As short-term interest rates fall toward zero, it may be necessary for the Fed to rethink how it conducts monetary policy. In this article, we examine why conventional policy loses its effectiveness at very low interest rates and review some alternative tools for stimulating the economy. We hope that this discussion will prove to be academic—that our economy’s natural resilience, together with the easing the Fed has already undertaken, will be sufficient to get employment and output growing again. But it’s nice to know that if additional stimulus is required, there are still arrows left in our quiver.

U.S. Economic Growth Weak Despite Low Interest Rates

Short-term interest rates have fallen dramatically over the past two and a half years, and are now as close to zero as they’ve been since 1958 (Chart 1). Any significant further rate reduction will make life difficult for money market mutual funds, which will either have to start paying out less than a dollar for each dollar invested or begin charging explicit management fees.

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Midway through 2003, it appears the Texas economy has bottomed out and is tilted toward expansion. Year-to-date data (through May) suggest the economy has finally emerged from the recession that began in 2001 and lasted through 2002.

Despite the good news, the improvement has been so moderate that it still feels like a recession to many Texans. A majority of economic indicators suggest growth will be slow, but that is an improvement over last year. A more robust pickup in the Texas economy depends on the strength of the U.S. recovery because many of the state’s key sectors will benefit from stronger U.S. growth.

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Texas Economy Warming Up in 2003

(Continued from front page)

Some History

After roaring through the 1990s, Texas’ economy cooled in 2000 and then turned down in 2001, mirroring the U.S. economy (Chart 1). Texas was especially hard hit from the technology bust and the fallout from September 11. During 2001, Texas’ high-tech and air transportation industries lost a combined 48,300 jobs, or 45 percent of total job losses. Overall, Texas employment dropped 1.4 percent in 2001, while national employment fell at a slightly slower rate of 1.1 percent. In 2002, conditions remained bleak and overall job numbers continued to fall. Texas employment declined another 0.1 percent, compared with a national dip of 0.4 percent.

So far in 2003, Texas job growth has been positive, registering a net gain of 29,000 jobs (0.8 percent) through May. Moreover, the Texas Coincident Index began exhibiting positive growth at the end of 2002, marking an end to the downturn (Chart 2). While recent growth has been tepid, it nevertheless indicates that Texas is on the road to recovery. But, despite the warming trend in some areas, several sectors of the Texas economy are still hurting. Following are short summaries of Texas economic indicators, ranked hottest to coldest, based on their contribution to current economic conditions. (See Texometer on page 13.)

Warm to Hot

Health and Education Services.

Health and education services employment has shown consistently strong growth over the past several years, even through the downturn of 2001 and 2002 (Chart 3). The sector added 19,400 jobs in the first five months of 2003, helping offset job declines in weaker sectors. The health services component of this sector includes private health care providers and is one of the largest industries in Texas. It currently comprises one-tenth of total Texas employment (or about a million people). The other component of this sector, education services, includes private schools, colleges and training centers and currently employs about 150,000. Employment in health and education services should continue to rise at a healthy pace as a result of the state’s faster-than-average population growth.

Energy.

Texas’ oil and gas sector is heating up, even though the energy sector has continued to play a declining role in the state’s economy. After falling consistently since late 2001, oil and gas employment began to increase in spring 2003, adding 1,800 to the payrolls from March through May (an 11.9 percent pace). Moreover, the Texas rig count is at its highest level since summer 2001.

What has caused the recent resurgence in Texas’ energy industry? After price fluctuations in 2001 and 2002 left the market unsure about price sustainability, oil prices now seem firmer, recently hovering in a narrow range around $30 per barrel. Additionally, upward pressures...
Texas home sales have eased in recent months, and inventories are rising.

on oil prices persist: (1) There is an absence of Iraqi oil on the market, (2) OPEC left quotas unchanged at the most recent meeting and (3) most economists expect the U.S. economy to improve in the second half of 2003. High natural gas prices are also contributing to increased employment and drilling.

Temporary Hiring. Employment at temporary agencies has picked up this year. The hiring of temporary workers usually quickens before an upturn in permanent employment. Since the end of 2002, temporary jobs have risen a robust 9.6 percent. Temporary employment accelerated 13.3 percent in May, pointing to increased job growth later in the year.

Warm Government. Government jobs have been rising at a moderate pace since 2000. Along with health and education services, government employment was unfazed by the 2001–02 recession (Chart 4). Local government, which includes a large portion of the public education sector, has been the fastest growing segment of government, rising 2.8 percent year-to-date. While government will continue to make up a large share of total Texas employment, growth in government jobs

Texas Single-Family Housing Permits Still High

may cool off later this year, a result of spending cuts associated with state and local budget shortfalls.

Warm but Losing Steam

Construction and Single-Family Real Estate. In 2002, construction employment forged ahead despite weakness in the rest of the economy. Although most office construction was at a standstill, single-family construction surged to record highs, partly due to low interest rates, which increased home affordability (Chart 5).

While the single-family construction industry is still anticipating a good year overall, the industry is not expected to contribute as much to economic growth this year as it did in 2002. In fact, Texas home sales have eased in recent months, and inventories are rising (Charts 6 and 7).

In addition, because new construction is running ahead of demand, the surge in home prices that began in late 1999 lost steam in 2003, and prices are now flat.

Manufacturing Hours Worked. Manufacturing hours worked edged down in April and May, but the measure climbed strongly in first quarter 2003 and remains above year-ago levels. Because employers generally increase hours prior to hiring, the higher level hints that manufacturing employment could improve in coming months.

Lukewarm Exports. Real Texas exports edged up slightly in first quarter 2003, after declines during the last two quarters of 2002. The increase was modest because Texas’ exports to Mexico (which account for almost half of total state exports) fell as Mexico’s economy weakened further (Chart 8).

Inflation-adjusted exports to the European Union, Latin America (excluding Mexico) and China were up in the first quarter. Exports to China were particularly strong, increasing 25 percent, as China posted the fastest economic growth in recent years. Texas’ top exports to China are chemicals, computer and electronic products, and machinery.
The Border Economy. The weakness in Mexico's economy has cooled overall border job growth, with Brownsville and El Paso posting negative job growth in recent months. In more positive news, the maquiladora industry is showing signs of stabilizing. Border maquiladora plants gained 2,800 net jobs in first quarter 2003 (the most recent data available), while transportation-related maquilas gained 3,500 jobs. Moreover, anecdotal reports and sales tax rebates indicate that retail sales along the border are beginning to pick up.

The Eleventh District Beige Book. The most recent Eleventh District Beige Book, a survey of current conditions conducted by the Federal Reserve Bank of Dallas and its branches, hinted at improving economic activity in Texas. Nevertheless, Texas' economic rebound is reportedly slow and inconsistent across industries. The Eleventh District Beige Book was somewhat more optimistic than the national summary. This is consistent with current employment conditions in Texas and the United States.

Texas Leading Index of Economic Indicators. The Texas Leading Index edged up in April and May 2003 following declines in the previous two months. After trending down in 2001 and 2002, the index's recent uptick indicates the Texas economy should improve in coming months.

Cold but Getting Warmer

High Tech. Texas' high-tech sector eliminated 74,900 jobs between the peak in November 2000 and the end of 2002. This year, the sector has continued to shed jobs (5,800), but the pace has slowed. High-tech employment has declined at an annualized rate of 6.7 percent year-to-date, after falling at a 14 percent pace in 2002.

Looking at individual subsectors, the telecommunications industry (both services and equipment) continues to lose jobs, but employment seems to have bottomed out in the semiconductor and computer manufacturing industries (Chart 9). Anecdotal reports confirm these figures, with some in the industry hinting at a “glimmer at the end of the tunnel.”

Because the tech market is worldwide in scope, a high-tech turnaround in Texas will have to come from global forces. So far, on the positive side, computer shipments have risen above year-ago levels for 10 consecutive months, and factory orders for computers were up strongly in April. On the down side, venture capital investing in Texas and the United States is at a five-year low, and the semiconductor book-to-bill ratio has edged down in recent months, meaning chip orders are not as strong as current shipments.

Initial Claims for Unemployment Insurance. Although still high, initial claims for unemployment insurance in the state fell in April and May 2003. Because initial claims are a leading indicator of the economy, the recent declines imply continued slow improvement in Texas labor market conditions.

Chilly Mexico. After attempting a recovery last year, Mexico's economy took a turn for the worse in first quarter 2003, when real gross domestic product (GDP) fell 2.9 percent from the previous quarter (Chart 10). Mexico's manufacturing sector remains weak and is not likely to see much improvement until gains are made in its U.S. counterpart. The National Institute of Statistics, Geography and Information's (INEGI) leading index for the Mexican economy is generally flat, and most analysts tie any recovery in the Mexican economy to stronger U.S. growth. Fortunately for the Texas economy, employment and hours in Mexico's maquiladora industry seem to have stabilized after falling in 2001 and much of 2002.
The U.S. airline industry, which was severely hurt by the events of September 11, has yet to recover. Because the industry plays a prominent role in Texas—home to Continental Airlines, American Airlines, Southwest Airlines and one of the world’s busiest airports—the tailspin has been a large contributor to the state’s economic weakness. Following an initial plunge in employment in 2001, air transportation jobs edged down only slightly in 2002. However, in 2003 roughly 3,800 (out of 71,500) jobs have been eliminated to-date as companies accelerate cost-cutting efforts.

With further cuts expected, the air transportation industry probably will not contribute to the state’s economic growth in the near future. Nevertheless, the long-term prospects seem more promising. A recent $1.46 billion bond sale by Dallas/Fort Worth International Airport suggests expectations for the airport and the Texas economy remain high.

**Manufacturing.** Manufacturing remains the weakest major sector of the Texas economy by far. The sector continues to shrink in terms of employment, but the rate of job loss has lessened in 2003. Manufacturing employment declined at an annual rate of 2.1 percent (8,300 jobs) in the first five months of this year, compared with a drop of 5.4 percent (53,100 jobs) in 2002.

Manufacturing may be slow to recover, as many industries within the sector have undergone significant changes during the recent downturn. For instance, high-tech manufacturing will still be an important component of the state’s economy, but it is doubtful that this subsector will return to the prominence it saw during the frenzied dotcom days of the 1990s. Nonetheless, the manufacturing sector should come around as economic conditions in the state and the nation improve. A growing Mexican economy would also benefit Texas’ manufacturing industries, which rely on demand from their southern neighbor.

**Summary**

The Texas economy is expanding, albeit slowly. Overall job growth is lukewarm at best, with many Texans still seeking work. The sectors driving the state’s expansion include health and education services, energy and government. Single-family housing, which plowed forward in 2002 despite the state’s downturn, is exhibiting less vigor. While many sectors remain depressed, including high-tech manufacturing and services and air transportation, the number of economic indicators in the lukewarm-to-warm range has increased in the first part of 2003.

The Texas Leading Index of economic indicators picked up in April and May, suggesting we may see additional improvement in coming months. If the national economy picks up steam as expected, Texas should continue on the path to renewed growth.

—D’Ann Petersen

Petersen is an associate economist in the Research Department of the Federal Reserve Bank of Dallas.

**Notes**

The author wishes to express her thanks to Steve Brown, John Thompson and Mine Yücel for sharing ideas and information; John Thompson and Mine Yücel for use of their Texometer; and John Thompson and Jennifer Afflerbach for excellent editorial comments.

1 All data are seasonally adjusted and all growth rates are annualized unless otherwise noted.

2 The Texas Coincident Index was developed and is maintained by Keith R. Phillips of the San Antonio Branch of the Federal Reserve Bank of Dallas.

3 The health and education sector is one of 11 supersectors as defined by the North American Industry Classification System (NAICS). March 2003 marked the first time Texas employment data were released in the new NAICS format. The NAICS system replaces the Standard Industrial Classification (SIC) system that had been in use since the 1930s. For more information on NAICS, see Robert W. Gilmer and Jonathan Story, “Goodbye SIC, Hello NAICS: A Fresh Slate for Houston Jobs Data,” Federal Reserve Bank of Dallas Houston Business, March 2003. Also, you may visit the Bureau of Labor Statistics web site at www.bls.gov/sae/saenaics.htm or the Census Bureau web site at www.census.gov.

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**Nonresidential and Multifamily Construction and Real Estate.** Texas office markets remain in the doldrums, with the metropolitan vacancy rate in Dallas one of the nation’s highest. There has been little new office construction in Texas this year, and most nonresidential construction is for publicly funded buildings, banks, industrial warehouses, retail buildings and build-to-suits. Business contacts say the industry is probably at the bottom; however, it may be next year before office demand and rents begin to turn the corner.

Strength in the single-family housing sector has come at the expense of Texas’ apartment industry. Apartment demand has been weak, yet building has continued, putting a damper on rental rates. It is likely that apartment vacancy rates will remain high and rents depressed until a marked turnaround in employment is evident.

**Air Transportation.** The U.S. airline industry, which was severely hurt by the events of September 11, has yet to recover. Because the industry plays a prominent role in Texas—home to Continental Airlines, American Airlines, Southwest Airlines and one of the world’s busiest airports—the tailspin has been a large contributor to the state’s economic weakness. Following an initial plunge in employment in 2001, air transportation jobs edged down only slightly in 2002. However, in 2003 roughly 3,800 (out of 71,500) jobs have been eliminated to-date as companies accelerate cost-cutting efforts.

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