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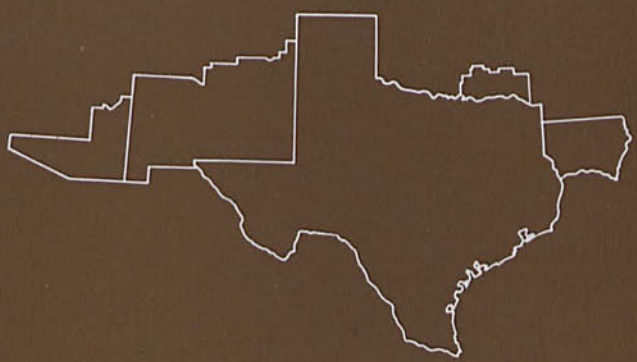


november 1970

FEDERAL RESERVE
BANK OF DALLAS

contents

The public debt: Changes in its maturity structure

The Treasury went into the market late last month with new issues to refinance nearly $8 billion in maturing Government securities. The operation was the twenty-first consecutive quarterly refunding in which no new marketable Treasury bonds could be offered to investors. The last time bonds were offered — a reopened issue of 4-percent, 6½-year obligations — was in August 1965.[1]

The reason for this long dry spell is generally known: the maximum permissible interest rate on marketable Treasury bonds (coupon securities with long-term maturities) is 4¼ percent — a statutory limitation imposed during World War I. Since rates on Treasury notes, bills, and other short-term marketable obligations have no such ceilings and market rates on high-grade bonds have been well above the legal limit on Treasury bonds since mid-1965, the Government has had to refund maturing debt with short- and intermediate-term obligations.

The same restriction applies, of course, to Treasury borrowings of new money, and this type of borrowing has been especially heavy since 1965. With the rapid increase in Government spending, especially on the war in Vietnam, Federal budget deficits for the fiscal years 1966 through 1970 totaled approximately $37 billion (net of a modest budget surplus in fiscal 1969). Most of the deficiency has been met by expanding issues of tax anticipation bills and short-term notes and enlarging weekly and monthly offerings of Treasury bills.

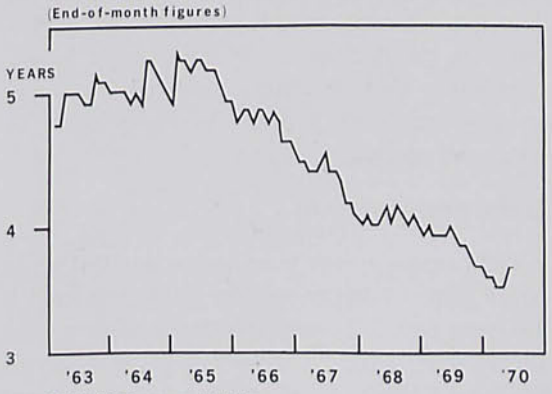
[1] At the time of the August 1965 refunding, these bonds were only three and a half years from final maturity. The Treasury has not issued marketable bonds maturing in more than five years since May 1965.

Obviously, the Treasury is not alone with such problems. High and rising interest rates have greatly impaired the availability of funds to several important classes of long-term borrowers, particularly those, like the Treasury, that are limited by law as to the rates they can pay.

Borrowers in mortgage and municipal markets make good examples. Borrowing to finance residential construction has been especially vulnerable to high interest costs for the past four or five years, partly because of rate ceilings on Government-insured home mortgages. Similarly, many state and local governments are limited in the rate of interest they can legally pay. When market rates rise above these ceilings, municipal governments are often unable to market their bonds.

The impact on the Treasury has been even more pronounced, however. The nation's largest

Average maturity of marketable public debt trends downward after mid-1965



SOURCE: Treasury Bulletin.

borrower, it has literally been shut out of the market for long-term bonds since mid-1965.

Sustained heavy borrowing in the short end of the maturity spectrum has brought a significant shift in the term structure of the nation's marketable public debt. The average time to maturity of the marketable debt has dropped a third since 1965, falling from five years and five months to about three years and six months. Where ten years ago less than 40 percent of the marketable debt was due within a year, the proportion reached more than 50 percent in 1970 before dropping seasonally to just over 45 percent on June 30.

Meanwhile, obligations maturing in more than five years declined from 31 percent of the marketable debt in June 1965 to 16 percent at the end of fiscal 1970. Five- to ten-year issues dropped more than half, and issues maturing in 20 years or over dropped about a third.

These changes wiped out almost all the progress made in the early 1960's in lengthening the maturity structure of the marketable public debt, causing a resumption of trends evident from the late 1940's through the 1950's. The trend causes considerable concern among some observers, who see the shift to shorter maturities as adding to inflationary pressures and, therefore, complicating fiscal and monetary efforts to control inflation. Others, however, while possibly conceding that the declining maturity structure may increase the problems of debt management, largely discount the importance of the decline as an inflationary factor, contending that its effects are probably small or only temporary and can be easily offset by fiscal and monetary measures.

Debt management . . .

Debt management is an enormous task even under fairly stable economic conditions, and it has been especially so under the conditions prevailing since 1965. The volume of new securities issued by the Treasury every year to meet its cash needs and refund maturing obligations amounts to tens of billions of dollars, far exceeding the annual borrowings of the nation's corporations and state and local governments.

Even when the Federal Government runs a budgetary surplus, seasonal shortages of cash — usually in the first half of the fiscal year (July through December) — often make sizable borrowings necessary. Although the Federal budget showed a $3.2 billion surplus in fiscal 1969, for example, temporary cash needs in the first half of the year forced the Treasury to borrow a net of around $11 billion to meet current requirements.

Raising new money to finance budget deficits or meet temporary cash needs is only a small part of debt management, however. The largest part involves the refinancing of securities already issued as part of the gross Federal debt outstanding. The debt now totals more than $381 billion.

In fiscal 1970, for example, the Treasury exchanged or redeemed for cash about $37 billion in maturing marketable notes and bonds. In addition, every Monday it refinanced about $3 billion of maturing three-month and six-month bills and once a month it rolled over another $1.5 billion or more of expiring nine-month and one-year bills.

Debt management is further complicated by the importance of Treasury decisions to the rest of the economy. Because the Treasury can ordinarily shift vast amounts of debt from short- to intermediate- to long-term obligations, its decisions to change the maturity composition of the public debt can exert powerful impacts on the cost and amount of funds available in various credit markets.

Also, Government obligations make up a large part of the assets of financial institutions, and short-term Government securities (mostly Treasury bills) are a key medium through which commercial banks and other institutions

adjust their cash positions. Treasury financing operations, therefore, affect the liquidity of the debt held by these investor groups and have a profound influence on the cost and availability of credit and, hence, private decisions to spend.

. . . *its basic goals* . . .

Recognizing the importance of debt management to the economy overall, the Treasury has sought to coordinate its debt management efforts with monetary and fiscal policy in achieving national economic goals. The most important of these goals have been to promote —

- Orderly growth without inflation
- Maximum employment of resources
- Equilibrium in the nation's balance of payments

Other objectives related more immediately to debt management have been to achieve a balanced debt structure, help accommodate the liquidity needs of the economy, hold down borrowing costs, avoid inflationary short-term borrowing (particularly through the commercial banking system), and retain long-term investors as holders of debt.

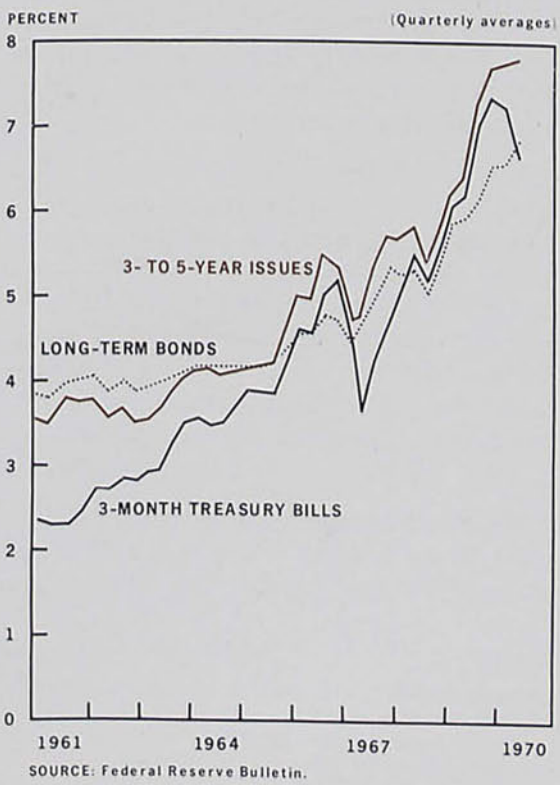
As the postwar years have shown, these objectives are not always mutually consistent. Compromises have often had to be made.

The rapid rise of debt issued by Federal and federally sponsored agencies since 1965 has caused the Treasury to add still another goal to its basic objectives: the coordination of debt management operations with Federal and federally sponsored agency financings. As credit conditions tightened in the late 1960's, many Federal lending agencies — particularly those concerned with housing and farming — were confronted with sharp increases in demand for credit from borrowers that could not easily obtain funds from commercial banks and other private sources. As a result of this increase in demand, debt issued by Federal and federally sponsored lending agencies has tripled since mid-1965, reaching almost $47 billion by the end of fiscal 1970. Because these agencies have become major competitors for short-term investment funds — offering obligations with attractive yields and little risk — the coordination of Treasury operations with increasingly frequent and growing agency debt offerings has become a major consideration in Treasury planning of financings.

. . . *and basic tools*

Making marginal changes in the structure of the marketable interest-bearing public debt is the principal tool of debt managers in achieving their goals. At $232.6 billion in June 1970, marketable obligations accounted for 63 percent of all interest-bearing public debt.

Rising market interest rates on key Government securities continued to reach new highs



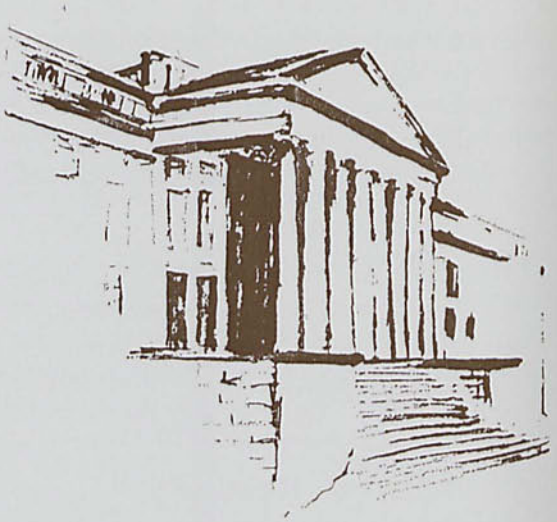
SOURCE: Federal Reserve Bulletin.

The term *marketable* implies that these securities can be bought or sold in the open market anytime after their sale by the Treasury. This, together with the safety of the securities and the ease of disposing of them, makes marketable obligations attractive to a variety of investors — commercial banks, nonfinancial corporations, municipal governments, thrift institutions, foreign governments, and individuals.[2] The marketable debt has increased substantially since 1965. Although there was a slight (less than $500 million) decline in fiscal 1969, this part of the debt showed a net gain of almost $24 billion, or 11.5 percent, through June 1970.

The rest of the debt consists of interest-bearing issues that cannot be marketed, plus a very small amount of matured debt that does not bear interest. Nonmarketable interest-bearing debt, which totaled $136 billion on June 30, is about evenly divided between special issues to Government accounts and agencies, on the one hand, and savings bonds and investment series bonds held by individuals and private institutions, on the other, plus a small residual of primarily foreign series issues.

A major source of funds, especially when capital markets are congested, special issues to Government accounts and agencies have increased almost 60 percent since 1965 — to a total of $76 billion at the end of fiscal 1970. By contrast, with investors attracted increasingly to investments with higher rates of return, nonmarketable public issues have increased less than 8 percent over the five-year period — to a total of $60 billion at the end of fiscal 1970.

The principal types of marketable securities issued by the Treasury are bills, certificates of indebtedness, notes, and (when rate ceilings



permit) bonds. The regular bill series issued weekly or monthly and sold at auction through Federal Reserve banks are probably the best known marketable Treasury obligations. Authorized by Congress in 1929, these money market instruments are offered in six denominations ranging from $10,000 to $1,000,000 and in four maturities — three months, six months, nine months, and a year.

There are also periodic offerings of tax anticipation bills and "strip" bills. Initiated in 1951, tax anticipation bills are used to attract the funds corporations usually accumulate for income tax payments. These bills mature the week after quarterly tax-payment dates, but the Government accepts them at full maturity value for payment of income taxes.

First introduced in June 1961, strip bills are the same as regular Treasury bills except that their maturity dates are staggered. Offered as a single package of equal additions to previous issues, they provide buyers with a variety of maturities. Regardless of their maturity, all Treasury bills are sold on a discount basis through competitive bidding. The return to the investor is the difference between the purchase price and the face value of the bill.

[2] New marketable issues are distributed through the Federal Reserve, which serves as the Government's fiscal agent. Securities already issued are traded over the counter by private dealers.

By contrast, Treasury certificates, notes, and bonds carry fixed coupons, and interest is paid regularly at intervals specified by the Treasury. Certificates of indebtedness must mature within a year. Although a few certificates were issued in early 1966, this type instrument was largely supplanted after 1963 by tax bills and one-year Treasury bills. None are outstanding today.

Maturities of Treasury notes vary from one to seven years. Issued in seven denominations ranging from $10,000 to $1,000,000, they are usually sold only in quarterly offerings.

Treasury bonds are coupon securities that can bear any original maturity. Typically, however, they carry original maturities of more than five years and, on occasion, have carried maturities of up to 40 years.

Changes before 1960

Problems with the maturity structure of the debt are not new. Without continuing Treasury efforts to lengthen the debt, the average maturity of Government obligations invariably declines over time. But the recent sharp decline in the maturity structure represents somewhat more than just a resumption of previous trends. This decline has been one of the fastest for a five-year period since World War II.

Long-term bonds were used in most Treasury financings during World War II, with the result that more than half the marketable issues outstanding at the end of the war had maturities of more than five years. The floating debt (issues with less than a year to maturity) made up only about a third of the marketable debt.

From that high point, however, time and the continued redemption of war debt brought a steady decline in the proportion of bonds. Despite modest debt-lengthening operations in 1954, 1955, and 1958, the average maturity of the debt had been cut in half by 1960. Where less than half the debt at the end of the war was scheduled to mature in five years or less, almost 80 percent was in that category by the beginning of the 1960's. Most striking was the increase in the relative importance of intermediate-term issues bearing one- to five-year maturities. These issues increased from 13 percent of the marketable debt in 1946 to 40 percent in 1960.

AVERAGE MATURITY OF MARKETABLE INTEREST-BEARING PUBLIC DEBT IN SELECTED MONTHS

Date	Average maturity
June 1946	9 years, 1 month
June 1950	8 years, 2 months
September 1960	4 years, 2 months
January 1965	5 years, 5 months
April 1970	3 years, 6 months
June 1970	3 years, 8 months

SOURCE: Treasury Bulletin.

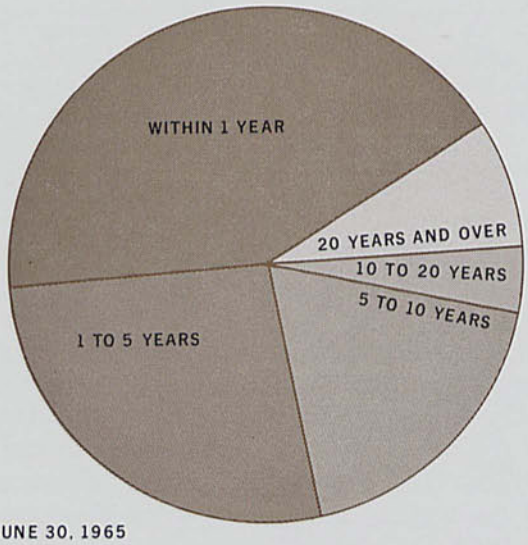
Advance refunding

The decline in debt maturity was temporarily reversed with the introduction of the *advance refunding* technique in June 1960. In advance refunding, the Treasury offered holders of certain outstanding notes and bonds not due to mature for several months or years the option of exchanging their holdings for new securities with longer maturities.[3]

Using this flexible technique, the Treasury carried out 13 advance refundings between June 1960 and August 1966. Almost $80 billion of marketable obligations was issued —

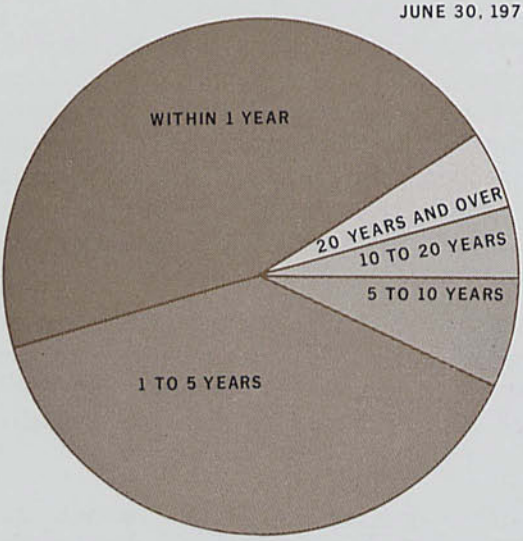
[3] Three types of advance refundings were used between June 1960 and August 1966. *Junior advance refundings* gave holders of Treasury securities maturing in one to five years the option of exchanging their holdings for securities maturing in more than five years. *Senior advance refundings* allowed holders of bonds maturing in five to 12 years to exchange their holdings for bonds maturing in 15 years or more. In *prerefunding* operations, holders of Government issues maturing in less than a year were allowed to exchange their holdings for securities with maturities of up to ten years. Most of the advance refunding operations after 1961 were combinations of these types.

Maturity of the public debt grows progressively shorter . . .



JUNE 30, 1965

JUNE 30, 1970



End of June	Within 1 year	1 to 5 years	5 to 10 years	10 to 20 years	20 years and over
1965	42.0%	26.9%	18.8%	4.0%	8.3%
1966	42.6	29.1	16.1	4.0	8.1
1967	42.6	33.9	11.6	4.0	8.0
1968	47.0	28.5	13.6	3.7	7.3
1969	46.0	27.8	15.4	3.7	7.2
1970	45.4	38.5	6.8	4.5	4.7

SOURCE: Treasury Bulletin.

about $25 billion of which had maturities of ten years or more. As a result, the average length of the marketable debt rose significantly, reaching a peak of five years and five months in January 1965. This average was 14 months longer than in May 1960. Meanwhile, the troublesome one- to five-year segment of the debt fell from about 40 percent of all marketable issues to less than 30 percent.

Tumultuous 1966-67

The benefits of advance refunding have been almost completely lost since the summer of 1965. The average maturity of the marketable debt, in fact, is now about nine months shorter than when advance refunding operations began in June 1960.

The average maturity of the debt fell fastest between mid-1965 and mid-1967, a period when private borrowers made record demands for funds, Federal agencies followed a heavy schedule of borrowing (especially in the last half of fiscal 1966), and intensification of the war in Vietnam combined to push up aggregate demand for funds, sending interest rates soaring and creating expectations that rates would go still higher. With the Treasury facing enlarged budget deficits, its need to maintain a balanced maturity structure was overshadowed by the compelling necessity to borrow wherever funds were available at rates it could legally pay.

New-money borrowings in fiscal 1966 and 1967 were confined almost entirely to tax anticipation bills and increases in weekly and monthly bill offerings. As a result of heavy net cash borrowings in the bill market, the total volume of bills outstanding rose $5 billion over the two-year period and, by the end of fiscal 1967, represented nearly 28 percent of total marketable issues.

In its refunding operations, the Treasury often had to make heavy allotments to commercial banks and other large buyers. In one operation, the May 1966 refunding, it suffered

the highest public attrition rate in any modern refunding. The proportion of maturing public-held issues not exchanged for new securities reached 46.5 percent.

The impact of time on coupon issues and heavy new-money borrowings in the bill market brought a substantial decline in debt maturity between mid-1965 and mid-1967. Marketable obligations due within five years rose from 69 percent of the marketable debt to more than 76 percent — a rise of $17 billion. Average debt maturity fell from five years and four months in June 1965 to four years and seven months in June 1967.

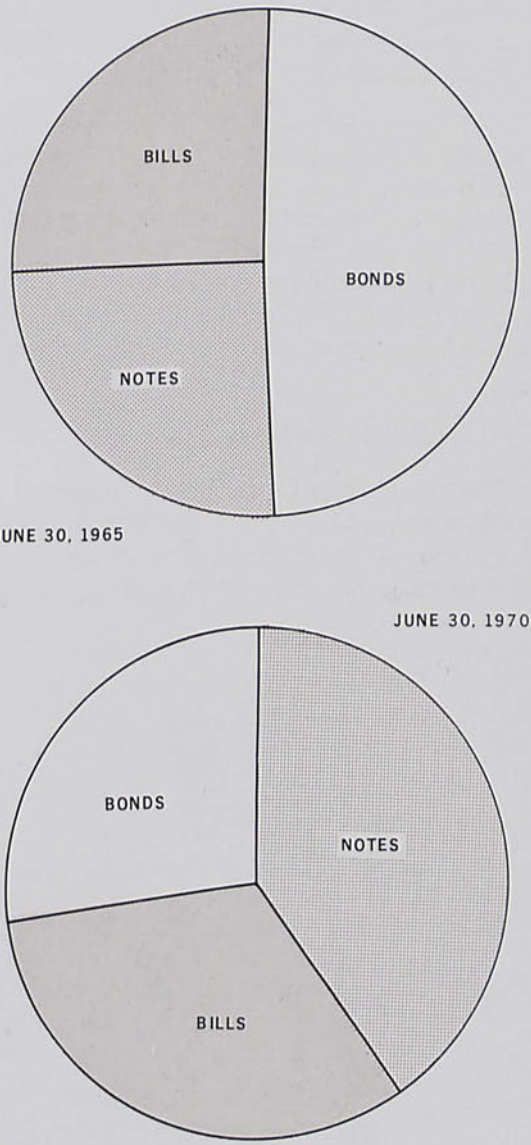
Record deficit of 1968

Near the end of fiscal 1967, in response to a request from the Treasury, Congress extended the maximum maturity on notes (which do not have a rate ceiling) from five to seven years. With more latitude in reaching potential investors, the Treasury has made extensive use of notes with six- and seven-year maturities. In fact, since November 1967, there has been one of these longer-term notes in every refunding except the one of August 1969. Through June 30, 1970, the Treasury had issued $39 billion of longer-term notes.

The additional leeway in offerings of Treasury notes came at a critical time — as debt managers entered fiscal 1968. Although the volume of maturing securities was fairly moderate, a record $25.2 billion budget deficit for fiscal 1968 caused the Treasury to expand its offerings in the money and capital markets at a time when demand pressures were already severe. Net cash borrowing by the Treasury totaled $20.5 billion that year. Most of this was raised through tax anticipation bills, additions to regular bill series, and three note offerings made in conjunction with the quarterly refundings of November 1967 and February and May 1968.

Despite the generally adverse market conditions, the Treasury made substantial efforts in

. . . as notes and bills account for rising proportion of the total



End of June	Bills	Certificates	Notes	Bonds
1965	25.7%	—	25.2%	49.1%
1966	26.3	0.8	24.2	48.7
1967	27.8	2.7	23.3	46.2
1968	28.4	—	31.4	40.2
1969	30.2	—	34.9	34.9
1970	32.7	—	40.2	27.1

SOURCE: Treasury Bulletin.

its fiscal 1968 refunding program to reverse the declining maturity structure of the debt. The seven-year notes, which attracted considerable speculative interest, were included in three quarterly refundings.

As a result of these efforts, marketable debt maturing in more than five years rose $6 billion. However, issues maturing in one year or less recorded the strongest advance since fiscal 1953, increasing almost $17 billion. And despite the issuance of the new longer-term notes, average maturity fell five months in fiscal 1968 to reach four years and two months by year-end.

Reduced borrowing needs

The period since June 1968 has presented a contrast to preceding years. At the outset, expectations of some moderation in economic growth and credit demands were given a boost by passage of the Revenue and Expenditure Control Act in June 1968. The new law imposed a 10-percent surcharge on taxable incomes and provided specific limitations on budget authority and outlays for fiscal 1969. In addition, projections of tax revenues and expenditures suggested the Federal budget would probably show a modest surplus in 1969 — the first in nine years.

Despite this apparent move toward fiscal restraint, however, demands for funds became increasingly heavy and, with the renewal of inflationary expectations, pushed interest rates to record levels in late 1969 as near-record amounts were borrowed in the credit markets. As in the past, to meet its seasonal cash needs, the Treasury relied heavily on offerings of tax anticipation bills and on increases in both regular weekly and longer-term bills. Securities carrying either six- or seven-year maturities were offered in all the major refundings of fiscal 1969 and in three of the quarterly refundings of fiscal 1970. Fairly subdued investor response to quarterly refundings resulted in moderate to substantial rates of attrition.

In the May 1970 refunding, which came on the heels of the Cambodian operation, the public exchanged almost 30 percent of the maturing issues for cash. More importantly, however, public subscriptions for an 18-month, 7¾-percent note offered for cash in conjunction with the May maturities barely exceeded the total offering, forcing the Treasury — for the first time in recent history — to make a 100-percent allotment on subscriptions.

The average length of the marketable debt continued to fall — from four years and two months in June 1968 to three years and six months in March and April 1970. It then rose seasonally by two months in May and June. Issues maturing in one to five years increased a net of $25 billion, while issues maturing in less than a year declined about $900 million. Marketable debt maturing in five to ten years

dropped massively, falling $15 billion, and bonds due in more than 20 years dropped from $16.6 billion outstanding to $11 billion.

The use of Treasury notes with six- and seven-year maturities has definitely slowed the rate of decline in the average maturity of the debt, even though the average has continued to fall. From June 1965 through October 1967, for example, the average maturity of the marketable debt dropped 14 months. But from then until June 1970, it fell only six months. The average, nevertheless, reached the lowest point in the postwar period — a drop of 20 months since June 1965.

Recomposition of the debt

Changes in the types of Treasury securities outstanding are almost as revealing as the changes in debt maturity. By the beginning of 1970, the marketable public debt was almost evenly divided between Treasury bills, notes, and bonds.

With the Treasury unable to roll over maturing bonds, the volume outstanding declined from slightly more than $100 billion in mid-1965 to $63 billion in June 1970 — a drop from nearly half the marketable issues in 1965 to less than 30 percent.

By contrast, Treasury notes, which totaled only $52.5 billion in June 1965, jumped to $93.5 billion by June 1970. This represented a shift from 25 percent of the marketable debt to more than 40 percent.

Treasury bills rose from less than $54 billion in June 1965 to almost $84 billion in March 1970. The volume then dipped to $76 billion in June, leaving bills to account for almost a third of all marketable obligations.

Bills have been the main source of new money raised by the Treasury since 1965. Issues of three-month bills, which averaged about $1.2 billion a week in fiscal 1965, were boosted to an average weekly level of $1.8 billion by June 1970. Six-month bills, which give the Treasury more borrowed funds than any other category of bills, were sold at an average of $1.3 billion a week in the last half of fiscal 1970, compared with $1.0 billion a week in 1965. (On August 27 this year, weekly offerings of six-month bills were raised to $1.4 billion.)

The Treasury also added a monthly cycle of nine-month bills. This addition, made in September 1966, amounted to $500 million. The size of this monthly offering has not changed, however, since the nine-month bills were introduced. By contrast, the regular series of one-year bills has been increased from $1.0 billion a month in 1965 to $1.2 billion in 1970.

In addition, the Treasury greatly expanded its periodic offerings of tax anticipation bills. While the average dollar volume of these bills showed wide variations with the ebb and flow of revenues, offerings of tax anticipation bills totaled $14.5 billion in fiscal 1970, compared with less than $6 billion in 1965.

The matter of inflation . . .

Those contending that the declining maturity structure of the debt adds to inflationary pressures cite two basic arguments. One is that as public holdings of short-term debt increase relative to holdings of longer-term obligations, the public feels more liquid and, as a result, increases its spending. Short-term Government securities, therefore, come to serve as substitutes for money holdings, depressing the demand for money and forcing market interest rates lower.

Furthermore, it is argued, if a large part of the short-term debt is held by commercial banks, these institutions are in a position to respond more quickly to private demands for bank credit and correspondingly less quickly to monetary restraint. This reasoning follows from the widespread banking practice of holding Government securities as a secondary reserve that

can be sold when the demand for bank loans outruns available funds.

The other argument relates to the impact of changes in debt maturity on the term structure of interest rates. If the Treasury replaces long-term bonds with shorter-term obligations, the initial effect is a tendency to lower long-term bond rates. By contrast, short-term interest rates tend to rise as the supply of short-term debt increases. If long-term rates have more impact on investment spending decisions than short-term rates, investment spending increases (on balance) and total demand for goods and services rises. If all this happens when the economy is near full employment, prices also advance.

There is no universal agreement on these points, however. Other observers contend that the effects of shortened maturities on interest rates are quickly eliminated by arbitrage as buyers and sellers shift their holdings between short- and long-term debt. Stressing the importance of expectations in the determination of relative interest rates, these observers say that while shifts in debt maturity may twist the structure of the market rates, the extent of the twisting is probably very little.

Moreover, since shortening the maturity of the debt tends to raise short-term interest rates and lower long-term rates, some investment expenditures are discouraged while others are encouraged. Thus, the net effect on investment decisions can be small, depending on the comparative responsiveness of decisions to long- and short-term interest rates.

While conceding a probably strong relationship between private spending and the level of liquidity in the economy as a whole, many observers question whether short-term Government debt is so much more liquid than long-term Government debt that marginal shifts in debt maturity produce significant changes in private spending. Some would argue that there is not enough difference between long- and short-term Government securities to make debt management an effective policy tool. They would add that the impact of changes in debt maturity can easily be offset by appropriate fiscal and monetary measures.[4]

. . . *and other problems*

Although the inflationary effects of a decline in the maturity structure of the debt are not clear and remain the subject of considerable debate, it is clear that a growing volume of short-term debt creates potentially serious housekeeping problems for debt managers. One of the most important is the increased size and frequency of Treasury offerings. Because a large short-term debt tends to increase the size and number of refinancing operations needed to cover maturing obligations, it can interfere with the conduct of monetary policy. The Federal Reserve usually avoids changes in monetary policy while the Treasury is issuing or refunding debt. This practice of keeping money and capital markets on an even keel when the Treasury is in the market occasionally delays central bank action designed to promote economic stability. ("Even keel" does not apply to all Treasury financings but is applied quite consistently to coupon-issue financings, which are generally large in size.)

If the market does not seem able to absorb newly issued Treasury securities at current market rates, the Federal Reserve's even-keel policy may result in the provision of additional bank reserves through the Fed's purchase of Treasury securities. Unless offset by subsequent Federal Reserve actions, these extra reserves tend to be expansionary since commercial banks typically use them to increase their loans and

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[4] Some economists also contend that the assumptions most often used in measuring debt maturity are arbitrary and lead to an overstatement of the impact on liquidity resulting from shifts in the term structure of the debt.

investments. Another potentially expansionary effect may arise if the Treasury allows commercial banks to credit their tax and loan accounts (deposits held by the Treasury at commercial banks) in payment for part or all of their allotments of new securities. By using the tax and loan privilege, a bank can gain additional reserves for investment in earning assets until the Treasury calls for its funds to be transferred to Federal Reserve banks.

The piling up of short-term debt can also create future problems in the placement of debt by reducing the choices open to the Treasury in conducting its financing operations. After five years of persistent debt shortening — with the Treasury unable to issue securities with maturities of more than seven years — the refunding schedule is full for the next three to four years, leaving few open spots for the placement of new issues. There are sizable blocks of securities maturing about the time of nearly every quarterly refunding date through 1974.

INTEREST-BEARING MARKETABLE PUBLIC DEBT MATURING AROUND QUARTERLY REFUNDING DATES

Outstanding August 31, 1970

(In billions of dollars)

Year of final maturity	February	May	August	November
1970				$ 7.7
1971	[1]6.7	8.4	5.1	15.2
1972	7.7	[1]6.5	[1]4.5	[2]2.6
1973	—	5.8	5.7	4.3
1974	6.3	3.6	10.3	6.2
1975	5.1	6.8	—	—
1976	3.7	2.7	1.7	—
1977	5.2	—	2.2	—
1980	2.6	—	—	1.9
1983	—	[3]1.5	—	—
1985	—	2.3	—	—
1990	4.8	—	—	—
1992	—	—	3.8	—
1993	.2	—	—	—
1994	—	1.6	—	—
1995	1.3	—	—	—
1998	—	—	—	4.1

[1] Includes issues maturing the following month.
[2] Issue matures in December.
[3] Issue matures in June.
NOTE. — Figures exclude regular weekly and annual Treasury bills, tax anticipation bills, and 1½-percent notes.
SOURCE: Treasury Bulletin.

Moreover, if Federal deficits grow large again, the Treasury could have difficulties in marketing new short- and intermediate-term issues. Public holdings of marketable debt maturing within a year increased more than $17 billion between fiscal 1965 and fiscal 1970, or about 29 percent. Over that same period, holdings of intermediate-term (one- to five-year) issues increased more than $13 billion, or 30 percent. With investor portfolios already heavy with short- and intermediate-term issues, substantial upward pressures on rates could result from further increases in the supply of these obligations. Also, in view of heavy Treasury borrowings in the six- to seven-year maturity range since mid-1967, the attractiveness of these longer-term notes at prevailing market yields may have declined.

The increase in short-term Treasury borrowings leads to additional market congestion and may have increased the volatility of deposits at commercial banks and other thrift institutions. As the increased volume of short-term Treasury borrowings pushes rates on short-term Government securities higher, the upward thrust tends to spread to other, primarily short-term, market yields. Interest-bearing deposits at savings and loan associations and other thrift institutions where rates are usually adjusted upward only with considerable lag become less attractive to investors, with the result that some

savings may be drawn away from these institutions. Funds flowing to the mortgage market and other areas where thrift institutions usually invest can be curtailed.

To the extent that an optimal policy of debt management calls for the active pursuit of economic stability at the least cost to the Treasury, it seems clear that optimal policy will be hard to exercise in the years just ahead. If Federal deficits turn out to be larger than projected and the volume of new-money borrowings begins to rise significantly, the Treasury could have problems making new issues attractive to investors already holding substantial amounts of short- and intermediate-term debt.

PETER S. ROSE

District highlights

The seasonally adjusted Texas industrial production index rose in September, even though manufacturing of durable goods continued to show weakness. The index, which reflects the output of factories, mines, and utilities, registered 180.5 percent of the 1957-59 base.

The increase centered in the production of crude petroleum, which accounts for about 30 percent of the state's industrial output. Petroleum has been a major source of strength all year.

Manufacturing output edged downward as an increase in the production of nondurables was more than offset by a decline in durables. The increase in nondurables resulted primarily from the greater output of chemical plants and oil refineries, both associated with the production of crude oil. Transportation equipment was responsible for most of the decline in durable goods production. Utilities were unchanged.

Strengths and weaknesses were much the same when compared with a year before as when compared with the month before. The total index was up only 2.8 percent from September 1969, with mining (essentially petroleum) showing an increase of 10.4 percent and manufacturing a decline of 0.7 percent. Utilities showed an increase of 5.4 percent. Within manufacturing, nondurables were up a healthy 6.6 percent but durables were down 9.5 percent. Prominent in the decline of durable manufacturing were lower outputs of transportation equipment and electrical machinery, which reflected cutbacks in defense spending and, to a lesser extent, effects of the General Motors strike.

Regulatory agencies in Texas and Louisiana raised oil allowables again for November. This was the fourth consecutive month that allowables were increased. Although output in Louisiana was greater than expected under the record high of 68 percent of maximum efficient production in October, the state increased its allowable to 75 percent for November. By contrast, the increase in Texas was only slight, edging upward from 87 percent for October to 87.3 percent for November.

Both states cited a need to boost inventories as the reason for continued record rates of production. A colder than normal winter is possible, and other fuels may have to be sup-

plemented by domestic petroleum. A shortage of tankers resulting from part of Europe's nearby Mediterranean supplies being cut off has made petroleum imports expensive. Difficulties in the allocation of hopper cars have interfered with coal deliveries to utilities. And declining reserves of natural gas have limited its availability.

The Texas and Louisiana state regulatory agencies are keeping a wary eye on possible conservation and transportation problems that could develop at these high allowables. In October, the Texas Railroad Commission lowered allowables briefly in fields having to flare gas but was later able to rescind some of these decisions as most of the problems were overcome by adjustments within the industry itself.

A large increase in government employment in September essentially offset small declines in other categories of nonagricultural wage and salary employment in the five southwestern states, leaving the total unchanged from August. Manufacturing and construction, which had shown weakness most of the year, declined 0.8 percent and 2.2 percent, respectively.

Comparison of employment with the same month a year before indicated a sluggish demand for labor. Total payrolls were up only 1.4 percent over September 1969, reflecting a 4.2-percent decline in manufacturing and a 2.8-percent rise in nonmanufacturing. Within nonmanufacturing, construction was off 2.1 percent and mining was off 2.2 percent. Trade registered no change, and other categories posted moderate increases.

Registrations of new passenger automobiles in Dallas, Fort Worth, Houston, and San Antonio were 1 percent lower in September than in August and 16 percent lower than in September 1969. Cumulative registrations for the first nine months of 1970 were 7 percent lower than in the same period last year.

Department store sales in the Eleventh District were 6 percent higher in the four weeks ended October 24 than in the corresponding period last year. Cumulative sales through that date were 3 percent higher than a year earlier.

The estimate of cotton production in the Eleventh District states was revised downward October 1 to 4,853,000 bales. Despite this reduction, however, the estimate was still 10 percent greater than the 1969 crop. Production in Texas was estimated at 3,353,000 bales. This contemplates an average yield of 319 pounds per acre, compared with 292 pounds last year.

Cattle and calves on feed for slaughter totaled 2.2 million in District states on October 1, or 2 percent more than a year before. There were 1.4 million head on feed in Texas. That was 6 percent more than a year earlier and 5 percent more than at the start of the third quarter. Placements in Texas feedlots in the third quarter were 3 percent less than in the same quarter last year, but marketings were 8 percent higher.

Range conditions improved markedly in September, especially in Texas and Oklahoma. Rains reversed the drought conditions of recent months, greatly improving prospects for winter grazing.

Although prices received by Texas farmers and ranchers dropped slightly in mid-September, they were still 6 percent higher than a year earlier. Average prices of cotton, rice, and peanuts were down, and prices of all feed and food grains except rice were up sharply. Prices of livestock and livestock products were up slightly in September but below levels of a year ago.

Through August, cumulative cash receipts from farm marketings in District states were 2 percent higher than in the first eight months last year. Increased livestock marketings more than offset a general decline in crop marketings, providing a net gain in total marketings.

new member banks

The First National Bank of Tomball, Tomball, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business September 28, 1970, as a member of the Federal Reserve System. The new member bank has capital of $200,000, surplus of $200,000, and undivided profits of $100,000. The officers are: Charles A. Thomas, President, and A. A. Brautigam, Vice President and Cashier.

The Bank of Harris County, National Association, Aldine, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business October 9, 1970, as a member of the Federal Reserve System. The new member bank has capital of $500,000, surplus of $300,000, and undivided profits of $200,000. The officers are: Harry G. Austin, Chairman of the Board; Albert L. Bacarisse, President; and John P. Chance, Cashier.

The Guaranty National Bank, Houston, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business October 12, 1970, as a member of the Federal Reserve System. The new member bank has capital of $400,000, surplus of $400,000, and undivided profits of $200,000. The officers are: William T. Keenan, President; Horace W. Pennington, Vice President and Cashier; and Billie M. Munson, Assistant Cashier.

The People's National Bank of Spring Branch, Houston, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business October 12, 1970, as a member of the Federal Reserve System. The new member bank has capital of $400,000, surplus of $400,000, and undivided profits of $200,000. The officers are: Earl M. Gilbert, Chairman of the Board; Robert R. Logan, President; Phil M. Howard, Assistant Vice President; Michael R. Wimberly, Assistant Vice President; and Jimmie A. Rodenberg, Cashier.

new par banks

The Merchants Park Bank, Houston, Texas, an insured nonmember bank located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, was added to the Par List on its opening date, October 1, 1970. The officers are: Jack W. Lander, President; Donald W. Wigley, Executive Vice President; and Albert H. Fritz, Vice President and Cashier.

The First Alief Bank, Alief, Texas, an insured nonmember bank located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, was added to the Par List on its opening date, October 5, 1970. The officers are: Waddell Moursend, President (Inactive); Carl O. Garner, Jr., Executive Vice President; and Brad Nelson, Cashier.

STATISTICAL SUPPLEMENT

to the

BUSINESS REVIEW

November 1970

FEDERAL RESERVE BANK
OF DALLAS

CONDITION STATISTICS OF WEEKLY REPORTING COMMERCIAL BANKS

Eleventh Federal Reserve District

(In thousands of dollars)

Item	Oct. 28, 1970	Sept. 23, 1970	Oct. 29, 1969
ASSETS			
Federal funds sold and securities purchased under agreements to resell	557,000	428,155	302,755
Other loans and discounts, gross	6,243,185	6,130,042	5,973,273
Commercial and industrial loans	2,962,681	2,941,022	2,951,802
Agricultural loans, excluding CCC certificates of interest	103,057	98,297	106,281
Loans to brokers and dealers for purchasing or carrying:			
U.S. Government securities	507	507	555
Other securities	33,241	34,281	42,041
Other loans for purchasing or carrying:			
U.S. Government securities	1,779	2,296	692
Other securities	426,121	413,748	380,936
Loans to nonbank financial institutions:			
Sales finance, personal finance, factors, and other business credit companies	203,558	169,931	130,485
Other	418,428	373,379	339,145
Real estate loans	643,392	623,733	652,986
Loans to domestic commercial banks	5,445	5,943	16,869
Loans to foreign banks	9,239	9,845	8,370
Consumer instalment loans	744,793	739,740	714,270
Loans to foreign governments, official institutions, central banks, and international institutions	0	0	0
Other loans	690,944	717,320	628,841
Total investments	2,779,982	2,703,703	2,498,322
Total U.S. Government securities	946,172	923,165	946,782
Treasury bills	135,952	82,684	54,097
Treasury certificates of indebtedness	0	0	0
Treasury notes and U.S. Government bonds maturing:			
Within 1 year	172,943	187,170	116,723
1 year to 5 years	553,260	563,142	620,971
After 5 years	84,017	90,169	154,991
Obligations of states and political subdivisions:			
Tax warrants and short-term notes and bills	50,943	47,257	33,013
All other	1,594,868	1,546,896	1,391,881
Other bonds, corporate stocks, and securities:			
Certificates representing participations in Federal agency loans	100,050	110,079	60,629
All other (including corporate stocks)	87,949	76,306	66,017
Cash items in process of collection	1,072,264	1,101,929	1,051,324
Reserves with Federal Reserve Bank	827,915	964,483	716,277
Currency and coin	91,101	91,737	87,334
Balances with banks in the United States	475,605	562,312	459,291
Balances with banks in foreign countries	8,105	8,498	7,700
Other assets (including investments in subsidiaries not consolidated)	479,929	486,335	447,533
TOTAL ASSETS	12,535,086	12,477,194	11,543,809
LIABILITIES			
Total deposits	9,993,714	9,796,675	9,030,685
Total demand deposits	5,812,742	5,793,333	5,670,580
Individuals, partnerships, and corporations	4,040,053	3,907,473	3,949,947
States and political subdivisions	247,876	293,008	258,669
U.S. Government	132,587	235,247	163,770
Banks in the United States	1,278,036	1,250,145	1,176,327
Foreign:			
Governments, official institutions, central banks, and international institutions	2,853	4,235	3,250
Commercial banks	23,709	22,492	27,363
Certified and officers' checks, etc.	87,628	80,733	91,254
Total time and savings deposits	4,180,972	4,003,342	3,360,105
Individuals, partnerships, and corporations:			
Savings deposits	931,595	922,383	943,395
Other time deposits	2,342,857	2,153,709	1,772,225
States and political subdivisions	784,319	795,115	613,697
U.S. Government (including postal savings)	36,243	45,934	5,286
Banks in the United States	66,073	66,716	18,642
Foreign:			
Governments, official institutions, central banks, and international institutions	18,785	18,385	5,500
Commercial banks	1,100	1,100	1,360
Federal funds purchased and securities sold under agreements to repurchase	908,727	998,607	838,975
Other liabilities for borrowed money	84,819	98,844	155,770
Other liabilities	376,064	421,131	417,435
Reserves on loans	127,670	130,560	116,525
Reserves on securities	16,520	16,360	11,478
Total capital accounts	1,027,572	1,015,017	972,941
TOTAL LIABILITIES, RESERVES, AND CAPITAL ACCOUNTS	12,535,086	12,477,194	11,543,809

RESERVE POSITIONS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. In thousands of dollars)

Item	5 weeks ended Oct. 7, 1970	4 weeks ended Sept. 2, 1970	4 weeks ended Oct. 1, 1969
RESERVE CITY BANKS			
Total reserves held	783,743	757,363	731,786
With Federal Reserve Bank	728,425	700,022	678,249
Currency and coin	55,318	57,341	53,537
Required reserves	779,708	778,310	737,885
Excess reserves	4,035	—20,947	—6,099
Borrowings	2,314	13,157	20,992
Free reserves	1,721	—34,104	—27,091
COUNTRY BANKS			
Total reserves held	793,952	794,567	779,853
With Federal Reserve Bank	606,819	605,534	594,908
Currency and coin	187,133	189,033	184,945
Required reserves	772,874	773,478	754,585
Excess reserves	21,078	21,089	25,268
Borrowings	4,270	8,395	12,840
Free reserves	16,808	12,694	12,428
ALL MEMBER BANKS			
Total reserves held	1,577,695	1,551,930	1,511,639
With Federal Reserve Bank	1,335,244	1,305,556	1,273,157
Currency and coin	242,451	246,374	238,482
Required reserves	1,552,582	1,551,788	1,492,470
Excess reserves	25,113	142	19,169
Borrowings	6,584	21,552	33,832
Free reserves	18,529	—21,410	—14,663

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS

(In thousands of dollars)

Item	Oct. 28, 1970	Sept. 23, 1970	Oct. 29, 1969
Total gold certificate reserves	352,640	594,856	310,680
Discounts for member banks	2,450	2,900	14,715
Other discounts and advances	0	0	0
U.S. Government securities	2,680,937	2,656,389	2,432,825
Total earning assets	2,683,387	2,659,289	2,447,540
Member bank reserve deposits	1,356,603	1,490,364	1,236,367
Federal Reserve notes in actual circulation	1,847,644	1,841,802	1,670,115

CONDITION STATISTICS OF ALL MEMBER BANKS

Eleventh Federal Reserve District

(In millions of dollars)

Item	Sept. 30, 1970	Aug. 26, 1970	Sept. 24, 1969
ASSETS			
Loans and discounts, gross	11,982	11,976	11,551
U.S. Government obligations	2,110	2,048	2,116
Other securities	3,533	3,466	3,144
Reserves with Federal Reserve Bank	1,405	1,448	1,283
Cash in vault	269	279	265
Balances with banks in the United States	1,454	1,284	1,231
Balances with banks in foreign countries[e]	11	10	9
Cash items in process of collection	1,426	1,234	1,294
Other assets[e]	944	902	761
TOTAL ASSETS[e]	23,134	22,647	21,654
LIABILITIES AND CAPITAL ACCOUNTS			
Demand deposits of banks	1,800	1,591	1,521
Other demand deposits	9,193	8,989	9,088
Time deposits	8,184	7,889	7,266
Total deposits	19,177	18,469	17,875
Borrowings	963	1,224	1,129
Other liabilities[e]	1,181	1,144	943
Total capital accounts[e]	1,813	1,810	1,707
TOTAL LIABILITIES AND CAPITAL ACCOUNTS[e]	23,134	22,647	21,654

e — Estimated.

BANK DEBITS, END-OF-MONTH DEPOSITS, AND DEPOSIT TURNOVER

(Dollar amounts in thousands, seasonally adjusted)

Standard metropolitan statistical area	DEBITS TO DEMAND DEPOSIT ACCOUNTS[1]				DEMAND DEPOSITS[1]			
	September 1970 (Annual-rate basis)	Percent change: September 1970 from August 1970	Percent change: September 1970 from September 1969	Percent change: 9 months, 1970 from 1969	September 30, 1970	Annual rate of turnover: September 1970	Annual rate of turnover: August 1970	Annual rate of turnover: September 1969
ARIZONA: Tucson	$ 7,710,936	15	27	19	$ 231,134	33.5	28.9	27.7
LOUISIANA: Monroe	2,722,380	—8	—2	9	85,843	30.5	32.0	30.6
Shreveport	9,122,796	6	0	18	237,862	37.4	35.4	37.4
NEW MEXICO: Roswell[2]	859,692	—2	—10	6	37,320	22.6	22.7	25.6
TEXAS: Abilene	2,087,868	—4	—4	5	103,069	20.5	21.4	21.7
Amarillo	6,140,436	7	4	10	157,868	38.2	35.3	36.7
Austin	8,390,016	—5	—3	—1	312,899	26.0	26.9	31.9
Beaumont-Port Arthur-Orange	6,083,232	2	—5	0	234,595	25.6	24.6	27.0
Brownsville-Harlingen-San Benito	1,706,952	38	1	12	76,255	23.5	17.7	24.7
Corpus Christi	5,909,604	28	15	6	261,655	24.1	21.2	25.1
Corsicana[2]	402,696	—18	—1	8	31,048	12.7	15.3	13.1
Dallas	128,836,224	10	1	10	2,188,654	58.1	56.5	57.6
El Paso	7,438,656	0	6	9	239,142	31.0	31.8	29.6
Fort Worth	22,875,696	1	2	10	640,075	35.6	35.2	35.9
Galveston-Texas City	2,990,280	10	13	11	116,508	26.0	24.0	25.0
Houston	100,673,004	—2	1	11	2,438,818	40.7	41.2	40.2
Laredo	918,876	—8	3	12	39,667	23.6	25.1	23.1
Lubbock	5,142,036	—4	0	3	175,446	28.7	30.2	31.5
McAllen-Pharr-Edinburg	1,524,336	7	—5	5	98,057	16.0	14.9	17.8
Midland	2,103,048	12	7	2	133,451	15.8	14.2	14.5
Odessa	1,618,560	—1	—8	6	93,720	17.3	17.8	22.7
San Angelo	1,229,100	1	1	8	67,761	18.3	18.4	17.7
San Antonio	17,262,240	—5	1	11	646,514	26.5	27.7	28.8
Sherman-Denison	1,077,948	2	—2	9	66,212	16.5	16.4	17.6
Texarkana (Texas-Arkansas)	1,497,444	5	—10	—7	72,144	20.7	19.8	24.5
Tyler	2,203,536	—3	—3	3	97,996	22.6	24.2	23.8
Waco	2,840,112	—7	—9	10	117,122	23.9	25.5	26.4
Wichita Falls	2,320,896	—1	0	—1	117,418	19.9	20.5	19.5
Total—28 centers	$353,688,600	3	2	10	$9,118,253	38.5	37.8	38.9

[1] Deposits of individuals, partnerships, and corporations and of states and political subdivisions.
[2] County basis.

BUILDING PERMITS

Area	NUMBER: Sept. 1970	NUMBER: 9 mos. 1970	VALUATION (Dollar amounts in thousands): Sept. 1970	VALUATION: 9 mos. 1970	Percent change: Sept. 1970 from Aug 1970	Percent change: Sept. 1970 from Sept. 1969	Percent change: 9 months, 1970 from 1969
ARIZONA							
Tucson	473	5,300	$ 7,417	$ 45,370	—13	294	—7
LOUISIANA							
Monroe-West Monroe	76	618	1,157	11,745	73	123	23
Shreveport	512	4,140	1,911	24,484	—26	—67	—21
TEXAS							
Abilene	42	359	506	7,110	289	12	—14
Amarillo	129	3,391	1,769	26,151	17	—73	—18
Austin	466	3,665	8,028	95,013	—44	—26	—18
Beaumont	140	1,337	693	7,720	17	14	—10
Brownsville	54	635	151	4,807	—91	—5	—32
Corpus Christi	237	2,725	823	19,090	—19	—54	1
Dallas	1,703	16,928	24,423	258,332	50	22	—3
Denison	32	342	107	3,039	—33	—31	21
El Paso	565	4,146	19,725	77,810	320	410	15
Fort Worth	380	3,531	11,066	68,181	116	160	13
Galveston	49	627	1,405	5,910	121	—51	—64
Houston	2,674	26,825	56,766	352,336	62	40	7
Laredo	38	428	281	5,768	—74	420	144
Lubbock	140	1,930	1,733	42,249	—76	—8	87
Midland	44	480	440	3,676	32	—52	—28
Odessa	77	678	1,509	7,995	459	390	17
Port Arthur	55	687	172	6,894	11	26	—10
San Angelo	45	504	398	8,938	53	—29	78
San Antonio	1,225	11,684	7,050	76,344	—33	—27	18
Sherman	78	625	430	11,012	—10	—42	—36
Texarkana	29	262	263	5,650	139	—79	—3
Waco	230	1,853	972	28,891	—64	—18	85
Wichita Falls	77	631	593	10,073	—55	—56	—14
Total—26 cities	9,570	94,331	$149,788	$1,214,588	28	27	2

GROSS DEMAND AND TIME DEPOSITS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. In millions of dollars)

Date	GROSS DEMAND DEPOSITS: Total	GROSS DEMAND DEPOSITS: Reserve city banks	GROSS DEMAND DEPOSITS: Country banks	TIME DEPOSITS: Total	TIME DEPOSITS: Reserve city banks	TIME DEPOSITS: Country banks
1968: September	10,066	4,722	5,344	7,255	3,058	4,197
1969: September	10,497	4,867	5,630	7,272	2,685	4,587
1970: April	10,497	4,819	5,678	7,328	2,634	4,694
May	10,233	4,671	5,562	7,394	2,659	4,735
June	10,265	4,748	5,517	7,391	2,651	4,740
July	10,412	4,782	5,630	7,511	2,722	4,789
August	10,530	4,816	5,714	7,783	2,926	4,857
September	10,658	4,885	5,773	8,088	3,162	4,926

VALUE OF CONSTRUCTION CONTRACTS

(In millions of dollars)

Area and type	September 1970	August 1970	July 1970	January—September: 1970	January—September: 1969r
FIVE SOUTHWESTERN STATES[1]	558	753	626	6,035	5,215
Residential building	269	331	305	2,309	2,147
Nonresidential building	183	285	210	1,975	1,692
Nonbuilding construction	107	137	111	1,750	1,376
UNITED STATES	5,398	6,230	6,178	52,058	51,773
Residential building	2,176	2,349	2,347	18,340	19,594
Nonresidential building	1,944	2,331	2,469	19,183	19,544
Nonbuilding construction	1,278	1,549	1,361	14,535	12,635

[1] Arizona, Louisiana, New Mexico, Oklahoma, and Texas.
r — Revised.
NOTE. — Details may not add to totals because of rounding.
SOURCE: F. W. Dodge, McGraw-Hill, Inc.

ustrial production.....	180.5	179.9	172.3r	175.5r
ring.....	198.4	199.2	193.8r	199.7
.....	205.2	208.4	204.3	226.6
ble.....	193.8	193.1	186.8r	181.8r
.....	140.2	137.5	125.3r	127.0
.....	260.7	260.7	260.7r	247.4r
ES				
ustrial production.....	166.0	168.9	169.2	173.9
ring.....	164.0	167.6	168.4	175.2r
.....	160.9	166.2	167.3r	178.7r
ble.....	167.9	169.5	169.7r	170.9r
.....	139.6	138.2	134.9r	131.6r
.....	239.5	236.5	236.3r	222.5

inary.
ed.
Board of Governors of the Federal Reserve System.
Federal Reserve Bank of Dallas.

Type of employment	1970p	1970	1969r	1970	1969
Total nonagricultural wage and salary workers..	6,360,000	6,361,000	6,269,200	0.0	1.4
Manufacturing.....	1,141,300	1,150,200	1,191,200	—.8	—4.2
Nonmanufacturing.....	5,218,700	5,210,800	5,078,000	.2	2.8
Mining.....	229,200	232,800	234,300	—1.6	—2.2
Construction.....	406,800	415,800	415,600	—2.2	—2.1
Transportation and public utilities.....	471,100	475,400	457,400	—.9	3.0
Trade.....	1,486,300	1,486,100	1,433,200	.0	3.7
Finance.....	325,800	327,200	311,400	—.4	4.6
Service.....	1,032,100	1,042,000	993,000	—1.0	3.9
Government.....	1,267,400	1,231,500	1,233,100	2.9	2.8

[1] Arizona, Louisiana, New Mexico, Oklahoma, and Texas.
p — Preliminary.
r — Revised.
SOURCE: State employment agencies.

CROP PRODUCTION

(In thousands of bushels)

	TEXAS			FIVE SOUTHWESTERN STATES[1]		
	1970, estimated Oct. 1	1969	1968	1970, estimated Oct. 1	1969	1968
....	3,353	2,862	3,525	4,853	4,415	5,244
....	26,838	25,124	26,052	37,987	34,266	36,871
....	54,408	68,856	84,150	167,715	197,619	218,974
....	28,140	25,460	19,822	36,332	33,058	25,450
....	4,394	3,290	3,348	35,340	29,096	26,856
....	736	684	528	1,762	1,664	1,208
....	22,834	21,646	27,164	43,594	42,420	53,306
...	350,448	309,800	340,780	406,539	368,740	402,729
....	1,127	1,300	742	1,127	1,300	742
....	4,211	3,451	4,587	9,637	9,136	10,418
....	420,000	389,070	426,300	644,360	610,549	671,476
[6]...	4,306	4,437	4,382	7,893	8,084	7,624
as[6]..	1,040	780	960	5,715	5,200	5,120
....	38,000	23,000	69,000	71,000	73,900	97,000

Louisiana, New Mexico, Oklahoma, and Texas.
nds of bales.
nds of bags containing 100 pounds each.
nds of tons.
nds of pounds.
nds of hundredweight.
U.S. Department of Agriculture.

DAILY AVERAGE PRODUCTION OF CRUDE OIL

(In thousands of barrels)

Area	September 1970	August 1970	September 1969r	Percent change from August 1970	Percent change from September 1969
FOUR SOUTHWESTERN STATES.....	7,123.5	6,918.6	6,452.1	3.0	10.4
Louisiana.....	2,639.4	2,509.3	2,343.8	5.2	12.6
New Mexico.....	359.2	369.1	350.0	—2.7	2.6
Oklahoma.....	600.9	608.1	615.7	—1.2	—2.4
Texas.....	3,524.0	3,432.1	3,142.6	2.7	12.1
Gulf Coast.....	701.8	696.1	626.8	.8	12.0
West Texas.....	1,701.5	1,631.5	1,508.3	4.3	12.8
East Texas (proper).....	209.5	214.8	157.1	—2.5	33.4
Panhandle.....	85.3	79.9	82.0	6.8	4.0
Rest of state.....	825.9	809.8	768.4	2.0	7.5
UNITED STATES.....	9,878.6	9,676.3	9,271.0	2.1	6.6

r — Revised.
SOURCES: American Petroleum Institute.
U.S. Bureau of Mines.
Federal Reserve Bank of Dallas.

COTTON PRODUCTION

Texas Crop Reporting Districts

(In thousands of bales — 500 pounds gross weight)

Area	1970, indicated Oct. 1	1969	1968	1970 as percent of 1969
rn High Plains.....	380	248	211	153
rn High Plains.....	1,450	1,134	1,384	128
ed Plains.....	165	179	312	92
ed Plains.....	300	213	372	141
rn Cross Timbers.....	15	15	20	100
and Grand Prairies.....	375	258	409	145
exas Timbered Plains....	25	15	19	167
exas Timbered Plains....	35	34	41	103
Pecos.....	143	144	189	99
ds Plateau.....	50	49	72	102
rn Texas Prairies.....	60	50	57	120
rn Texas Prairies.....	50	106	93	47
al Prairies.....	95	93	79	102
Texas Plains.....	20	17	25	118
Rio Grande Valley.....	190	307	242	62
.....	3,353	2,862	3,525	117

U.S. Department of Agriculture.