the Southwest ECONOMY

FEDERAL RESERVE BANK OF DALLAS ISSUE 3 – 1995

Is Texas' Real Estate Boom a House of Cards?

Ten years ago, the Texas real estate and construction industries were booming. But by 1986, a plunge in oil prices, a statewide recession and federal tax law revisions had sent the state's construction activity and real estate values into a free fall. What was once the land of oil derricks and construction cranes had become the land of see-through skyscrapers and vacant apartment buildings.

After the crash, construction and real estate activity grew little for the rest of the decade. Demand for real estate was stagnant, and construction was next to nil. In the 1990s, however, activity began to pick up. Since 1991, demand for almost all types of real estate has rebounded, resulting in rising occupancy and rents for apartments, office buildings and retail space. The higher demand for real estate has also boosted construction activity and employment. But is this growth solid, or is the Texas real estate rebound just another house of cards?

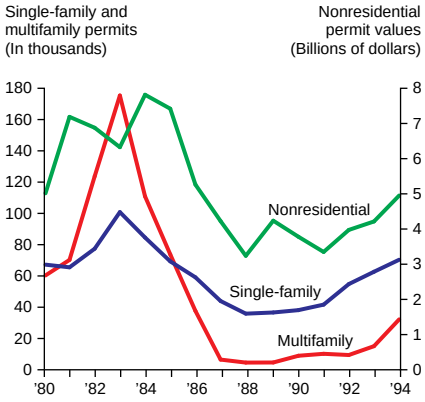
"If You Build It, They Will Come"

Texas' 1980s real estate boom followed the oil boom that started in the late 1970s. Oil prices spiraled upward between 1978 and 1981 and spurred job growth across the state. People and firms flocked to Texas, and construction activity soared. But much of the economic growth was based on speculative expectations. Oil was king, and "$85 by '85" became a rallying cry among investors.

Oil prices edged down in 1982, but even that, coupled with the spillover effects of a national recession, didn't quell construction growth in Texas. Home and apartment building surged, and construction of offices and other nonresidential structures remained at very high levels (*Chart 1*). The Economic Recovery Tax Act of 1981 was one likely reason construction continued to increase. The act created significant tax breaks for apartment and office building investors. Basically, the new law gave investors and builders incentives to build without much regard for demand.

Another culprit in the 1980s real estate buildup may have been a so-called lending frenzy. Two major banking laws were passed in the early 1980s giving financial institutions a larger pool of funds to lend to real estate investors.[1] These laws,

Chart 1
Texas Construction Activity



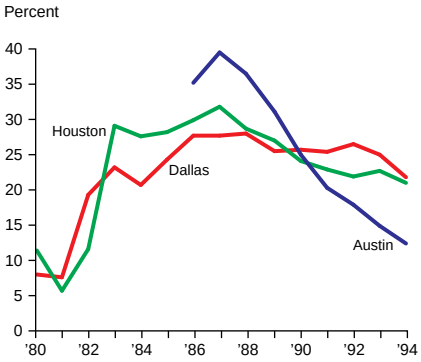
SOURCE: U.S. Department of Commerce, Bureau of the Census.

along with a monetary easing that initiated a decline in interest rates, added to banks' liquidity. Although these were national events, the lending frenzy was probably worse in Texas. Texas lending institutions that had been badly burned by energy loans in the 1970s were searching for new investments, and they chose real estate.

Unrealistic expectations of oil prices and economic growth, tax laws that favored investment in real estate and a lending frenzy combined to push financing and construction of real estate to a point

INSIDE

Chart 2
Office Vacancy Rates



NOTE: Austin data unavailable prior to 1986.

SOURCE: CB Commercial; 1980–82 values provided by Torto Wheaton Research.

of extreme oversupply. As Chart 2 shows, office vacancy rates rose rapidly during the early 1980s, even as construction continued. Excessive building during the boom made the bust especially painful. In 1986, oil prices tumbled, the state entered a recession and a new tax law eliminated certain real estate tax shelters. Construction activity plummeted to pre-1980 levels.

Where Are We Now?

In the 1990s, signs of life have returned to the Texas real estate and construction sectors. In fact, 1994 was the best year for these Texas industries since the boom days of the early 1980s. Last year, employment in the real estate-related sectors of the economy rose by 42,300 jobs, almost 17 percent of total Texas employment growth.[2] In addition, contracts for new residential and nonresidential construction rose 15 percent in 1994, and real estate values and rents began to pick up.

A rebound in the residential market led the real estate industry's recovery. Growing demand for housing and diminishing inventories led to an 84-percent increase in single-family home construction from 1990 through 1994. Also in the 1990s, many who bought homes at the 1980s peak could finally breathe a sigh of relief as home prices began to rise. As Chart 3 indicates, average home prices have surpassed their 1980s peak in most major Texas cities. The most dramatic increase has been in Austin, where 1994 prices reached $120,800, 9.6 percent above their 1986 peak. Apartment demand also surged. Texas apartment permits rose more than 100 percent in 1993 and 60 percent in 1994, and rents for new apartments have reached historical highs.

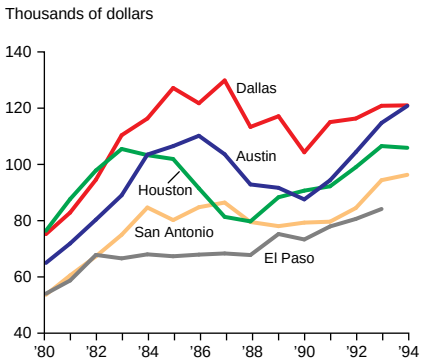
The real estate recovery is not limited to the housing sector. The market for nonresidential real estate, including retail, industrial and office space, also has improved. As demand increased and vacancy rates began to fall, nonresidential construction began to pick up in 1992 and took off in 1993 and 1994. Much of the growth is a result of retail and industrial construction.

Even the office market has made a comeback. Although construction levels remain low, rising demand for office space has caused vacancy rates to fall. In 1987, Austin had the highest office vacancy rate ever recorded in the state of Texas—39.5 percent. By December 1994, Austin had the lowest office vacancy rate of any major Texas city—12.4 percent. Dallas' and Houston's vacancy rates remain higher than the national average but have edged down in the 1990s.

On Solid Ground

Texas' construction and real estate sectors have come a long way since the bust, and the outlook is positive. The factors driving growth in the 1990s are based on the fundamental strengths of the Texas economy, unlike the more speculative factors that drove the 1980s boom.

Chart 3
Average Home Prices



SOURCE: The Real Estate Center at Texas A&M University.

One of the most important influences behind the construction and real estate recovery is Texas' strong rate of economic growth. In 1994, the Texas economy expanded at a faster pace than the nation for the sixth straight year. Unlike the expansion of the late 1970s and early 1980s, Texas' economic growth today is broad-based and not overly dependent on a single industry.

Rising job opportunities and numerous business relocations have drawn workers to Texas, boosting the demand for housing. In addition, the state's lower costs of living have enabled many newcomers to purchase homes or live in luxury apartments. Despite rising prices in recent years, home prices and apartment rents are below the national average in most Texas cities. The average price of a Dallas home, for example, remains about 10 percent below the national average.[3]

Texas' central location and proximity to Mexico are also contributing to the real estate sector's strength. Numerous companies have moved manufacturing facilities and distribution hubs to Texas. For example, Nokia Mobile Phones, Riddell Athletic Footwear, Nestle and Zenith have all chosen Alliance Airport in Fort Worth for national or regional distribution centers. Similarly, El Paso's industrial warehouse space is 97.5-percent full, a result of increased demand from manufacturers choosing to locate near Mexico.

In the 1990s, builders, investors and bankers appear to be taking care not to repeat the mistakes of the 1980s. Homebuilders are watching buyer demand, and when home sales slowed last fall, builders cut back on starts, keeping inventories manageable. Also, despite much new apartment construction, vacancy rates remain relatively tight, sug-

(Continued on page 6)

Government Deficits: Good, Bad or Irrelevant?

Recent legislative proposals in Congress could have significant impacts on the government's budget deficit in coming years. On the one hand, the tax cut package passed by the House of Representatives could well increase the deficit, at least in the short term, if passed into law. On the other hand, Congress is considering numerous proposals to narrow the deficit (including a balanced budget amendment).

This legislative activity has refocused attention on government budget deficits, how they are measured and their effects on economic performance. This article summarizes the vast academic literature on the measurement and economic effects of the deficit. The focus is primarily on the economic effects of the deficit per se as opposed those of government spending or taxation separately, although there is considerable research on each of these topics that should not be ignored.

Few issues have received as much attention as the U.S. budget deficit. The extensive literature about its causes and consequences ranges from academic treatises to popular commentary. Not too long ago, government deficits were widely regarded as a useful way to maintain the economy at full employment during times when recession threatened. Today, however, the popular view of deficits is starkly different. The popular press and policymakers now often single out the budget deficit as a major cause of a long laundry list of economic woes, including recessions, unemployment, inflation, high interest rates, trade deficits and gyrations in the dollar's value. They regard the view that the deficit is a serious problem requiring discipline and tough legislation as self-evident.

Economists, in contrast, while certainly far from a consensus, tend to view the economic effects of deficits as small. This article explores the issues of the measurement and economic effects of deficits and asks if there are reasons to worry about the state of government finance, even if deficits by themselves have no major harmful economic effects.

Measures of the Deficit

There are numerous measures of the government deficit. Many do not use sensible accounting principles and therefore are prone to be misleading. Unfortunately, the most popular measure is probably the most misleading. This is the unified federal budget deficit, the simple difference between total federal government outlays and receipts. One version of this measure counts spending and receipts that have been deemed "off-budget" by Congress. The major off-budget item is Social Security. Since the Social Security trust fund is currently running a large surplus, the total deficit is substantially less than the on-budget deficit ($203 billion versus $259 billion in fiscal year 1994). However, this will change in the future as the population ages and Social Security payments become larger than the payroll tax receipts that finance them.

Official deficit measures are misleading for a variety of reasons. First, they cover only the federal government, not state and local governments. By virtue of the annual federal grants they receive, state and local governments generally run a surplus—$28 billion in 1994 after including federal grants of $210 billion.

Second, government outlays and revenues are highly sensitive to the level of economic activity. The *structural* deficit, the deficit after temporary business-cycle effects are discounted, adjusts for the lower tax revenues and higher payouts of unemployment insurance that occur when unemployment is high. The structural deficit is calculated assuming that the unemployment rate is at a benchmark level, termed the *nonaccelerating inflation rate of unemployment* (NAIRU), currently defined to be at 6 percent. In 1994, with the average unemployment rate slightly above this level, the structural deficit was estimated to be $187 billion, or $16 billion less than the official federal deficit including off-budget items.

Third, official measures ignore the effects of inflation and changing interest rates on government indebtedness. Inflation acts to reduce the real value of publicly held government debt, just as it reduces the real value of an individual's mortgage debt. This "inflation tax" on government bondholders should be recognized as revenue to the government. Similarly, when market interest rates rise, the market value of publicly held government debt falls, again leading to a gain for the government that should be counted as revenue. Inflation and rising interest rates thus reduce properly measured government deficits by reducing the real value of outstanding government debt, while falling prices and interest rates increase deficits by increasing the debt's real value.

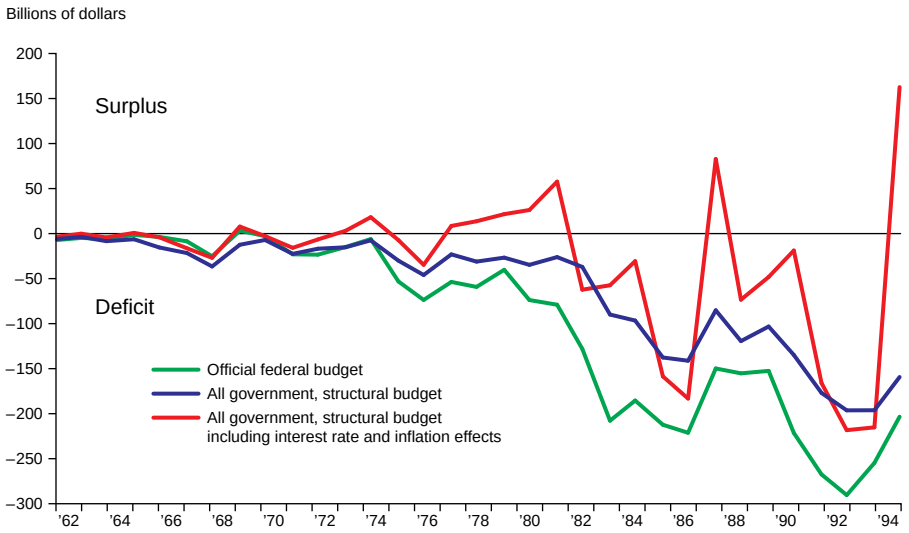
Because the stock of outstanding government debt held by the public is large, these interest and inflation adjustments can dwarf the official budget numbers. For example, rising interest rates throughout 1994 reduced the market value of the publicly held outstanding debt by $250 billion, while 1994's modest inflation rate reduced the real value of the debt by another $72 billion. Count-

ing these reductions in the value of the debt as government revenue turns a deficit of $159 billion (after adjusting for state and local government accounts and business-cycle effects) into a *surplus* of $163 billion.

Finally, official forecasts of deficit figures ignore potentially vast amounts of future outlays. The government has large unfunded obligations for federal employee and military retirement programs and other contingent obligations such as loan and credit guarantees. As the savings and loan crisis illustrates, some of these federal guarantees can turn into large cash outlays for the federal government. Estimating precisely these potential liabilities and their future likelihood is extremely difficult. However, it is clear that they have been growing rapidly in recent years. The U.S. Treasury estimates that the actuarial deficit for federal and military retirement programs (excluding Social Security) more than tripled from 1980 to 1993 when it surpassed $2 trillion.[1]

Charts 1 and 2 present two estimates of the budget surplus or deficit that attempt to address some of these measurement problems, along with the official measure of the federal budget deficit including off-budget items. One estimate, the *all government, structural budget*, includes the budgets of state and local governments and is adjusted for cyclical variations in the economy. Because it adjusts for state and local finances and for business-cycle effects, this measure is a good indicator of the intended budgetary stance of the government sector, as legislated by Congress and state and local governments. The second estimate adjusts the all government, structural budget for inflation and interest rate effects. Because this measure indicates the change in the net debt of the government held by the public, it is a good indicator of the effective stance of fiscal policy. However, because inflation and changes in interest rates are beyond government's immediate control, this measure is not indicative of the intended stance of fiscal policy.

Chart 1
Measures of the Government Budget



SOURCE: Congressional Budget Office.

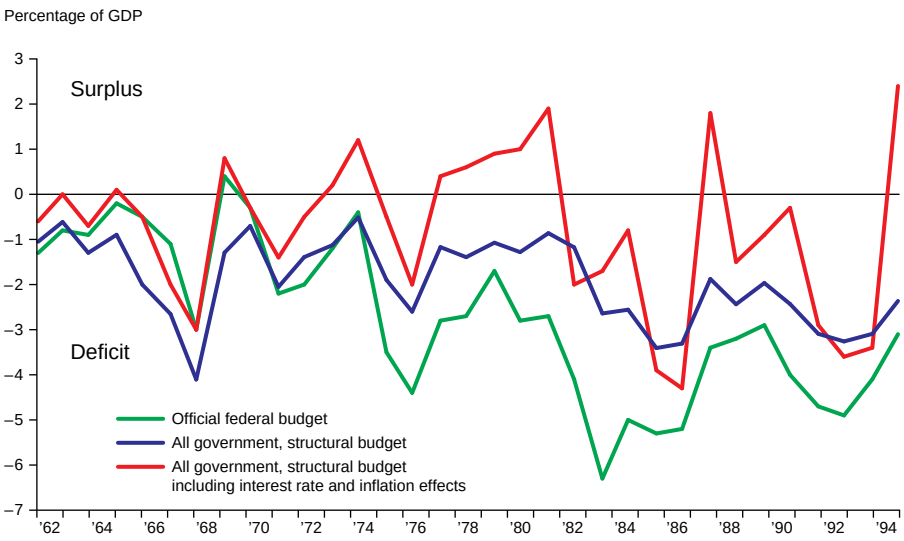
The two measures provide a distinctly different impression of the state of government finance than does the official measure. In each year since 1980, the all government, structural deficit has been between about $50 billion and $100 billion *less* than the official federal deficit. After accounting for inflation and interest-rate changes, the deficit becomes even narrower and the budget actually shows a surplus for a few years since 1962, most recently in 1994.

One also gets different impressions of the deficit by looking at it in dollar terms (*Chart 1*) and as a percentage of gross domestic product (GDP) (*Chart 2*). The deficit in relation to our capacity to pay it off (in other words, as a share of GDP) is the more appropriate measure for calculating the size of the deficit. As a share of GDP, recent deficits don't look much worse than those of the late 1960s. The source of today's concern over the deficit may therefore involve an aspect of government obligations that *has* grown dramatically in recent years—that is, the myriad number of future or contingent obligations taken on by the federal government. These have the potential to impose a huge real cost on government finances at some unspecified time in the future.

Economic Effects of Deficits

There are four main schools of thought with regard to the economic effects of budget deficits. The *irrelevance school*, led by Robert Barro, argues that deficits have no macroeconomic effects: financing government expenditures by borrowing is exactly equivalent to financing via taxes in terms of the effect on the economy. This argument, labelled the *Ricardian equivalence proposition*, runs as follows: if government expenditures are financed by borrowing instead of by taxes, taxpayers will have greater current after-tax incomes. However, they will not spend their extra income; they will save it to pay the future taxes necessary to service the resulting government debt or leave it to their children to pay those taxes. Government debt financing will thus induce no more spending than tax financing. And it will induce no less saving than tax financing, since the increased public dissaving of the higher deficit will be exactly offset by the increased private saving needed to pay future taxes.

Chart 2
Measures of the Government Budget



SOURCE: Congressional Budget Office.

The irrelevance school does not claim that government spending and taxation are without economic effects; in particular, it allows for the possibility that high levels of government expenditure and high marginal tax rates can blunt incentives to work and save, thereby lowering long-term economic growth. All it claims is that the deficit per se has no economic effects.

The irrelevance school has had a major impact on the academic debate over the economic effects of deficits, although much less so on the debate among policymakers. This may be because the theory makes perhaps unrealistic assumptions about how individuals react to tax cuts and make bequests to their children. However, this does not necessarily mean that Ricardian equivalence is not a good approximation of economic reality; for that we have to look at the empirical evidence.

The traditional *Keynesian* analysis of deficits claims that a deficit adds to the purchasing power and aggregate demand of the private sector and, through the multiplier process, changes aggregate income and output by a multiple of the initial change. Deficits are therefore expansive and surpluses contractive. In this analysis, deficits will only increase real output to the extent the unemployment rate is above the NAIRU. Increasing the deficit when the economy is at or below the NAIRU will have no effect on output but merely increase inflation. Deficits can therefore have beneficial effects if they are properly managed to keep the economy running at the highest growth rate consistent with low inflation.

The *monetarist* analysis of deficits claims that a deficit affects the economy in different ways, depending on how it is financed. If financed by printing money, the result is inflation. If financed through the issuance of government debt (as has largely been the case in the United States), then the effect on the economy operates through interest rates. Increases in debt finance raise real interest rates, crowding out private investment and lowering the level of long-run expected income or normal output. In this case, while the short-term effect of debt financed deficits is expansionary, the long-term effect may be to lower economic growth.

A final view is that regardless of the true effects of the deficit on the economy, deficits matter because the bond market believes they matter. If bond market participants believe the deficit is a good signal of the current government's attitude toward inflation, they may react to the deficit's size as an indicator of future inflation. Some analysts have linked the strong bond market rallies in 1986 and 1993 to the passage of legislation that was viewed as aiding in a reduction of future deficits.

Considerable recent empirical work addresses the effects of deficits on the economy. The results are mixed. To date, the bottom line of this research is that if budget deficits have effects on interest rates or investment, these effects appear to be too small to be picked up in econometric analysis.[2] This means that, while not a literally true description of behavior, the irrelevance school's claim that deficits do not matter might be a good approximation of reality. Alternatively, open world capital markets provide a plausible explanation for the failure to find large effects of deficits on interest rates. A country's deficit is financed in the world capital market. If world capital markets are integrated, then risk-adjusted, after-tax real interest rates are equalized across countries, and if the U.S. deficits are small relative to world saving, then the effect of deficits on interest rates can be expected to be small.

Conclusions

The general message from economists is that budget deficits, properly measured, do not appear to be any more serious today than they were 30 years ago, with the important caveat that there has been a dramatic increase in the federal government's potential *future* liabilities. The magnitude of this liability is impossible to evaluate precisely but may impose a considerable burden on government finances at some time in the future. Budget deficits of the magnitude that the United States has experienced in the recent past (ranging up to about 5 percent of GDP when properly measured) appear to have major economic effects only if they are financed by printing money or per-

ceived as signifying a more liberal attitude toward inflation.

Does this mean we should not worry about the government budget? Absolutely not. The empirical work has focused on periods when the deficit has been under 5 percent of GDP. Deficits larger than this could have more painful and more obvious economic effects. Furthermore, although the deficit per se may have no perverse economic effects, there is considerable evidence that the level and composition of government spending and taxation do. For example, the share of the economy's resources commanded by the public sector has risen by about one-third since 1945. Government spending now makes up more than one-third of total GDP. To the extent that this increased government spending has crowded out private expenditures, there is a real danger that resources have become increasingly misallocated, thereby lowering long-term growth.

Is the marginal value of a dollar transferred to government and spent by the public sector as great as it would be if left in the hands of private citizens? If not, then government has grown too large. Empirical work suggests that the private sector values the marginal dollar spent by the government only about one-fourth as much as a dollar left in the hands of the private sector. To the extent that growth in the public sector is a function of a budget process that allows the government to practice deficit spending, the budget process may be in need of change.

In addition, the structure of taxation and the composition of government spending may have important effects on growth. High marginal tax rates lower long-term economic growth by blunting incentives to work and save. Low levels of public investment in physical and human capital may mean insufficient spending on the physical infrastructure, education and training that are essential to a healthy economy.

Overall, the weight of evidence from economic research suggests that the ongoing debate over balancing the budget would be better focused, instead, on the larger issue of the proper role and size of government in the economy.

—Stephen Prowse

Notes

[1] This potential liability dwarfs the cost to the government of the savings and loan crisis, which totaled roughly $155 billion over four years.

[2] Proponents of the "deficits matter because bond markets believe they matter" school argue that such evidence does not conflict with their hypothesis because bond markets may believe deficits matter only at certain times; for example when the budget deficit is large relative to GDP by historical standards. Thus, the bond market may have become focused on the deficit in the mid-1980s and early 1990s when the deficit increased. Empirical studies over a long time period would not pick up this phenomenon.

Texas' Real Estate Boom

(Continued from page 2)

gesting that construction is in line with demand. While vacancy rates have come down in the nonresidential sector, increases in speculative building are not evident.

Bankers' standards for real estate loans in the 1990s are much tougher than those of the early 1980s. Texas' wave of bank failures in the late 1980s forced the industry to impose strict underwriting standards and to scrutinize loans more closely. Despite a recent lending recovery in Texas and some easing of credit standards, banks rarely make real estate loans to developers without several committed tenants. Similarly, investors are more careful now. The Tax Reform Act of 1986 removed the tax incentive to invest in income-losing properties and reduced the attractiveness of real estate investments relative to other types of investments.

Real estate and construction are cyclical industries and will rise and fall along with fluctuations in the national and regional economies. But because the growth of these industries in the 1990s seems based on the fundamental strengths of the Texas economy, the next downturn should not trigger another 1980s-style bust. Today, the real estate sector's strength is grounded in economic reality. As long as developers, bankers and investors keep demand and supply in balance, the real estate and construction industries should prosper throughout the 1990s.

—D'Ann M. Petersen

Notes

[1] These laws were the Depository Institutions Deregulation and Monetary Control Act of 1980 and the Garn–St Germain Depository Institution Act of 1982.

[2] In this article, real estate-related employment includes construction, lumber and wood products; stone, clay and glass products; furniture and fixtures, fabricated structural metal products; real estate; retail sales of construction materials and home furnishings.

[3] Likewise, commercial rents are low in Texas. The average cost for first-class Dallas office space at the end of 1994 was $17 per square foot, compared with $40 per square foot nationally.

The Southwest Economy is published six times annually by the Federal Reserve Bank of Dallas. The views expressed are those of the authors and should not be attributed to the Federal Reserve Bank of Dallas or the Federal Reserve System.

The Southwest Economy is available free of charge by writing the Public Affairs Department, Federal Reserve Bank of Dallas, P.O. Box 655906, Dallas, TX 75265-5906, or by telephoning (214) 922-5257.

Beyond the Border

Real Trade-Weighted Value of The Dollar Holds, Despite Fall Against the Yen and Mark

World currency markets were shaken in early March as the nominal value of the dollar declined to post–World War II lows against the Japanese yen and the German mark. From January 1 through April, the nominal value of the dollar fell 15.3 percent against the yen and 10.4 percent relative to the mark. Over approximately the same period, the real value of the dollar (adjusted for U.S. and foreign inflation differentials) was down 8.2 percent against the yen and 14 percent against the mark. A looming question for the U.S. economy is whether the decline in the dollar portends higher U.S. inflation as imports from Japan and Germany become more expensive.

Over the past 10 years, U.S. consumer prices have increased nearly 43 percent, while German prices increased 26 percent and Japanese prices increased only 14 percent. Although the dollar's long-term nominal decline against the yen and mark undoubtedly reflects the fact that U.S. inflation has been higher than German and Japanese inflation, the dollar's recent decline does not necessarily signal higher future U.S. inflation resulting from increased import prices.

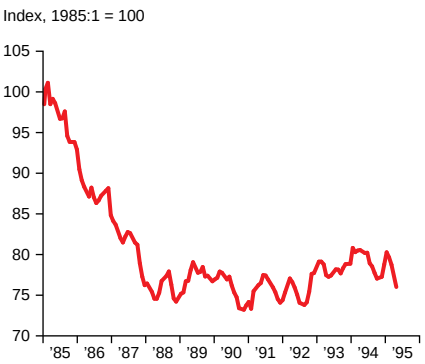
Despite the dollar's recent fall against the yen and mark, the overall real trade-weighted value of the dollar has changed only slightly during the past year. From April 1994 to April 1995, the Dallas Fed's Real Trade-Weighted Value of the Dollar Index (which includes 99 countries) fell only 5.7 percent (*Chart 1*). The Real Trade-Weighted Value of the Dollar Index is calculated by weighting each country's dollar exchange rate by that country's share of total U.S. trade (exports plus imports) and then adjusting for inflation differentials between that country and the United States. Consequently, movements in the real trade-weighted value of the dollar approximate changes in the overall purchasing power of the dollar.

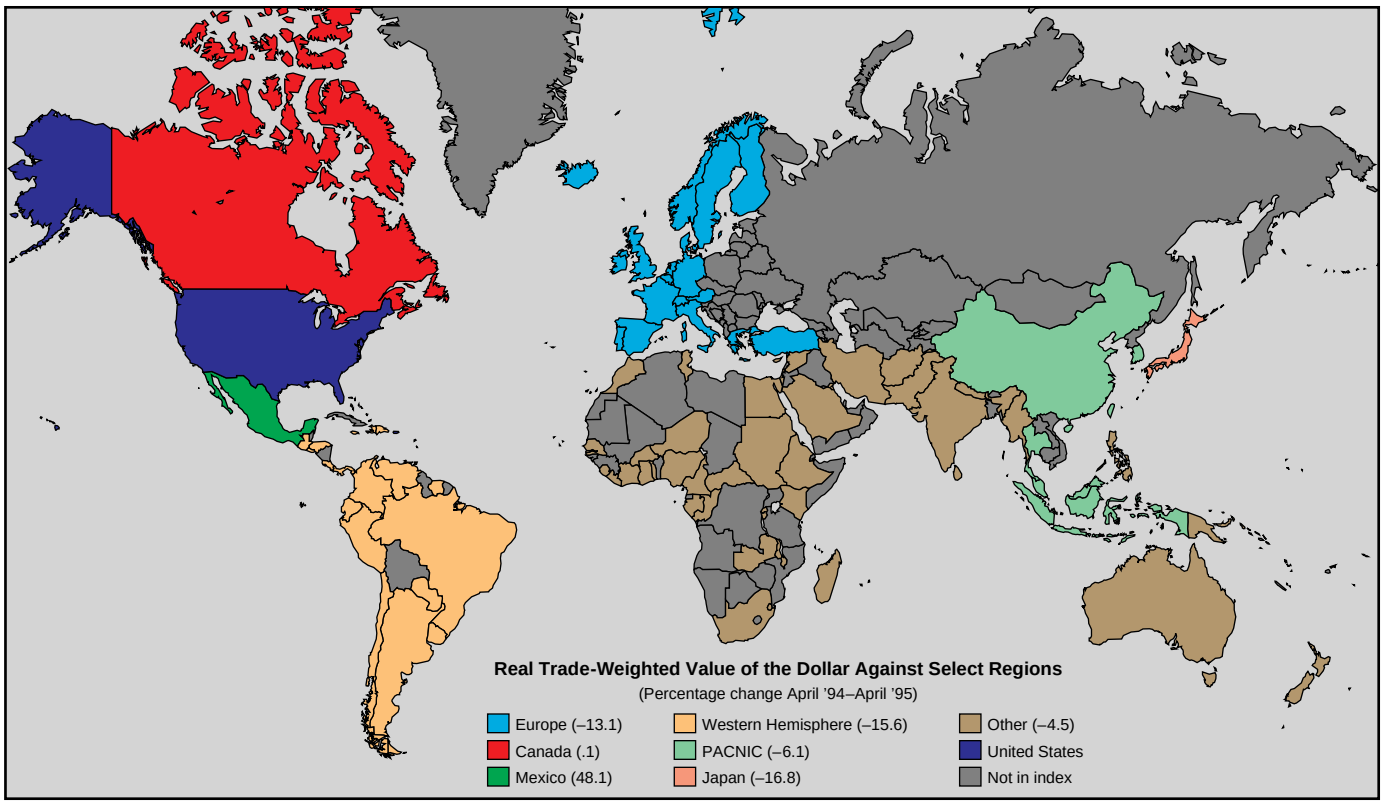
The real trade-weighted value of the dollar has remained relatively stable because of offsetting movements in the dollar's value across our largest trading partners. Although the dollar has been declining against the yen and mark, it has been appreciating against the Mexican peso and remained fairly stable against the Canadian dollar and other currencies. Since April 1994, the dollar has appreciated 48.1 percent against the Mexican peso and is unchanged against the Canadian dollar (*map*). Canada and Mexico represent nearly 30 percent of total U.S. trade, while Japan and Germany account for around 20 percent of U.S. trade. As a result, the dollar's decline against the yen and the mark has been mitigated by the dollar's rise against the peso and Canadian dollar.

Consequently, while U.S. consumers may see higher prices for imported German and Japanese products, overall U.S. prices may not increase that much because of lower or unchanged prices for Canadian and Mexican imports.

—David M. Gould

Chart 1
Real Trade-Weighted Value of the U.S. Dollar





Regional Update

After experiencing strong growth in 1994, the Eleventh District economy has decelerated in 1995. Employment in Louisiana, New Mexico and Texas increased 2.4 percent in the first three months of this year, after rising 4.1 percent last year. A lower value of the Mexican peso, a slower national economy and higher interest rates have likely contributed to slowing the District expansion. Manufacturing employment growth remains much stronger in the District than in the nation.

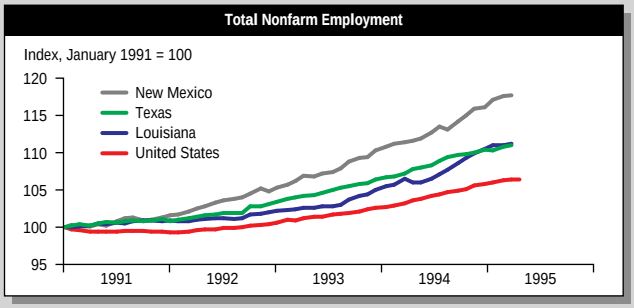
Slower job growth in service industries—which make up roughly 80 percent of all jobs in the three-state region—contributed to the region's slower employment gains. In the service sector, transportation firms and retail stores have accounted for much of the slower employment growth. Weaker demand for transportation and warehousing services led to a 0.9-percent decline in employment in the first quarter of 1995, following a 6.1-percent increase in 1994. Retail trade employment growth also slowed in the first quarter, mostly at automotive dealers, and retail stores selling building materials, furniture and apparel.

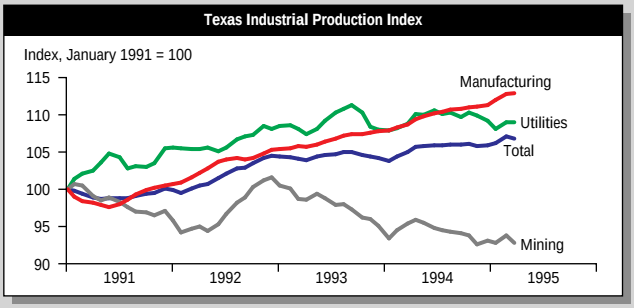
Construction employment fell in February and March, after higher interest rates slowed home building in the second half of 1994. A recent decline in mortgage rates has boosted contract values and building permits, however, suggesting job growth will rebound in the next few months.

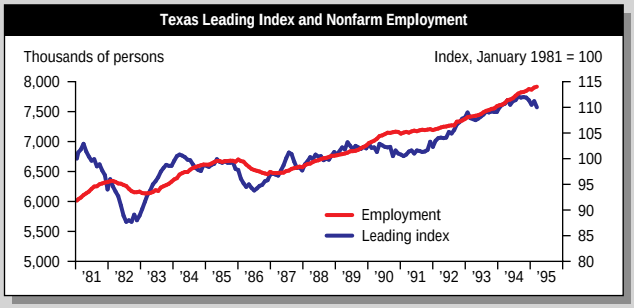
The manufacturing sector has remained strong over the past quarter, although job growth weakened in March. Employment gains were slower in industries that produce construction-related materials and transportation equipment, but job growth was strong for food and kindred products.

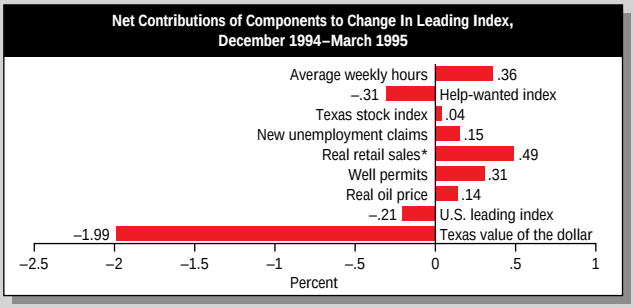
Current indicators suggest that Texas employment growth is still slowing. The Texas Leading Index declined in March, its fifth decline since peaking in August 1994. Although most components weakened or declined, much of the index's recent drop has been centered in the Texas weighted value of the dollar.

—Fiona Sigalla









*Data are through February 1995.

REGIONAL ECONOMIC INDICATORS

	Texas Leading Index	TIPI Total	Texas Employment					Total Nonfarm Employment		
			Mining	Construction	Manufacturing	Government	Private Service-Producing	Texas	Louisiana	New Mexico
3/95	110.0	119.3	156.4	401.5	1,029.3	1,432.5	4,896.5	7,916.2	1,785.5	684.9
2/95	111.2	119.6	157.0	404.8	1,028.8	1,430.8	4,880.7	7,902.1	1,782.4	684.3
1/95	110.5	118.6	157.0	405.4	1,024.5	1,429.2	4,851.4	7,867.5	1,781.8	681.5
12/94	111.4	118.3	157.8	398.5	1,022.7	1,426.1	4,870.8	7,875.9	1,774.5	675.3
11/94	111.9	118.2	159.7	393.3	1,021.1	1,420.7	4,851.5	7,846.3	1,764.0	674.2
10/94	112.0	118.5	160.7	389.9	1,020.2	1,418.3	4,838.9	7,828.0	1,755.1	669.0
9/94	111.9	118.4	163.1	387.9	1,017.7	1,417.9	4,834.4	7,821.0	1,743.8	664.5
8/94	112.1	118.4	162.9	383.1	1,014.3	1,423.5	4,817.7	7,801.5	1,729.3	658.3
7/94	111.4	118.3	162.5	380.3	1,010.6	1,414.4	4,797.2	7,765.0	1,719.4	660.2
6/94	111.2	118.3	162.8	376.9	1,007.4	1,417.0	4,759.5	7,723.6	1,710.3	655.4
5/94	110.5	118.2	163.2	374.3	1,005.9	1,402.8	4,755.3	7,701.5	1,701.8	651.1
4/94	111.4	118.0	163.9	376.4	1,003.4	1,390.9	4,756.7	7,691.3	1,702.3	649.3

FURTHER INFORMATION ON THE DATA

For more information on employment data, see "Reassessing Texas Employment Growth" (*Southwest Economy*, July/August 1993). For more information on TIPI, see "The Texas Industrial Production Index" (Dallas Fed *Economic Review*, November 1989). For more information on the Texas Leading Index and its components, see "The Texas Index of Leading Indicators: A Revision and Further Evaluation" (Dallas Fed *Economic Review*, July 1990).

On-line economic data and articles are available on the Dallas Fed's electronic bulletin board, FEDFLASH (214-922-5199 or 800-333-1953).