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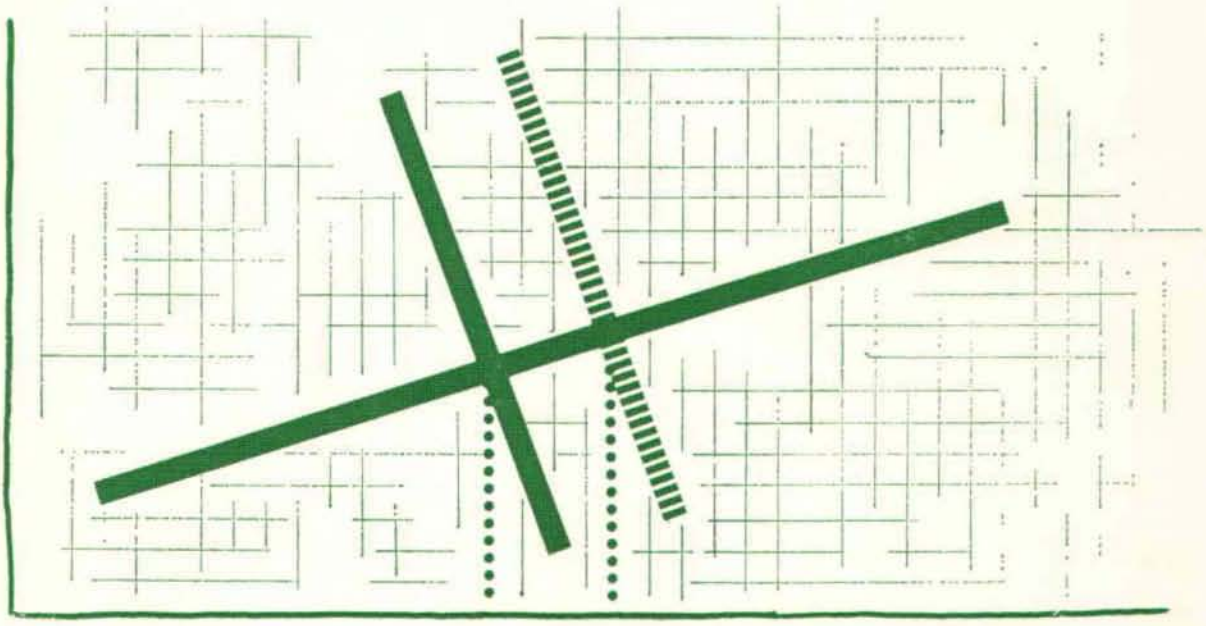
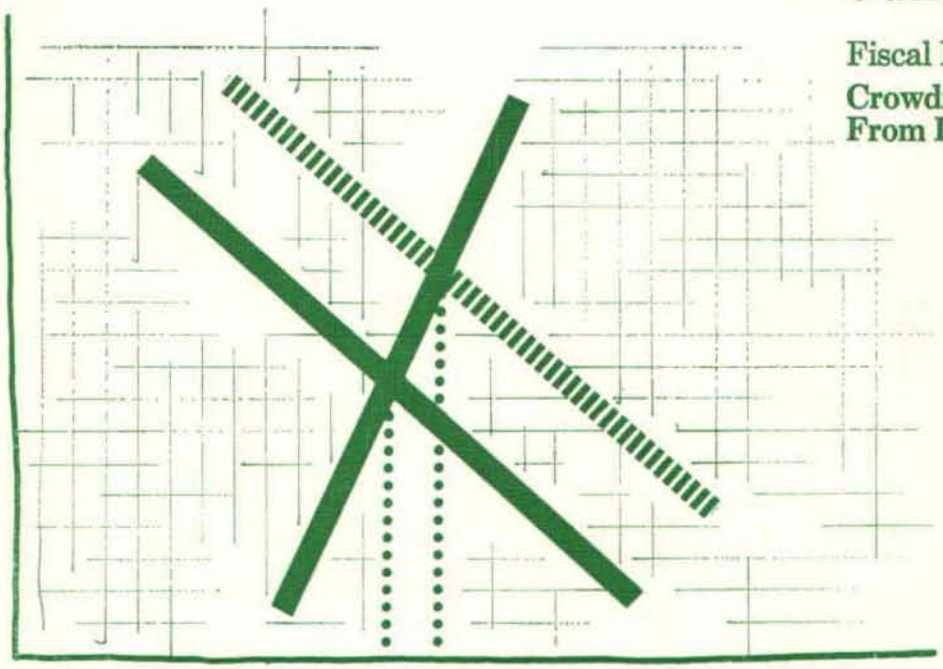




June 1976

Fiscal Policy– Crowding Out Estimated From Large Econometric Model

Fiscal Policy–

Crowding Out Estimated From Large Econometric Model

Concern about the effects of the federal government deficit on the nation's ability to generate new capital sufficient to meet the needs of a growing population continues to be fairly widespread. It has been argued that the large deficits incurred by the government, particularly since fiscal 1975, have impaired and will continue to impair our ability to create new capital. In the extreme, this argument states that an increase of $1 in the federal deficit "crowds out" $1 of private capital formation.

The term *crowding out* has actually been used to refer to the displacement of private expenditures by federal government spending in general, whether it is financed by taxes or by borrowing.[1] But since the concern is mainly about the effects of government deficits and debt financing, only crowding out through government borrowing is discussed here.

In order to distinguish between the effects of fiscal actions and those of monetary policy, formal analysis of crowding out assumes that the central bank does not respond to fiscal actions with changes in the stock of money. In practice, of course, changes in fiscal policy are often accompanied by changes in monetary policy. Therefore, whether government borrowing displaces private expenditures in any particular instance depends on not only the pure crowding-out effect but also the concurrent actions of the central bank.

Whether government borrowing displaces private expenditures in any particular instance depends on not only the pure crowding-out effect but also the concurrent actions of the central bank.

The degree to which crowding out can occur in a situation of less than full employment of resources depends on the structure of the economy. To give a precise answer to the question of the size of the potential for crowding out in such a case, numerical estimates of this structure are required. This article provides such estimates and shows how they can be used. Then, it examines whether crowding out has importantly influenced recent economic activity and whether it is likely to affect private capital formation over the longer run.

The IS-LM framework

The crowding-out issue can be analyzed in terms of the well-known IS-LM framework taught in most macroeconomics courses in the nation's universities.[2]

The IS curve depicts the relationship between the nominal rate of interest and the equilibrium level of real spending and output in the economy. It slopes downward, indicating that lower interest rates induce higher aggregate demand. For example, a reduction in interest rates will raise spending on investment goods. Higher investment demand raises aggregate demand and, hence, income. And the growth in income raises consumption, so that the final change in income is equal to some multiple of the original change in spending resulting from lower interest rates.

The LM curve, on the other hand, represents the set of output and interest rates that brings about an equality between the amount of real money balances supplied and demanded. The LM curve slopes upward, indicating that at higher levels of output, there is more demand for real money balances–and, hence, higher interest rates–given the real money supply. The main factor that can cause the LM curve to shift is a change in the stock of real money balances. For example, the real money stock can be augmented by either an increase in the nominal money stock or a fall in the price level. It is usually assumed, and is assumed in this analysis, that prices are relatively inflexible at

1. Keith M. Carlson and Roger W. Spencer, "Crowding Out and Its Critics," *Review,* Federal Reserve Bank of St. Louis, December 1975, pp. 2-17
2. A thorough discussion of the IS-LM framework is available in a wide variety of textbooks. See, for example, Paul Wonnacott, *Macroeconomics* (Homewood, Illinois, Richard D. Irwin, 1974). Not all economists are agreed that the IS-LM framework is necessarily the best mode of analysis, and monetarists have devised alternative frameworks. Among these are Karl Brunner and Allan H. Meltzer, "Money, Debt, and Economic Activity," *Journal of Political Economy* 80 (September/October 1972): 951-77; and Merton H. Miller and Charles W. Upton, *Macroeconomics: A Neoclassical Introduction* (Homewood, Illinois, Richard D. Irwin, 1974). The IS-LM framework is quite flexible, however, and some monetarists have used this method of analysis to illustrate their own points. An example is Milton Friedman, "Comments on the Critics," *Journal of Political Economy* 80 (September/October 1972): 906-50.

levels of activity with less than full employment of resources but are fully flexible upward beyond that point.

The equilibrium levels of output and the interest rate occur at the intersection of the IS and LM curves. Only at this point are the demand for and supply of commodities equal and the demand for and supply of money simultaneously equal.

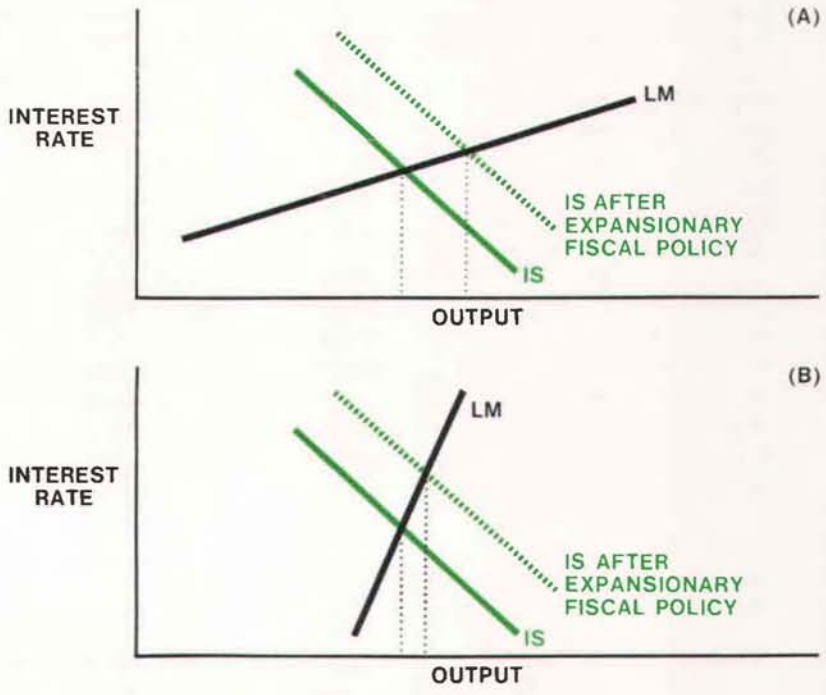
Such a framework can be used to determine the extent to which an increased federal deficit raises interest rates and crowds out interest-sensitive spending. The degree of crowding out in a situation of less than full employment depends on the relative slopes of the IS and LM schedules.

Suppose, for example, that taxes are reduced or government expenditures are increased. This change shifts the IS curve to the right by the amount of the change times the tax or expenditure multiplier. The real money stock–and, hence, the LM curve–is assumed to be unchanged. The effect of such a tax reduction is shown in Figure 1. In both panels, the IS curve has the same slope and the horizontal shift is of the same magnitude. In Panel A, the LM curve is drawn according to a demand for money that is very sensitive to changes in interest rates, whereas in Panel B, the demand for money balances is relatively insensitive to changes in interest rates.

When the demand for money is very sensitive to interest rate changes (Panel A), most of the effect of an increased federal deficit is translated into additional income and output, assuming the economy's resources are not fully employed. Very little goes into raising interest rates, and the smaller rise in interest rates causes only a small decline in private spending. However, if the demand for money is relatively insensitive to interest rate changes, crowding out becomes more severe. In this case (Panel B), there is a greater rise in interest rates. Private spending experiences a sharper decline, resulting in a smaller net increase in output.

Figure 1

Crowding out greater with steeper LM curve . . .



In addition to the slope of the LM curve, the slope of the IS curve relative to that of the LM curve is also significant for crowding out. The manner in which this relationship affects the determination of interest rates and income is shown in Figure 2.

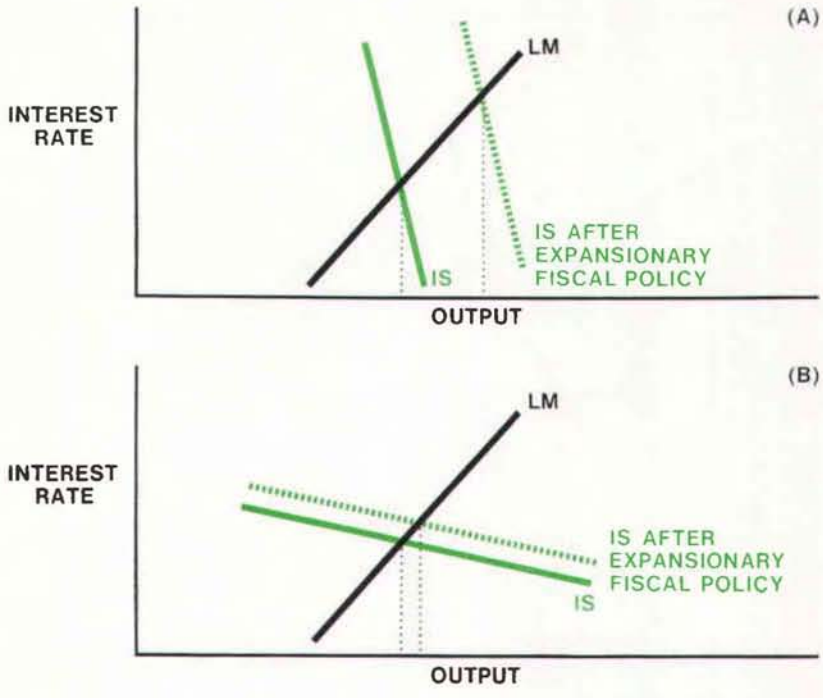
In both panels of this diagram, the LM curves are identical; only the slopes of the IS curves differ. The horizontal shift in each IS curve is the same, meaning that the same size tax cut or expenditure increase is implemented and the multiplier (determined by the marginal propensity to spend) is the same in both cases. Panel A illustrates the case of spending being very insensitive to changes in interest rates, while Panel B shows the case where spending is much more sensitive to interest rate changes.

An IS-LM framework can be used to determine the extent to which an increased federal deficit raises interest rates and crowds out interest-sensitive spending.

When private spending does not respond significantly to interest rate changes (Panel A), the effect of stimulative fiscal policy is not so dissipated by falling investment, and the net increase in output is greater. But when private spending is highly sensitive to interest rate changes (Panel B), expansionary fiscal policy chokes

Figure 2

. . . and with flatter IS curve



off a considerable amount of such spending, and crowding out then becomes serious. The additional consumer spending resulting from the lower personal income taxes is largely offset by a fall in spending of the interest-sensitive type.

Estimated IS-LM curves

Obviously, the extent to which crowding out is a serious problem depends on the actual structure of the economy as embodied in the slopes of the IS and LM curves. Estimates of the actual slopes were obtained from simulations using the Federal Reserve Board-MIT-PENN econometric model of the U.S. economy. This model is basically a very detailed representation of the IS-LM framework for the U.S. economy.

Alternative tax programs and monetary policies were simulated, with the effects of the assumed policy change in each simulation being allowed to work themselves out for two years. To estimate the IS schedule, the money stock was increased by differing amounts, and the resulting changes in interest rates and output produced by the model after eight quarters were observed.[3] The estimate of the LM schedule was obtained by changing personal income taxes in varying amounts and tracing the resulting path for interest rates and output. The estimated IS and LM schedules and the effect of a $10 billion reduction in current-dollar personal income taxes–a $5.2 billion cut in 1958 dollars–are shown in Figure 3.

The estimated LM curve is almost eight times steeper than the estimated IS curve. Because of this, the demand for money balances is seen to be less sensitive to changes in interest rates than is aggregate demand.[4] Hence, the amount of crowding out by a tax cut in a situation of less than full employment is very large.

Most textbooks dealing with the IS-LM framework explain the slope of the IS curve largely in terms of the responsiveness of investment spending to changes in the rate of interest. This is a significant factor in the explanation of the relative flatness of the estimated IS curve, but there are other important factors as well.

First, the equations in the large-scale econometric model that explain business fixed investment allow it to depend on the current level of output, as well as interest rates. Thus, if interest rates fall, business fixed investment rises, leading to higher aggregate demand and output. But with higher output comes greater capacity utilization, which induces even more investment. So, the change in GNP along the IS curve resulting from a change in interest

3. A simulation over eight quarters is long enough to capture most of the ultimate effects of the policy changes. However, the effects of these changes over shorter periods are significantly different, showing a smaller crowding-out effect. The results over four quarters and further details on the simulations are given in the accompanying technical appendix.
4. Linear approximations to the estimated schedules at the point of equilibrium are–
   IS curve: $y = -77.5r + 1{,}638.0$
   LM curve: $y = 10.3r + 830.0$
   Real output is expressed in 1958 dollars, and the interest rate is for Aaa corporate bonds. The absolute value of the coefficient of the interest rate in the IS schedule is almost eight times as large as the same coefficient in the LM schedule, indicating that the LM schedule is almost eight times as steep.

rates is larger than if business fixed investment depended on interest rates alone.

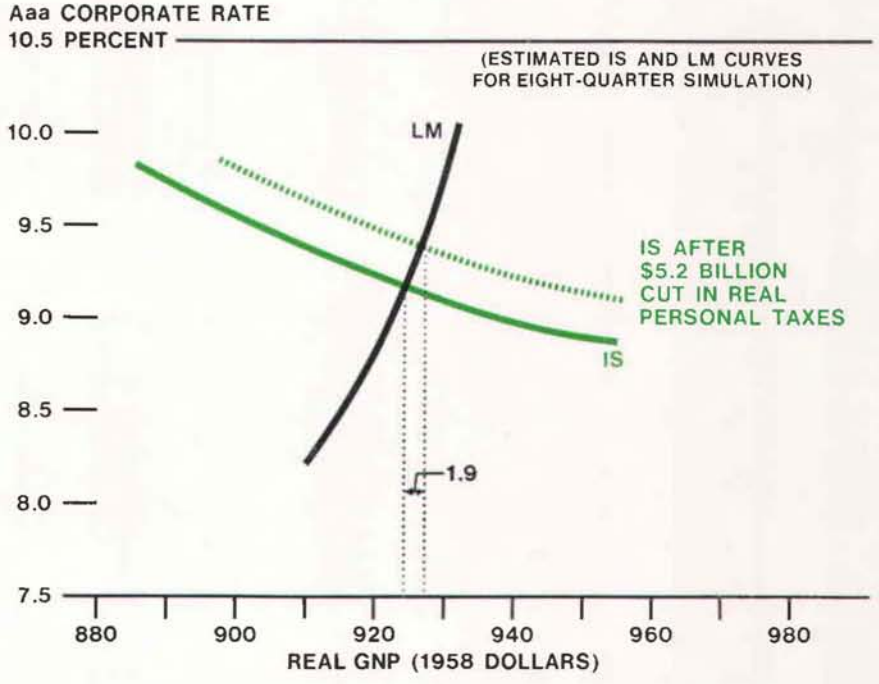
The second major determinant of the slope of the estimated IS curve is the wealth effect. In the econometric model, wealth is an important determinant of the level of consumption. When wealth–or household net worth–rises, consumption also rises.

Wealth, in turn, is affected by changes in both income and interest rates. As income rises, business profits and the price of corporate stock increase. Because equity shares constitute a significant portion of household net worth, this gives added stimulus to consumption beyond the standard income-consumption relationship.[5]

The simulations indicate that the effect of a tax cut on output is severely dampened by a significant amount of crowding out of private spending even in a situation of less than full employment of resources.

Figure 3

With unemployed resources, crowding out is partial . . .



Falling rates of interest also raise wealth–for two reasons. First, government bonds held by the public rise in price as interest rates fall. Second, equity prices often rise when bond prices rise since equities and bonds are substitutes in many portfolios.

Putting these elements together, the change in GNP along the IS curve for a given change in interest rates is larger than if consumption was not influenced by wealth. A decline in interest rates boosts wealth *directly* by increasing the market value of stocks and bonds and *indirectly* through the effect of higher aggregate demand on income and equity values. And the resulting increase in wealth leads to a larger increase in consumption spending and, hence, output than would otherwise be the case.

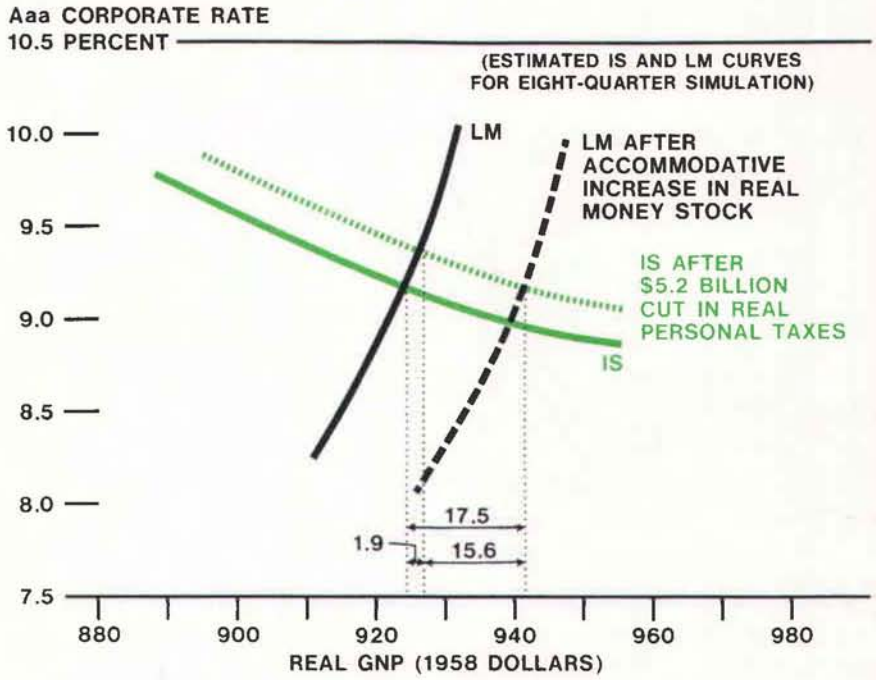
As shown in Figure 3, the simulations indicate that the effect of a tax cut on output is severely dampened by a significant amount of crowding out of private spending even in a situation of less than full employment of resources.[6] A $10 billion reduction in current-dollar personal income taxes–which is a $5.2 billion cut in 1958 dollars–raises constant-dollar GNP by only $1.9 billion after eight quarters when the real money stock is kept unchanged. In this case, most of the stimulative effect of the tax cut is neutralized by rising interest rates.

With the real money supply unchanged, the tax cut raises the corporate bond rate by 20 basis points; and as a result, gross private domestic investment–measured in 1958 dollars–falls $1.2 billion. In addition to an outright reduction in investment spending, consumption rises less than the

5. The effect on consumption of a rise in stock prices is quite significant, according to the estimated consumption function in the econometric model. It suggests that a rise of 10 percent in the stock market from current levels, which would not be an unusual occurrence, would cause an increase of about $5 billion in consumption.
6. Actually, some spending by state and local governments is also crowded out by a decrease in federal taxes. According to the U.S. Department of Commerce, state and local governments spent about $34 billion on capital projects in 1975. These involved schools, hospitals, roads, sewers, water treatment facilities, and airports, to name but a few. In the econometric model, such capital expenditures by state and local governments are estimated to vary inversely with interest rates and, hence, are subject to crowding out.

Figure 4

. . . and can be offset by monetary policy . . .



standard multiplier analysis would indicate. And because of the rise in the corporate bond rate, the current market value of all outstanding long-term debt declines, thus creating a wealth effect on consumption that runs counter to the initial stimulus.

Monetary policy, full employment, and crowding out

The crowding-out effect can be offset, in a situation of less than full employment, by an expansion of the money stock sufficient to keep interest rates constant, as shown in Figure 4. No crowding out occurs because the mechanism through which it takes place–rising interest rates–is not allowed to operate. A $10 billion tax reduction–a $5.2 billion cut in real terms–causes real GNP to rise only $1.9 billion when the real money stock is unchanged. But when interest rates are kept from rising by an expansion of the money stock, a $10 billion tax cut causes real GNP to rise $17.5 billion. The difference of $15.6 billion is due to the crowding out of private expenditures.

The problem of crowding out, in an economy with less than full employment of resources, is actually an aspect of a broader issue in macroeconomic analysis–the question of the relative strengths of fiscal and monetary policy. So, the estimated IS and LM curves provide a tentative answer to this important question also. The conditions under which monetary policy is more powerful than fiscal policy–a steep LM schedule relative to IS schedule–are exactly the same as those under which crowding out is important. Indeed, the phenomenon of crowding out is the mechanism by which the power of fiscal policy is reduced relative to that of monetary policy.

This point can also be illustrated with Figure 4. As previously seen, a tax cut of $10 billion in current dollars, or $5.2 billion in 1958 dollars, causes real GNP to rise $17.5 billion when the money stock is expanded enough to keep interest rates constant. This change in output is caused by the combined changes in fiscal and monetary policy. But the fiscal change alone would cause an increase of only $1.9 billion in real GNP through the shift in the IS curve. The remainder, because of the shift in the LM curve, is attributable to the accompanying change in the money stock. Consequently, monetary policy is seen to be over eight times as powerful as fiscal policy.[7]

Up to this point, we have considered crowding out only in a situation of less than full employment of resources. But if taxes are cut or government expenditures increased in a fully employed economy, the stimulative fiscal policy will always be fully offset because of the crowding out of other expenditures. This is true no matter

7. If the estimated LM curve had been completely flat because of a perfectly elastic demand for money with respect to the rate of interest (as in the Keynesian liquidity trap), the change in real income due to the change in fiscal policy would have been the entire $17.5 billion, with no portion attributable to monetary policy. On the other hand, if the LM curve had been vertical because of a perfectly inelastic demand for money with respect to the rate of interest (classical case), then no portion of the change in real income could have been attributed to the fiscal policy. When the LM curve is neither vertical nor completely flat (as is, in fact, the case), the relative strengths of fiscal and monetary policy depend on the relative steepness of the two schedules. Our estimates clearly suggest that the economy lies much closer to the pole where only monetary policy matters than to the other extreme, where only fiscal policy matters.

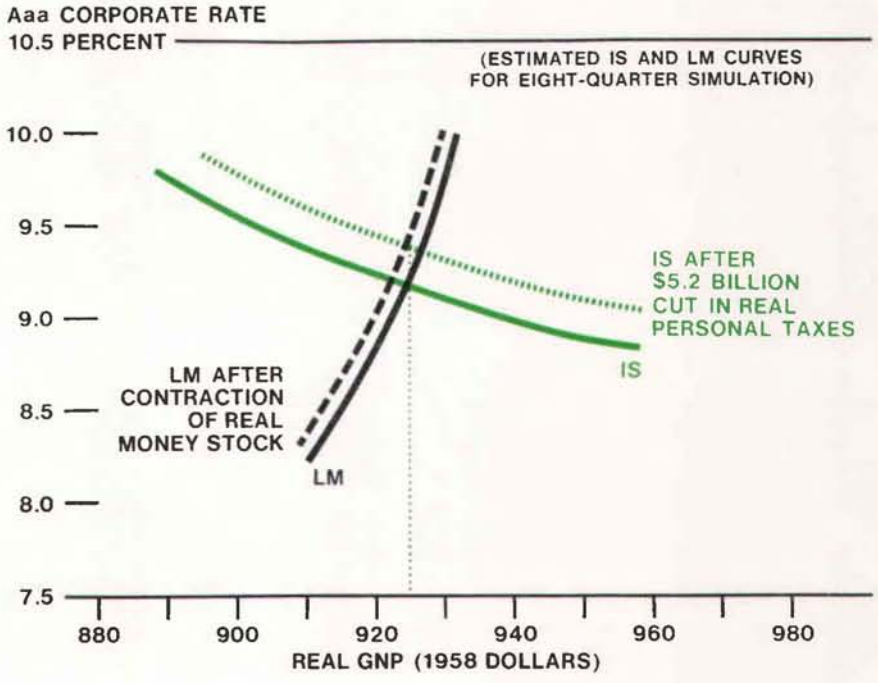
what the shape of the IS and LM curves or the posture of monetary policy.

Demand in excess of the ability of the economy to expand output drives up prices, reducing the real money stock so that the LM schedule shifts to the left. This tends to offset the effect on demand of the original rightward shift in the IS schedule. Prices rise and the LM schedule continues to shift to the left until the equilibrium level of real output is reduced back to the full-employment level.

The problem of crowding out, in an economy with less than full employment of resources, is actually an aspect of a broader issue in macroeconomic analysis–the question of the relative strengths of fiscal and monetary policy.

Figure 5

. . . but with full employment, crowding out is complete



Alternatively, the central bank may act to prevent the potential inflation. Instead of allowing the real money stock to be reduced by inflation, it contracts the nominal stock of money to achieve a lower real money stock at the same price level as before. The result is again a leftward shift in the LM schedule, fully offsetting the effect on output of the rightward shift in the IS schedule.

Such crowding out in a full-employment situation is illustrated with the estimated IS and LM schedules in Figure 5. A $10 billion reduction in personal income taxes, equal to a $5.2 billion cut in 1958 dollars, shifts the IS schedule to the right, as before. The $1.9 billion increase in real GNP that would otherwise occur cannot materialize in this case because the economy's resources are assumed to be already fully employed. Therefore, an additional $1.9 billion of real output must be crowded out by rising interest rates. Since the IS schedule is relatively flat, a rise of only 24 basis points in the Aaa corporate bond rate is required.

The required reduction in the real money supply occurs through either a decline in nominal money or an increase in prices. Thus, with full employment, the full amount of the fiscal stimulus is always crowded out by an equal reduction in other expenditures. Monetary policy can neither offset nor reinforce the crowding-out effect in this situation but only influences the price level.

Some implications

Even when the amount of unemployed resources is substantial, the use of stimulative fiscal policy without an accommodative monetary policy produces comparatively small gains in real GNP since a significant amount of private expenditures is crowded out. Crowding out occurs because both investment and consumption expenditures appear to be highly sensitive to interest rate changes while the demand for money balances is relatively insensitive.

These same structural conditions also imply that an expansion of the money stock has considerably more powerful effects on the economy than a change in fiscal policy. Indeed, the greater strength of monetary policy is a direct consequence of the fact that the effects of fiscal policy are largely offset by crowding out.

Care must be taken in applying this analysis to actual situations, however. In 1975, for example, business spending on investment goods–particularly inventories–fell sharply at the same time the federal budget deficit rose. Some analysts concluded that investment spending was being crowded out by the deficit. But this drop in

business investment was not, in fact, basically caused by the rise in the deficit. Rather, investment fell in 1975 mainly because of weakness in the economy. The resulting declines in income and profits brought reductions in tax revenues, and the deficit climbed.

In terms of IS-LM analysis, the IS schedule shifted to the left because of the decline in spending on investment goods, and the resulting decline in income produced a rise in the deficit. If the rate of resource utilization in 1975 had been the same as the levels in 1973, the U.S. Treasury would have collected an extra $46 billion in tax revenues, assuming no change in the tax laws.[8] In addition, expenditures on unemployment compensation would have been about $10 billion less, thus bringing the federal budget for calendar year 1975 even closer to balance.

However, crowding-out analysis is directly applicable to the fiscal stimulus originating from the Tax Reduction Act of 1975, which accounted for most of the remaining $20 billion of the federal budget deficit that calendar year. Our estimates of the structure of the economy indicate a large potential for the crowding out of private expenditures from this stimulus. But it appears that the crowding-out effect from the Tax Reduction Act was largely offset by an accommodative monetary policy on the part of the Federal Reserve.

As measured by the low point of real GNP, the trough of the recession was reached in the first quarter of 1975. In the absence of the tax act, interest rates would have been expected to rise somewhat–or, at least, not to fall–as the recovery began to take hold. But despite the upward pull on rates from the tax act, beginning in the second quarter, most interest rates were kept from rising over the rest of the year. So, while the potential for crowding out due to the Tax Reduction Act definitely existed in 1975, that potential appears to have been largely offset by an accommodative monetary policy.

While the potential for crowding out due to the Tax Reduction Act definitely existed in 1975, that potential appears to have been largely offset by an accommodative monetary policy.

The longer-run prospects for a displacement of private expenditures–and investment in particular–depend much less on the structural conditions of the economy or any monetary policy pursued than on the fiscal policies followed by the federal government as the economy returns to full employment. For with full utilization of resources, $1 of the government's borrowing always crowds out $1 of private borrowing.

A full-employment level of output is consistent with many different combinations of monetary and fiscal policy. But the actual mix chosen is a fundamental factor in determining the rate of private capital formation over the long run. The larger the budget deficit, the less private saving there is available to private borrowers. With less available saving, interest rates have to be higher in order to ration it, lowering the rate of private capital formation. Conversely, a budget surplus increases the amount of saving available to the private sector, leading to lower interest rates and a higher rate of private capital formation.

Whether capital needs of the 1970's and beyond are fully met will, therefore, depend critically on the position of the federal government's budget in the years ahead. One recent study concluded that to satisfy goals affecting the quality of living, the United States will have to undertake nearly $2 trillion in new capital projects between 1974 and 1980.[9] The study further concluded that this amount of new investment would be forthcoming if two conditions were met. First, this achievement would be facilitated if the economy's resources were fully employed. Second, with fully employed resources, the federal budget would need to show an annual surplus of $80 billion by 1980.

While the study conceded that this figure may be incorrect for a variety of reasons, any budget surplus would be a significant reversal of the government's fiscal position. It is also clearly a matter of judgment as to whether the stated investment goals are worth achieving. But what is undeniable is the fact that the crowding-out effect from continued budget deficits would make the achievement of such goals impossible.

–Brian P. Sullivan

8. According to the FRB-MIT-PENN econometric model, personal income taxes tend to fall 16.7 cents, federal unemployment insurance contributions 1.1 cents, federal excise taxes 0.1 cent, Social Security contributions 8.8 cents, and taxes on corporate profits 10.5 cents per $1 decrease in nominal GNP. In total, federal revenues fall 37.2 cents for each $1 decrease in nominal GNP. To have attained employment rates and capacity utilization rates in 1975 equal to those achieved in 1973, current-dollar GNP would have had to be nearly $124 billion higher than the amount actually realized. The $46 billion is the product of these two figures.
9. Barry Bosworth, James S. Duesenberry, and Andrew S. Carron, *Capital Needs in the Seventies*, Washington, D.C., Brookings Institution, 1975

Technical appendix

The FRB-MIT-PENN econometric model is a large and detailed representation of the U.S. economy, having approximately 200 endogenous and 136 exogenous variables. Despite its size, the links between various sectors of this model are well defined and consistent with the economic theory embodied in the IS-LM framework.

Because of a fairly complicated lag structure, however, both fiscal policy and monetary policy take time to work in the model. For this reason, the model was allowed to simulate the effects on the economy of fiscal and monetary policy changes for eight quarters. This period is long enough to capture most of the ultimate effects of the policy changes.

The IS curve was simulated by raising the level of the money stock by varying amounts in the initial quarter and allowing it to grow at the previous rate thereafter. The alternative levels of the money stock for the initial quarter and for real GNP and the interest rate after eight quarters are shown in Table 1. The estimated IS curve was obtained by connecting these nine combinations of the interest rate and real GNP.

To simulate the LM curve, the effective rate of personal income taxation was raised and lowered by increments designed to change income tax revenues, based on the original income level, by $10 billion. Thus, policies ranging from a $40 billion tax increase to a $40 billion decrease from the rates that were effective in the beginning period were simulated. No other changes were made in the forecasted values of the other exogenous variables. The nine points of real GNP and the Aaa corporate bond rate tracing out the estimated LM curve are also given in Table 1.

The use of one-time-only changes in the money stock to shift the LM curve is based on the standard textbook concept of that curve. Various components of federal government expenditures could have been used to simulate shifts of the IS curve. However, recent political debate has centered on tax reduction as a vehicle for recovery. While some proposals include provisions to alter corporation or payroll taxes, such changes have the effect of altering the relative prices of capital and labor to firms. Since the FRB-MIT-PENN model uses such variables, observed changes in real GNP would be the result of a combination of fiscal policy and changed factor prices. To avoid this possibility, personal income taxes were selected as the vehicle for the implementation of fiscal policy.

Because prices were allowed to change in response to the fiscal changes, the estimated LM curve is actually a hybrid incorporating the effects of these price changes on the real money supply and is, therefore,

Table 1

SIMULATION RESULTS FOR EIGHT-QUARTER ADJUSTMENT PERIOD

(Billion dollars, except for Aaa rate)

IS CURVE					LM CURVE				
Real (1958 dollars)			Aaa corporate rate	Money stock, initial quarter	Real (1958 dollars)			Aaa corporate rate	Personal income tax change
GNP	Investment[1]	Consumption			GNP	Investment[1]	Consumption		
885.8	127.7	589.2	9.86%	295.8	916.3	160.0	588.9	8.54%	+40
896.1	135.0	593.2	9.66	298.7	918.3	158.9	592.8	8.69	+30
905.8	142.2	597.1	9.48	301.4	920.3	157.9	596.6	8.84	+20
915.2	149.1	600.8	9.32	304.1	922.4	157.1	600.5	9.01	+10
924.4	156.1	604.5	9.19	306.8	924.4	156.1	604.5	9.19	0
933.0	162.6	607.9	9.09	309.3	926.3	154.9	608.3	9.39	−10
941.0	168.9	611.2	9.00	311.8	928.1	153.8	612.2	9.59	−20
948.5	174.9	614.3	8.94	314.3	929.8	152.7	616.1	9.80	−30
955.5	180.6	617.3	8.90	316.7	931.4	151.4	619.9	10.03	−40

1. Sum of business fixed investment, new residential construction, and inventory investment

steeper than the true LM curve. However, the effects on the real money supply appear to be quantitatively negligible.

There is a similar effect in the estimated IS curve. That is, at lower interest rates and higher real income, the rate of inflation increases. The resulting reduction in real household net worth tends to depress consumption and real output. While this effect appears to be quantitatively negligible, it tends to increase the steepness of the estimated IS curve also. But because both the IS and LM curves are made steeper by such induced price changes, the direction of bias, if any, in our estimate of the relative strengths of fiscal and monetary policy cannot be determined.

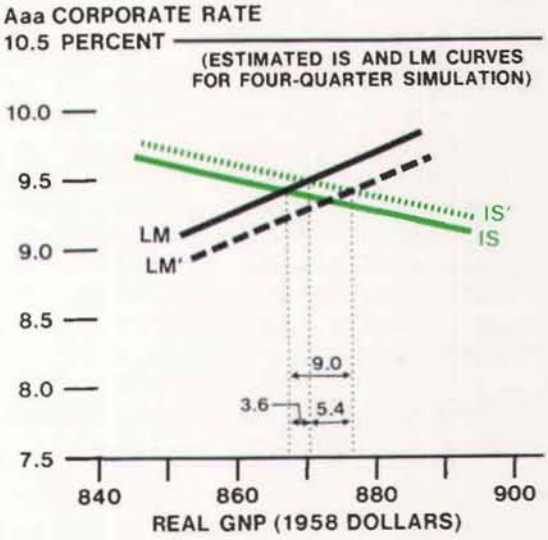
It is noteworthy that the relative slopes of the estimated IS and LM curves differ with the period of the simulation. The slope of the IS curve is about the same in a simulation over four quarters as over eight quarters, but the slope of the LM curve is much less in a four-quarter simulation than an eight-quarter simulation. Simulations of IS and LM curves over four quarters are shown in Table 2, and the linear approximations to them are–

IS curve: $y = -77.9r + 1{,}601.3$

LM curve: $y = 50.0r + 395.8$

The LM curve is significantly flatter over four quarters mainly because of the nature of the equation for the term structure of interest rates in the large econometric model. The Aaa corporate bond rate is determined in this model through a term-structure equation that involves a lengthy

Relative Strengths of Fiscal Policy And Monetary Policy



NOTE: IS' is after a $5.2 billion cut in real personal taxes.
LM' is after an accommodative increase in the real money stock.

Table 2

SIMULATION RESULTS FOR FOUR-QUARTER ADJUSTMENT PERIOD

(Billion dollars, except for Aaa rate)

IS CURVE					LM CURVE				
	Real (1958 dollars)		Aaa corporate rate	Money stock, initial quarter		Real (1958 dollars)		Aaa corporate rate	Personal income tax change
GNP	Investment[1]	Consumption			GNP	Investment[1]	Consumption		
843.9	118.9	564.5	9.71%	295.8	852.9	132.0	560.0	9.12%	+40
850.2	123.4	566.7	9.66	298.7	856.4	132.9	563.3	9.20	+30
856.1	127.6	568.9	9.56	301.4	860.0	133.6	566.6	9.28	+20
861.7	131.6	571.0	9.50	304.1	863.3	134.6	569.9	9.35	+10
867.2	135.3	573.3	9.42	306.8	867.2	135.3	573.3	9.42	0
872.6	139.0	575.6	9.36	309.3	870.8	136.1	576.6	9.50	−10
878.3	142.6	577.9	9.30	311.8	874.4	137.0	580.0	9.57	−20
883.6	146.3	580.4	9.24	314.3	878.1	137.7	583.5	9.65	−30
889.3	150.1	583.0	9.20	316.7	881.7	138.7	586.9	9.72	−40

1. Sum of business fixed investment, new residential construction, and inventory investment

distributed lag in the 90-day Treasury bill rate. The tax reduction, which causes the IS curve to shift, succeeds in raising both the 90-day bill rate and the level of real GNP. When only four quarters are allowed before the response to policy is measured, the rise in the 90-day bill rate, which equilibrates the supply of and demand for money, is not yet fully reflected in the term-structure equation that determines the Aaa corporate rate. Therefore, the increase in the Aaa rate per unit change in real output is less than in the eight-quarter simulation.

Because the steepness of the LM curve relative to the IS curve is significantly less for a simulation over four quarters, the strength of fiscal policy relative to monetary policy is much greater. As shown in Table 2 and the diagram, a $10 billion current-dollar tax cut raises real GNP by $3.6 billion and raises the Aaa corporate rate by 8 basis points. In addition, a $2.5 billion increment in the nominal money stock is required to raise real GNP by $5.4 billion and lower the bond rate by 8 basis points. So, if taxes are cut $10 billion and the money supply is raised $2.5 billion, the bond rate remains unchanged while real GNP rises a full $9 billion after four quarters. In this case, the fiscal action accounts for fully 40 percent of the total rise in real GNP produced as a result of the combined policies, compared with only 12 percent for the eight-quarter simulation.

New member bank

Plaza National Bank, San Antonio, Texas, a newly organized institution located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, opened for business May 10, 1976, as a member of the Federal Reserve System. The new member bank opened with capital of $500,000, surplus of $500,000, and undivided profits of $250,000. The officers are: John L. Cardenas, Chairman of the Board; Roy C. Diefendorf, President; Dan R. Perales, Vice President; and Elva Quijano, Cashier.

New par banks

Farmers Guaranty State Bank, Kennard, Texas, an insured nonmember bank located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, began remitting at par May 14, 1976. The officers are: Frank Smith, Chairman of the Board; John N. Morgan, President; Wendell Mericle, Vice President; Jenell Johnson, Cashier; and Bobbie V. Jones, Assistant Cashier.

First State Bank, Jarrell, Texas, an insured nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, began remitting at par May 17, 1976. The officers are: Vernon Lemens, Jr., Chairman of the Board; Vernon Lemens, Sr., Vice Chairman of the Board; Cora G. Sexton, President; F. W. Buchanan, Vice President and Cashier; Ben Parnell, Vice President; H. L. Jones, Vice President (Inactive); Bonnell Sybert, Assistant Cashier; and Tommy Sladecek, Assistant Cashier.

Exchange Bank & Trust Company, Natchitoches, Louisiana, an insured nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, began remitting at par May 26, 1976. The officers are: Arthur C. Watson, Chairman of the Board; Herbert S. Cobb, President; C. E. Dranguet, Jr., Executive Vice President; Ronald D. Roy, Vice President; Audie F. Smith, Assistant Vice President; James B. Cannon, Assistant Vice President; John E. Prudhomme, Cashier; Charlene C. Cobb, Assistant Cashier; Willard J. Ogle, Assistant Cashier; James R. Talbert, Assistant Cashier; and Diane S. Page, Assistant Cashier.

Federal Reserve Bank of Dallas
June 1976

Eleventh District Business Highlights

GROWTH IN SAVINGS

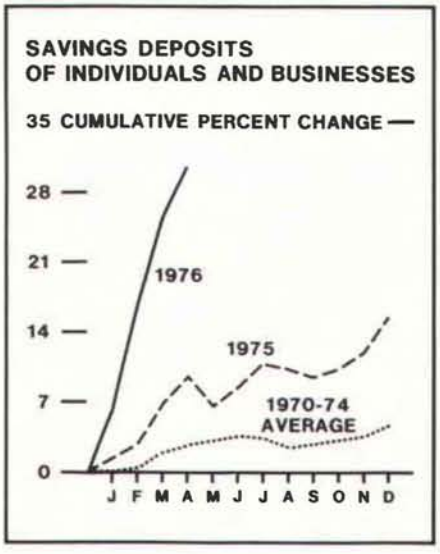
Large commercial banks in the Eleventh District are experiencing rapid growth in savings deposits of individuals and businesses. Savings surged 15.4 percent in 1975 and increased an additional 30.6 percent in the first four months of 1976.

Much of the growth in savings can be attributed to a fast recovery in real disposable personal income. Disposable income was boosted sharply last summer by the income tax rebates and increased supplemental Social Security payments. In Texas alone, disposable income rose almost 12 percent in 1975.

Another incentive for individuals to increase their savings at commercial banks developed as the rate of inflation abated. Interest rates on alternative short-term investments fell sharply, and a sizable volume of funds moved into the convenient and relatively attractive passbook-type savings accounts.

The November 10 regulatory change that permits member banks of the Federal Reserve System to offer business savings accounts has also been responsible for some of the growth in savings deposits. These business deposits accounted for 12 percent of the increase in total savings in 1975 and 18 percent in the first four months of 1976.

Most of the growth in savings deposits this year probably reflects a continuation of the economic trends established last year. Sizable gains in both current and real disposable personal income were registered in the first quarter. And short-term interest rates continued to decline through April, causing passbook-type savings accounts to remain attractive investments.



URBAN FAMILY BUDGETS

Family budgets in three Texas cities continued to rank among the lowest in the country last year, according to the U.S. Bureau of Labor Statistics. However, budget requirements to maintain living standards generally grew faster in those same cities than in many other urban areas.

Austin continued to have the lowest living costs of the 39 metropolitan areas sampled. But Dallas and Houston were close behind.

For an urban family of four living on what the bureau considers an intermediate budget, it required $13,422 a year to run a household in Austin, $13,924 in Dallas, and $14,020 in Houston. The U.S. average for the cities sampled was $15,318.

For lower-budget families, the ranking was the same for the three Texas cities. Austin was lowest with $8,412, followed by Dallas with $8,730 and Houston with $8,968. The national average was $9,588.

The only change in rank was for families in the highest budget category. Although Austin was still low with $19,413, the $20,197 required in Dallas was more than the $20,090 in Houston. These were, nonetheless, well below the $22,294 average for the high budget in the 39-city sample.

Lower living costs in Texas at all three budget levels were largely due to the absence of a state income tax. As a result, urban Texans paid roughly a third less in personal income taxes than comparable families elsewhere.

In addition, family costs were held down by the smaller outlays required for food and housing. But for the three Texas cities, Dallas generally had the highest housing costs while Houston had the highest food costs.

Although their overall living costs were lower, some Texans paid more than the national average for some items. Clothing costs were relatively high in Austin, and costs for personal and medical care were above average in Dallas and Houston.

While living costs were among the lowest in the country for urban areas, most family budgets grew faster in Texas than the respective national averages. The biggest increases at all three budget levels were in Houston. For example, living costs there for a family on an intermediate budget grew 8.9 percent, compared with 6.9 percent for the corresponding U.S. family.

In Austin and Dallas, the low budgets grew slower than the national average. But the intermediate and high budgets expanded faster. Living costs for the intermediate budget rose 8.3 percent in Austin and 7.8 percent in Dallas.

(Continued on back page)

CONDITION STATISTICS OF WEEKLY REPORTING COMMERCIAL BANKS

Eleventh Federal Reserve District

(Thousand dollars)

ASSETS	May 19, 1976	Apr. 21, 1976	May 14, 1975[1]
Federal funds sold and securities purchased under agreements to resell	1,224,610	1,260,676	1,945,167
Other loans, gross	10,791,913	10,708,485	10,471,306
Less loan loss reserve	267,985	265,828	n.a.
Other loans, net	10,523,928	10,442,657	n.a.
Commercial and industrial loans	5,439,086	5,326,447	5,061,594
Agricultural loans, excluding CCC certificates of interest	229,411	223,340	190,645
Loans to brokers and dealers for purchasing or carrying:			
U.S. Government securities	1,627	578	200
Other securities	77,518	77,534	27,488
Other loans for purchasing or carrying:			
U.S. Government securities	6,658	3,302	2,226
Other securities	423,648	367,840	388,179
Loans to nonbank financial institutions:			
Sales finance, personal finance, factors, and other business credit companies	178,426	209,639	134,961
Other	640,379	616,428	588,353
Real estate loans	1,334,748	1,345,175	1,519,107
Loans to domestic commercial banks	40,907	45,803	63,532
Loans to foreign banks	77,450	75,463	91,618
Consumer instalment loans	1,087,219	1,089,049	1,101,941
Loans to foreign governments, official institutions, central banks, and international institutions	5,769	5,644	3
Other loans	1,249,067	1,322,243	1,301,459
Total investments	5,804,671	5,788,344	4,834,296
Total U.S. Government securities	2,114,671	2,193,101	1,264,325
Treasury bills	432,144	526,280	199,797
Treasury certificates of indebtedness	0	0	0
Treasury notes and U.S. Government bonds maturing:			
Within 1 year	233,497	241,686	227,914
1 year to 5 years	1,253,094	1,216,650	686,426
After 5 years	195,936	208,485	150,188
Obligations of states and political subdivisions:			
Tax warrants and short-term notes and bills	188,308	204,904	104,958
All other	3,104,224	3,045,903	3,106,125
Other bonds, corporate stocks, and securities:			
Certificates representing participations in federal agency loans	17,765	18,243	5,450
All other (including corporate stocks)	379,703	326,193	353,438
Cash items in process of collection	1,544,616	1,453,243	1,486,942
Reserves with Federal Reserve Bank	1,145,505	1,430,792	1,090,545
Currency and coin	137,206	143,745	131,038
Balances with banks in the United States	489,785	487,891	448,955
Balances with banks in foreign countries	248,068	228,360	24,761
Other assets (including investments in subsidiaries not consolidated)	1,282,295	1,353,881	1,025,563
TOTAL ASSETS	22,400,684	22,589,589	21,458,573

LIABILITIES	May 19, 1976	Apr. 21, 1976	May 14, 1975[1]
Total deposits	16,868,212	17,133,726	16,168,136
Total demand deposits	7,666,913	7,825,559	7,467,365
Individuals, partnerships, and corporations	5,518,518	5,681,832	5,461,930
States and political subdivisions	513,012	404,821	490,626
U.S. Government	138,483	174,931	56,108
Banks in the United States	1,337,822	1,377,503	1,280,492
Foreign:			
Governments, official institutions, central banks, and international institutions	4,354	3,147	3,274
Commercial banks	55,730	74,961	64,394
Certified and officers' checks, etc.	98,994	108,364	110,541
Total time and savings deposits	9,201,299	9,308,167	8,700,771
Total savings deposits	1,801,335	1,757,227	1,297,828
Individuals and nonprofit organizations	1,664,729	1,660,383	n.a.
Partnerships and corporations operated for profit	135,867	96,354	n.a.
Domestic governmental units	662	420	n.a.
All other savings deposits	77	70	n.a.
Total time deposits	7,399,964	7,550,940	7,402,943
Individuals, partnerships, and corporations	4,825,443	4,807,061	4,667,454
States and political subdivisions	2,105,161	2,233,901	2,343,225
U.S. Government (including postal savings)	7,152	10,829	9,724
Banks in the United States	446,990	483,595	353,872
Foreign:			
Governments, official institutions, central banks, and international institutions	12,070	13,333	23,161
Commercial banks	3,148	2,221	5,507
Federal funds purchased and securities sold under agreements to repurchase	3,187,389	3,178,924	2,902,332
Other liabilities for borrowed money	80,925	55,440	56,864
Other liabilities	565,345	554,924	856,425
Total equity capital and subordinated notes and debentures	1,698,813	1,666,575	1,474,816
TOTAL LIABILITIES AND CAPITAL ACCOUNTS	22,400,684	22,589,589	21,458,573

1. Because of format revisions as of March 31, 1976, earlier data are not fully comparable.
n.a.—Not available

CONDITION STATISTICS OF ALL MEMBER BANKS

Eleventh Federal Reserve District

(Million dollars)

Item	Apr. 28, 1976	Mar. 31, 1976	Apr. 30, 1975[1]
ASSETS			
Loans and discounts, gross	22,801	23,497	21,345
U.S. Government obligations	4,112	3,970	2,546
Other securities	7,795	7,723	7,384
Reserves with Federal Reserve Bank	1,745	1,822	1,912
Cash in vault	447	402	375
Balances with banks in the United States	1,530	1,749	1,455
Balances with banks in foreign countries[e]	255	226	33
Cash items in process of collection	1,883	1,988	1,821
Other assets[e]	1,986	1,954	1,884
TOTAL ASSETS[e]	42,554	43,331	38,755
LIABILITIES AND CAPITAL ACCOUNTS			
Demand deposits of banks	1,854	2,078	1,695
Other demand deposits	13,452	13,829	12,592
Time deposits	19,499	19,460	17,194
Total deposits	34,805	35,367	31,481
Borrowings	3,495	3,763	2,938
Other liabilities[e]	1,309	1,291	1,625
Total capital accounts[e]	2,945	2,910	2,711
TOTAL LIABILITIES AND CAPITAL ACCOUNTS[e]	42,554	43,331	38,755

1. Because of new accounting procedures for bank balance sheets as of March 31, 1976, earlier data are not fully comparable.
e—Estimated

DEMAND AND TIME DEPOSITS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. Million dollars)

Date	DEMAND DEPOSITS			TIME DEPOSITS	
	Total	Adjusted[1]	U.S. Government	Total	Savings
1974: April	13,984	10,289	236	15,143	2,975
1975: April	14,247	10,572	213	17,196	3,325
May	14,106	10,374	195	17,303	3,348
June	14,333	10,529	199	17,273	3,409
July	14,501	10,698	164	17,315	3,480
August	14,514	10,745	129	17,452	3,493
September	14,748	10,608	196	17,563	3,513
October	14,725	10,752	171	17,715	3,561
November	15,072	10,947	165	18,031	3,608
December	15,418	11,217	201	18,249	3,689
1976: January	15,736	11,438	188	18,558	3,817
February	15,363	11,178	218	18,955	4,063
March	15,315	11,280	191	19,255	4,287
April	15,616	11,599	199	19,454	4,430

1. Other than those of U.S. Government and domestic commercial banks, less cash items in process of collection

RESERVE POSITIONS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. Thousand dollars)

Item	4 weeks ended Apr. 28, 1976	5 weeks ended Mar. 31, 1976	4 weeks ended Apr. 30, 1975
Total reserves held	2,141,420	2,107,474	2,022,415
With Federal Reserve Bank	1,757,796	1,743,314	1,674,984
Currency and coin	383,624	364,160	347,431
Required reserves	2,104,051	2,104,051	2,008,628
Excess reserves	37,369	3,423	13,787
Borrowings	2,137	59,358	4,439
Free reserves	35,232	−55,935	9,348

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

SMSA's in Eleventh Federal Reserve District

(Dollar amounts in thousands, seasonally adjusted)

Standard metropolitan statistical area	DEBITS TO DEMAND DEPOSIT ACCOUNTS[1]				DEMAND DEPOSITS[1]			
	Apr. 1976 (annual-rate basis)	Percent change: Apr. 1976 from Mar. 1976	Percent change: Apr. 1976 from Apr. 1975	Percent change: 4 months, 1976 from 1975	Apr. 30, 1976	Annual rate of turnover: Apr. 1976	Annual rate of turnover: Mar. 1976	Annual rate of turnover: Apr. 1975
ARIZONA: Tucson	$34,679,710	9%	95%	86%	$395,744	86.3	81.0	47.2
LOUISIANA: Monroe	7,634,137	−7	26	36	147,089	51.8	57.8	46.9
Shreveport	17,462,664	−9	−23	−11	390,590	45.0	51.1	62.9
NEW MEXICO: Roswell[2]	1,695,062	−3	11	18	58,987	28.5	29.2	28.3
TEXAS: Abilene	5,090,455	−6	16	25	165,631	30.7	32.6	30.0
Amarillo	13,436,100	−1	24	21	283,038	47.7	47.3	42.4
Austin	32,619,776	6	68	53	488,424	61.8	51.4	48.2
Beaumont-Port Arthur-Orange	12,257,280	−6	9	15	377,108	31.7	33.5	32.3
Brownsville-Harlingen-San Benito	7,630,452	6	89	63	161,543	49.0	48.9	31.5
Bryan-College Station	2,278,145	−1	15	27	71,991	31.8	33.1	32.0
Corpus Christi	13,966,662	1	17	13	348,138	39.9	38.7	39.0
Corsicana[2]	905,753	−7	16	12	45,891	19.6	20.8	17.8
Dallas	297,553,392	−6	9	12	3,470,537	87.9	94.9	85.7
El Paso	17,076,887	−7	6	21	345,555	47.8	51.3	49.1
Fort Worth	47,512,540	2	16	15	1,057,138	44.8	44.8	43.3
Galveston-Texas City	5,434,586	−3	3	4	170,457	32.0	33.4	34.7
Houston	296,960,508	−11	14	19	4,453,979	66.6	74.7	65.3
Killeen-Temple	3,398,180	0	14	19	149,045	23.2	24.1	24.5
Laredo	2,478,100	3	12	19	85,119	28.7	28.0	31.2
Lubbock	12,551,220	3	20	25	260,298	47.1	45.1	43.4
McAllen-Pharr-Edinburg	6,024,985	0	19	23	197,520	30.4	31.1	29.7
Midland	7,885,741	3	66	66	251,768	30.6	29.0	21.6
Odessa	6,058,652	−5	66	75	146,646	40.8	43.3	26.5
San Angelo	5,006,544	16	59	56	111,699	43.3	37.7	31.4
San Antonio	38,374,967	−4	12	17	1,003,115	38.5	40.5	37.7
Sherman-Denison	2,004,995	1	12	22	94,233	21.4	21.4	20.5
Texarkana (Texas-Arkansas)	2,843,028	−3	20	17	101,737	27.9	29.0	25.1
Tyler	4,811,300	−8	27	24	168,844	28.7	31.0	25.2
Waco	6,668,648	−6	10	8	192,434	35.7	38.3	35.3
Wichita Falls	5,308,097	0	5	1	193,926	27.1	26.9	27.7
Total—30 centers	$917,608,566	−6%	15%	19%	$15,388,224	59.7	63.5	57.3

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

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS

(Thousand dollars)

Item	May 26, 1976	Apr. 28, 1976	May 28, 1975
Total gold certificate reserves	420,435	422,062	422,062
Loans to member banks	2,400	900	54,200
Other loans	0	0	0
Federal agency obligations	324,269	337,756	260,272
U.S. Government securities	4,177,614	4,459,556	4,322,228
Total earning assets	4,504,283	4,798,212	4,636,700
Member bank reserve deposits	1,605,740	1,744,800	1,630,469
Federal reserve notes in actual circulation	3,131,285	3,072,395	2,724,681

VALUE OF CONSTRUCTION CONTRACTS

(Million dollars)

Area and type	Apr. 1976	Mar. 1976	Feb. 1976	January—April 1976	January—April 1975r
FIVE SOUTHWESTERN STATES[1]	1,088	1,168	876	3,934	3,810
Residential building	490	481	422	1,743	1,211
Nonresidential building	344	477	259	1,289	1,418
Nonbuilding construction	254	209	195	902	1,181
UNITED STATES	9,408	8,908	6,149	30,869	25,815
Residential building	4,003	3,618	2,546	12,403	8,325
Nonresidential building	2,741	2,561	1,996	9,178	9,408
Nonbuilding construction	2,664	2,729	1,608	9,289	8,082

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.

BUILDING PERMITS

Area	NUMBER: Apr. 1976	NUMBER: 4 mos. 1976	VALUATION (Dollar amounts in thousands): Apr. 1976	VALUATION: 4 mos. 1976	Percent change: Apr. 1976 from Mar. 1976	Percent change: Apr. 1976 from Apr. 1975	Percent change: 4 months, 1976 from 1975
ARIZONA							
Tucson	331	1,212	$5,217	$21,520	−44%	−75%	−42%
LOUISIANA							
Monroe-West Monroe	85	343	1,166	5,005	−8	−15	−2
Shreveport	556	1,656	6,427	22,914	−27	−22	22
TEXAS							
Abilene	135	507	3,011	11,177	21	−52	−2
Amarillo	329	1,149	13,392	30,798	92	138	91
Austin	433	2,030	16,493	61,429	−24	24	47
Beaumont	228	739	5,791	15,659	102	183	53
Brownsville	148	535	2,261	7,973	53	164	171
Corpus Christi	257	1,102	3,307	16,466	2	−78	−32
Dallas	1,420	4,621	27,693	126,230	2	49	39
Denison	27	99	302	1,530	−62	47	85
El Paso	579	2,124	13,928	46,405	14	4	3
Fort Worth	365	1,407	26,518	48,683	247	5	1
Galveston	71	276	1,921	4,420	120	659	136
Houston	2,251	9,016	64,422	220,167	−9	24	16
Laredo	97	387	4,943	9,299	170	930	184
Lubbock	235	768	8,831	31,195	−21	0	−44
Midland	113	488	1,802	9,549	−16	−19	21
Odessa	230	682	12,644	31,532	−6	994	338
Port Arthur	84	305	1,106	3,050	176	304	172
San Angelo	75	314	6,385	11,083	295	386	154
San Antonio	1,004	3,880	19,119	56,049	30	42	46
Sherman	31	124	383	2,709	−11	−22	35
Texarkana	81	265	488	3,363	−62	−18	83
Waco	237	815	2,658	7,453	73	89	51
Wichita Falls	127	552	1,336	13,333	−81	19	114
Total—26 cities	9,529	35,396	$251,544	$818,991	8%	17%	21%

INDUSTRIAL PRODUCTION AND TEXAS MANUFACTURING CAPACITY UTILIZATION

(Seasonally adjusted indexes, 1967 = 100 for production)

Area and type of index	Apr. 1976p	Mar. 1976	Feb. 1976	Apr. 1975r
TEXAS				
Total industrial production	127.4	128.9	129.1	121.4
Manufacturing	135.2	136.5	134.7	124.3
Durable	132.1	136.0	132.2	128.4
Nondurable	137.7	136.9	136.6	121.1
Mining	102.9	105.3	110.0	108.4
Utilities	175.4	175.4	175.4	166.8
Capacity utilization in manufacturing (1972 = 100)	96.9	98.1	97.2	92.9
UNITED STATES				
Total industrial production	122.5	121.7	120.8	109.9
Manufacturing	121.5	120.6	119.8	107.9
Durable	113.6	112.0	111.0	103.3
Nondurable	132.9	132.7	132.3	114.8
Mining	106.3	106.9	103.6	108.5
Utilities	162.2	160.9	159.9	153.1

p—Preliminary
r—Revised
SOURCES: Board of Governors of the Federal Reserve System
Federal Reserve Bank of Dallas

LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT

Five Southwestern States[1]

(Seasonally adjusted)

Item	Thousands of persons			Percent change Apr. 1976 from	
	Apr. 1976p	Mar. 1976	Apr. 1975r	Mar. 1976	Apr. 1975
Civilian labor force	9,305.6	9,316.1	9,237.8	−0.1%	0.7%
Total employment	8,722.4	8,757.5	8,633.1	−.4	1.0
Total unemployment	583.2	558.6	604.7	4.4	−3.6
Unemployment rate	6.3%	6.0%	6.5%	[2].3	[2]−.2
Total nonagricultural wage and salary employment	7,740.3	7,751.2	7,576.4	−.1	2.2
Manufacturing	1,282.8	1,282.9	1,251.0	.0	2.5
Durable	710.3	711.3	699.3	−.1	1.6
Nondurable	572.5	571.6	551.7	.2	3.8
Nonmanufacturing	6,457.5	6,468.3	6,325.4	−.2	2.1
Mining	272.5	274.0	266.0	−.5	2.4
Construction	482.3	484.4	483.3	−.4	−.2
Transportation and public utilities	507.4	504.9	503.9	.5	.7
Trade	1,859.0	1,862.6	1,814.0	−.2	2.5
Finance	426.8	428.6	418.9	−.4	1.9
Service	1,336.4	1,340.8	1,308.3	−.3	2.1
Government	1,573.1	1,573.0	1,530.9	.0%	2.8%

1 Arizona, Louisiana, New Mexico, Oklahoma, and Texas
2 Actual change
p—Preliminary
r—Revised
NOTE: Details may not add to totals because of rounding.
SOURCES: State employment agencies
Federal Reserve Bank of Dallas (seasonal adjustment)

OTHER HIGHLIGHTS:

• Preliminary data show the Texas industrial production index fell in April for the second month in a row. The decline, measuring 14.3 percent at an annual rate, reflected reduced output in durable goods manufacturing and crude petroleum mining. Substantial decreases were evident in the transportation equipment, machinery, and primary metals industries.

Output in nondurable goods manufacturing overall was up, but there was weakness in some industries. Although production in the chemical and refining industries continued to recovery, production in the food, apparel, and paper industries was down.

• The unemployment rate for the five southwestern states increased to 6.3 percent in April from 6.0 percent a month earlier. A sharp rise in the number of unemployed workers and a small decline in the labor force accounted for the increase in the jobless rate.

• Reversing a sharp four-month decline, a seasonal pickup in drilling activity in the nation appears to be underway. The number of rotary rigs in operation began making strong weekly gains in May and approached the level attained a year earlier, suggesting drilling activity may be strong during the remainder of this year. Offshore work may also show some improvement, but a surplus of offshore rigs may persist.

• Loan demand at weekly reporting banks in the Eleventh District picked up in the four weeks ended May 19, following considerable weakness in most of the first 3½ months of the year. Total loans rose moderately in the four weeks, mainly reflecting increased borrowing by chemical and rubber manufacturers, mining concerns, commodity dealers, and public utilities. Demand for real estate loans and consumer loans, however, remained sluggish.

• An 11-percent increase in average prices for livestock and livestock products raised the index of prices received by Texas farmers for all farm products in the month ended April 15. Higher prices for beef cattle, calves, sheep, lambs, broilers, and wool increased the livestock index. The crop index, however, was little changed as lower prices for wheat, oats, and cotton offset higher prices for barley, rice, and soybeans.