued and while underwriters are moving their inventories into the hands of more permanent investors.

Considering the difficult economic environment, and considering that this was the largest new cash-financing operation in the coupon market in over a decade, the offering was actually quite successful. It failed to meet the objectives of lengthening the structure of the debt and curbing the liquidity of the economy, but under the circumstances, the Treasury probably had no alternative.

A cash financing in May, like the one in February, was conducted in conjunction with



a 7-year exchange refunding, this time for \$6.7 billion at 6 percent. In this cash financing, \$3 billion of 15-month notes were offered with a 6-percent coupon, reflecting the February-to-May downtrend in prices of governments. The yield was generous in comparison with the market-yield curve, and an additional attraction was the 100-percent tax-and-loan privilege, but all this seemed necessary in light of the many uncertainties facing the money market.

Oversubscription was heavier this time, yielding a 28-percent allotment on subscriptions exceeding \$100,000, and this permitted a \$366-million overallotment as compared with the \$277-million overallotment in February. Still, the issue's reception in a market

affected by war and surtax uncertainties gave a mixed picture: the security traded at a slight discount on a when-issued basis and fell further immediately after issuance.

The Treasury's additional cash needs during the last quarter of fiscal 1968 were met through \$2.1 billion of additions to weekly and monthly bill series. Thus, for the year as a whole, outstandings in the under-one-year category jumped by \$16.8 billion—the largest such increase since fiscal 1953. Not surprisingly, then, the average length of the debt dropped to four years and two months at the end of this period, as compared with five years and four months at the end of fiscal 1965, the high-point for this decade.

Michael Prell

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Single and group subscriptions to the *Monthly Review* are available on request from the Administrative Service Department, Federal Reserve Bank of San Francisco, 400 Sansome Street, San Francisco, California 94120

Credit—and Credit Cards

Credit-card activity continues to increase throughout the nation, but the West still dominates the field, just as it has from the very outset. The booklet, *Credit—and Credit Cards*, reviews some of the recent developments in this rapidly moving field, in a revised version of material which first appeared in the September 1968 *Monthly Review*.

Copies of this publication are available upon request from the Administrative Services Department, Federal Reserve Bank of San Francisco, San Francisco, California 94120.

Western Digest

Rising Interest Rates

The Federal Reserve Bank of San Francisco, along with the other eleven Reserve banks, raised its discount rate from $5\frac{1}{4}$ to $5\frac{1}{2}$ percent during the week of December 16. The Federal Reserve Board approved the increase "in recognition of the advances that have taken place in other market interest rates in recent months and also in light of the resurgence in inflationary expectations that is impeding the restoration of economic stability." . . . Hard on the heels of the Federal Reserve action, the nation's major commercial banks increased their prime lending rate from $6\frac{1}{2}$ to $6\frac{3}{4}$ percent. Then, in early January, the banks again raised their rate to prime commercial borrowers, this time to 7 percent. They attributed this increase to the heavy borrowing demand of business and consumers, as well as the rapidly rising cost of funds to the banks.

Falling Aerospace Employment

The employment decline in the Western aerospace industry continued during the fall months. Payroll employment in the regional industry totaled 718,000 at the end of November—down 40,000 since the beginning of 1968. . . . Sluggish activity in the industry reflected the 3 percent decline, to \$7.8 billion, in the volume of military contracts awarded to District firms during fiscal 1968. Contract awards for missiles and space systems actually rose during this period, primarily for new research-and-development work, but these gains were more than offset by cutbacks in electronics and communication work and in shipbuilding.

Zooming Lumber Prices

Lumber prices continued to rise sharply in December, mostly in response to the heavy demand from wholesalers for 1969 construction needs. Price quotations for ponderosa pine and Douglas fir were up 40 to 50 percent above year-ago figures. . . . At this point, the National Association of Homebuilders asked the Presidential Committee on Price Stability to study the situation "with a view toward restoring lower price levels." In addition, two major lumber firms attempted to roll back some of the recently-posted price increases, but their efforts were frustrated as the rest of the industry continued to quote higher prices.

Winter Crop Damage

Falling temperatures caused moderate-to-heavy damage to the District's citrus and winter vegetable crops in late December. The crop damage brought about some strengthening in prices, which had tended to weaken earlier in the face of potential bumper crops. . . . Severe late-January storms also caused some damage to California crop areas, but the destruction was concentrated in urban areas, with 90 deaths and \$35 million in property damage reported.