Economic Review

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Debt: The Threat To Economic and Financial Stability

By Henry Kaufman

I was pleased to have received an invitation to be the leadoff speaker at this conference to present an overview of the current debt situation in the United States and of financial stability. It was in the late 1960s when I first detected that developments in debt creation might be taking an ominous turn. Since then, I have spoken about the subject a number of times. While many debt problems have surfaced in recent years, the issue of debt and financial stability does not yet have the national attention it so crucially deserves. Now, the problems associated with debt are well past their infancy and, indeed, are dangerously full grown. Even so, there is still only some awareness today that debt has both a sunny and a dark side to it. Historically, the act of creating debt contributed to economic and financial exhilaration. But in the past several years, we have realized that the obligations inherent in debt may impose hardships on lenders and borrowers and, indeed, on the economy and the financial markets as a whole.

The reality is that our debt problem is not going to go away. It is complex; there are no easy solutions. To cope successfully with this problem and stave off an economic disruption of major proportions, the role of our financial system will need to be redefined and structural changes and disciplines that are lacking today will have to be imposed. Unfortunately, there is as yet no evidence that adequate measures will be undertaken soon to ameliorate this situation.

The many dimensions of the debt problem

The debt problem has many dimensions. Most noticeable—and most talked about—is the rapid growth of debt. At the end of 1985, total credit market debt—mainly households, businesses, and governments, but also the financial sector—totaled $8.2 trillion, compared with $4.6 trillion at the start of the decade and $1.6 trillion in 1970. As shown in Table 1, total debt rose annually by 7.25 percent in the 1960s, by 11 percent in the 1970s, and by almost 12 percent so far in the 1980s.

Henry Kaufman is executive director of Salomon Brothers. The article is based on a paper given at the symposium on "Debt, Financial Stability, and Public Policy," sponsored by the Federal Reserve Bank of Kansas City at Jackson Hole, Wyoming, August 27-29, 1986.

TABLE 1
Growth of nominal GNP versus credit
(Average annual percentage of change)

	1960s	1970s	1980-85	1985	Billions of dollars[1]
Nominal GNP	6.89	10.06	8.07	5.67	3,998.10
Domestic nonfinancial debt	6.83	10.40	11.58	15.00	7,131.90
Corporate	9.40	11.22	10.39	12.40	1,505.10
Household[2]	8.55	11.40	10.30	12.85	3,224.60
U.S. government	1.96	8.83	15.84	16.24	1,660.40
State and local government	7.55	7.39	12.47	34.18	553.10
Foreign debt in the U.S.	8.57	14.42	5.54	0.61	1,115.60
Financial debt	14.94	16.78	15.69	21.03	248.90
Total Debt	**7.25**	**11.06**	**11.75**	**15.23**	**8,247.50**

[1] As of December 31, 1985
[2] Household sector includes farm and nonfarm corporate business.

Debt expansion is also outrunning gross national product (GNP) growth. Credit market debt outstanding at the end of last year exceeded nominal GNP by a ratio of 2 to 1. In 1980, debt was 70 percent higher than GNP, and in both 1960 and 1970, it was roughly 50 percent higher than GNP.

All major sectors of the economy have accelerated their use of credit. Corporate debt, for example, increased by 12.4 percent in 1985, compared with 9.4 percent annually in the 1960s. Household debt rose by 12.8 percent in 1985, up from an annual average increase of 8.6 percent in the 1960s. But the most dramatic stepup in borrowings by far has been incurred by governments: U.S. government debt rose at an annual rate of 2 percent in the 1960s, by 9 percent in the 1970s, and almost 16 percent annually thus far in the 1980s. Concurrently, state and local governments debt expanded by around 7.5 percent annually in the 1960s and 1970s and then jumped to 12.5 percent per year thus far in the 1980s. Debt has also burgeoned internationally. At the end of 1985, the medium and long-term external debt of less developed countries totaled $781 billion, or 159 percent of their gross merchandise exports, compared with $173 billion, or 73 percent of their merchandise exports, in 1975.

A significant deterioration in the quality of credit has accompanied this swift debt growth. In the United States, this has been most noticeable in the business sector, where more credit ratings have been downgraded than upgraded since the start of the current business expansion in 1982 (Table 2). Today, the universe of AAA-rated industrial and utility corporations has been cut

TABLE 2
Changes in credit ratings of nonfinancial corporate and state and local government bonds
Number of upgradings (+) less downgradings (−)

	Nonfinancial Corporate Including International[1]	State and Local Government[2]
First Half 1986	−97	+47
First Half 1985	−135	−66
1984	+1	−116
1983	−98	−157
1982	−154	−127
1981	−31	−81
1980	+13	−9
1979	+28	−95
1978	+22	+158

[1] Standard & Poor's
[2] Moody's

to 26 from 56 a decade ago, when the economy was smaller. Currently, the size of the high-yield bond market (with credit ratings below BBB) is about $100 billion, or roughly 21 percent of outstanding corporate bonds. In 1976, the size of this market was nearly $19 billion, or 9 percent of outstandings. At present, only the paper of one large bank holding company is rated AAA; ten years ago, there were 14.

A glaring contribution to this erosion in quality has been the simultaneous increase in debt and the actual decline in the equity positions of business corporations. Over the two years 1984 and 1985, the debt of nonfinancial corporations rose by $384 billion, while equity contracted by $99 billion. This contraction comprises the total of retained earnings, which were a positive $53 billion, and net new equity issuance, which was a negative $152 billion. This disturbing pattern, persisting so far in 1986, reflects an audacious leveraging strategy that has gone unchallenged by a smaller or larger degree of economic adversity.

Nevertheless, it is beginning to take its toll. The once smoothly functioning corporate bond market is showing signs of weakness. No longer is it the market leader, a role that has been usurped by U.S. government securities. More importantly, investing in and trading corporate bonds on relative value merits has become increasingly hazardous. "Event risks," such as takeovers, have often resulted in a sudden collapse in credit quality, producing large losses for bond investors. As a result, relative value analysis has been rendered a less useful tool for bond investing.

This credit quality deterioration is also evident in other sectors. In the state and local government market, overall credit quality growth eroded for the seventh consecutive year in 1985, the latest year for which we have complete data. In the agricultural sector, the value of farmland, after peaking in 1981, has fallen by 25 percent, while farm debt has continued to mount. As a result, over the past five years, farmers' net worth has fallen by 30 percent, and many farms are in financial disrepair. Even households do not show the financial strength they enjoyed a decade ago.

Both the ratios of household debt to disposable personal income and to net worth are at record highs—they were 25 percent and 15 percent lower, respectively, ten years ago. In the current business expansion, the consumer's appetite for credit has been voracious. In the past four years, for example, while disposable income has risen by 32 percent, households have taken on 42 percent more in mortgage debt and an extraordinary 73 percent more in installment debt.

In addition to the ongoing deterioration in these sectors of the economy, there is a relatively new area of weakness—commercial real estate construction. We are just beginning to realize the extent of this problem. Significant real estate loan losses have been reported at a number of large banking and thrift institutions, not only in the Southwest, but nationwide, reflecting the fact that rental income is insufficient to support the debt service of many office projects.

An additional facet of the debt problem concerns the data. Now all of us who have worked with debt data should readily concede to the shortcomings of these statistics. The Federal Reserve's flow-of-funds data, a prime source for many of us, have many flaws. For example, information on state and local government borrowing is provided with a long lag by the Census Bureau. The U.S. Treasury, for cost-cutting reasons, has moved to voluntary reporting on many of the capital flows between residents of the United States and foreigners. The data on borrowing and investing abroad by domestic corporations are inadequate in terms of accuracy, completeness, and timeliness. The statistics on corporate pension funds and public retirement funds are incomplete and, like many other data, are available only with a considerable delay.

Nevertheless, imperfections in the data do not invalidate the conclusion that the nation faces a very serious debt problem. If anything, the available data probably understate the magnitude of the problem. For example, the Federal Reserve's flow-of-funds data tend to be revised sharply upward from the preliminary report. As shown in Table 3, two years after the release of the preliminary fourth-quarter 1983 flow-of-funds statistics, the upward revision for nonfinancial debt was nearly 7 percent. It ranged as high as 40 percent for some subsectors.

In addition, we should all understand that the enormity of the debt situation is being masked by accounting conventions and liberal official regulatory standards. Financial statements often tend to show a netting out of assets and liabilities. Given current balance sheet conventions, many business and financial entities probably employ greater leverage of debt to capital than is readily discernible.

The underlying causes of debt growth

How did this enormous growth of debt come about and what is sustaining it? Merely to blame the incorrect policies that fueled inflation is too easy. There is much more to the debt explosion. I have written at length about the underlying causes of the surge in debt. For this discussion, let me summarize with the following seven points: the attitude toward debt, financial deregulation, financial innovation, securitization, financial internationalization, the tax structure, and practicing debt prudence.

The attitude toward debt has been a transformation from a hesitancy to borrow in the early

TABLE 3
Revisions in fourth quarter 1983 flow-of-funds
(Billions of dollars)

		Revisions					
	1983:4Q	1984:2Q		1984:4Q		1985:4Q	
Category	Billions	Billions	Percent Change	Billions	Percent Change	Billions	Percent Change
Total nonfinancial debt	509.5	526.4	3.3	526.4	3.3	542.9	6.6
Government	186.6	186.6	0.0	186.6	0.0	186.6	0.0
Tax exempt	44.3	56.3	27.1	56.3	27.1	57.3	29.3
Corporate and foreign bonds	15.0	15.7	4.7	15.7	4.7	16.0	6.7
Mortgages	168.6	167.3	−0.8	167.3	−0.8	180.3	6.9
Business loans	19.1	27.3	42.9	27.3	42.9	26.8	40.3
Consumer credit	54.2	51.3	−5.4	51.3	−5.4	56.7	4.6
Open-Market paper	−1.2	−1.2	0.0	−1.2	0.0	−1.6	33.3
Other	23.0	23.1	0.4	23.1	0.4	20.7	10.0

post World War II period to an intense use of credit in recent years. This attitudinal change reflects the declining influence of those who experienced the Great Depression of the 1930s. Indeed, despite a series of greater or less serious financial crises during the past 20 years, only relatively few institutions failed. Today, no one celebrates paying off the home mortgage. Now, corporate financing strategies do not differentiate between money and credit or between liabilities and liquidity.

Financial deregulation, regardless of its merits, still facilitates the creation of debt, because it spurs competition, and reinforces the drive for new markets and enlarged market standing. Credit growth was more inhibited when markets were more compartmentalized and institutions were more restricted in their activities.

Financial innovation, by its very nature, either facilitates a credit that could not have been financed at all using earlier techniques or is utilized to reduce financing costs. Perhaps the most far-reaching of the many changes that have been introduced in the past few decades has been floating-rate financing. This technique enables financial institutions to try to insulate themselves from the interest rate risk by quickly passing on increases in the cost of their sources of funds to their borrowers. In the past, a move toward higher interest rates curbed debt growth because financial institutions could not easily pass on the higher costs to their customers. But with the advent of the pass-through device of the floating-rate note, financial institutions have become aggressively more entrepreneurial and growth oriented than in the past.

Securitization, which transforms obligations from nonmarketable to marketable, has encouraged debt growth in several ways. First, it tends to create the illusion that credit risk can be reduced if the credit instruments become marketable. Holders of the marketable obligation frequently believe that they have the foresight to sell before

the decrease in creditworthiness is perceived by the market. Second, the enhancement techniques employed in securitization, such as credit guarantees and insurance, blur the credit risk and raise the vexing question, "Who is the real guardian of credit?"

Internationalization of finance has also enhanced debt creation. Today, major corporations and official and private institutions seek the best terms by borrowing in Europe, the United States, and Japan. Rapid advances in communications and technology, together with financial deregulation abroad, have intensified competition among key financial centers. In view of the differences in the degrees of deregulation, regulatory requirements, and accounting standards, the opportunity to generate debt is very great indeed.

Our tax structure is another factor that encourages the use of debt over equity. Interest payments are generally tax deductible. Although this preferential treatment may be curtailed somewhat by the proposed tax reform, dividend payments are still subject to double taxation and the levy on capital gains may be raised.

Practicing financial prudence is virtually impossible for major participants in our financial system. Even the best compromise. For business corporations, this may happen through the use of greater leveraging to avoid a takeover. As I have noted in my book, "If (financial) participants fail to adapt to the new world of securitized debt, proxy debt instruments, and floating-rate financing, then they lose market share, make only limited profits and do not attract the most skilled people. The driving force behind profit generation is credit growth."[1]

The risks and policy challenges of financial stability

What risks do the mounting debt pose for financial stability? Here no simple formula will reveal to us the flashpoints of economic and financial trouble. The fact is that the debt buildup in the past two decades has been greater than most would have thought tolerable. Several credit crises have been surmounted, and both the economy and financial markets have survived. Interest rates rose to levels that were unimaginable in earlier years. But while the financial system remained intact, its structure and financial practices were altered dramatically. Nevertheless, it cannot be denied that our system is now more marginal and more highly leveraged than at any time in the past 40 years. This might be less disturbing if business cycle volatility had been sharply curtailed, but this has not been the case. Another matter of concern is that debt can severely restrict freedom of action when income slows and debt servicing needs preempt much of the income that is left. In contrast, of course, large equity positions relative to debt provide society with enhanced freedom and maximum economic flexibility. Given these observations, huge debt will add a very troubling dimension to the next business recession. If a major economic and financial upheaval is to be avoided, official policymakers must act with alacrity. There will be less leeway for errors in policy decisions and implementation.

The greatest need is to harness effectively the growth of debt. How can this be accomplished in our new financial world of deregulation, securitization, globalization, and innovation? We cannot and should not attempt to return to the financial markets of yesteryear. Too much has changed. We need a framework that will get the best out of the current financial system and ward off the worst. The resolution to the debt problem has at least two dimensions. One is immediate. How do we defuse the debt explosion without risking a major economic calamity? The other is

[1] Henry Kaufman "Interest Rates, the Markets, and the New Financial World," Time Books, New York, 1986.

closely related. It involves the kind of disciplines and practices that should be implemented to foster reasonable, but not excessive, debt growth.

Unfortunately, history offers little encouragement in this regard. In the period before World War II, excessive debt was generally eliminated through bankruptcies and failures that, if large enough, brought about precipitous economic contractions. Today, this form of discipline has become unacceptable, although during each economic contraction in the postwar years, debt growth slowed but did not shrink. Actually, we are moving in a new direction in this new financial world of ours in which aggressive financial practices are proliferating. An official safety net is being spread under many financial activities. No longer are market forces allowed to exercise their full discipline over large financial institutions. Depositors of smaller institutions enjoy the protection of that safety net. It is also my belief that obligations covered by credit insurance and by the implied guarantee of the federal government—as is the case with many credit agencies—benefit from an implied official safety net.

With this in mind, how do we steer the economy toward moderate debt growth and at the same time avoid deflation? The magnitude of the debt problem itself suggests that it would seriously undermine the ability of the economy to revive quickly from the next business recession. Consequently, until there is solid evidence of a significant economic rebound, monetary policy must take the risk and err even further on the side of accommodation. Lower interest rates will ease the debt burden in the United States and, particularly, in the developing countries. Further monetary ease will give many marginal borrowers the opportunity to survive. We must stretch out the period in which debts can be written off by creditors and in which debtors, therefore, can recoup earning power. To be sure, this monetary policy approach runs the risk of rekindling inflation, but the alternative is also punishing. Deflation is the more immediate threat to our economic and financial stability. On the one hand, the monetary throttle can always be pulled back if need be, but on the other hand, once a deflation is under way, even large reserve injections may not immediately halt the decline in economic activity and the contraction in income flows.

Monetary policymakers today face the dilemma that the new financial world has rendered obsolete the once simple rules for conducting policy. In this new setting, the Federal Reserve is encumbered by a poorly defined monetary approach; therefore, it must be more highly judgmental than in the past. The Federal Reserve must have insights into the rapidly changing financial developments and their policy implications. Even if these insights are timely, they may not be sufficient in formulating an effective policy because many of the new financial practices are beyond the immediate control of the Federal Reserve.

In addition to the immediate monetary policy quandary in dealing with the debt explosion, there is the serious question of appropriate fiscal policy. Since the U.S. government has accelerated the rate of its borrowings more than any other sector, it would seem at first blush that a sharp reduction in the budget deficit would seem appropriate. Here, we face a serious judgment problem in policy, because a drastic pullback in the deficit would contribute to fiscal drag just when the economic growth is seriously lacking in vigor. This, in turn, will add to the Federal Reserve's difficulty in deciding how much more accommodating monetary policy should be to offset the fiscal drag. Some studies have claimed that fiscal policy initially can have a more powerful influence than monetary policy. A study by the Organization for Economic Cooperation and Development, for example, reveals that a two-percentage-point cut in short-term interest rates raises real GNP growth in the United States by ½ percent over three years, while a rise in govern-

ment spending by 1 percent of gross domestic product (GDP) increases the level of real GDP by 2½ percent during this period. While this example may overstate the problem, if there is a fiscal pullback, then the pressure is on monetary policy to be very accommodating.

The fiscal quandary and its implications for debt growth and economic and financial stability are deeper still. A huge reduction in the deficit over a short time span weakens economic activity even further, while small reductions would do little to solve the "deficit problem." If another recession should take place with a large deficit at the outset, it will be extremely difficult for our legislators to opt quickly for an even higher deficit. Thus, the legacy of the debt explosion that we have experienced may well be that the next recession will have to be overcome mainly through monetary ease with little help from fiscal policy. The University of St. Louis economist Hyman Minsky has often pointed out that fiscal and monetary stimulus has rescued the financial system from the crises since World War II. The question for the future is, "Can monetary policy do it alone the next time around?"

Some specific recommendations

Much of the feared reflation that might result from substantial monetary stimulation over the near term would most likely be contained if we initiate structures and disciplines that are rooted in the realities of the new financial world. Procedures and a governing process should be set up that fully recognize that markets and institutions are no longer neatly compartmentalized. I continue to believe that the following suggestions, if adopted, would go a long way toward stabilizing the debt situation.

(1) Many of the current regulatory bodies should be eliminated. In our rapidly changing financial system, in which institutions perform a multiplicity of services, is it efficient to have so many regulators on both the state and federal levels? These regulators are largely vestiges of our past financial development. At times, they compete with each other and they do not have an integrated view of today's financial world.

(2) Centralized monitoring and regulation of our financial system should be established. I continue to urge, as I did in congressional testimony more than a year ago, that the prudential responsibilities of the Federal Reserve should be enlarged to encompass institutions other than banks, or that a National Board of Overseers should be established to monitor and promulgate codes of minimum behavior for all major financial institutions.

(3) Financial institutions should be required to report their assets at the lower of cost or market value. Losses would then be quickly recorded, inducing managements of financial institutions to turn toward more conservative practices.

(4) There should be much greater disclosure by financial market participants—including institutions and corporations—in their financial statements. Assets and liabilities should not be netted out. Contingent liabilities should be reported in detail, thus providing creditors with the opportunity to improve their ability to access the credit standing of debtors.

(5) If this type of disclosure continues to be inadequate, then the official regulatory agencies should be required to rate the creditworthiness of the financial institutions under their jurisdiction. These ratings should be made public after a delay, thereby allowing the institutions time to remedy any problems before the public is apprised.

(6) We should adopt tax policies that foster the enlargement of equity capital, rather than the excessive use of debt. In this regard, the double taxation of dividends and the capital gains tax on equity shares should be eliminated.

(7) The official regulatory agencies should issue regulations that require the gradual enlargement of the capital base of the institutions under their

supervision.

(8) To contain the debt problem, international cooperation and coordination must be strengthened. A new official international organization, consisting of key central bank and other officials, should be established. This organization should work toward achieving uniform accounting, capital, and reporting standards of major financial institutions. It should monitor international capital flows more closely by promulgating better reporting standards. In a world with a rapidly growing web of financial linkages, such improvements are essential not only to rein in debt growth, but also to achieve effective monetary policies.

These recommendations are designed not so that we return to the structural world of finance of a few decades ago, but rather to remedy the problems that have been created in this new environment. If failures and bankruptcies are unacceptable, then institutions and markets must be required to adhere to standards that prevent many of them from moving to the brink of failure. A strong financial system should encourage equity instead of debt and should insist on understated asset values, rather than liberal accounting standards and hidden liabilities. The changes that need to be made to prevent a debt crisis from causing major damage are difficult to engineer, because the many vested interests involved will attempt to limit the necessary legislative initiatives. The urgent need is far-reaching decisions now—not when the debt problem has completely overwhelmed us.

The U.S. Economy in 1986 and 1987

By J. A. Cacy, Glenn H. Miller, Jr., and Richard Roberts

The U.S. economy continued to grow in 1986 as the current business cycle expansion extended through its fourth year. Growth remained moderate, however, with a substantial part of internal demand growth again being met by imports. Household spending, for consumer goods and services and for housing, contributed heavily to total growth.

Interest rates declined substantially in 1986 as moderate economic growth held down the demand for credit. The sharp drop in oil prices also contributed to declining interest rates by lowering inflationary expectations. The Federal Reserve reduced its discount rate two percentage points during 1986 and maintained a generally accommodative policy during the year.

The economic expansion is expected to continue in 1987 as real GNP growth is likely to about equal that of 1986. The composition of growth is expected to change in 1987, however, as a smaller portion of U.S. demand is met from imports and as export growth accelerates somewhat.

Nonetheless, uncertainty remains about the strength of domestic demand and the extent of improvement in U.S. net exports. This article summarizes economic and financial developments in 1986 and discusses the economic outlook for 1987.

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The economy in 1986

The U.S. economy continued to grow moderately in 1986, despite strong growth in consumer spending and residential construction. Domestic demand grew more slowly than in 1985, and a worsening in net exports further reduced total growth. At the same time, 1986 was the best year for inflation performance in two decades. The improvement in inflation was due mainly to a fall in oil prices, but continued slack in the economy also contributed.

Economic growth

Economic growth in the first three quarters of 1986 slowed further from its moderate pace in

TABLE 1
Real gross national product and components
(Percent change at seasonally adjusted annual rates)

	1985[a]	1986[b]
GNP	2.9	2.4
Final sales	4.1	2.2
Gross domestic demand	3.9	3.4
Personal consumption expenditures	3.5	5.5
Nonresidential fixed investment	6.5	−6.2
Residential fixed investment	7.8	11.7
Government purchases	8.4	0.0
Exports	−3.2	3.1
Imports	5.8	10.8
Addenda		
Inventory investment[c]	9.0[d]	18.2[e]
Net exports[c]	−108.2[d]	−147.7[e]
Personal saving rate[f]	5.1[d]	4.3[e]

[a] 1985:Q4 compared with 1984:Q4
[b] 1986:Q3 compared with 1985:Q4
[c] Level, billions of 1982 dollars
[d] Annual average
[e] Average, first three quarters
[f] Personal saving as a percent of disposable personal income

1985 (Table 1). This slowing occurred despite stronger growth in consumer spending and housing associated with sharp declines in oil prices and interest rates, and an increase in business inventory investment. Business capital spending declined in the first three quarters of 1986, and the growth in government purchases slowed markedly. Growth in domestic demand was slower than in 1985, and some of that growth was again diverted abroad. The U.S. net export position worsened considerably, despite the continuing decline in the value of the dollar and some evidence of increasing prices for imports. The economy apparently grew moderately in the fourth quarter, and economic growth for the year was little changed from its 1985 pace.

Resource use and inflation

Slow output growth in 1986 brought little change in the underuse of resources. The civilian unemployment rate, which averaged 7.1 percent in the second half of 1985, averaged just over 7 percent for the first 11 months of 1986 and stood at that level in November. Nonfarm payroll employment increased in 1986, but manufacturing employment

TABLE 2
Consumer price index
(Percent change at seasonally adjusted annual rates)

Period	All Items	All Items Less Food and Energy
1982	3.9	6.0
1983	3.8	4.9
1984	4.0	4.7
1985	3.8	4.4
1986*	0.8	3.8

*First eleven months, annual rate

continued to slide. In addition, about one-fourth of the jobs in the oil and gas extraction industry was lost in 1986 as the industry adjusted to the sharp fall in oil prices. The rate of capacity use in industry drifted down through the year, indicating increased slack in the industrial sector of the economy.

Primarily because of the sharp decline in oil prices, 1986 was the best year for inflation in the United States since the mid-1960s. Oil prices fell about 50 percent from the end of 1985 before firming around midyear. Overall inflation as measured by the Consumer Price Index (CPI) responded by decelerating dramatically. The CPI increased at an annual rate of only 0.7 percent in the first ten months of 1986, compared with annual increases of about 4 percent in each of the four preceding years (Table 2). Improvement in inflation was not due solely to the decline in energy prices, however. The basic inflation rate, as indicated by the CPI less food and energy prices, also declined moderately in the first ten months of 1986, continuing a pattern of deceleration begun earlier in the decade (Table 2). Unit labor costs in the economy's nonfarm business sector also rose more slowly in the first three quarters of 1986 than in 1985, restraining the upward pressure of costs on prices. The GNP deflator, the broadest general price index, increased at an annual rate of about 2.6 percent over the first three quarters of 1986, compared with a 3.3 percent increase for the year 1985.

Interest rates and the monetary aggregates in 1986

Interest rates declined substantially in 1986, as both short and long-term interest rates dropped to levels that had not been seen since 1977. The interest rate yield curve flattened during the first half of the year but steepened later. Long-term rates increased somewhat during the last half of the year but remained well below 1985 levels. In addition, real interest rates—nominal rates adjusted for inflation—decreased in 1986 but remained high by historical standards. Finally, both short and long-term U.S. interest rates generally declined more than their foreign counterparts.

Nominal interest rates

Short-term interest rates declined moderately through mid-April, rose slightly through mid-June, and then trended generally downward during the last half of the year (Chart 1). The decline in short-term rates mirrored a drop in the Federal Reserve's discount rate in 1986. The discount rate began the year at 7.5 percent and then was cut in a series of four one-half percentage point reductions to its current level of 5.5 percent.

Long-term interest rates declined sharply through mid-April but fluctuated in a narrow range slightly above their mid-April lows for the remainder of the year. For example, the 30-year U.S. Treasury constant maturity rate declined from around 9.3 percent in early January to around 7.2 percent in mid-April. After that, the 30-year Treasury rate increased to around 7.4 percent by early December (Chart 2).

CHART 1

Selected short-term interest rates

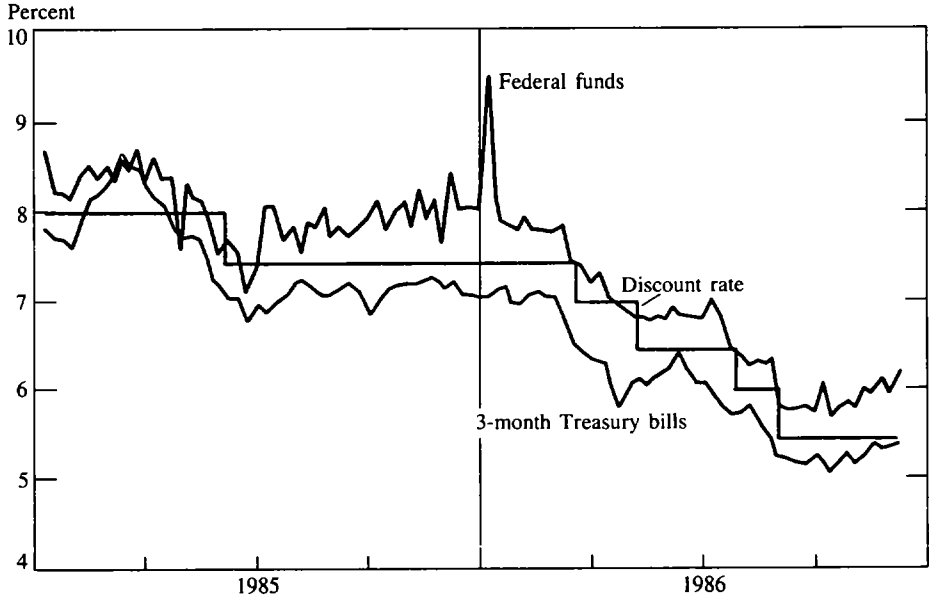


CHART 2

Selected long-term interest rates

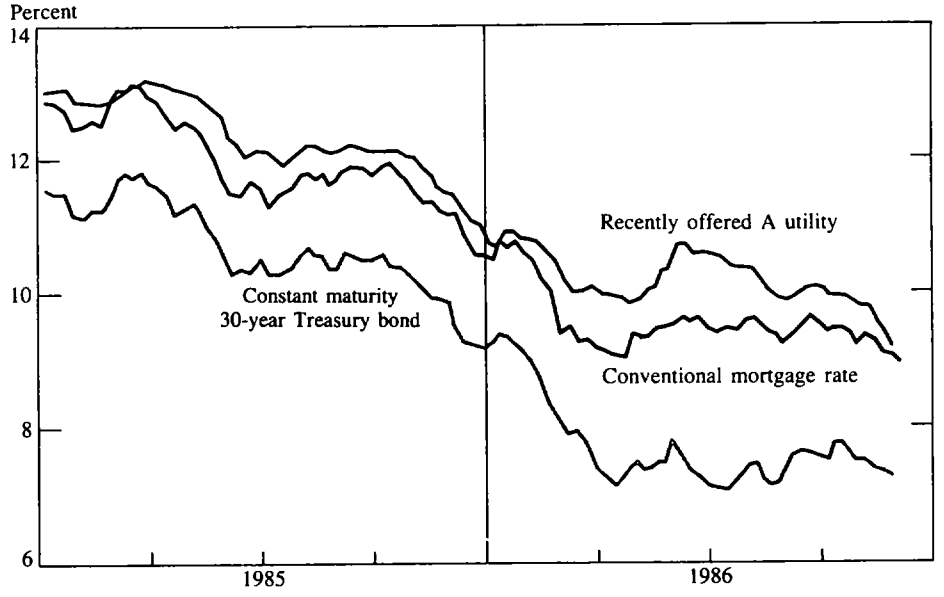
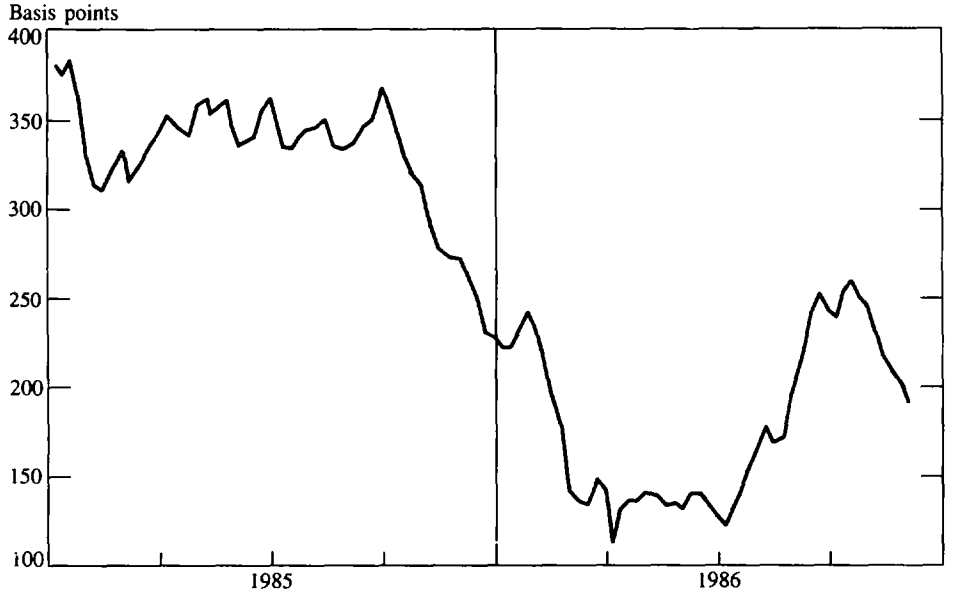


CHART 3
Yield on 30-year Treasury bonds minus yield on 90-day Treasury bills



Yield curve

Chart 3 shows the yield spread between the 30-year Treasury bond and the 3-month Treasury bill, a measure of the slope of the yield curve. As shown, the yield spread fell sharply early in the year, resulting in a flattening of the yield curve. During the last half of the year, however, the yield curve steepened, as the spread between long and short-term interest rates increased. The interest rate yield curve is a smooth line drawn through several market interest rates, of varying times to maturity, observed at a particular time.

The dramatic flattening of the yield curve early in the year was due primarily to the sharp drop in oil prices. The sharp oil price decline, in turn, led to expectations of lower inflation that placed downward pressure on long-term rates. Short-term rates also declined moderately, due primarily to accommodative monetary policy.

There were several reasons for the steepening of the yield curve during the last half of the year. A bottoming out of oil prices, a runup in precious metals prices, and continued rapid monetary growth heightened concerns of future inflation. In addition, market expectations for the budget deficit apparently worsened after midyear. Finally, the decline in the value of the dollar may have caused foreign investors to reduce their participation in the U.S. bond market.

Real interest rates

Like nominal interest rates, measured real interest rates declined in 1986, but remained high by historical standards. The real 3-month Treasury bill rate averaged 3.2 percent for the year, lower than in 1985 but significantly higher than the −0.8 percent in the last half of the 1970s (Table 3). The tendency for real interest rates to persist at high

TABLE 3
Nominal and measured real 3-month Treasury bill rate
(Percent per year)

Date	Nominal	Real
1970-74	5.9	−0.9
1975-79	6.7	−0.8
1980-84	10.8	4.6
1985	7.5	4.2
1986	6.0	3.2
1986:Q1	6.9	4.4
Q2	6.1	4.3
Q3	5.5	1.9
Q4	5.3	1.7

Note: The measured real rate in this table is defined as the quarterly nominal 3-month Treasury bill rate minus the rate of inflation as measured by the percent change at an annual rate in the GNP deflator. Data for the fourth quarter assumes that the 3-month Treasury bill rate averaged 5.4 percent in December and that the inflation rate equaled that of the third quarter.

levels reflects, to an important extent, the impact of high budget deficits.

An additional indication of the decline in real interest rates in 1986 is shown in Chart 4. In this chart, the expected real interest rate is derived by subtracting the expected rate of inflation over the life of a security from the nominal yield of that security. By this measure, the real 1-year Treasury bill rate declined from 3.3 percent in December 1985 to 2.1 percent in November 1986. During the same period, the real 30-year bond rate declined from 3.9 percent to 2.0 percent.

Domestic rates relative to worldwide rates

The spread between U.S. and most foreign short-term rates declined in 1986, as domestic short-term rates generally fell more than their foreign counterparts. For example, from January to early December, the rate on 3-month large certificates of deposit at U.S. banks declined over 2.0 percentage points, while comparable foreign short-term rates declined less than 1.5 percentage points.[1]

U.S. long-term rates also declined more than their foreign counterparts. As shown in Chart 5, the spread between domestic and foreign long-term interest rates generally declined during the first six months or so, but after mid-year spreads over German rates stabilized, while the U.S.-Japanese spread rose.

Monetary aggregates

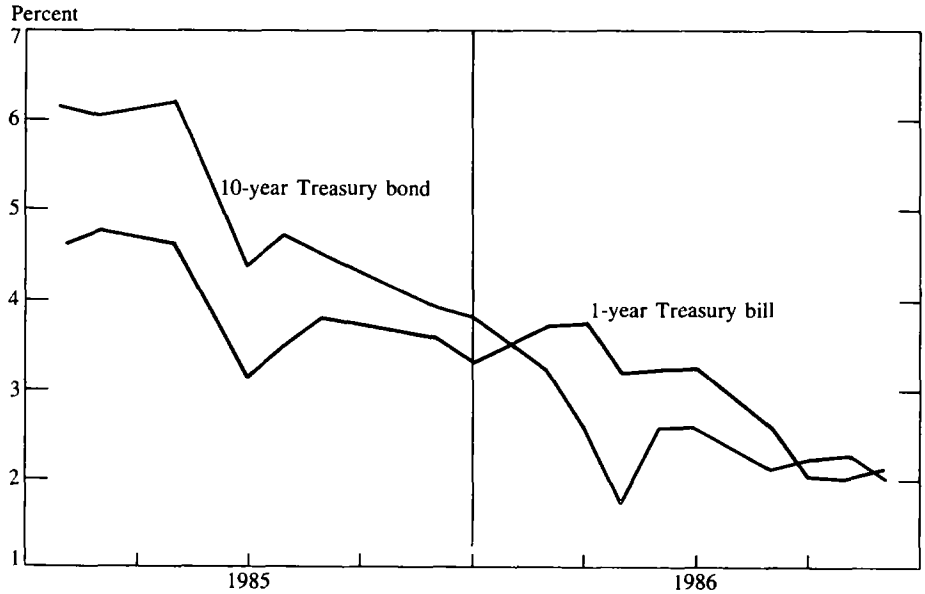
Growth in the monetary aggregates in 1986 generally exceeded that of 1985. Through November 1986, the narrowly defined money supply, M1, grew at an annual rate of 15.0 percent, a pace considerably faster than in any recent year (Table 4). The more broadly defined money supply, M2, grew at an annual rate of 8.9 percent in 1986, about the same as in 1985. And M3, the most comprehensive money supply measure, grew at an annual rate of 8.7 percent, somewhat more than in 1985. In addition, domestic nonfinancial debt—the outstanding debt of all domestic government units, households, and nonfinancial businesses—grew at an annual rate of 12.6 percent in 1986, somewhat less than in 1985.

M1's turnover, or velocity, continued to decline sharply in 1986 as M1 grew much more rapidly than nominal GNP. The continued decline in velocity was due partly to the decline in interest rates, which induced the public to increase its holdings of liquid assets, including checkable deposits. Demand and other checkable deposits grew at an annual rate of 16.8 percent in the first three quarters of the year, compared with 13.7 percent in 1985.

[1] The foreign rates consist of a composite of G-10 (major west European countries, Canada, and Japan) and Swiss short-term rates. Source: Board of Governors of the Federal Reserve System.

CHART 4

Expected real interest rates



Source: Richard B. Hoey, *Decision-Makers Poll*, Drexel Burnham Lambert, Inc.

CHART 5

Long-term world interest rate differentials

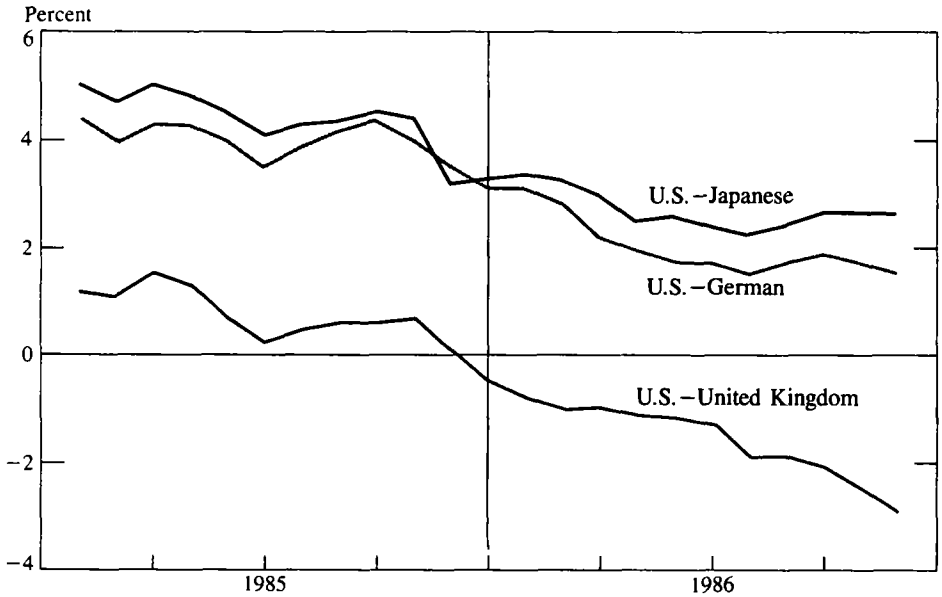


TABLE 4
Growth of the monetary aggregates: 1980-86
(Percent change at seasonally adjusted annual rates)

Period	M1	M2	M3	Domestic Non-financial debt
1980-85	8.1	9.4	10.0	14.8
1984	5.4	8.0	10.5	13.9
1985	11.9	8.7	7.7	13.3
1986:First 11 months*	15.0	8.9	8.7	12.6
1986:Q1	7.7	4.3	7.6	15.4
Q2	15.8	10.5	9.0	10.3
Q3	17.3	11.1	10.2	11.9

*Fourth-quarter 1985 through November 1986.

The relationship between M1 velocity growth and short-term interest rates is illustrated in Chart 6. As shown, M1 velocity growth and the 3-month CD rate generally trended upward together from 1966 to 1980.[2] In recent years, however, M1 velocity trended downward, broadly mirroring the decline in the CD rate. Indeed, in recent years, velocity has become more sensitive to movements in market interest rates. This is partly due to the deregulation of interest rate ceilings and the rapid growth of M1's interest-bearing components.

Monetary policy in 1986

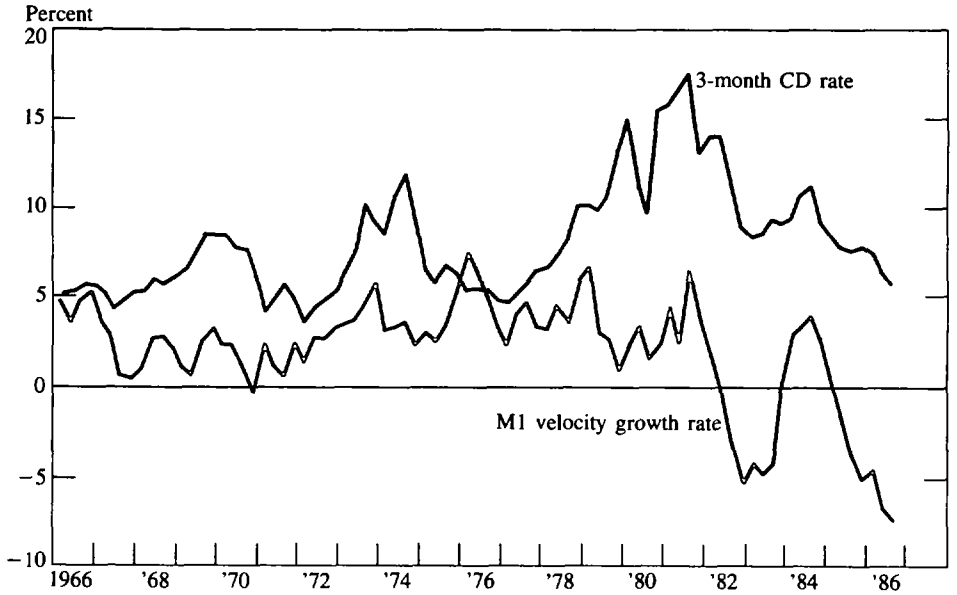
Monetary policy in 1986 continued to be guided by the need to bring about growth in the monetary aggregates consistent with sustainable economic growth in an environment of reasonable price stability over time.

In line with this objective, the Federal Reserve System's Federal Open Market Committee (FOMC) established growth rate ranges for the monetary and credit aggregates at its February 1986 meeting. M1's growth rate range for the period from the fourth quarter of 1985 to the fourth quarter of 1986 was established at 3 to 8 percent, while the ranges for M2 and M3 were both set at 6 to 9 percent. The range for total domestic nonfinancial debt was set at 8 to 11 percent.

Monetary growth in the broader aggregates was consistent with FOMC expectations and objectives during the first half of 1986. From the fourth quarter of 1985 to June 1986, M2 grew at an annual rate of 7.9 percent and M3 grew at an annual rate of 8.4 percent, both well within the 6 to 9 percent growth ranges established for these aggregates in February.

[2] The growth of velocity did not move upward with the CD rate in the early 1980s. This was due partly to the introduction of NOW accounts, which tended to reduce velocity by boosting M1 growth as the public transferred funds from non-M1 balances into NOW accounts.

CHART 6
M1 velocity growth rate and 3-month CD rate



M1, however, grew much more rapidly than expected during the first half of 1986. The narrowly defined money supply increased at a 12.9 percent annual rate during the first half of the year, well above the earlier established 3 to 8 percent growth rate range.

Despite the rapid growth in M1, the Federal Reserve's monetary policy was generally accommodative in the first half of 1986. On March 7, the discount rate was cut from 7.5 percent to 7.0 percent, and on April 21, the discount rate was cut another one-half percentage point to 6.5 percent.

One consideration in the Federal Reserve's decision to lower the discount rate in the first half of 1986 was the desire to coordinate such action with other industrial nations. For example, the March 7 discount rate cut was taken "in the context of similar actions by other important industrial countries" such as Japan and Germany.[3] The cut on April 21 also was "consistent with international interest rate considerations."[4] This action was shortly followed by a one-half percentage point cut in the Japanese discount rate. Acting in coordination with other industrial countries contributed to exchange rate stability and avoided undue deterioration in the value of the dollar. Furthermore, an overall reduction in the level of interest rates in other industrial countries was needed to stimulate their sluggish economies. The increase in the economic growth of industrial countries would, in turn, lead to an increase in the demand for U.S. exports and an improved U.S. trade deficit.

[3] See press release, Board of Governors of the Federal Reserve System, March 7, 1986.

[4] See press release, Board of Governors of the Federal Reserve System, April 18, 1986.

Several other factors also influenced the decision to maintain an accommodative monetary policy in the first half of 1986. Price pressures remained subdued, due in part to sharply lower oil prices. Also, growth in the broader monetary aggregates was moderate, with M2 and M3 remaining well within their growth rate ranges. In addition, economic growth was weaker than expected, and market interest rates generally declined throughout the period.

In accordance with the Full Employment and Balanced Growth Act of 1978, the 1986 target ranges for the aggregates were evaluated at the July FOMC meeting. At this meeting, the committee reaffirmed the 6 to 9 percent growth rate range set for M2 and M3 at its February meeting. The committee also reaffirmed the 8 to 11 percent growth rate range for domestic nonfinancial debt. Regarding M1, however, the committee noted that the demand for M1 balances had become increasingly sensitive to movements in market interest rates over the course of recent years. As a result, the committee felt that "it had become very difficult to assess or predict the implications of M1 growth for the future course of economic activity and the rate of inflation."[5] Therefore, the committee stated that M1 growth in excess of the 3 to 8 percent range established earlier in the year would be acceptable. Chairman Volcker, in his testimony to Congress in July, stated that growth in M1 "could only be judged in the context of movements in the broader aggregates, and against the background of movements in interest rates and the economy generally."[6]

The posture of monetary policy generally remained accommodative during the second half of the year. At its July and August meetings, the FOMC acted to reduce the restraint on bank reserve positions. On July 11 the discount rate was reduced one-half percentage point and a further reduction was made on August 21. These reductions were made in conjunction with declining market interest rates and against a background of slow economic growth, continued price stability, and moderate M2 and M3 growth.

For 1986 as a whole, the Federal Reserve was partly successful in achieving its growth objectives for the aggregates. Through November, the growth rates of M2 and M3 were at the upper end of their ranges. Due to the decline in velocity, M1's 11-month growth rate was well above the upper end of its range (Table 5).

Economic outlook for 1987

The current business cycle expansion is expected to continue through 1987 with the pace of economic growth likely to remain moderate. Real GNP growth is expected to be between 2.5 and 3 percent, compared with about 2.5 percent growth expected for 1986. Major uncertainties surrounding the outlook include the strength of consumer spending, the role of net exports in total output growth, and the impact of fiscal policy.

Consumer spending

Whether strong growth in consumer spending will continue to provide much of the motive power for total growth is an important question bearing on the performance of the economy in 1987. Consumer spending depends heavily on the growth of real disposable personal income and the behavior of the personal saving rate. Only modest real income growth is expected in 1987, as compensation grows only moderately and inflation accelerates slightly. The modest growth in real income expected in 1987 is thus related partly to an erosion of domestic purchasing power due to

[5] Record of Policy Actions of the Federal Open Market Committee, meeting held on July 8, 1986.

[6] Paul A. Volcker, Chairman, Board of Governors of the Federal Reserve System, *Monetary Policy Objectives for 1986*, Testimony before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, July 23, 1986.

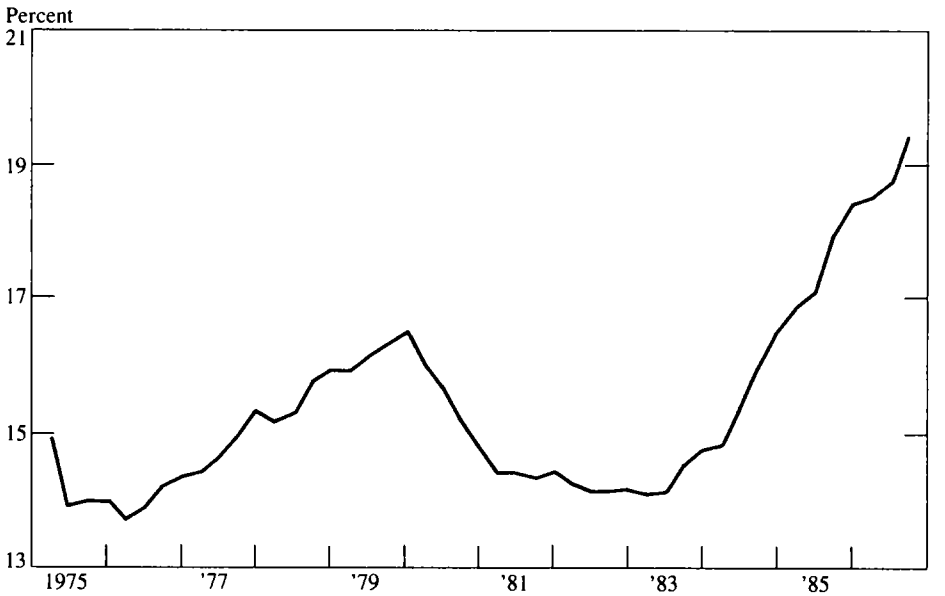
TABLE 5
FOMC growth rate ranges
(Percent change at seasonally adjusted annual rates)

Period	M1	M2	M3	Domestic Non-financial Debt
1986 actual*	15.0	8.9	8.7	12.6
1986 FOMC growth ranges	3-8	6-9	6-9	8-11
1987 FOMC tentative growth ranges	3-8†	5.5-8.5	5.5-8.5	8-11

*Growth rate from fourth-quarter 1985 through November 1986.

†Indicative of likely range if more stable velocity behavior shows signs of reemerging.

CHART 7
Ratio of consumer installment credit outstanding to disposable personal income



rising import prices. Consumer spending growth is thus likely to be modest unless the slack from expected slower income growth is taken up by a further reduction in the personal saving rate.

Declines in the saving rate bolstered consumer spending in 1985 and 1986, but a repeat of that performance in 1987 is unlikely. The saving rate, which hovered around 7 percent in the late 1970s and early 1980s, fell from 6.3 percent in 1984 to an average just over 5 percent for 1985 and the first half of 1986 (Table 1). A further decline in the saving rate in the second half of 1986 was due partly to the low third-quarter rate associated with the incentive-induced surge in domestic new car sales. The saving rate may not increase much in 1987, but further significant declines are unlikely. Thus, a stable to rising saving rate is expected to join modest income growth in restraining the growth of consumer spending in 1987.

What happens to the saving rate in 1987 will depend partly on past and prospective changes in the extent of consumer credit use. Heavy use of credit in 1986 brought a sharp increase in the ratio of consumer installment credit outstanding to disposable personal income (Chart 7). The resulting increased debt burden can be expected to restrain consumer spending as households face increasing debt service expenses and become slow to add new debt. A similar analysis before 1986 was not borne out by consumer behavior, at least partly for some special reasons. Real personal disposable income growth benefited from the lower inflation rate as the decline in oil prices released income for increased purchases of other goods and services. Household net worth was maintained or increased as the value of household assets increased, acting as a counterbalance to the rising debt-income ratio. The sharp declines in interest rates, though depressing the growth in interest income, also served to strengthen consumer spending. The likelihood is low, however, of a similar set of positive influences coming together again in 1987.

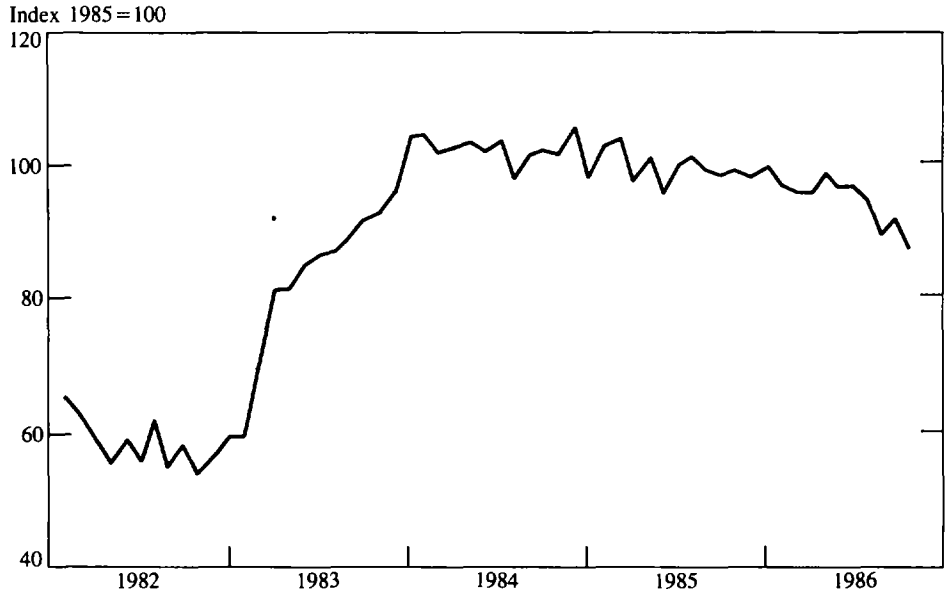
The ability of households to increase their purchases depends on such things as income growth, changes in the saving rate, and the burden of debt. But the ability to increase purchases does not alone determine the growth of consumer spending. Households must also be willing to increase their purchases, and that depends partly on their attitudes regarding their own future and the future of the economy. One measure of such attitudes is the Conference Board index of consumer confidence. That index, after drifting downward since early 1984, declined noticeably in the last half of 1986 (Chart 8).

For all these reasons, personal consumption expenditures are expected to grow more slowly in 1987 than in 1986. Modest income growth, no further decline in the saving rate, the burden of consumer debt, and lessened consumer confidence are likely to combine to prevent strong growth in consumer spending in 1987.

Other domestic spending sectors

Domestic final purchases other than personal consumption expenditures are not likely to contribute to economic growth in 1987. An exception is business fixed investment, which is expected to contribute slightly to growth in 1987 after being a drag on growth in 1986, especially in the first half of that year when the energy industry reduced its spending in response to the oil price declines. With most of that adjustment presumed to be over, some slight increase in capital spending is possible even though the capacity utilization rate remains low. Moderate growth in spending for producers' durable equipment may offset further declines in spending for new nonresidential structures. Residential construction, an important factor in 1986 growth, is expected to contribute little if anything to growth in 1987. Most of the effects of the early 1986 fall in mortgage rates have been felt, and high rental vacancy rates and reduced tax benefits are expected to restrain building of

CHART 8
Index of consumer confidence



Source: The Conference Board

multifamily structures. Government purchases are expected to increase at about their slow 1986 rate. Finally, inventory investment is expected to be a small but positive contributor to growth in 1987.

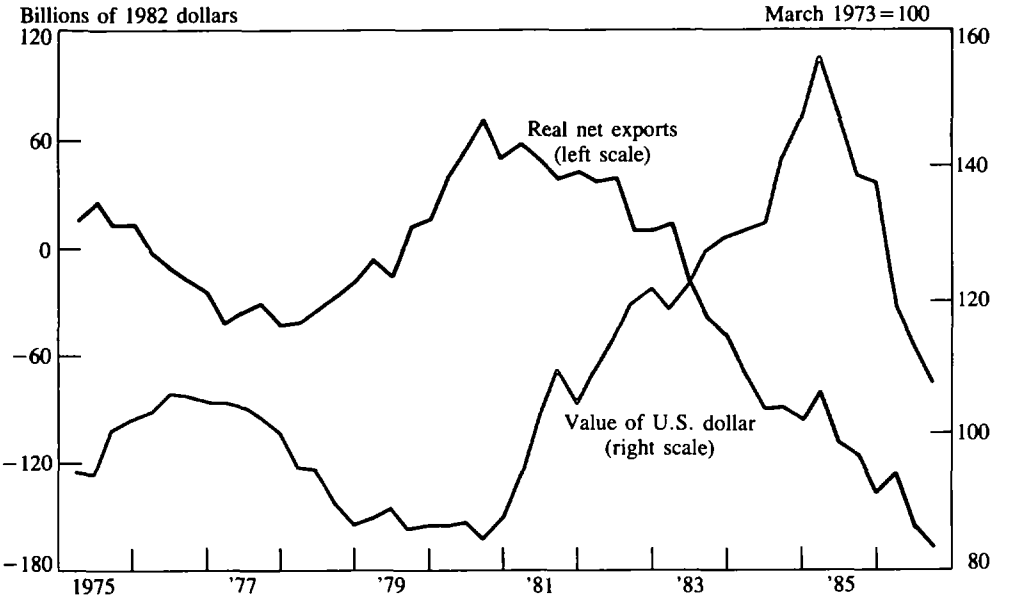
Net exports

The forecast of moderate growth in 1987 depends heavily on a significant turnaround in net exports. Improvement in the U.S. net exports position, in turn, depends partly on the relationship between the foreign exchange value of the dollar and net exports. Chart 9 shows the weighted average exchange value of the dollar and net exports moving regularly in opposite directions from 1975 to 1985. Expectations of an improvement in U.S. net exports in 1987 rest largely on a response to the decline in the dollar's value, which began in early 1985.

According to the measure shown, the dollar's value fell more than 30 percent from the first quarter of 1985 to the third quarter of 1986. The resulting higher prices for U.S. imports and lower prices for U.S. exports are expected to discourage imports and stimulate exports, thus improving the U.S. trade balance and making it a contributor to economic growth in 1987. Because much of the improvement is expected to be in traditional goods-producing industries, the U.S. economy would be strengthened and some of the imbalances of recent years would be corrected.

Many analysts expected the scenario just described to begin to be seen in 1986, but there is little evidence of its appearance yet. As Chart 9 shows, net exports continued to decline through the third quarter of 1986 despite the fall in the dollar's value. Several reasons have been given for an improvement in net exports not appearing

CHART 9
Real net exports and index of weighted-average exchange value of U.S. dollar



after nearly two years of significant decline in the value of the dollar. One is that the lag between the beginning of dollar depreciation and a turnaround in real net exports is simply longer than estimated. A second is that foreign producers have not raised their prices in line with the appreciation of their currencies against the dollar, reflecting a strategy of accepting lower profit margins to hold market share.

Another reason suggested for the persistence of the trade gap is that the commonly cited indicators of change in the trade-weighted value of the dollar may not present a correct picture of the decline in the dollar. The dollar has not declined uniformly against the currencies of all our trading partners. It has declined most against the currencies of Japan and the European countries. However, it has declined little if any against the currencies of several other countries—including Canada, Mexico, and several east Asian countries other than Japan—which account for a large part of our trade deficit.

Relatively slow growth in the economies of some of our major trading partners has also limited the growth of foreign demand for U.S. goods. Table 6 shows that real GNP growth was slower in Japan and west Europe after the 1980-82 recession years than in the late 1970s. Growth strengthened in Canada and in west Europe in the first half of 1986, but slowed down in Japan. Recent economic policy moves in Japan, including the third discount rate reduction of 1986 and a proposal for tax reform to take effect in 1987, should provide some stimulus to demand growth there. Increased growth in demand for U.S. exports resulting from faster growth in foreign economies would help improve the U.S. trade balance.

TABLE 6
Real gross national product, United States and selected major trading partners
(Percent change, annual rate)

	1976-79	1980-82	1983-85	1986*
United States	4.3	−0.3	4.2	2.2
Canada	3.6	0.6	4.2	4.7
Japan	5.2	3.7	4.3	1.9
West Europe†	3.6	0.5	2.2	3.5[e]

*First half
†Germany, United Kingdom, France, Italy
[e] Estimated

These four factors also account for the uncertainty about the extent and timing of an improvement in U.S. net exports and its contribution to economic growth in 1987. Without a significant improvement in net exports, economic growth in 1987 will be slower than suggested earlier.

Monetary and fiscal policy in 1987

The FOMC established tentative 1987 growth rate ranges for the monetary and credit aggregates in mid-1986. The tentative ranges for M2 and M3 were both set at 5.5 to 8.5 percent, slightly less than their 1986 ranges. The M1 range for 1987 was tentatively set at the 1986 range of 3 to 8 percent, assuming that more stable velocity behavior reemerges. The tentative domestic nonfinancial debt range was set at the 1986 range of 8 to 11 percent. These tentative ranges will be reconsidered when the FOMC meets early in 1987.

The fiscal policy stimulus of recent years is likely to be reduced in 1987. The actual budget deficit set a record of $220.7 billion in fiscal year 1986. Budget legislation enacted by Congress and signed by the President produced an estimated deficit of $151 billion for fiscal 1987. While above the Gramm-Rudman-Hollings target of $144 billion, the estimated deficit was within the $10 billion leeway granted by the law. Private observers and some congressional leaders have suggested that the 1987 deficit is more likely to be near $180 billion. But even at that level, a sizable decline in the deficit from its 1986 record level would be achieved.

The estimated decline in the actual deficit would be accompanied by a significant decline in the structural, or high employment, budget deficit. This measure, which estimates how big the deficit would be at a high level of resource use, is an indicator of the thrust of fiscal policy. A smaller high employment deficit in fiscal 1987 indicates a lessening in fiscal stimulus that would be a restrictive influence on economic growth. A decrease in the structural deficit would thus weigh in on the side of only modest economic growth in 1987.

Resource use and inflation

There are reasons for expecting some acceleration in inflation from its slow rate in 1986. The end of the sharp decline in the price of oil, and the firming that followed, will contribute to a higher inflation rate. In addition, the weakening dollar has brought some increases in import prices and higher import prices have the potential for reducing pressure on prices of U.S. goods competing with imports. The weaker dollar, then, is also a potential source of accelerating inflation in this country.

While these factors will mean a higher rate of inflation than in 1986, the expected moderate rate of economic growth and continued slack in the economy will keep inflation moderate in 1987. With the civilian unemployment rate and the rate of industrial capacity use likely to change little in 1987, moderate labor cost increases are expected to put little upward pressure on prices.

Conclusion

Neither recession nor exceptional strength is expected for the U.S. economy in 1987. Moderate growth in real GNP is expected to rely on a significant turnaround in U.S. net exports and continued but slower growth in personal consumption expenditures. Other major spending sectors are likely to contribute little to total growth. The rate of resource use is not likely to change much in such an environment. But inflation will probably accelerate somewhat from its very low rate in 1986, due to the effects of the dollar depreciation and the end of the sharp fall in oil prices.

The Tenth District Economy: Continued Sluggishness Ahead

By Tim Smith

Economic growth was sluggish during 1986 in the states of the Tenth Federal Reserve District—Colorado, Kansas, Missouri, Nebraska, New Mexico, Oklahoma, and Wyoming (Figure 1). More of the same sluggish growth also seems likely in 1987. The lackluster growth of the district economy stems mainly from continued weakness in its two dominant sectors—energy and agriculture. Despite overall weakness in the district, growth in employment and income improved in 1986, with most of the states in the district showing improvement over 1985. States with more diversified economies are expected to continue performing better than states that depend heavily on energy and agriculture. It is unlikely, however, that the district as a whole will outpace the nation anytime soon.

Overview of recent economic performance in the district

The overall economic performance of the district in 1986 was slightly better than in 1985.[1] Employment in the district rose at an annual rate of 1.1 percent in the first three quarters of 1986, compared with 0.9 percent for the whole of 1985 (Chart 1).[2] However, low overall employment growth and large job losses in the energy industry kept the district's unemployment rate higher than the national rate (Chart 2). Real personal income in the district rose at an annual rate of 6.4 percent in the first half of 1986, a significant improvement above the 1.3 percent gain in 1985 (Chart 3).[3] The patterns of growth in employment established in early 1986 very likely continued

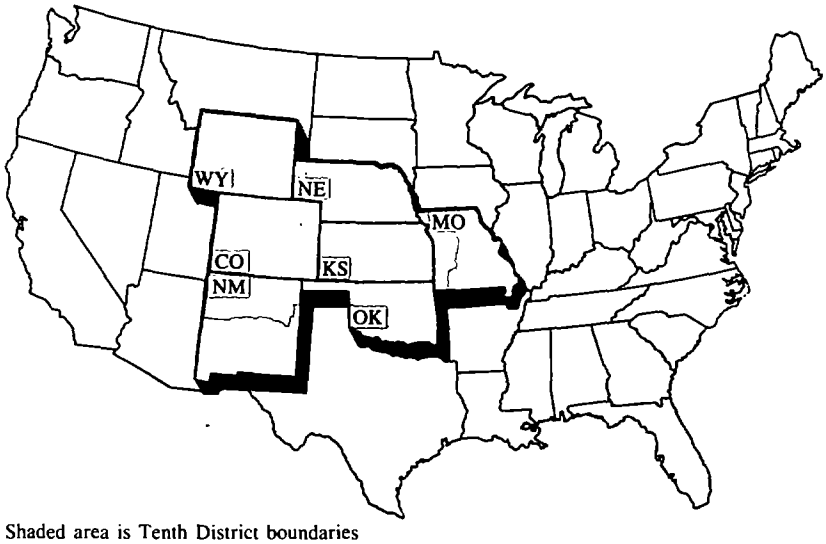
Tim Smith is an economist at the Federal Reserve Bank of Kansas City. Kim Norris, an assistant economist at the bank, assisted in the preparation of the article.

[1] At the time of writing, the latest available personal income data were through the second quarter. For employment, third-quarter data are estimates based on two months of historical data.

[2] Growth rates are fourth quarter to fourth quarter. For periods of less than a year, growth rates are calculated from the fourth quarter to the most recent quarter and annualized.

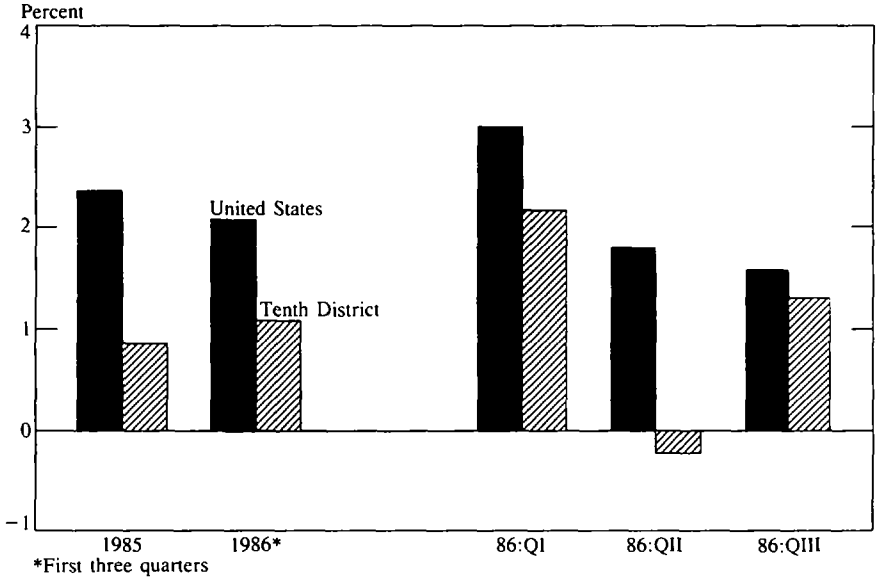
[3] Growth in district real personal income during the second quarter of 1986 was large because of large Commodity Credit Corporation purchases and deficiency payments to farmers. Real personal income growth in district states for all of 1986 is not expected to be as strong as data for the first half might suggest. Government payments were especially large in Nebraska and Kansas. See also Chart 5.

FIGURE 1
Tenth District states



Shaded area is Tenth District boundaries

CHART 1
Growth in nonagricultural employment
(Seasonally adjusted annual rates)



*First three quarters

Source: Data Resources, Inc.

CHART 2

Unemployment rate

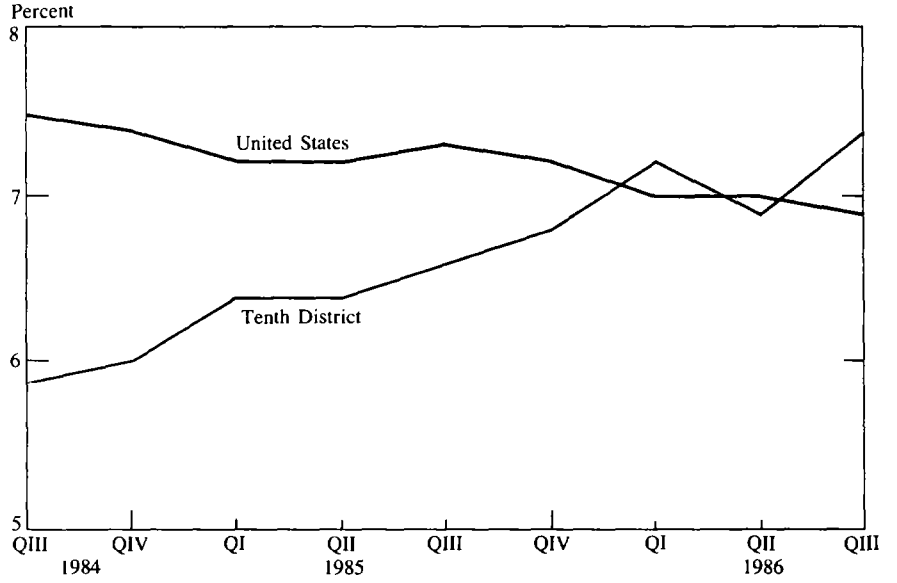
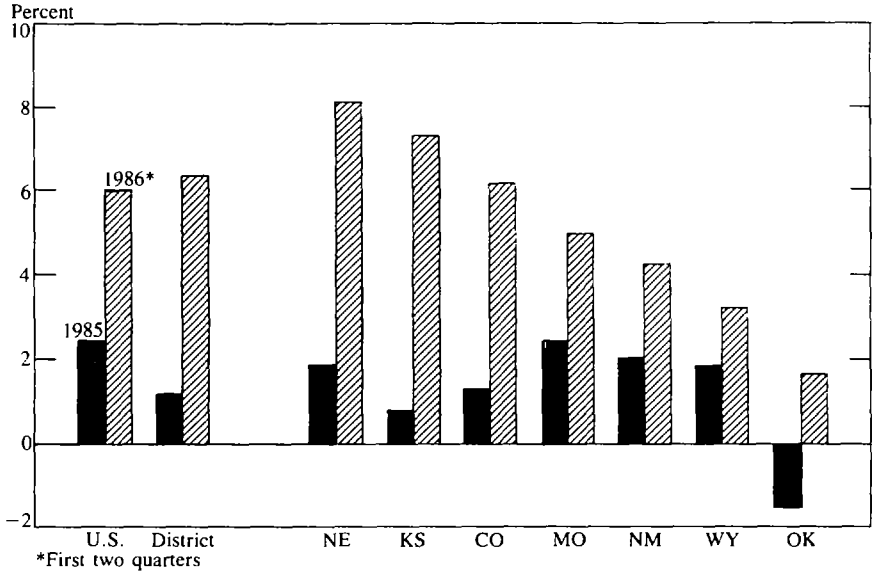


CHART 3

Growth in real personal income

(Seasonally adjusted annual rates)



*First two quarters

Source: Data Resources, Inc.

during the latter part of the year, though large gains in personal income coming from government payments to farmers in the second quarter were not likely repeated.

Some individual district states participated in the improvement in economic performance while others did not. States with more diversified economies and strong growth in service sector employment—Missouri, Kansas, Colorado, and Nebraska—showed improvement. The economies of states with large employment losses in the energy sector—New Mexico, Oklahoma, and Wyoming—weakened in 1986.

The district economy continued to grow slower than the national economy in 1986. Employment in the district rose at only about half the rate of the nation's gain. While personal income growth was slightly stronger in the district than in the nation, a large part of this gain was due to government payments to farmers; hence, the improvement in income growth does not reflect any fundamental improvement in economic activity in the district. In fact, much of the farm income received in 1986 was used not to fuel real economic growth but to pay down debt.

The sectors

Review of recent sector performance

Weakness in energy and agriculture accounted for a large part of the district's sluggish economic performance in 1986. The performance in other sectors was more mixed. Manufacturing was generally weak, but the government and service sectors continued to lend some strength to the district economy.

Energy and mining. The district's energy industry received a major shock in 1986 as oil prices fell nearly two-thirds in the first half of the year. The plunge in oil prices led to substantial reductions in exploration, development, and production activity in an industry already weakened by sluggish world demand and large supplies for two to three years.

Oil and gas exploration and development activity fell drastically in the Tenth District during 1986. The number of drilling rigs in operation fell from a weekly average of about 600 at the beginning of the year to about 200 in the third quarter, a rate of decline four times greater than in the same period a year earlier. Sharp cuts in drilling contributed to a loss of over 27,000 mining jobs in the district during the first three quarters of 1986. There was a modest rebound in drilling late in the year as oil prices firmed, but the upturn was not nearly enough to make a dent in the losses incurred earlier in the year.

Energy production also fell in the district during 1986. Cumulative production of crude oil in the district for the first six months of 1986 was 2.5 percent less than in the same period a year earlier. The district's production of natural gas in the first six months was 7.2 percent less than in the same period a year earlier. Coal production fell significantly, with mined tonnage through the end of the third quarter of 1986 down almost 10 percent from 1985 levels.

Other mining in the district also remained depressed in 1986. Uranium, copper, and molybdenum mining continued to operate far below capacity. Production of soda ash and precious metals was stable, but bentonite production fell as a result of the decline in oil and gas drilling, for which bentonite is an important input.

Agriculture. Agriculture gained some stability in 1986, but considerable financial stress and surplus problems remained. Grain prices weakened due to a large crop and weak export markets. But livestock prices firmed as inventories waned, making 1986 a solid profit year for livestock producers. Farm income, buoyed by large government payments, declined only slightly in 1986. While financial problems remained serious for farmers in the Tenth District during the year, steady farm income and a slowing rate of decline in collateral

values provided some relief. Nonetheless, the prolonged farm recession continued to batter most farm communities in the district, as farm income was used to service debt rather than finance discretionary purchases and capital goods.

Manufacturing. The district's manufacturing sector continued to weaken in 1986, partly from the weight of the nation's huge trade deficit and partly from weakness in other sectors, especially energy and agriculture. Overall, the rate of decline in the district's manufacturing employment worsened slightly in 1986. Manufacturing employment fell in the first three quarters of 1986 at an annual rate of 2.8 percent, compared with a decline of 2.4 percent for all of 1985.

Automobile assembly in district states declined somewhat in 1986. The number of units produced in plants in district states fell 11.4 percent in the 1986 model year, compared with an increase of 4.0 percent in the 1985 model year. Even with this decline, however, nearly 1.5 million units, about 19 percent of the U.S. total, were produced in district plants during the 1986 model year. As the 1987 model year began, district plants continued to operate at capacity, although some workers had been laid off and a General Motors truck plant in St. Louis was due to be closed.

The district's general aviation industry, plagued by weak demand and strong foreign competition, remained very weak in 1986. The value of aviation production in the district was down an average of about 35 percent in the first three quarters of 1986 from the same period in 1985. Unit sales of new aircraft were also down more than a third in the three-quarter period.

High-technology manufacturing remains a source of strength in some parts of the district. However, fierce foreign competition and weak domestic demand continue to stay the rapid growth that these industries had come to expect. The computer and semiconductor manufacturing segments of the industry have suffered most from worldwide overcapacity. Aerospace and other defense-related firms, on the other hand, continued to perform relatively well in 1986.

Oilfield and farm equipment manufacturing weakened again in 1986. Sharp cuts in drilling for oil and gas brought with them significant reductions in demand for oilfield equipment. Likewise, farm equipment sales remained depressed by the weak farm economy.

Construction. Construction activity in the district was flat in 1986. Despite lower mortgage rates, district housing starts increased only slightly to an annual rate of about 118,000 units in the second quarter of 1986. Gains in some parts of the district, especially metropolitan areas, were offset by weakness in energy-dependent and rural areas that caused housing activity in the district to lag national housing activity.

Nonresidential construction did not add as much strength to the district economy in 1986 as it had in 1985. Construction of office buildings slowed significantly in most cities, and high vacancy rates slowed retail and industrial construction. The value of nonresidential construction contracts through the third quarter of 1986 was down 19.2 percent from the same period a year earlier.

Services, retail trade, and wholesale trade. The service industry in the Tenth District slowed somewhat in 1986 from the healthy pace in 1985. Service employment in the district increased at an annual rate of 2.9 percent in the first three quarters of 1986, compared with an increase of 4.0 percent in 1985. Moreover, growth in the district's service industry in 1986 lagged slightly behind growth for the nation.

Growth in the district's wholesale and retail trade continued to be held back by the depressed rural economy across much of the district. Employment in this sector grew at an annual rate of 1.7 percent during the first three quarters of 1986, only slightly more than in 1985. As in the service sector, growth in trade was less than for the nation as a whole.

Government. Federal government spending added substantial fuel to an otherwise lackluster district economy. Nearly a third of federal spending in the district was for defense purposes, reflecting recent record high levels of peacetime procurement spending. The proportion of defense spending varied significantly across states. Those with the highest proportions of defense spending—Missouri, Colorado, and Kansas—were helped most in the wake of cuts in nondefense federal spending.

Generally weak economic performance caused the fiscal condition of most district states to tighten in 1986. With the sharp drop in oil prices, budgets were especially tight in states depending heavily on revenues from severance taxes—Wyoming, New Mexico, and Oklahoma.

Sector outlook

The outlook for the sectors is mixed, as some sectors will continue to bolster the economies of district states while others will remain a drag. The mix of sectors in each state, then, shapes the outlook for state economic performance in 1987.

The future for energy and mining in the district is clouded by large world supplies of most resources mined in the region. Even if oil prices rise slowly throughout 1987, they are not likely to reach the levels needed to spur a resurgence in exploration and stop the decline in production. Political instability in South Africa has brought higher gold prices, possibly boding well for precious metal mining in some district states, but other mining is likely to remain in the doldrums during 1987.

No marked improvement in agriculture is expected in 1987. Low grain prices will stimulate export demand somewhat, but stocks are not expected to be drawn down significantly. Farm income, therefore, will remain largely a function of government payments. The moderation in the decline of farmland values established in 1986 is expected to continue, but some farm financial problems will remain to be worked through in 1987.

The outlook for district manufacturing in 1987 is for modest growth at best. The expected improvement in the nation's trade balance will provide some stimulus to regional manufacturing, but the mix of industries in district states suggests that manufacturing activity in the region will remain sluggish and continue to lag manufacturing activity nationwide. Defense spending in the district is due to begin leveling off in 1987 and, therefore, is expected to contribute little additional strength to high-technology industries. Recent layoffs at automobile plants and gathering signs of sluggish auto sales suggest a somewhat bearish outlook for auto production in 1987. Recovery in the district's general aviation, oilfield equipment, and farm equipment manufacturing industries will almost certainly remain elusive again in 1987.

High vacancy rates in commercial buildings and the generally sluggish regional economy suggest that construction activity will not lend much additional strength to the district in 1987. The weakness in commercial real estate markets is likely to push increasing numbers of real estate loans at district financial institutions into troubled categories. Moreover, even if mortgage interest rates remain relatively low in 1987, housing activity will probably not improve much because of the sluggish regional economy and the expected decline in multifamily starts due to the removal of tax incentives.

The service sector is expected to continue adding strength to the district economy in 1987. There is a chance, though, that sluggish overall regional economic performance will again cause the district's service sector to lag the nation's. Retail and wholesale trade will continue to grow slowly in 1987. There is also a probability that such trade will be slower in the district than the nation, since this sector depends almost entirely on overall economic activity in the region.

Federal government spending will probably not add much, if any, additional strength to the regional economy in 1987. Defense spending will remain strong, but it is not expected to increase substantially. State governments will no doubt spend the year adjusting to reduced revenue flows by trimming expenditures and seeking new revenue sources.

Lackluster growth in district states

The small increase in economic activity in the district during the first part of 1986 was not shared equally across district states. Employment growth improved in Missouri, Kansas, Colorado, and Nebraska, but the improvement was almost entirely offset by employment losses in the district's energy-dependent states (Chart 4). Real personal income grew more rapidly in all district states in the first half of 1986 than in 1985 (Chart 5). The largest gains were in the states most dependent on agriculture. Economic performance in the different states reflects the influence of the industries important to each state. Similarly, the outlook for the different states in 1987 is colored by the outlook for key sectors in each state.

Missouri

Missouri, with the most diversified economy in the district, fared better than the district as a whole. The state's economy continued to be restrained in 1986 by poor performance in manufacturing and agriculture, but the state's employment and income growth showed improvement over 1985. Employment grew at a more rapid rate in Missouri than in the nation during the first three quarters of 1986, but real personal income growth in the state lagged slightly behind.

Two manufacturing industries provided strength to the state economy. Automobile assembly plants operated at capacity throughout the year and aerospace manufacturing was boosted by large federal government defense expenditures. However, the decline in the U.S. dollar did little to help the state's export-dependent industries in 1986. As a result, manufacturing remained generally weak in Missouri.

Missouri's agricultural sector continued to suffer from large stocks and weak export markets. Grain prices were weak, but farm earnings were bolstered by large government payments. The state's important cattle industry had a fairly good year, though prices ranged widely.

The construction industry provided strength to the Missouri economy in 1986. Most of the strength came early in the year, when residential construction activity surged and nonresidential construction was still strong. Nonresidential construction picked up as mortgage interest rates fell, but the pace of nonresidential construction slowed as many large projects in Kansas City and St. Louis neared completion.

Missouri is expected to continue performing better than the district as a whole in 1987. Unless national economic performance improves significantly, however, it is not likely that growth in Missouri will improve in 1987. No additional strength is expected from defense spending, automobile production, or construction. Moreover, the outlook for the agricultural sector is for another year of large surpluses and low prices. Even if government payments keep farm income from falling substantially in 1987, stable farm income is not likely to rejuvenate Missouri's depressed rural economy. Overall, Missouri can be expected to at least match the nation in growth in employment and income in 1987.

Kansas

Kansas achieved moderate economic growth in 1986, even with a weak farm economy. Growth in both employment and income improved over the rates in 1985. Employment growth in Kansas was moderate and above the district and national

CHART 4

Growth in nonagricultural employment

(Seasonally adjusted annual rates)

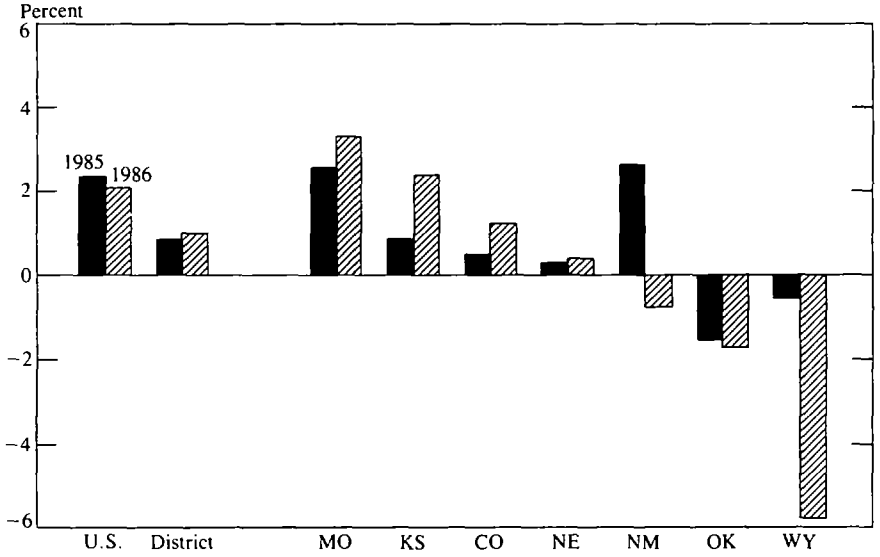
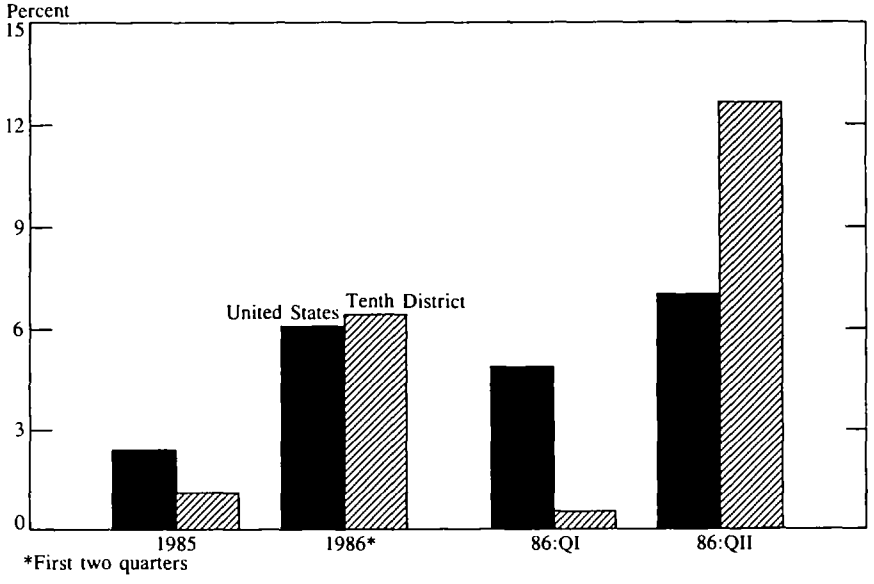


CHART 5

Growth in real personal income

(Seasonally adjusted annual rates)



*First two quarters

Source: Data Resources, Inc.

averages. Income growth in the first half of 1986 was 2 percent greater than for the nation, with government payments to farmers accounting for much of the increase. Performance in major sectors outside agriculture was mixed in 1986.

The decline in oil prices caused a substantial slowing in exploration and development activity in Kansas. Oil production also fell as many of the state's numerous stripper wells—those producing less than ten barrels a day—were shut down. Crude oil output in Kansas for the first half of 1986 was about 5 percent lower than the same period a year earlier. Natural gas production was flat in the first half of 1986. Coal production rebounded somewhat, however, after declining significantly in 1985. Total mining employment in the state fell at an annual rate of nearly 40 percent in the first three quarters of 1986.

Performance of the state's manufacturing sector was mixed in 1986. Strength came from the automobile industry and defense-related aircraft manufacturing, but this strength was offset to some extent by weakness in the state's important general aviation industry. Budget trimming by many U.S. corporations and changes in tax laws have softened demand for private business aircraft. The Kansas City-based automobile industry operated near capacity throughout the 1986 model year. Military aircraft production and assembly of civilian jet aircraft components provided additional stability. The general aviation industry, on the other hand, did not fare well in 1986. The industry suffered large declines in both the number of units produced and the value of those units.

The Kansas economy probably will perform about the same in 1987. The service sector will continue to bolster employment growth in the state, but other sectors are not expected to post significant gains. The oil and gas industry is not likely to improve much, nor will the manufacturing sector gather much additional strength from automobile assembly and military spending. The general aviation industry is expected to remain under pressure from foreign competitors and weak domestic demand. These factors, combined with the weak farm economy, point toward continued slow growth for Kansas in the year ahead.

Colorado

The Colorado economy improved in 1986, with stronger income and employment gains than in 1985. Growth in Colorado employment and income was nearly equal to growth in the district as a whole for 1986. However, employment growth was slower in Colorado than in the nation. Sluggishness in the Colorado economy was due to weakness in mining and agriculture and slow growth in high-technology manufacturing.

Colorado is another district state that suffered the adverse effects of the 1986 drop in oil prices. The resulting decline in oil and gas drilling activity further depressed the state's already ailing mining sector. The state's molybdenum industry operated at only half capacity in 1986.

High-technology manufacturing made only slight gains in 1986 from the slump that began in 1984. Layoffs and plant closings continued, but at a slower pace than in 1985. The state's microchip manufacturers continued to face a flood of output from foreign competition and soft demand for computers and peripheral equipment. However, defense-related high-technology activity remained strong.

Construction activity slowed significantly in Colorado in 1986. Weakness in residential construction was due to a sharp drop in multifamily starts. High vacancy rates for office space in downtown Denver kept nonresidential construction at a standstill there.

Expansion in the important recreation industry continued in 1986, spurred by a general increase in tourism and a particularly good 1985-86 ski season. The industry benefited from lower oil prices and interest rates, but not as much as expected. Visits to national park service areas were

estimated to have increased, and a 0.7 percent gain in skier visits over the previous season set a record for the fourth straight year.

Growth in the Colorado economy is expected to remain sluggish in 1987. The mining and agriculture sectors will continue to be a drag on state economic growth. The manufacturing sector is not likely to improve, given the expected moderation in defense spending. Nevertheless, defense spending will remain an important factor to the state's economy in 1987. Barring weather-related problems, the recreation industry will probably continue to lend strength to the state. Both recreation-related services and business services will continue to contribute to job growth in the state. On balance, the weaker sectors are likely to be offset by the stronger sectors, bringing another year of positive, though sluggish, growth to Colorado.

Nebraska

Economic growth in Nebraska was only slightly stronger than the slow pace recorded in 1985. Most of the state's modest employment gain was in the service sector. While personal income growth was much stronger in Nebraska in the first half of 1986 than in 1985 and much stronger in Nebraska than in the nation, a substantial part of this strength was due to large government income subsidies to Nebraska farmers.

Growth in services, particularly finance and telemarketing, continued to fuel the economies of Omaha and Lincoln. But the growth was limited to these metropolitan areas. Problems in the farm sector brought further distress to services in rural areas of the state.

Nebraska's manufacturing sector remained weak in 1986. The food processing industry had another solid year, but sluggish growth in the national economy did little to further improve the national market for food products. The state's farm equipment manufacturing industry had another very weak year as a result of depressed sales of farm equipment.

The construction sector was weak, and the number of construction jobs increased very little in 1986. What growth there was resulted from a modest pickup in housing starts. The value of nonresidential contracts fell more than 40 percent during the first three quarters of 1986 from the same period in 1985.

The near-term outlook for the Nebraska economy is heavily influenced by the condition of the agricultural sector, which is not likely to improve significantly in 1987. For that reason, the state will probably again muddle through the coming year with very weak growth. If government farm payments are reduced, economic performance in Nebraska could deteriorate.

New Mexico

Economic growth in New Mexico slowed considerably in 1986 from the moderate pace achieved in 1985. Employment fell slightly during the first three quarters of the year after increasing 2.7 percent in 1985. Personal income growth remained relatively strong but fell behind growth rates in the district and the nation. The metropolitan areas in New Mexico—Albuquerque and Santa Fe—performed far better than the rural parts of the state that were depressed by the protracted farm recession and the sharp downturn in the energy industry.

Mining activity slowed sharply in New Mexico in 1986 due to the sharp decline in oil prices. The fall in production of oil, natural gas, and coal came when the state's mining industry was already suffering from weakness in copper and uranium production. A sharp drop in exploration and development activity contributed to a plunge in mining employment.

Growth in New Mexico's manufacturing sector was dampened by weak performance in high-technology industries. Semiconductor and com-

puter manufacturing in the state felt the effects of fierce foreign competition. Defense-related research and manufacturing contracts helped some firms, however, particularly in Albuquerque, Las Cruces, Alamogordo, Santa Fe, and Los Alamos.

The service and trade sectors provided some stability to the New Mexico economy in 1986. Growth in financial services bolstered urban areas of the state, and tourist-related services and retail trade brought some strength to many areas.

Problems in mining and agriculture probably will prevent a strong rebound in the New Mexico economy in 1987. Other sectors may do fairly well. There is some prospect for improvement in the state's high-technology industry. The service and trade sectors in the state, boosted by tourism, will likely continue lending strength. Federal spending, though likely to increase slower than in 1986, will remain a major force in the New Mexico economy because of the substantial number of military installations in the state and the large number of defense contracts let to the state's high-technology industry. Moreover, commercial applications of defense research are likely to become more important as the state seeks new means of diversifying and developing its economy.

Oklahoma

The Oklahoma economy weakened markedly in 1986. Employment declined slightly faster than in 1985, as a result of the energy slump. Real personal income growth was positive, but remained weak compared with other district states and the nation as a whole. This weakness can be attributed to continuing problems in the agricultural sector and turmoil in the energy sector.

The state's already weak energy industry was dealt a severe blow when oil prices dropped in 1986. Sharply lower crude oil prices led to corresponding sharp declines in exploration and development activity. The average weekly number of drilling rigs in Oklahoma fell almost 60 percent in the first three quarters of 1986. Production of oil and natural gas each fell 5 percent during the first half of the year. The result was a loss of 9,400 mining jobs in the state during the first three quarters of 1986.

The manufacturing sector in Oklahoma was generally weak in 1986. While automobile production continued at a healthy pace, the number of units produced was somewhat less than in 1985. The state's oilfield equipment manufacturing industry remained depressed as problems in the energy sector mounted during 1986.

There is little prospect for recovery in the Oklahoma economy in 1987. It does appear, however, that the downturn in the energy industry may taper off in 1987 when employment losses are expected to be much smaller than in 1986. Uncertainty about future oil prices will likely prevent a rebound in exploration and development activity. Overall, weak energy and agricultural sectors will keep economic performance in Oklahoma well below the district average in 1987.

Wyoming

Economic performance in Wyoming worsened considerably in 1987. As in other states of the district, weakness in energy and agriculture affected performance in the entire state economy. Employment in Wyoming fell at an annual rate of 5.8 percent during the first three quarters of 1986. Real personal income grew moderately in the first half of the year, partly reflecting some improvement in profit margins for livestock producers.

The state's important tourist industry was a source of strength to the Wyoming economy in 1986. The state's national parks had another good year but did not contribute as much to growth in service activity as had been expected. Nevertheless, employment losses in other sectors were slightly offset by tourist-related service employment growth.

Wyoming's mining industry was severely hit by the decline in oil prices in 1986. Although oil production was constant and natural gas production increased moderately during the first half of the year, production levels remained low compared with recent years. Exploration and development were harder hit. The average number of drilling rigs in operation fell nearly two-thirds during the first three quarters of 1986. Coal production fell 10 percent during the first three quarters, while other mining activity in the state was mixed. Soda ash production remained stable, but bentonite production suffered from cutbacks in oil and gas drilling.

The construction sector in Wyoming did not share in the benefits of lower mortgage interest rates because of the generally weak condition of the state economy. Housing starts during the first half of 1986 were well below starts during the same period in 1985. Likewise, a surge in nonresidential construction that occurred in 1985 was short-lived. The value of nonresidential contracts through the first three quarters of 1986 was down about 30 percent from the same period a year earlier.

Agriculture did not contribute any strength to the Wyoming economy in 1986. Firmer cattle prices improved profits from livestock operations, but the profits were used to reduce some of the financial stress rather than to fuel general economic activity.

Another difficult year lies ahead for the Wyoming economy. Except possibly for tourism, most of the state's industries will almost certainly not contribute much to growth in 1987. But problems in energy and agriculture are not likely to worsen. Thus, the worst employment losses may be over, though a recovery is not likely in 1987.

Conclusion

Weakness in energy and agriculture—the two mainstays of the Tenth District economy—kept economic performance sluggish in the seven-state region in 1986. As a result, overall district growth continued to lag behind growth in the nation. The performance of each state was determined by the particular mix of industries in that state. States with the heaviest reliance on energy and agriculture recorded the weakest performances.

Performance of the district economy promises to be lackluster again in 1987. States with more diversified economies will likely do better than states depending heavily on energy and agriculture. As a result, performance will range widely from state to state. Overall, however, the Tenth District economy likely will continue to lag the national economy in 1987.

The Long Road Back for U.S. Agriculture

By Mark Drabenstott

Agriculture had another painful year in 1986. The industry entered the year at perhaps the darkest moment of its deep recession. Farmland values were still falling rapidly in many parts of the country and farm liquidations were the highest in recent memory. But as the year unfolded, a few more signs emerged that maybe the worst news was past. Farmland value declines started to slow, liquidations began to level out, and record high farm program payments added ballast to farm cash flows. In short, the debt problems that plagued farmers and their lenders for nearly five years began to stabilize. That stability was welcomed, but it came even as agriculture's other main problem—chronic surplus—continued to worsen significantly.

Has agriculture fully bottomed? A simple question, but the answer is more complex. Agriculture appears to be embarking on a long road back to recovery. Debt problems remain to be worked through, but the problems are better defined now. With firming land values, lenders and borrowers can arrange workouts with a clearer understanding of the size of the problem. As time goes on, the debt problems should continue to diminish, slowly and steadily. But the road to a smaller grain surplus may be much longer. The world is awash in grain, and even though the United States will undertake more aggressive programs to trim supplies in 1987, the U.S. and global surpluses appear likely to persist for the foreseeable future. Not only will the road be long, it will also be expensive. Farm program payouts reached record levels in 1986, and budget exposure promises to stay large along with the surpluses.

This article reviews farm developments in 1986 and then considers the farm outlook in 1987. The article concentrates on farm financial conditions, crop and livestock market conditions, farm exports, and farm policy.

The year in review

The year began with widespread expectation that another difficult year was in store for agri-

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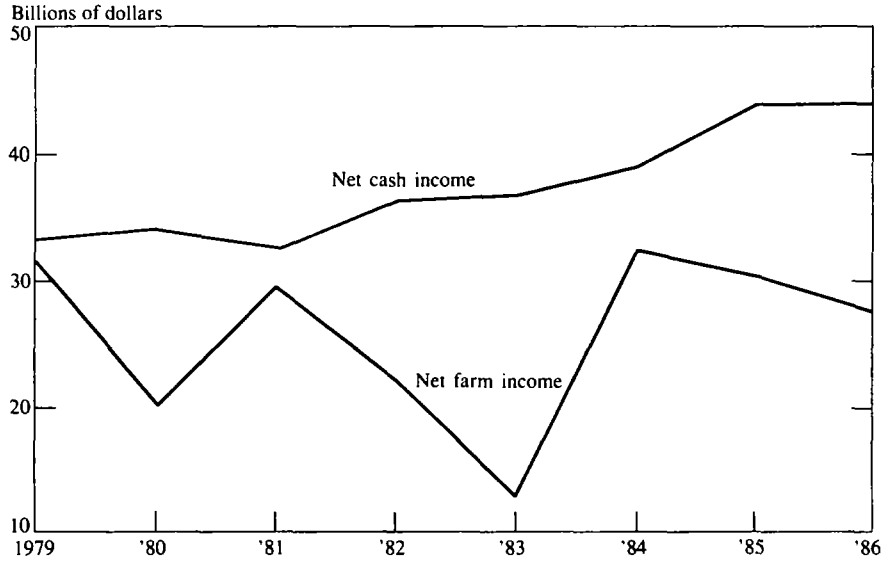
CHART 1
Farm income



culture. Overall, things turned out only a little better than expected. Land values began to stabilize in many parts of the country and the five-year wave of farm loan problems, though still sizable, appeared to be cresting. Net farm income was only modestly lower than in 1985, and some income measures nearly set records. The improvement in income, however, was due almost entirely to record farm program outlays. In the face of dormant exports and large crop supplies, crop prices dipped to 15-year lows. Livestock producers were expected to have a good year in 1986. That expectation was generally correct, though livestock prices went through some wide fluctuations in the process. The Dairy Termination Program led to a steep temporary fall in both cattle and hog prices. Finally, farm programs generally came under increasing attack as costs mounted while exports remained listless.

Farm income

Farm income declined only moderately in 1986. Net farm income is expected to have been $28.0 billion, about 10 percent less than 1985's revised $30.5 billion (Chart 1). Excellent crops, generally good livestock profits, lower farm expenses, and record government payments kept farm income above the level suggested by weak crop prices. Direct government payments reached an estimated $13 billion in 1986, a new record. In addition, huge net loans by the Commodity Credit Corporation (CCC)—now estimated at $13 billion—added further strength to farm cash flow. In real terms, net farm income in 1986 was an estimated $25.0 billion (1982 dollars), substantially less than in 1985. Ongoing expansion in the general economy raised off-farm income to a record $43.0 billion. That strength in nonfarm

earnings was especially important to the two-thirds of all farms that have annual farm sales less than $40,000 and are, in effect, part-time farms.

Net cash income was again record high in 1986. Currently estimated at $44 billion, net cash income would equal 1985's level. Total cash receipts fell moderately to $132 billion. Crop cash receipts were down more than 10 percent while livestock receipts improved slightly. The main improvement in net cash income came in cash expenses, down $6 billion, and in substantially higher government payments. Farmers continued to benefit from lower costs of production—from lower cash rents to lower prices for such inputs as fuel, fertilizer, and chemicals.

Excellent yields and generous farm program benefits produced strong cash flows for many farmers in 1986. Many corn and soybean producers had record or near-record yields. The 1985 Farm Bill did cut crop loan rates as much as 25 percent in 1986, but frozen target prices meant record large deficiency payments.

Nonfarm rural businesses, including farm input suppliers, had another difficult year in 1986. The farm equipment industry continued to retrench. Farm equipment sales were extremely weak as used equipment remained widely available and farmers watched capital expenditures carefully. Large plantings and lower product prices kept demand brisk for fertilizer, seed, and chemicals. Other rural businesses, however, remained depressed. In the Tenth District, surveys showed that one of four nonfarm rural businesses were in serious financial difficulty in 1986.

Farm credit conditions

Farm credit conditions remained extremely difficult in 1986, but as the year unfolded some signs emerged that debt problems were beginning to stabilize. Losses for farm lenders still ran higher than in 1985, and land values edged down further. Nevertheless, the onset of problem loans slowed and loan repayments began to improve, due mainly to large government payments to farmers.

Farm debt declined in 1986, continuing a significant trend that began in 1983. Not since World War II have farmers reduced debt so long or so much. Total farm debt peaked at $204 billion at the end of 1982. By the end of 1986, total sector debt may have dropped to $186 billion (Table 1). Excluding CCC crop loans, which have grown rapidly in the past two years, the debt reduction has been even more dramatic, from $192 billion in 1983, the peak year for non-CCC debt, to an estimated $164 billion in 1986. The sharp drop in debt held by commercial lenders reflects weak loan demand, efforts of both lenders and borrowers to reduce debt relative to earnings, and greater availability of government credit, mainly from the CCC but also from the Farmers Home Administration (FmHA).

Farm assets also declined in 1986, but at a slower rate than in 1985. The sector balance sheet for December 31, 1986 is expected to show an 8 percent decrease in farm assets. Similarly, farm sector net worth is expected to decline more slowly than in 1985. The sector debt-asset ratio is expected to be only slightly higher than last year's 25 percent. Welcome news after six years of increases, that stability could signal some future lessening in farm loan problems.

Farm loan funds were readily available in 1986. The FmHA exhausted its initial direct lending authority in the spring, but an additional allocation from economic emergency funds and increased emphasis on loan guarantees apparently met demand for FmHA loan programs. Agricultural banks had ample funds to lend in 1986. Their problem was finding sufficient loan demand. The loan-deposit ratio at agricultural banks in the Tenth District, for example, dipped to 52 percent, the lowest in ten years.

Farm liquidations in 1986 remained about on par with 1985's rapid pace. According to a survey of agricultural banks in the Tenth District, 7.0 per-

TABLE 1
Farm balance sheet excluding operator households on December 31
(billions of dollars)

	1982	1983	1984	1985	1986p	1987f
Assets						
Real estate	745.6	736.1	639.6	559.6	509	474
Nonreal estate	232.2	220.3	216.4	211.9	197	195
Total assets	977.8	956.5	856.1	771.4	707	669
Liabilities						
Real estate	101.2	103.7	102.9	97.3	92	89
Nonreal estate	102.4	98.8	96.0	94.8	94	86
Total liabilities	203.6	202.4	198.7	192.1	186	175
Proprietors equity	774.2	754.0	657.3	579.3	520	494
Debt-asset ratio	20.8%	21.2%	23.2%	24.9%	26.4%	26.1%

p = preliminary
f = forecast
Source: U.S. Department of Agriculture, 1986 Agricultural Outlook Conference

cent of the farms and ranches in the district fully liquidated in the 12 months ended October 1, 1986. Bankers considered that rate nearly four times normal. Partial liquidations during that period totaled 7.4 percent, almost five times what bankers considered normal. Financial stress remains concentrated in the western Corn Belt and northern plains states, although the severe drought in the Southeast also increased stress there.

Farmland values edged down again in 1986, but at a much slower rate than in the previous two years. Land values in the Tenth District had declined 20 to 25 percent a year in 1984 and 1985. That rate slowed to about 10 percent a year in the first quarter of 1986, and the slower rate continued throughout the rest of the year. The amount of land sold increased somewhat as buying interest picked up, but the amount of land on the market remained high compared with normal levels of the past. At the close of 1986, land values in some parts of the farm belt were at levels that could be justified by the cash flow, though only when farm program benefits were included in the calculation.

Farm loan problems remained prominent for farm lenders in 1986. The number of agricultural bank failures ran about on par with the rapid pace in 1985. Loan losses at the nation's agricultural banks in 1986 likely matched or slightly exceeded the 2.1 percent written off in 1985. At midyear, nonaccrual loans were modestly greater than the same period in 1985. But as the year progressed, the rate of increase in these problem loans slowed, suggesting that problem loans could be nearing their top.

The Farm Credit System remained the most visible and the most severely strained farm lender in 1986. At the end of the third quarter, the system had lost $1.53 billion, with a general expectation that full-year losses would again top $2 billion. Problem loans totaled $12.7 billion at the end of the third quarter, while primary capital (earned net worth and loan loss reserves) was $5.6 billion. The system also reported that it owned more than a billion dollars worth of acquired property.

TABLE 2
U.S. farm product price projections

Crops	Marketing Years 1985-86	1986-87	Percent Change
Wheat	$3.16/bu	$2.20-2.40/bu	−27
Corn	$2.35/bu	$1.35-1.65/bu	−36
Soybeans	$5.10/bu	$4.50-4.90/bu	−8
Cotton	$.548/lb	N/A	N/A
Livestock	**Calendar Years 1986**	**1987**	**Percent Change**
Choice Steers	$58-59/cwt	$62-68/cwt	+11
Barrows & Gilts	$51-52/cwt	$52-58/cwt	+7
Broilers	$.57-.58/lb	$.50-.56/lb	−8
Turkeys	$.72-.73/lb	$.64-.70/lb	−8
Lamb	$68-69/cwt	$66-72/cwt	+1
Milk	$12.45-12.50/cwt	$12.05-12.65/cwt	−1

Source: U.S. Department of Agriculture, 1986 Agricultural Outlook Conference

Crops

Crop supplies were big as 1986 began, and they grew even bigger throughout the year. Industry analysts had hoped that reductions in crop support prices provided for in the 1985 Farm Bill would begin to stimulate farm exports. Instead, exports slipped still further. Crop supplies, meanwhile, were abundant as excellent yields more than offset supply control programs that idled a fourth of wheat and cotton acreage and a fifth of feedgrain acreage. Crop prices sagged all year, and by harvest time were reaching lows not seen since the early 1970s. During harvest, corn prices at Corn Belt country elevators sank below a dollar a bushel.

Wheat production was the smallest in seven years, but supplies were still abundant. Total production, at 2.1 billion bushels, was down 14 percent due to smaller yields and reduced acreage. The smaller supply was more than offset, however, by very weak exports. Surplus stocks were large all year, and as a result, wheat prices averaged $3.16 in the 1985-86 marketing year, off somewhat from the previous year (Table 2).

Feedgrain producers harvested huge crops for the second year in a row. Although acreage declined somewhat, excellent growing weather produced record yields. Corn production swelled to 8.2 billion bushels, second only to 1985's record crop. Corn prices averaged $2.35 a bushel in the 1985-86 marketing year, a tenth less than the previous year. Stocks were extremely burdensome throughout the year, and prices fell sharply in the spring, when loan rates for the 1986 crop were cut 25 percent. Prices then remained weak all year, especially as harvest approached.

Soybean production also remained relatively large in 1986. Output totaled 2.0 billion bushels, slightly less than the year before. Yields again

were excellent. Stocks remained sizable due to generally sluggish export demand, and the national average farm level price averaged $5.10 a bushel in the 1985-86 marketing year, off an eighth from the previous year.

Cotton production was down significantly in 1986. Planted acreage fell because of the supply control program, and severe drought in the Southeast markedly reduced yields. Output totaled nearly 9.8 million bales, a fourth less than in 1985. Exports fell sharply in the 1985-86 marketing year in the face of abundant foreign supplies and as foreign purchasers anticipated the lower U.S. prices that would result from the marketing loan program implemented in August. Prices averaged 54.8 cents a pound in the 1985-86 marketing year, down three cents from the previous year.

Overall, mounting surplus and sluggish export demand characterized the 1986 crop year. Another bumper crop added to already burdensome supplies. As a result, crop prices trended down throughout the year.

Livestock

Livestock markets were dominated by supply factors in 1986. Producers began the year expecting strong profits as a result of declining meat supplies and low feed prices. That expectation proved true until April. But the April 1 announcement of details for slaughtering 1.5 million dairy cows under the Dairy Termination Program sent red meat markets tumbling. By mid-summer, when the initial surge of marketings was past, prices began to recover. And by the latter part of the year, profit margins had grown relatively wide for many cattle and hog feeders. Consumer demand was relatively strong throughout the year, and total meat consumption was second only to the record set in 1985.

Beef production increased 1.6 percent in 1986 due mainly to the increase in dairy cow slaughter. At the beginning of the year, many analysts had expected a 5 percent decline in beef output. But a substantial 8 percent jump in nonfed and cow slaughter more than offset a decline in fed marketings. Slaughter weights that remained at 1985's record level also contributed to the net increase in beef output. Inexpensive feed and favorable weather encouraged producers to market heavier cattle.

On balance, cattle prices were favorable in 1986, but prices ranged widely due to the effects of the dairy buyout. Prices for choice steers at Omaha averaged an estimated $58.50 a hundredweight, about the same as the year before. Shortly after the Dairy Termination Program was announced, prices fell to around $50, and then recovered to the mid-$60 range by the third and fourth quarters.

Pork production declined 5 percent as producers continued to trim inventories. The nation's hog inventory began falling in early 1984, and by mid-1986 hog numbers had dropped to their lowest level in ten years. The cutback in output combined with record overall meat consumption to push up hog prices. Prices for barrows and gilts at the seven regional markets averaged $51.50 a hundredweight, up nearly a fifth from 1985. In the third quarter, hog profit margins hit new records as corn prices fell to about $1.25 a bushel while hog prices surged past $60.

Broiler production rose 4 percent in 1986 as poultry producers continued to expand. Encouraged by steady growth in consumption and inexpensive feed, poultry producers have now increased output for three years. Consumers ate about equal quantities of pork and chicken in 1986, the first time that has happened. Broiler prices averaged about 57 cents a pound at the 12 city markets, up sharply from 1985. Turkey production increased a substantial 12 percent in 1986 as producers responded to wide profit margins. Turkey prices averaged 72.5 cents, down only slightly from 1985.

The Dairy Termination Program was the principal dairy development in 1986. By the end of

the year, upwards of a million dairy cows had been slaughtered. Despite the decline in the dairy herd, production still increased because of continued gains in productivity. Total output may top 145 billion pounds, a new record. Milk prices in 1986 averaged $12.50 a hundredweight, down just slightly from 1985.

The year ahead

U.S. agriculture appears to be entering a stable period. The industry is not likely to decline sharply, as it has in recent years, but it is not likely to improve significantly either. Farm income probably will be steady and farmland values may trend down narrowly. Government support to agriculture will again be very expensive, and the mounting costs probably will precipitate new congressional debate over farm policy. Crop markets will be weak. The crop surplus will be enormous, and exports offer no immediate prospect of emptying U.S. bins. To the contrary, recent upward revisions in estimates of the Soviet grain crop have further depressed crop markets. The cheap grain will be good news to livestock producers, who may have their best year in a decade.

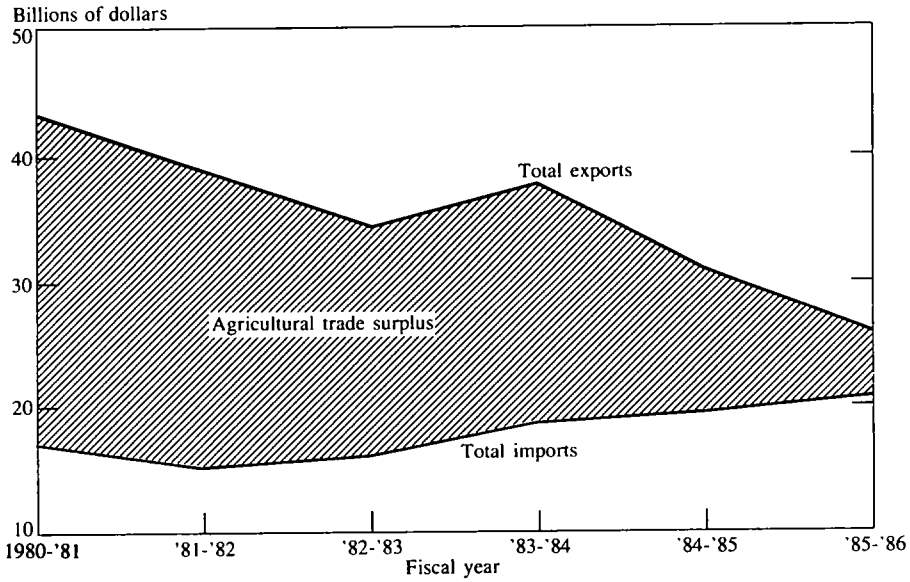
Farm income and financial conditions

Farm income may improve slightly in 1987. Higher livestock profits, lower cash expenses, and continued record government payments probably will slightly offset extremely weak crop prices and a possible decline in crop production. Livestock prices are expected to be fairly strong throughout most of the year and low feedgrain prices may result in record or near-record profit margins for many feeders. Crop prices are likely to remain below loan rates all year. The high proportion of grain stocks now held by the government may result in some seasonal firming in market prices, but the surpluses, huge by any standard, will keep prices depressed overall. Exports may pick up in volume terms, but may show little if any improvement in value terms. Overall, net farm income could increase as much as $4 billion, due mainly to further reductions in farm expenses and perhaps even bigger government payments. Net cash income, on the strength of the large government payments, could exceed this year's $44 billion.

Farm loan problems will remain to be worked through in 1987, but credit conditions should continue to stabilize. Many farm lenders have restructured or written off bad loans in the past couple of years. A substantial portion of the problems, therefore, is out in the open. And as farm asset values stabilize further, lenders and borrowers will gain flexibility and some breathing room to make the necessary financial adjustments that remain. Despite these reasons for restrained optimism about the farm credit outlook, the outward signs of farm lender strains are certain to carry over from 1986. Farm bank closings may keep pace with the high number of failures in 1986. The Farm Credit System will wrestle with a mountain of problem loans. But these developments will owe their origin to the last five years, not to further deterioration in the underlying farm credit fundamentals. To the contrary, those fundamentals could firm somewhat in 1987.

Farmland values may decline narrowly next year. The bearish crop prices expected in 1987 may exert some downward pressure on land values, even though in many parts of the country land values are fairly stable now. That stability, however, appears mainly due to high farm program payments. Current land values accurately reflect returns when government payments are included. But if investors look only at the returns generated by the market, land bought at current prices will not cash flow in most cases. Thus, the future course of land values depends to a considerable extent on farm programs. If government farm spending is reduced, or if investors have good reason to believe programs will be cut, farmland values will adjust accordingly.

CHART 2
U.S. agricultural trade



In other respects, farm credit conditions in 1987 will continue trends evident in 1986. Farm loan interest rates may continue to move lower, although it seems likely that farm interest rates will maintain a wide margin over money market rates simply because of the large loan losses many farm lenders still face. Loanable funds will remain amply available. The Farmers Home Administration will have fewer funds available for direct loans, but expects to offset that with expanded loan guarantees. The problem for agricultural banks will remain one of finding creditworthy loans. As in 1986, many agricultural banks will have very low loan-deposit ratios.

Food prices outlook

Food price increases are expected to remain modest in 1987, as they were in 1986. Retail food prices increased 3 percent in 1986, about equal to the average of the last four years. Higher meat prices in 1987 will be offset to some degree by stable crop prices and only modest increases in food marketing costs. Overall, retail food prices are expected to increase 2 to 4 percent in 1987.

Export outlook

U.S. farm exports declined unexpectedly in 1986. As the year began, many observers believed that a falling U.S. dollar coupled with the sharp cuts made in loan support prices would stimulate exports. Instead, exports slid another 15 percent, to $26.3 billion (Chart 2). Export volume also fell, to an estimated 108 million metric tons. Both dollar value and tonnage volume were new lows for the 1980s.

The reasons for the disappointing export performance are the ones agriculture now knows so well. Competing supplies were plentiful—total

world grain production was slightly above 1985's record. World demand remained sluggish—world grain trade, at 205 million metric tons, was well below 1985's depressed level. The dollar fell when measured by a general trade-weighted index, but for agriculture, it did not fall against the right currencies. For example, the currencies of Canada, Argentina, and Australia—all important grain exporting competitors—continued to depreciate against the dollar. And finally, the purchasing power of the developing countries—the segment of the world food market with the most growth potential—remained captive to their serious economic and financial problems.

A disturbing corollary to sluggish U.S. farm exports is the ongoing rise in U.S. farm imports. Farm imports were a record $20.9 billion in 1986. The agricultural trade balance, as a result, was a surplus of $5.4 billion, down more than $20 billion from its peak in 1981. Thus, it is readily apparent that U.S. agriculture is no longer fighting only one competitive battle. The industry must compete for sales not only in foreign markets but also in the domestic food market.

The export outlook for 1987 is somewhat brighter, but no boom is expected. U.S. export volume should increase markedly, perhaps as much as a fourth, due to the very attractive U.S. prices. But precisely because of those low prices, export value probably will be little changed.

Farm policy outlook

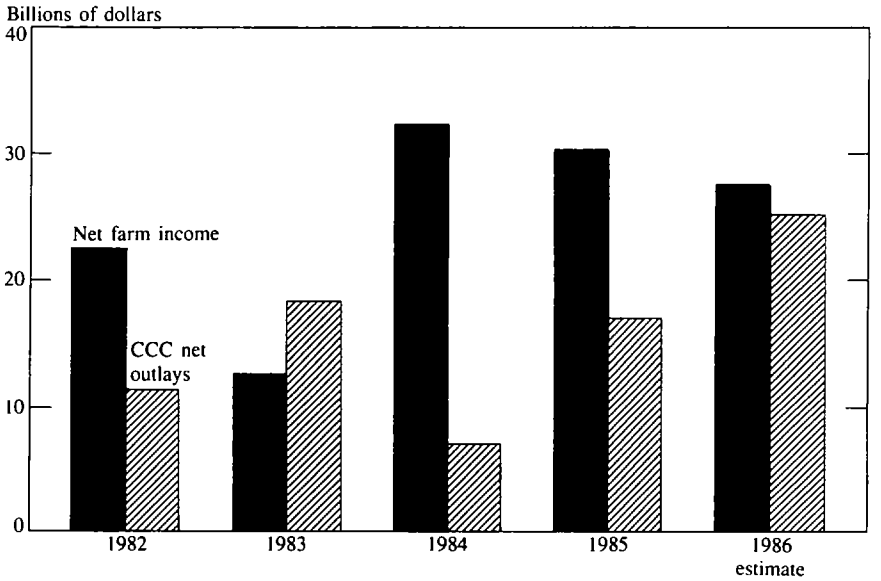
Major reshaping of the farm bill normally would not occur until 1989, because a four-year bill was passed in late 1985. But indications accumulate that Congress may consider substantial changes to that farm bill sometime in 1987. Legislators are concerned about mounting costs and are disappointed in the ineffectiveness of the programs in boosting exports and trimming surpluses. It appears likely, therefore, that Congress will reopen the farm policy debate, possibly in early 1987.

Concerns over mounting costs are legitimate. Farm program costs—net CCC loans plus deficiency payments—skyrocketed in 1986 to a record $25.6 billion, a record that bears striking resemblance to 1986 net farm income (Chart 3). In the early 1970s, by comparison, annual costs averaged $2.4 billion. In the early 1980s, annual costs were much higher, at $11.9 billion, but still much lower than under current programs.

Costs are rising for two main reasons. First, the 1985 Farm Bill reduced loan support prices, to make U.S. products more competitive abroad, but froze target prices for three years. Loan support prices were cut 25 percent in 1986 while target prices were unchanged, resulting in a great amount of budget exposure for the government. Deficiency payments—an amount paid on the difference between the target price and the higher of the loan rate or the market price—rose to a record $13 billion in 1986. Second, a growing portion of farm program benefits are not subject to any payment limitation. In the past, payments to any farm could not exceed $50,000. The 1985 Farm Bill effectively eliminated that ceiling for about 40 percent of all program benefits because of a provision (the Findley amendment) that removed portions of the deficiency payment from a per-farm limit. Thus, large producers are selling grain through government programs, where returns are higher, and leaving the government with more commodities to purchase and store.

The agenda for a possible policy debate in 1987 is still unknown. Three questions will receive the most attention. First, what additional programs can be implemented to boost exports? Many approaches will be discussed—subsidized credit, export Payment-In-Kind (PIK), marketing loan programs, and outright export subsidies. However, it appears that U.S. farm exports will not increase until incomes improve in major trading partners. Second, should some form of mandatory supply controls be implemented? Many policy analysts oppose such controls, as do many in agriculture,

CHART 3
Farm program costs and income



but supply controls are being mentioned with increasing frequency. Mandatory controls would have far-reaching implications for agribusiness segments of the industry and would hand U.S. export markets to competitors. Third, can farm programs target benefits more effectively to medium-size farms? Targeting of benefits remains a considerable problem with current programs, but the very nature of commodity programs—where benefits depend on the amount produced—leads to the problem. Alternative methods of supplementing farm income without using the commodity price mechanism will need to be explored, and the idea of "de-coupling" farm payments from the quantity a farmer produces is gaining some acceptance.

The Farm Credit System (FCS) and its ongoing financial difficulties will also be a concern of Congress in 1987. Important FCS legislation was quietly passed as the 99th Congress adjourned, attached to the final omnibus budget resolution. The legislation, cosponsored by Representative Ed Jones and Senator Thad Cochrane, essentially does three things. First and most important, FCS banks may, subject to Farm Credit Administration (FCA) approval, amortize over 20 years loan losses that exceed 0.5 percent of all outstanding loans. Second, FCS banks can "refinance" long-term debt and spread the cost over 20 years. This refinancing occurs only on paper and does not involve an actual recall of system bonds. Third, FCS institutions are given more independence from the FCA in setting interest rates. The legislation has the effect of giving the system time to work out its loan problems—but only through regulatory accounting—and will delay if not negate the need for government assistance provided in the amendments to the Farm Credit Act passed in December 1985. The issues that will remain in 1987 are how the

TABLE 3
U.S. agricultural supply and demand estimates
December 10, 1986
(millions of bushels, bales or metric tons)

	Corn (bu) Oct. 1-Sept. 30		Feed grains (mt) Oct. 1-Sept. 30		Soybeans(bu) Sept. 1-Aug. 31		Wheat (bu) June 1-May 31		Cotton (bales) Aug. 1-July 31	
	1985-86	1986-87	1985-86	1986-87	1985-86	1986-87	1985-86	1986-87	1985-86	1986-87
Supply										
Beginning stocks	1,648	4,038	57.5	126.3	316	536	1,425	1,905	4.10	9.35
Production & imports	8,876	8,226	274.8	251.0	2,099	2,009	2,425	2,077	13.43	9.79
Total	10,524	12,264	332.2	377.3	2,415	2,545	3,865	3,992	17.57	19.15
Demand										
Domestic	5,245	5,350	169.4	168.6	1,139	1,170	1,044	1,130	6.40	7.01
Export	1,241	1,125	36.6	35.2	740	760	915	975	1.96	6.75
Total	6,486	6,475	205.9	203.9	1,879	1,930	1,960	2,105	8.36	13.76
Ending Stocks	4,038	5,789	126.3	173.4	536	615	1,905	1,887	9.35	5.48

Source: U.S. Department of Agriculture

loss accounting will be implemented, how FCS borrowers, bond holders, and potential investors will respond to the accounting change, and how much pressure will be brought to bear on Congress to allow agricultural banks to use the same type of regulatory accounting.

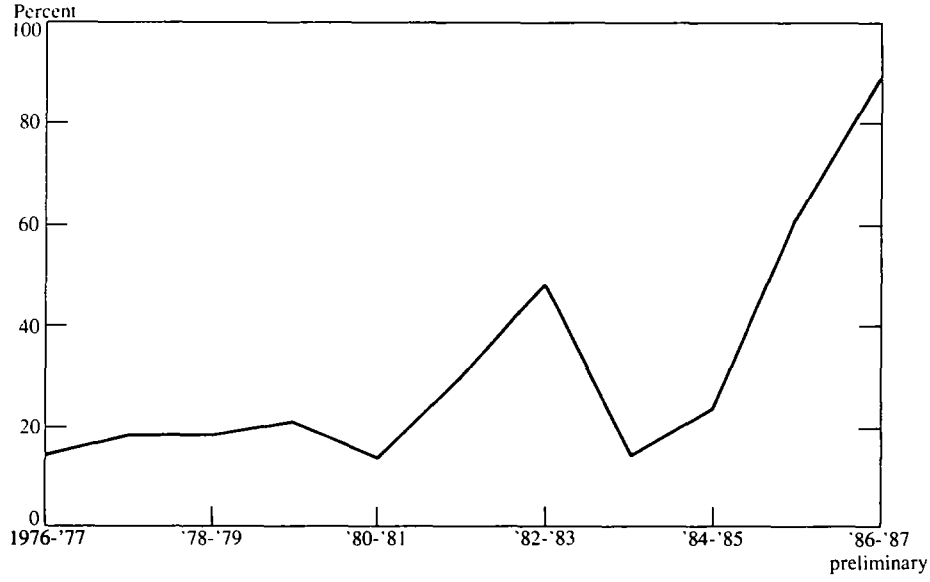
Crop outlook

The crop outlook is bearish for 1987. Total U.S. grain stocks will set another record next year, exceeding the 1983 levels that gave rise to the PIK program. A paid diversion program for feedgrains may prevent buildup in stocks, but stocks could be as huge at yearend as they are now. Domestic and foreign demand likely will remain weak. Crop prices, therefore, also promise to be weak. Any price strength is likely to be seasonal, the result of large government stocks and small free stocks. Overall, market grain prices probably will be well below the loan rate throughout the year.

Wheat supplies will be a near-record 4.0 billion bushels in 1987 (Table 3). The crop was relatively small in 1986, but lackluster domestic and foreign demand has kept surplus stocks at high levels. In addition, production by major foreign competitors increased an estimated 5 percent in 1986, leading to the second largest world wheat crop on record. U.S. wheat carryover stocks for the 1986-87 marketing year are expected to decline only slightly, to 1.9 billion bushels.

The domestic wheat market remains weak because of the abundant supplies and sluggish demand worldwide. A good Soviet crop will limit their imports. Low U.S. wheat prices will encourage some increase in the use of wheat as feed for livestock, but carryover stocks likely will still be at or near record levels at the end of 1987. Farm-level prices are expected to average $2.20 to $2.40 a bushel in the 1986-87 marketing year, down sharply from last year, and the lowest average price since 1977.

CHART 4
U.S. corn stocks to use ratio



Surplus stocks for feedgrains are even more burdensome. Feedgrain supplies will total 377 million metric tons in 1987, the largest ever. Corn supplies, the leading feedgrain, will swell to 12.3 billion bushels, another record. Corn carryover stocks are currently forecast at 5.8 billion bushels, a level that dwarfs the previous record of 3.4 billion bushels in 1983. Corn stocks will equal nearly 90 percent of annual use, a level not seen for 30 years (Chart 4).

Feedgrain demand remains anemic. Domestic use in 1987 will be little changed from the previous year. Feed use may increase slightly, but the increase will be limited by livestock inventories that are the lowest in more than ten years. Corn export volume is expected to decline from the already depressed level in 1986. The good Soviet grain crop will limit exports to that country, which had been relatively strong in 1986. Farm level corn prices may average $1.35 to $1.65 a bushel in the 1986-87 marketing year, again less than the loan rate, and down sharply from the year before. Grain sorghum prices are expected to average $1.30 to $1.50 a bushel in the 1986-87 marketing year, down from $2.15. Barley prices also will be down, to an expected range of $1.45 to $1.65 a bushel.

The soybean outlook is also clouded by record supplies. Total supplies will top 2.5 billion bushels in 1987, up from 1985's record supply. Ending carryover stocks are expected to climb to a record 615 million bushels. Prospects are brighter for soybean meal than for soy oil. A record world oilseed crop, including large output of Malaysian palm oil, is likely to depress U.S. soybean oil prices.

Soybean demand is expected to improve modestly in 1987, but not enough to prevent further build up in stocks. Domestic crushings are expected to increase slightly, encouraged by solid demand for feed. Foreign demand remains extremely sluggish, however, and exports may

trend down slightly. A large crop in the Southern Hemisphere will put downward pressure on U.S. exports. Farm-level soybean prices may average $4.50 to $4.90 bushel in the 1986-87 marketing year, down 8 percent and the lowest price since the early 1970s.

The outlook for cotton is somewhat brighter. Cotton supplies are big going into the 1986-87 marketing year, but only because of the extraordinary fall in cotton exports last year. A sharp reduction in U.S. cotton production in 1986 and a return of more normal export levels promises declining stocks throughout 1987. Domestic and world consumption is expected to increase moderately, contributing to smaller stocks. Carryover stocks at the end of the 1986-87 marketing year are expected to be 5.5 million bales, a 40 percent decline from the previous year. Cotton prices may trade at or slightly above the 52.25 cent loan rate throughout the year.

On balance, the crop outlook is not bright for 1987. Crop markets are burdened with record surplus stocks as the new year begins. Export volume may improve somewhat, but only at lower prices. As in 1986, most producers will be looking to government programs to market their crops. There promises to be a wide divergence between market cash prices and government target prices.

Livestock outlook

Livestock producers expect good profits in 1987. Feed will be extremely cheap and consumer demand likely will be strong. The unknowns are how soon producers expand their herds to take advantage of the profits, and how much. Any increase in supplies will push down prices and erode profits. Expansion has not yet happened, despite sizable profit margins in the last half of 1986. Red meat supplies are expected to decline 5 percent in 1987, mainly due to cutbacks in beef production. Total meat production, however, is expected to fall only 1 percent as poultry producers continue their vigorous expansion. Meat prices may not be much higher than in 1986, but because of low feed prices, profit margins should be wider than any other recent year.

The beef industry should return to trend levels of output in 1987. With the principal impact of the Dairy Termination Program spent, total beef production is expected to decline 7 percent, following no change in 1986. Fed marketings are expected to decline at least through the first half of the year, but incentives will remain for producers to boost output. The biggest change in the beef supply in 1987 will be in nonfed marketings, now expected to fall nearly a fifth. The cutback results almost entirely from more normal slaughter after the sharp increase in 1986 nonfed marketings related to the Dairy Termination Program. The total number of cattle slaughtered, therefore, probably will decline throughout 1987, but heavy dressed weights will offset some of the decrease.

Cattle prices should be much stronger than in 1986. For the year, choice steers at Omaha may average $64 to $66 a hundredweight, a significant improvement over the $58.50 average for 1986. Prices could be under some pressure in the last half if hog and poultry producers expand output more than now expected. Short supplies of calves and comfortable feeding margins for cattle finishers are expected to result in strong feeder cattle prices throughout most of 1987. Prices may average in the high $60 a hundredweight range, with prices topping at more than $70 at midyear.

Pork production in 1987 will be an important swing variable in the overall livestock output. Industry analysts expect pork production to decline 1 percent in 1987. But much depends on the ability and willingness of the industry to boost output and take advantage of record profit margins. Up to now, producers have been slow to expand and lenders have disciplined the expansion by lending cautiously. If expansion is delayed until late in the year, pork growers may have their most profitable year in a decade.

Prices for barrows and gilts at the seven regional markets may average about $55 a hundredweight, up from $51.50 in 1986. Significant reductions in pork and beef supplies in the first half will support prices, and prices could remain in the upper $50 range for the first six months of the year. The second half is less certain, depending much more on when expansion occurs.

Broiler producers expect another banner year in 1987. With feed cheap and consumer demand buoyant, producers may boost output 6 percent. Broiler and poultry growers continue to benefit from the excellent reception consumers afford their products. In 1987, per capita consumption of chicken may overtake pork for the first time in U.S. history. Broiler prices at the 12 city markets may average 53 cents a pound, off moderately from 1986.

Turkey producers have even bigger expansion plans in 1987. Encouraged by inexpensive feed and strong prices in 1986, turkey output may increase 16 percent, after a strong 12 percent increase in 1986. The larger supplies likely will put pressure on prices, which are expected to average 67 cents, about 10 percent less than 1986. Nevertheless, most growers will earn solid profits because of the low costs of production.

Dairy output should decline in 1987, now that the first round of herd reduction is over. As 1987 begins, dairy cow numbers are about 4 percent less than a year earlier. But even though the number of cows will be less, inexpensive feed will encourage high per-cow production. Thus, total dairy output may decline only 2 percent in 1987. With somewhat stronger U.S. consumption, government purchases may trend down somewhat, to about 6 billion pounds. Market dairy prices probably will remain close to the $11.35 a hundredweight loan support price that will take effect January 1, 1987.

Conclusions

U.S. agriculture had another difficult year in 1986, but signs mounted that the long, painful recession was starting to bottom out. The most encouraging sign was a marked slowdown in the decline of farmland values. Farm income also was fairly stable, though only due to record farm program payments. Farm lenders still had large loan losses, yet as the year progressed it became more evident that the wave of farm loan problems was beginning to crest. The major problem that agriculture still faces is the chronic crop surplus. Another large crop in 1986 and still lethargic exports only added to the huge mountain of grain the United States was already storing.

In the coming year, agriculture is likely to find itself on a plateau. Conditions in the industry may not improve much, due to the sorry state of export markets and the chronic crop surplus, but they may not decline much either, thanks to generous farm programs. The plateau rests firmly on government support. If that support is reduced, farm income and farmland values will adjust accordingly. Agriculture desperately seeks a significant rebound from its deep recession. Unfortunately, the road to recovery is long.

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