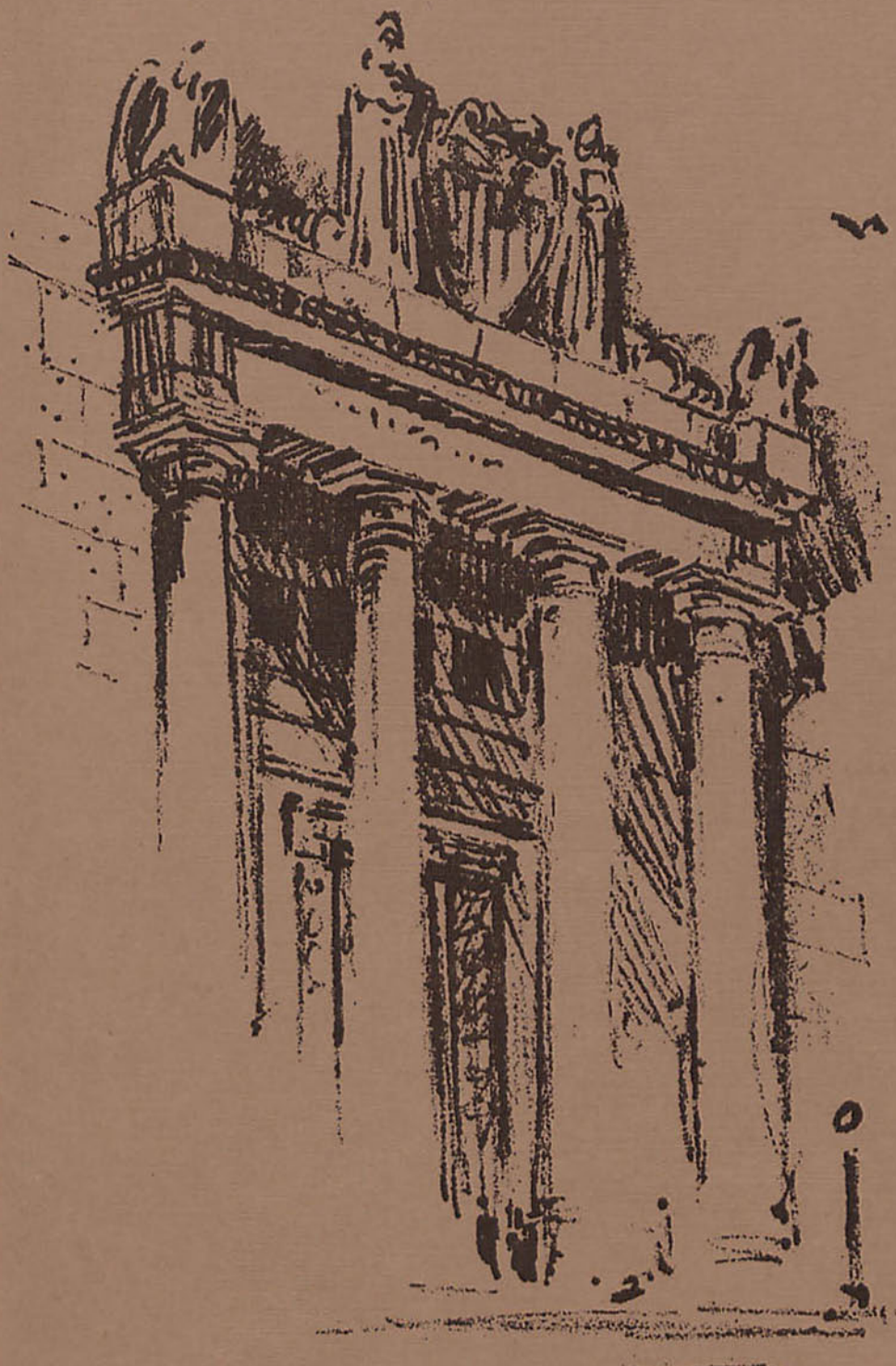
Federal Reserve Bank of Dallas

Business Review



Natural Gas–
Its Impending Shortage And Potential Abundance

Bank Credit Cards–
The Boom Spreads To the Southwest

January 1971

Natural Gas–

Its Impending Shortage And Potential Abundance

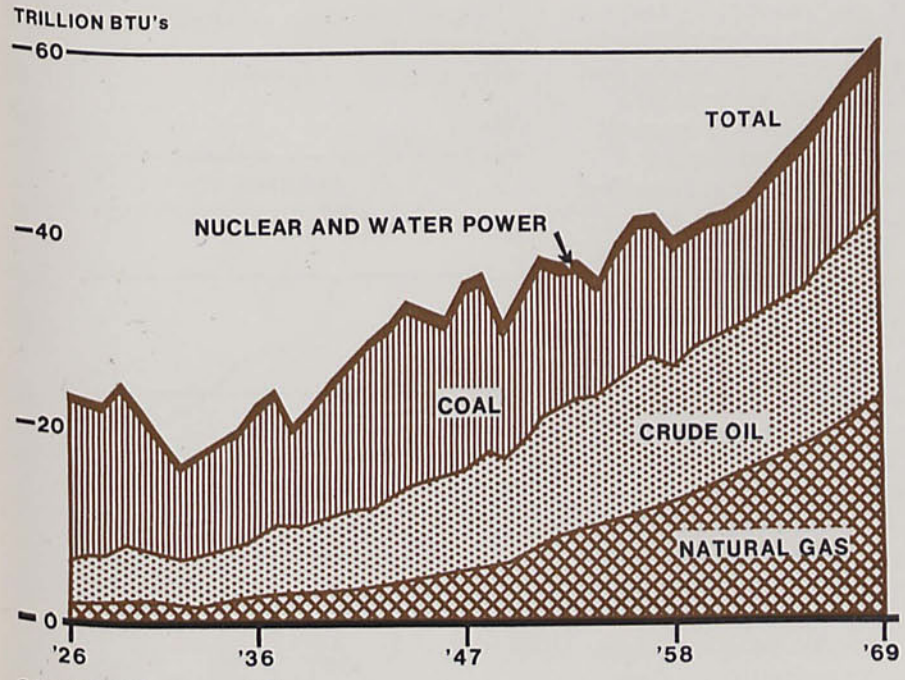
Demand for natural gas is increasing far faster than proved reserves, making it hard for the gas industry to keep up with the nation's growing need for this important fuel. Much of the burden of meeting the demand for natural gas falls on producers in the Southwest. States of the Eleventh Federal Reserve District accounted for 85 percent of the nation's gas production in 1969. And at the beginning of 1970, they accounted for 83 percent of the proved reserves.

Many experts believe a reserve-to-production ratio of at least 10 is required to meet the industry's commitments. But if current trends continue, that critical point could be reached by 1973. Where proved reserves were more than 32 times greater than gas production in 1946, by 1969 the ratio had dropped to 13.3. Many gas distributors already report difficulties in supplying gas beyond their current commitments.

The seeming suddenness of this shortage comes as a surprise to much of the general public, which has been accustomed to the belief that this country has an abundance of natural gas. Adding to the public's consternation are the large volume of known reserves and reports of vast quantities of gas still to be found. Moreover, the public is generally aware that imports of liquefied natural gas are technically feasible, that synthetic gases can be made from coal, oil shale, and petroleum products, and that in the generation of electricity atomic energy may even be superior to natural gas.

Natural gas producers explain this apparent contradiction between scarcity on the one hand and abundance on the other as the result of a pricing structure that does not encourage exploration and development of new reserves. They are appealing for higher prices as a means of stimulating growth in reserves. The Federal Power Commission, which is charged with the regulation of prices of gas sold interstate, has been examining the producers' argument, and some experts believe the FPC will grant at least some of the increase producers are seeking. Prices of gas sold within states (and therefore not subject to FPC regulation) have already advanced above the regulated prices of interstate gas.

Gas consumption–Gas and other light fuels take increasing share of the energy market



SOURCE: U.S. Bureau of Mines

The supply problem

Reserves have not merely failed to keep pace with demand. They have actually declined in the past two years. Proved reserves stood at 275 trillion cubic feet in 1969–12 trillion feet less than in 1968 and essentially the same as for 1966.

Even though reserves are still over 13 times greater than production–which means that at current production they should be adequate for more than 13 years –there are already shortages in some areas. And more shortages are expected as the reserve-to-production ratio declines further.

Several factors make a large backlog of reserves necessary for an adequate level of production. One relates to the conservation of gas fields and the maintenance of efficient rates of production. Since pressure in the underground reservoirs of a gas field falls as the field is exhausted, the rate of production must be regulated to extend the life of the field as long as possible.

Also, the gas must be withdrawn at a rate slow enough to protect the interests of all producers in the vicinity. Without regulation, one producer could take out a disproportionately large share of the gas from a field by producing faster than his neighbors. In fields where oil and gas are found together, the flow of gas is further restricted by oil conservation regulations.

The other primary factor relates to the capacity of pipelines. Before building a pipeline, investors require that proved reserves in an area be large enough to ensure full use of this expensive facility for many years–often 20 years. Since gas cannot be moved economically to market except by pipeline, production is held to the capacity of pipelines built for a flow over many years.

Growth in demand

The current heavy demand for gas was slow in developing. The advantages of gas as a fuel have been apparent for years. Cleaner and more convenient than other fossil fuels, it was quickly preferred in areas where it was available. But in the early days of gas production, when natural gas was released essentially as a by-product of petroleum production, it could not be transported economically for any great distance from the wellheads. With little foreseeable commercial value for gas, there was no incentive for its conservation and great volumes were burned (or flared) in the oil fields.

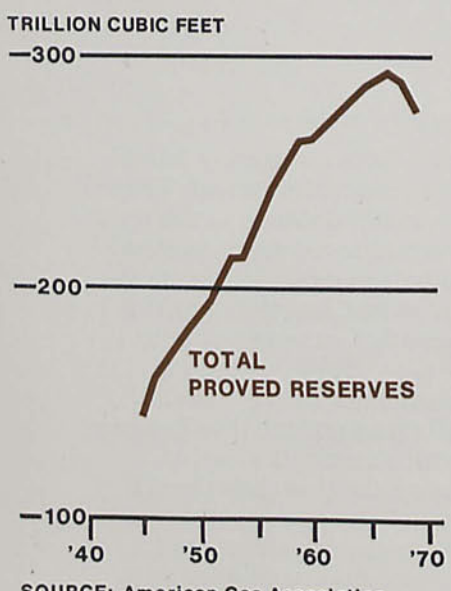
But as transmission systems were developed, opening distant markets, gas was rapidly transformed from a near-worthless by-product of petroleum production into a highly valued natural resource. Production increased dramatically. Where output totaled about 2 trillion cubic feet in 1935, it ran about 25 trillion feet in 1969. In the intervening years, the industry's share of the nation's total energy market increased from about a tenth to more than a third. Much of this increase was due to residential users' switching from coal and fuel oil. But natural gas was also becoming important as an industrial fuel and as an input to the growing petrochemical industry.

Industries that had to have rigid control of temperatures in their production processes–such as in the manufacture of glass and primary metals–found gas an excellent fuel for their purposes and built new plants dependent on gas. Others turned to gas because it burns with little atmospheric pollution, and even more would still switch if an adequate supply were available.

As production increased, natural gas also became important for the other fuels and hydrocarbons produced with it. Propane, butane, and natural gasoline are all gases at reservoir temperatures and pressures and are often produced along with natural gas. Natural gas itself is largely methane, with some ethane. All these products are important as fuels or inputs to petrochemicals. In addition, some natural gas contains helium, a lightweight inert gas recovered under a Government-sponsored production and conservation program for special experimental and industrial uses. Natural gas is the only economical source of helium.

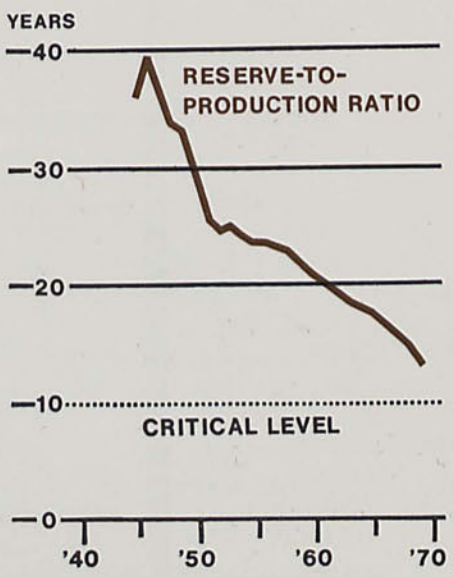
Shortages of coal and heavy fuel oils have also added to the demand for natural gas as many electric

Gas production–Proved reserves have doubled since World War II . . .



SOURCE: American Gas Association

. . . but faster rise in output has sharply cut effective life of reserves



SOURCE: American Gas Association

utilities have shifted away from the use of other fossil fuels as energy sources. Much of the changeover has been due to higher prices and uncertain deliveries of other fuels. But much of it has also been due to the mounting concern over pollution. And this concern–which is partly responsible for delaying the shift of utilities to atomic energy–is expected to further increase demand for natural gas.

Energy experts generally agree that because of the superiority of gas as a fuel, its use will continue to increase faster than total energy use–at least as long as production permits. Not only will businesses and residential users burn more gas, but efforts are being made to develop new uses of gas as a pollution-free energy source. These include an automobile fueled by natural gas and fuel cells operating on natural gas to generate electricity.

Incentive and prices

The problem is not a shortage of natural gas to be found. In fact, from the standpoint of supplies still to be discovered, the industry's future is probably very bright. In 1969, the Potential Gas Agency of Colorado School of Mines Foundation estimated that 1,227 trillion cubic feet of potentially recoverable natural gas was still to be discovered in the United States. This estimate, which did not include proved reserves, was nearly twice the estimate prepared in 1968. The difference reflected recognition of the vast potential in Alaska and the feasibility of drilling to new depths.

With plenty of gas still to be found, the drop in proved reserves must be attributed to a lack of exploration–which industry spokesmen attribute, in turn, to a lack of incentive. According to them, the FPC has kept interstate prices of natural gas too low to sustain adequate exploration and development of new reserves. Only with higher prices, they say, can producers afford the high costs and risks of searching out and developing new reserves, especially in the face of rising taxes and drilling costs. But while the industry views higher gas prices as necessary to the easing of shortages, inflation-conscious consumers and Government officials view the prospects of higher prices with foreboding.

Any discussion of appropriate prices for natural gas must distinguish between the short-run and long-run effects of prices on production. Current gas production is largely insensitive to prices. The direct costs of operating a field are usually very small compared with the costs of finding and developing a field. Once the field is developed, costs of exploration and development become fixed costs and are incurred whether gas is produced or not.

Given the opportunity, producers will sell gas from existing wells as long as the revenue they receive exceeds their comparatively small operating costs and allows them to cover at least some of their fixed costs. Although they could eliminate their operating costs by not producing, their fixed costs would remain. Therefore, even in cases where not all costs are covered, producers may still continue production to reduce their losses.

Another cost also encourages producers to continue the operation of existing wells. That is the cost of foregoing income. By withholding reserves from production, producers must forego the interest income they could have earned by investing cash receipts from the sale of reserves. Therefore, unless they expect gas prices to increase fast enough to offset this loss in interest income, producers are not apt to withhold reserves from production.

Prices then have little influence on the availability of gas in the short run. As long as reserves were large enough to accommodate demands for gas and prices were high enough to cover operating costs, interstate prices could be set with little danger of restricting supplies.

Now that reserves are beginning to dwindle, however, and new reserves must be discovered and developed, long-run considerations also become important. Exploration costs, which were fixed in the short run, become variable in the long run. In the long run, prices must be high enough to cover all the producer's costs, including those of finding and developing new reserves. Recognizing the need to stimulate the discovery and development of new reserves, the FPC has already begun to raise prices of gas in some producing areas, and industry experts expect prices in other areas to be raised.

As natural gas became more important after World War II, prices rose. At the end of the war, wellhead prices of natural gas averaged about 5 cents a thousand cubic feet. In 1969, they averaged nearly 17 cents. Prices would probably have risen faster had large proved but undeveloped reserves not been available at the end of the war. But with production increasing faster than reserves, proved reserves gradually declined, slipping relative to production over most of the postwar years and then dropping absolutely after 1968 as growth in reserves fell short of withdrawals.

Prices offered in interstate sales have been at the FPC ceilings and would probably have gone higher had there been no ceilings. A recent FPC study indicates that intrastate buyers have been paying as much as 10 cents a thousand cubic feet more than prices offered by interstate purchasers operating under FPC regulation. Better

prices and other contract terms are attracting newly developed gas to intrastate users, leaving interstate users to feel most of the pinch on gas supplies.

Impact on consumers

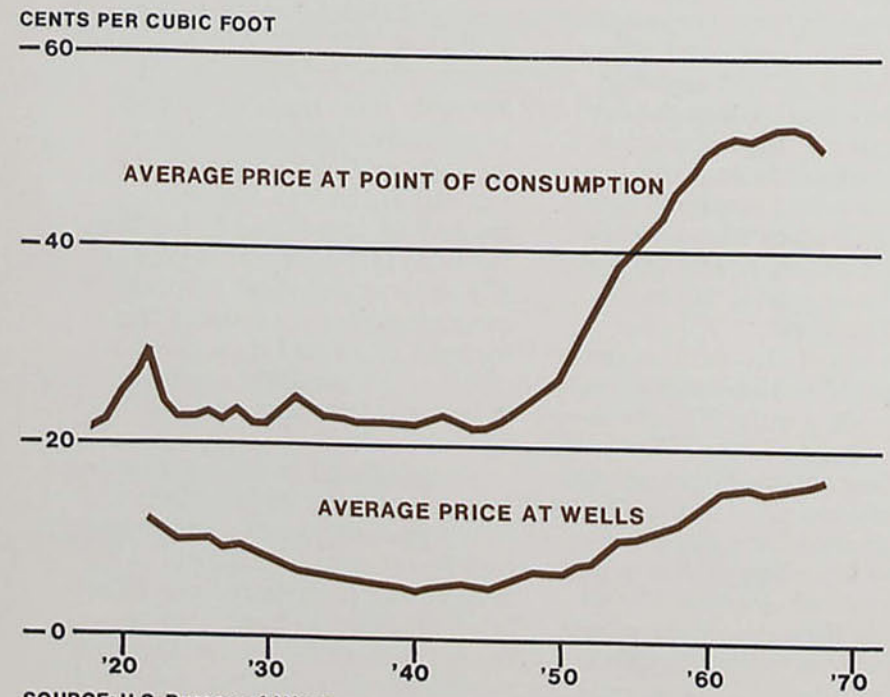
Consumers have not suffered as much from increases in gas prices as might be expected, however, and for several reasons. First, as natural gas entered new markets, it replaced more expensive gas manufactured from coal and oil. Utilities, for example, bought only about a sixteenth as much manufactured gas in 1968 as in 1945.

Second, natural gas has remained competitive with other fuels. Coal producers, in fact, have long complained–despite increases in field prices of natural gas–that the gas industry invaded their markets by offering special prices to large users willing to take deliveries that can be interrupted. To hold down transmission costs by operating pipelines at full capacity, the industry can afford to offer gas to some users at reduced prices, provided deliveries can be interrupted during periods of peak demand for gas.

Third, improvements in gas transmission systems have helped offset some of the rising prices of gas in the field. New, larger pipelines allow much more economical transmission than some of the older ones. By doubling the diameter of the pipe, for instance, transmission companies can quadruple the amount of gas they carry.

There will also be factors to soften effects of an increase in the FPC price ceiling. Most gas will still come from reserves covered under long-term contracts made when the ceiling was lower. Only when new, higher-priced discoveries make up a significant part of the nation's production will users feel the influence of the rise in prices. And even then, the increase will not necessarily be in direct proportion to the advance in field prices. Because transmission costs bulk so large in the prices of gas sold in distant markets, an increase in field prices could translate into a smaller percentage increase in prices to consumers.

Gas prices—Rising prices to consumers primarily reflect costs other than prices at the well



SOURCE: U.S. Bureau of Mines

Alternative sources

Prices high enough to encourage producers to find more reserves could be consumers' least expensive alternative. Supplies of gas from other sources are more limited than domestic gas, and more expensive.

Imports by pipeline from Canada and Mexico supply very little of the American market, equaling only about 3 percent of the American production marketed in recent years. Mexican imports are not expected to change much. Canada could probably contribute more gas to the American market, but the future of its imports into this country depends on the development of its reserves and the export policies of its government.

The Canadian government recently authorized additional exports of natural gas to the United States. The authorization was limited, however, to exports that would otherwise represent excess Canadian capacity. Also, in approving these shipments, the government was sensitive to issues regarding prices, not wanting direct or indirect FPC regulation of Canadian field prices, and was careful to hold back reserves needed for that country's growing energy markets.

There are large gas reserves in Alaska. This gas will be expensive to bring to market, however, and it will be some time before transmission facilities are built.

Some imports of liquefied natural gas from overseas have been made to the East Coast to help meet seasonal peak demand there, and more hulls equipped to carry this superchilled liquid are expected to be in operation by 1972 or 1973. But these new ships will still provide only a small part of the natural gas needed in this country in the next five years. Moreover, availability of this gas will depend on the export policies of producing countries.

If natural gas prices are increased enough, gas manufactured from coal, oil shale, and petroleum could help supplement supplies of domestic natural gas. Several processes are technically feasible. But here again, it could be many years before significant production will be available.

As American natural gas reserves are used up, supplementary sources of gas will become increasingly important. But even with the development of supplementary sources, domestic producers will still have to meet most of the nation's needs for natural gas in the foreseeable future.

With the reserve-to-production ratio dropping relentlessly toward the critical level of 10, greater efforts must be made in exploration. According to an FPC staff publication, even with substantial improvements in exploration between now and 1973, the ratio probably cannot be held much above 11.

Higher prices could be vital in stimulating the investment needed to seek out and develop new reserves. And in the long run, higher prices could also serve as incentives to the importation of more natural gas and the manufacture of synthetic gases. As these alternative sources became more important in meeting the nation's growing need for energy sources, they would also tend to restrain further increases in prices of domestic natural gas.

–Stephen L. Gardner

New par bank

The Jackson Parish Bank, Jonesboro, Louisiana, an insured nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, was added to the Par List on December 14, 1970. The officers are: Wilbur C. McDonald, Sr., President; William R. McDonald, Executive Vice President; Elmer Stevenson, Vice President; Wilbur C. McDonald, Jr., Vice President; Mrs. Elizabeth R. Alberti, Cashier; and Mrs. Tommy Lou Barr, Assistant Cashier.

The Boom Spreads To the Southwest

Banks in recent years have participated increasingly in the boom in credit cards. For example, the number of commercial banks issuing credit cards more than tripled between the end of 1967 and the end of 1969. Moreover, during that time, the amount of credit outstanding under bank credit-card plans also more than tripled.

Credit granted through bank cards expanded faster, in fact, than any other major category of consumer instalment credit at banks. Credit outstanding under bank cards accounted for only 2.4 percent of total consumer instalment credit at banks in late 1967, but by late 1969 it accounted for 6.5 percent. While card credit still represents only a small part of the total funds banks supply to consumers, it is evident that the relative importance of such credit at banks has increased sharply.

The rapid involvement of banks in the credit-card business resulted largely from the development of two national, and even international, credit-card plans–BankAmericard and Master Charge. Cards from both plans are now accepted in all 50 states and in many foreign countries.

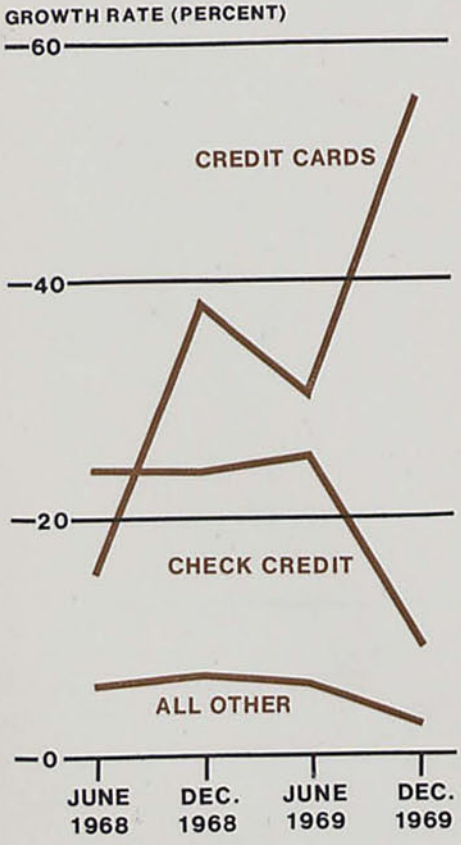
Growth of bank cards

The dramatic growth of these two large credit-card plans suggests that the advantages they offer banks, businessmen, and consumers far outweigh the disadvantages. For issuing banks, the large nationwide plans represent a potentially profitable enterprise. For consumers, they offer the convenience of shopping at stores all over the country with only one or two credit cards. For businessmen, they offer the additional sales that result from being able to give credit without the trouble and cost of setting up credit programs for individual customers.

Such plans are not without their problems, however. Lack of experience in managing credit-card plans and unexpectedly high starting costs plagued many banks undertaking earlier plans. Early in the boom, for example, many banks mailed out cards somewhat indiscriminately. Many cards were stolen, and many were received by people that would not ordinarily have been considered good credit risks. But while improved management techniques and computerized record systems have resolved many of the collection problems of these earlier plans, there will always be some thefts and delinquencies.

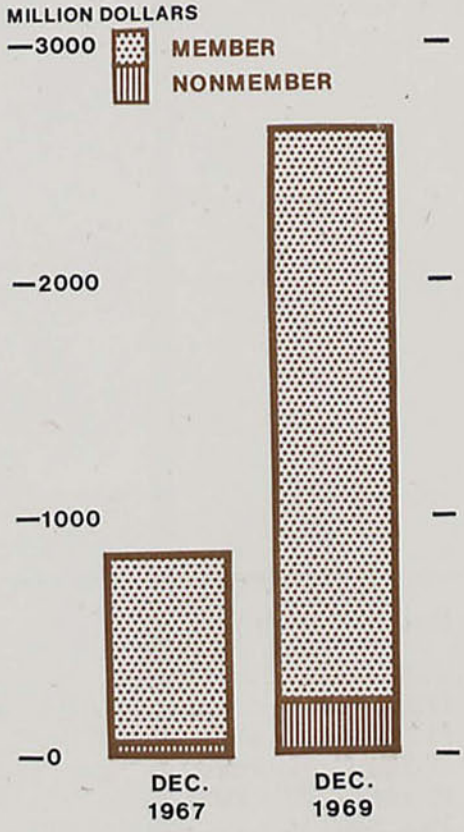
Moreover, since credit is granted automatically under credit-card

Consumer instalment credit at banks shifts to credit cards



SOURCE: Federal Deposit Insurance Corporation

Member banks account for most of the nation's rise in card credit outstanding . . .

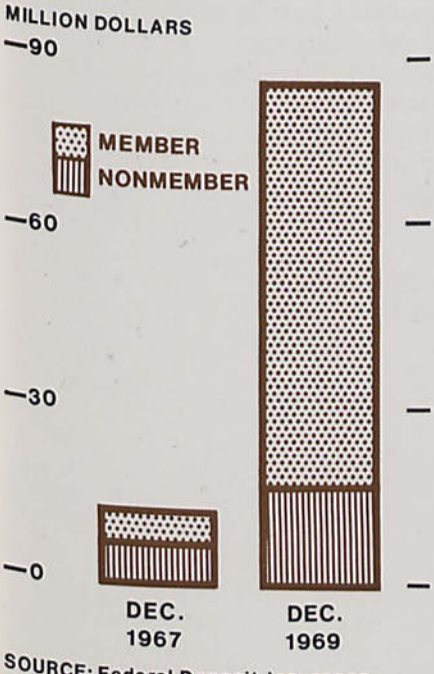


SOURCE: Federal Reserve Bulletin

plans, without the review of a loan officer, banks could be placed in a tight position relative to their funds available for loans. The magnitude of this problem is tempered, however, by the limits that are usually imposed on the amount an individual cardholder can borrow under these plans. Also, since heavy consumer demand for credit tends to be highly seasonal, banks can ordinarily take steps to prepare for such increases in the use of credit cards.

Most of the banks that initiated credit-card plans between the end of 1967 and the end of 1969 were members of the Federal Reserve System. By December 1969, the number of member banks with card plans had reached 773, or nearly twice the number of nonmember banks with such plans.

. . . and the same trend has developed in the Eleventh District



SOURCE: Federal Deposit Insurance Corporation

Consequently, member banks also accounted for most of the increase in credit outstanding under card plans over this two-year period.

As might be expected, however, the growth of these two credit-card plans was not uniform throughout the country. BankAmericard originated with Bank of America in California. With the extensive branching operations of that bank, it quickly distributed BankAmericards over the entire state. It is not surprising, therefore, that the Twelfth Federal Reserve District, which includes California, accounted for close to half the credit outstanding under bank plans at the end of 1967.

But with the rapid spread of BankAmericard to other states and the emergence of Master Charge, by the end of 1969 credit outstanding under bank plans in the Twelfth (San Francisco) District had fallen to little more than a fourth of the nation's total. Implicitly, these figures indicate the more rapid expansion of these plans in other parts of the country.

Expansion in the Southwest

One of the areas sharing in the rapid growth of bank credit-card programs after 1967 is that encompassed by the Eleventh Federal Reserve District. Although the number of banks offering card plans in the Eleventh District increased slightly less rapidly than the national average between the end of 1967 and the end of 1969, the amount of credit outstanding under these plans expanded faster in the District than in the nation as a whole during this period.

Where only seven banks in the District offered credit-card plans in September 1967, there were 37 in December 1969 and many more were offering this service as associate or participating banks. While this change represented more than a fivefold increase, the expansion in the credit outstanding under such plans was even greater. Between the end of 1967 and the end of 1969, the amount of credit outstanding under bank credit-card plans in the District increased more than six times.

In concert with national developments, most of the increase in the number of banks undertaking such plans in the District, as well as most of the dollar increase in credit outstanding under these plans, involved banks that are members of the Federal Reserve System. In fact, from the end of 1967 through the end of 1969, only one additional nonmember bank undertook a credit-card plan, bringing the number of nonmember banks with such plans to ten. By contrast, the number of member banks with credit-card plans more than doubled over this period, reaching a total of 27 by December 1969. As might be expected, the increase in card credit outstanding at member banks far surpassed that of nonmember banks during that time.

Geographically, the development of bank credit cards in the District has also been fairly concentrated, although it is becoming less so. In December 1967, more than 80 percent of card credit outstanding in the District was centered in Dallas County, where the first bank-card plans in the Southwest had started. By the end of 1969, however, this county's share had fallen to less than half the District total. Other major areas of concentration in late 1969 included Harris County with almost 20 percent, Bexar County with 7 percent, and Jefferson and Tarrant counties, both with 5 percent. By then, at least one bank in every major city in the District offered either BankAmericard or Master Charge.

With the increasing popularity of credit-card plans, many banks have become interested in learning more about the problems and

potential profits of issuing credit cards. Consequently, a Dallas bank began in 1968 to offer training in all levels of credit-card banking. As the only school in bank-card management, it attracts bankers from throughout the country and from other countries.

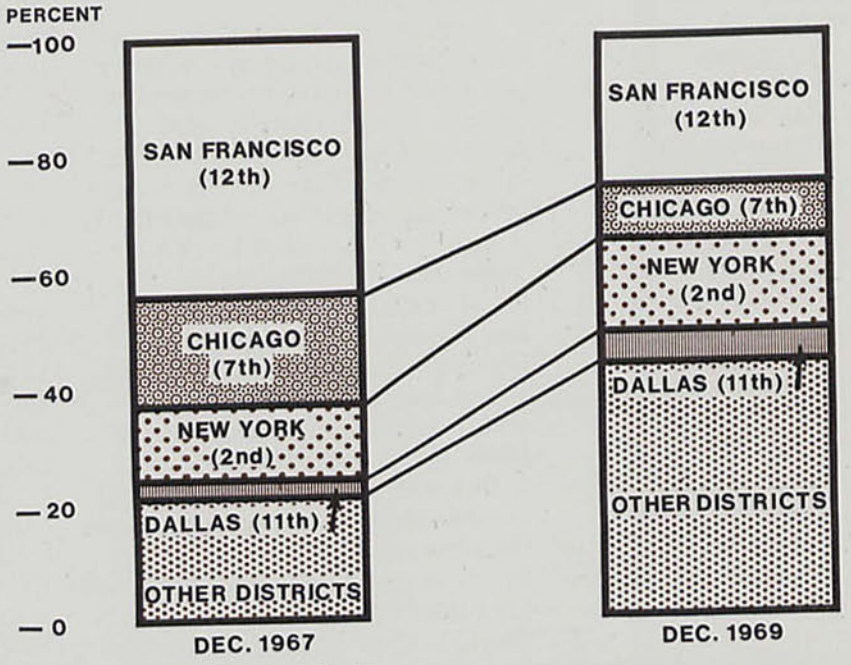
Outlook for bank cards

The tremendous growth in both the number of banks offering credit-card plans and the volume of credit extended seems to indicate that more banks can be expected to align themselves with some credit-card system not only to maintain their positions as full-service institutions but also to take advantage of the potential profits of credit-card operations. But with more than half the nation's commercial banks already associated with one of the nationwide card systems, growth in the number of banks offering credit cards is bound to taper off.

On the other hand, more and more consumers are becoming aware of the ease of credit-card purchases, finding credit cards a convenient means of making small purchases and consolidating bills. And with nearly 60 million credit cards already in the hands of consumers, the volume of credit extended seems certain to increase rapidly.

Moreover, all types of retail and service establishments seem to be potential users of credit-card plans, especially small to medium-size establishments that have not yet associated themselves with the large systems. Many small businesses have found that bank credit cards not only are cheaper and more convenient than their own credit programs but also allow them to compete more effectively with large department stores that extend their own credit.

Federal Reserve district shares of total bank-card credit tend to even out



SOURCE: Federal Reserve Bulletin

In a society heavily oriented toward consumer spending, credit cards are almost certain to become even more important. Continued increase in their use may well be a further step in the direction of a cashless-checkless society.

–Carla M. Warberg
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Federal Reserve Bank of Dallas
January 1971

Statistical Supplement to the Business Review

Crude oil production in Eleventh District states continued at a high level in November, with output up only slightly from October but up 11.5 percent from November 1969. Louisiana and Texas accounted for all of the increase. Production slipped slightly in New Mexico and Oklahoma.

With fears of an energy crisis abating, petroleum output in the coming months may be less than the high level reached in November. But production is still apt to be well above year-earlier levels.

In Texas, the allowable was reduced slightly for January–to 83.1 percent of maximum efficient production, compared with 83.5 percent in December. In Louisiana and Oklahoma, allowables were held at the rates set for December–75 percent and 150 percent, respectively. In southeastern New Mexico, the rate was raised from 70 percent in December to 80 percent in January.

Registrations of new passenger automobiles in Dallas, Fort Worth, Houston, and San Antonio were 15 percent lower in November than in October and 26 percent lower than in November 1969. Cumulative registrations for the first 11 months of 1970 were 11 percent lower than in the same period a year earlier. Nationally, new car registrations for the first 11 months were 16 percent lower than a year earlier.

Department store sales in the District were 4 percent higher in the four weeks ended December 26 than in the corresponding period a year before. Cumulative sales through that date were 3 percent higher than a year before.

The seasonally adjusted Texas industrial production index changed little in November. Utilities were unchanged from October. Reflecting a leveling off in crude oil output, mining rose only 0.1 percent. Production of both durable goods and nondurable goods declined, lowering total manufacturing output 0.8 percent. Apparel and paper products were weakest of the nondurable industries. The largest decline in the production of durable goods was registered in electrical machinery.

The total index was up only 2.4 percent over November 1969. Large increases in mining and utilities output were largely offset by a substantial decline in the production of manufactured goods.

Total nonagricultural wage and salary employment in the five southwestern states was slightly stronger in November, rising 0.3 percent from October. Employment in manufacturing remained weak, declining 0.6 percent, but jobs in nonmanufacturing increased, rising a brisk 0.5 percent. The rise in nonmanufacturing employment was led by a seasonal increase in trade and a contraseasonal rise in construction. Finance was the only nonmanufacturing category of employment to post a decline.

In spite of the improvement over October, total employment was only 0.9 percent higher than in November 1969. There was a year-to-year decline of 5.9 percent in manufacturing, and nonmanufacturing employment rose only 2.4 percent. Mining and construction were the only nonmanufacturing categories to show declines from a year before.

Credit at weekly reporting commercial banks in the Eleventh District rose considerably more than usual in the four weeks ended December 23, largely reflecting heavy borrowing by businesses. This increase in credit at banks was accommodated mainly through sizable inflows of demand deposits, although there was also a contraseasonal rise in time and savings deposits.

Total loans, adjusted for a small decline in loans sold outright to bank affiliates, advanced substantially during this period. And while business loans accounted for the bulk of the increase, most other major loan categories showed noticeable strength. The only exceptions were consumer and security loans. Moreover, the increase in business loans around the December tax and dividend dates was no more than usual, suggesting that the sharp increase in business loans over the entire period may reflect some shift of general business demand for funds to banks–probably in response to recent cuts in prime lending rates.

With the increase in loan demand, banks added only moderately to their holdings of securities. While the increase in bank holdings of U.S. Government securities was slightly larger than in corresponding periods of other recent years, the rise in holdings of other securities was less than usual.

Total bank deposits expanded markedly after November, principally reflecting the sizable inflow of demand deposits. However, there was also a contraseasonal rise in time and savings

(Continued on back page)

CONDITION STATISTICS OF WEEKLY REPORTING COMMERCIAL BANKS

Eleventh Federal Reserve District

(Thousand dollars)

ASSETS	Dec. 23, 1970	Nov. 25, 1970	Dec. 24, 1969
Federal funds sold and securities purchased under agreements to resell	623,362	714,950	296,085
Other loans and discounts, gross	6,680,336	6,320,092	6,160,670
Commercial and industrial loans	3,202,424	3,003,940	3,078,674
Agricultural loans, excluding CCC certificates of interest	108,809	104,910	110,591
Loans to brokers and dealers for purchasing or carrying:			
U.S. Government securities	507	507	555
Other securities	56,986	44,937	48,334
Other loans for purchasing or carrying:			
U.S. Government securities	1,270	971	950
Other securities	420,441	440,303	392,026
Loans to nonbank financial institutions:			
Sales finance, personal finance, factors, and other business credit companies	291,977	243,840	144,631
Other	400,149	384,423	358,914
Real estate loans	663,877	646,656	657,744
Loans to domestic commercial banks	16,485	4,719	11,860
Loans to foreign banks	8,338	9,136	7,969
Consumer instalment loans	740,054	736,482	728,264
Loans to foreign governments, official institutions, central banks, and international institutions	0	0	0
Other loans	769,019	699,268	620,158
Total investments	2,886,842	2,804,791	2,590,139
Total U.S. Government securities	1,004,334	967,903	929,481
Treasury bills	125,372	107,665	41,383
Treasury certificates of indebtedness	0	0	0
Treasury notes and U.S. Government bonds maturing:			
Within 1 year	220,336	189,804	139,668
1 year to 5 years	529,976	573,294	619,438
After 5 years	128,650	97,140	128,992
Obligations of states and political subdivisions:			
Tax warrants and short-term notes and bills	38,957	42,069	9,062
All other	1,599,913	1,609,298	1,527,039
Other bonds, corporate stocks, and securities:			
Certificates representing participations in Federal agency loans	109,783	83,950	57,624
All other (including corporate stocks)	133,855	101,571	66,933
Cash items in process of collection	1,313,401	1,152,191	1,317,755
Reserves with Federal Reserve Bank	1,115,883	957,386	828,679
Currency and coin	90,530	85,111	82,859
Balances with banks in the United States	513,584	470,361	502,204
Balances with banks in foreign countries	8,336	9,323	8,874
Other assets (including investments in subsidiaries not consolidated)	466,477	459,533	460,437
TOTAL ASSETS	13,698,751	12,973,738	12,247,702

LIABILITIES	Dec. 23, 1970	Nov. 25, 1970	Dec. 24, 1969
Total deposits	10,705,287	10,291,978	9,437,450
Total demand deposits	6,252,558	5,894,058	6,095,782
Individuals, partnerships, and corporations	4,240,778	4,007,364	4,196,095
States and political subdivisions	236,484	346,930	248,294
U.S. Government	253,411	101,329	259,859
Banks in the United States	1,393,350	1,324,301	1,274,855
Foreign:			
Governments, official institutions, central banks, and international institutions	3,426	2,677	2,770
Commercial banks	27,121	24,317	26,571
Certified and officers' checks, etc.	97,988	87,140	87,338
Total time and savings deposits	4,452,729	4,397,920	3,341,668
Individuals, partnerships, and corporations:			
Savings deposits	943,090	935,726	947,070
Other time deposits	2,504,167	2,500,841	1,716,740
States and political subdivisions	913,850	847,000	647,970
U.S. Government (including postal savings)	26,755	39,023	2,587
Banks in the United States	46,482	56,945	18,441
Foreign:			
Governments, official institutions, central banks, and international institutions	17,285	17,285	7,500
Commercial banks	1,100	1,100	1,360
Federal funds purchased and securities sold under agreements to repurchase	1,353,620	1,054,760	995,921
Other liabilities for borrowed money	84,775	95,159	258,506
Other liabilities	380,179	359,941	456,025
Reserves on loans	128,822	128,846	117,527
Reserves on securities	16,750	16,989	10,721
Total capital accounts	1,029,318	1,026,065	971,552
TOTAL LIABILITIES, RESERVES, AND CAPITAL ACCOUNTS	13,698,751	12,973,738	12,247,702

RESERVE POSITIONS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. Thousand dollars)

Item	4 weeks ended Dec. 2, 1970	4 weeks ended Nov. 4, 1970	4 weeks ended Dec. 3, 1969
RESERVE CITY BANKS			
Total reserves held	775,369	765,711	731,700
With Federal Reserve Bank	720,348	710,627	679,167
Currency and coin	55,021	55,084	52,533
Required reserves	785,916	773,047	735,397
Excess reserves	—10,547	—7,336	—3,697
Borrowings	0	1,275	48,627
Free reserves	—10,547	—8,611	—52,324
COUNTRY BANKS			
Total reserves held	803,230	794,847	777,540
With Federal Reserve Bank	616,275	605,499	598,067
Currency and coin	186,955	189,348	179,473
Required reserves	789,156	772,111	756,752
Excess reserves	14,074	22,736	20,788
Borrowings	912	2,315	11,168
Free reserves	13,162	20,421	9,620
ALL MEMBER BANKS			
Total reserves held	1,578,599	1,560,558	1,509,240
With Federal Reserve Bank	1,336,623	1,316,126	1,277,234
Currency and coin	241,976	244,432	232,006
Required reserves	1,575,072	1,545,158	1,492,149
Excess reserves	3,527	15,400	17,091
Borrowings	912	3,590	59,795
Free reserves	2,615	11,810	—42,704

CONDITION STATISTICS OF ALL MEMBER BANKS

Eleventh Federal Reserve District

(Million dollars)

Item	Nov. 25, 1970	Oct. 28, 1970	Nov. 26, 1969
ASSETS			
Loans and discounts, gross	12,528	12,191	11,450
U.S. Government obligations	2,186	2,116	2,107
Other securities	3,648	3,612	3,178
Reserves with Federal Reserve Bank	1,499	1,357	1,246
Cash in vault	257	273	245
Balances with banks in the United States	1,342	1,323	1,284
Balances with banks in foreign countries[e]	11	10	9
Cash items in process of collection	1,341	1,243	1,323
Other assets[e]	940	934	852
TOTAL ASSETS[e]	23,752	23,059	21,694
LIABILITIES AND CAPITAL ACCOUNTS			
Demand deposits of banks	1,720	1,676	1,525
Other demand deposits	9,162	8,994	9,004
Time deposits	8,730	8,408	7,220
Total deposits	19,612	19,078	17,749
Borrowings	1,189	1,046	1,146
Other liabilities[e]	1,120	1,102	1,071
Total capital accounts[e]	1,831	1,833	1,728
TOTAL LIABILITIES AND CAPITAL ACCOUNTS[e]	23,752	23,059	21,694

e — Estimated.

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS

(Thousand dollars)

Item	Dec. 23, 1970	Nov. 25, 1970	Dec. 24, 1969
Total gold certificate reserves	687,979	628,238	499,251
Discounts for member banks	0	50	24,450
Other discounts and advances	0	0	0
U.S. Government securities	2,791,830	2,650,378	2,423,807
Total earning assets	2,791,830	2,650,428	2,448,257
Member bank reserve deposits	1,668,608	1,498,680	1,373,310
Federal Reserve notes in actual circulation	1,945,227	1,881,012	1,745,492

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

(Dollar amounts in thousands, seasonally adjusted)

Standard metropolitan statistical area	DEBITS TO DEMAND DEPOSIT ACCOUNTS[1]				DEMAND DEPOSITS[1]			
	November 1970 (Annual-rate basis)	Percent change: November 1970 from October 1970	Percent change: November 1970 from November 1969	Percent change: 11 months, 1970 from 1969	November 30, 1970	Annual rate of turnover: November 1970	Annual rate of turnover: October 1970	Annual rate of turnover: November 1969
ARIZONA: Tucson	$ 7,455,780	3%	42%	21%	$ 228,772	32.2%	31.1%	23.3%
LOUISIANA: Monroe	2,639,988	1	14	8	85,081	31.0	30.4	27.6
Shreveport	8,305,368	—3	6	15	261,387	32.8	35.5	32.5
NEW MEXICO: Roswell[2]	822,432	—10	0	5	38,699	21.1	23.8	22.3
TEXAS: Abilene	2,065,872	—4	10	5	105,310	19.8	20.8	19.2
Amarillo	6,026,952	1	17	10	161,532	37.7	37.9	32.2
Austin	8,924,184	—1	3	0	309,424	29.9	30.0	30.5
Beaumont-Port Arthur-Orange	6,178,524	2	10	1	237,742	25.9	25.6	23.9
Brownsville-Harlingen-San Benito	2,264,172	15	25	14	79,383	28.6	25.4	25.2
Corpus Christi	6,758,892	3	51	12	294,197	23.3	24.0	21.9
Corsicana[2]	431,604	3	13	7	31,436	14.3	14.0	13.2
Dallas	120,911,340	—3	12	10	2,244,128	55.2	57.7	51.3
El Paso	7,404,120	—2	22	10	240,653	30.6	31.2	26.4
Fort Worth	23,619,864	4	17	10	652,482	36.7	35.5	33.0
Galveston-Texas City	2,716,476	—5	12	11	107,396	24.9	25.1	23.4
Houston	103,431,960	3	19	11	2,563,198	40.8	40.8	35.6
Laredo	946,308	3	21	12	43,182	22.5	22.8	19.8
Lubbock	4,539,984	—1	28	4	176,992	26.0	26.3	22.0
McAllen-Pharr-Edinburg	1,746,228	9	21	6	103,041	17.2	16.2	15.8
Midland	1,950,084	—3	10	2	134,049	14.7	15.3	13.4
Odessa	1,550,916	—7	—2	4	88,104	18.2	18.9	23.2
San Angelo	1,285,104	9	9	7	68,209	19.2	17.8	17.2
San Antonio	19,356,096	3	21	13	644,955	30.4	29.6	27.4
Sherman-Denison	1,105,440	11	12	8	67,047	17.0	15.4	15.8
Texarkana (Texas-Arkansas)	1,360,236	—2	2	—7	74,150	18.8	19.4	19.3
Tyler	2,319,180	—3	15	4	100,205	23.8	24.8	21.8
Waco	3,136,032	8	21	10	120,310	26.6	25.1	22.7
Wichita Falls	2,193,204	—11	4	0	116,841	18.9	21.3	18.6
Total—28 centers	$351,446,340	0%	16%	10%	$9,377,905	38.1%	38.6%	34.6%

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

BUILDING PERMITS

Area	NUMBER: Nov. 1970	NUMBER: 11 mos. 1970	VALUATION (Dollar amounts in thousands): Nov. 1970	VALUATION: 11 mos. 1970	Percent change: Nov. 1970 from Oct. 1970	Percent change: Nov. 1970 from Nov. 1969	Percent change: 11 months, 1970 from 1969
ARIZONA							
Tucson	427	6,235	$ 5,673	$ 55,198	37%	—7%	—5%
LOUISIANA							
Monroe-West Monroe	67	775	805	13,506	—16	—14	12
Shreveport	536	5,184	2,964	29,666	34	—11	—21
TEXAS							
Abilene	42	443	341	7,826	—9	53	—32
Amarillo	126	3,637	981	28,145	—3	—83	—31
Austin	395	4,476	8,133	115,561	—34	42	—18
Beaumont	139	1,625	644	8,756	64	8	—13
Brownsville	70	801	145	5,628	—79	—62	—27
Corpus Christi	1,234	4,885	3,710	26,757	—6	343	18
Dallas	1,491	19,987	25,397	317,490	—25	89	8
Denison	32	418	256	3,398	149	133	26
El Paso	440	5,024	3,860	86,830	—25	—55	5
Fort Worth	299	4,212	4,154	78,516	—33	—31	12
Galveston	62	731	188	6,395	—37	55	—64
Houston	2,468	31,371	53,535	435,532	80	83	8
Laredo	34	508	75	6,164	—77	—22	53
Lubbock	131	2,207	3,740	48,955	26	—44	56
Midland	51	570	256	4,117	38	—53	—30
Odessa	50	785	390	8,918	—27	236	21
Port Arthur	83	849	208	7,313	—1	48	—9
San Angelo	29	584	130	9,587	—75	—80	59
San Antonio	1,181	14,136	8,143	93,713	—12	25	21
Sherman	63	751	730	13,355	—55	132	—25
Texarkana	24	321	340	6,164	95	—4	—4
Waco	174	2,211	2,007	32,531	23	190	91
Wichita Falls	59	769	960	11,804	25	276	—30
Total—26 cities	9,707	113,495	$127,765	$1,461,825	7%	30%	4%

VALUE OF CONSTRUCTION CONTRACTS

(Million dollars)

Area and type	November 1970	October 1970	September 1970	January—November 1970	January—November 1969
FIVE SOUTHWESTERN STATES[1]	553	597	558	7,175	6,277r
Residential building	227	270	269	2,790	2,589r
Nonresidential building	199	201	183	2,381	2,084r
Nonbuilding construction	128	127	107	2,004	1,603
UNITED STATES	5,145	5,453	5,398	62,278	62,220r
Residential building	1,947	2,302	2,176	22,451	23,518r
Nonresidential building	1,701	1,863	1,944	22,556	23,480r
Nonbuilding construction	1,497	1,289	1,278	17,271	15,222r

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

GROSS DEMAND AND TIME DEPOSITS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. Million dollars)

Date	GROSS DEMAND DEPOSITS: Total	GROSS DEMAND DEPOSITS: Reserve city banks	GROSS DEMAND DEPOSITS: Country banks	TIME DEPOSITS: Total	TIME DEPOSITS: Reserve city banks	TIME DEPOSITS: Country banks
1968: November	10,365	4,776	5,589	7,498	3,145	4,353
1969: November	10,373	4,750	5,623	7,268	2,690	4,578
1970: June	10,265	4,748	5,517	7,391	2,651	4,740
July	10,412	4,782	5,630	7,511	2,722	4,789
August	10,530	4,816	5,714	7,783	2,926	4,857
September	10,658	4,885	5,773	8,088	3,162	4,926
October	10,684	4,860	5,824	8,317	3,305	5,012
November	10,843	4,899	5,944	8,622	3,476	5,146

DAILY AVERAGE PRODUCTION OF CRUDE OIL

(Thousand barrels)

Area	November 1970	October 1970	November 1969r	Percent change from October 1970	Percent change from November 1969
FOUR SOUTHWESTERN STATES	7,285.9	7,242.3	6,537.3	0.6%	11.5%
Louisiana	2,756.0	2,714.2	2,404.7	1.5	14.6
New Mexico	343.5	345.9	360.6	—.7	—4.8
Oklahoma	604.4	606.2	622.1	—.3	—2.9
Texas	3,582.0	3,576.0	3,149.9	.2	13.7
Gulf Coast	728.6	711.4	622.4	2.4	17.1
West Texas	1,720.8	1,730.9	1,517.7	—.6	13.4
East Texas (proper)	228.8	211.7	158.1	8.1	44.7
Panhandle	80.0	86.9	80.4	—8.0	—.5
Rest of state	823.8	835.1	771.3	—1.4	6.8
UNITED STATES	10,062.0	10,025.5	9,321.2	.4%	7.9%

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

INDUSTRIAL PRODUCTION

(Seasonally adjusted indexes, 1957-59 = 100)

Area and type of index	November 1970p	October 1970	September 1970	November 1969
TEXAS				
Total industrial production	180.6	181.4	180.1r	176.3
Manufacturing	195.9	197.5	195.6r	201.2
Durable	198.1	200.7	205.3	224.8
Nondurable	194.5	195.3	189.2r	185.4
Mining	143.1	143.0	141.1r	127.0
Utilities	267.1	267.1	274.4r	247.4
UNITED STATES				
Total industrial production	161.4	162.4	165.8r	171.4
Manufacturing	158.5	159.5	163.7r	171.8r
Durable	151.5	153.5	160.4r	172.1r
Nondurable	167.3	167.1	167.7r	171.5r
Mining	140.1	139.9	138.9r	132.6r
Utilities	241.0	241.5	242.5r	226.0r

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

NONAGRICULTURAL EMPLOYMENT

Five Southwestern States[1]

Type of employment	Number of persons: November 1970p	October 1970	November 1969r	Percent change Nov. 1970 from: Oct. 1970	Nov. 1969
Total nonagricultural wage and salary workers	6,384,900	6,367,000	6,330,600	0.3%	0.9%
Manufacturing	1,123,400	1,130,000	1,193,100	—.6	—5.9
Nonmanufacturing	5,261,500	5,237,000	5,137,500	.5	2.4
Mining	228,400	228,200	232,000	.1	—1.6
Construction	403,000	400,100	414,000	.7	—2.7
Transportation and public utilities	469,400	469,300	458,000	.0	2.5
Trade	1,505,700	1,492,400	1,460,400	.9	3.1
Finance	324,100	325,100	314,300	—.3	3.1
Service	1,035,700	1,030,800	996,600	.5	3.9
Government	1,295,200	1,291,100	1,262,200	.3%	2.6%

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

deposits that resulted from inflows of such deposits other than large negotiable CD's. As is typical at that time of year, large CD's declined somewhat, probably as corporations turned in maturing instruments as one means of making part of their tax and dividend payments. Nevertheless, with total deposit inflows quite large, the banks further reduced their reliance on nondeposit sources of funds, cutting in half their borrowing in the commercial paper market and slightly reducing their borrowings in the Eurodollar market.