FEDERAL RESERVE BANK OF DALLAS

Issue 3 May/June 2005

Southwest Economy

Dallas Fed Introduces Business-Cycle Indexes for Texas Metros

The frequency and severity of cyclical swings in a local economy are important to businesses and consumers because such cycles impact production and inventory decisions, employment and unemployment. Analyzing the overall direction of a local economy, however, can be difficult and confusing. Often the handful of local economic indicators gives mixed signals. For example, if the unemployment rate and job growth both increase, is the local economy picking up or weakening? Often it is not clear.

To more clearly define regional business cycles, the Dallas Fed has developed composite indexes that aggregate the movements of key economic indicators for nine Texas metropolitan areas. The Metro Business-Cycle Indexes use statistically optimal weights so that movements in the indexes best represent the underlying co-movements in the indicators and thus the underlying

(Continued on page 2)

A Fitter, Trimmer Core Inflation Measure

Speaking of the challenge in interpreting monthly inflation numbers during his tenure on the Federal Reserve Board, former Vice Chairman Alan Blinder said, "The name of the game then was distinguishing the signal from the noise, which was often difficult. The key question on my mind was typically: What part of each monthly observation on inflation is durable and what part is fleeting?"[1]

Blinder's conception of a component of monthly inflation that is durable as opposed to fleeting—that represents signal rather than noise—corresponds to what most economists call *core inflation*. Core inflation, understood in this way, represents the underlying trend in inflation once temporary swings have

(Continued on page 4)

INSIDE:

Chart 1

Tech Centers Dallas and Austin Hardest Hit but Bouncing Back

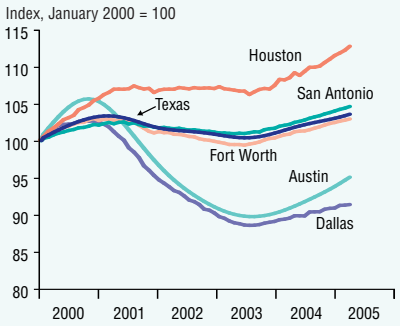
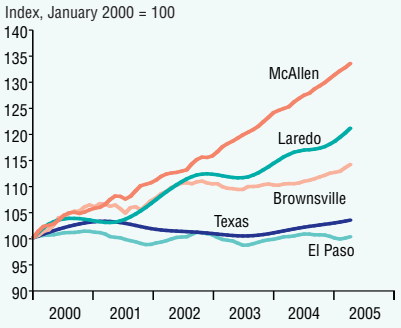


Chart 2

South Texas Border Economies Growing Strongly



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state of the economy. The long-run growth in the indexes is set equal to growth in real personal income. The indexes are constructed using the same statistical techniques as the Texas Leading Index.[1]

In May the Dallas Fed introduced business-cycle indexes for the metropolitan areas of Austin–Round Rock, Brownsville–Harlingen, Dallas–Plano–Irving, Fort Worth–Arlington, El Paso, Houston–Sugar Land–Baytown, Laredo, McAllen–Edinburg–Mission and San Antonio. Movements in the indexes summarize the movements in locally measured nonagricultural employment, the unemployment rate, inflation-adjusted wages and inflation-adjusted retail sales. Because the indexes are designed to measure the economy's overall direction but not the magnitude of local activity for each metro area, links are included to the component series.

The indexes will be published monthly on the Dallas Fed web site, www.dallasfed.org, a couple of days after the employment and unemployment rate data for the state and metro areas become available from the Texas Workforce Commission. Usually these data are released on about the 22nd day after the end of the reporting month.

The indexes show clear patterns of recessions and expansions. While Texas recessions have impacted local economies, many of the state's metro areas have business cycles that deviate from those of the state, the nation and other Texas regions. For example, the high-tech cities of Austin and Dallas were hit hard by the downturn that began in early 2001 (*Chart 1*), but the South Texas border cities continued to grow (*Chart 2*). The Metro Business-Cycle Indexes illustrate economic conditions in other Texas metropolitan areas as well.

Economic Conditions in Nine Major Metros

Austin–Round Rock. After leading Texas' major metros in economic expansion during the 1990s, Austin was hit hard by the high-tech bust that occurred in 2001, as the metro's business-cycle index illustrates. Since mid-2003, however, Austin's index suggests its economy has turned the corner and is once again one of the fastest-growing in the state.

Brownsville–Harlingen. The business-cycle index shows this metro area outperforming the state and nation since 2000. Brownsville's economy has been boosted by a strong peso and favorable agricultural conditions due to adequate rainfall and good citrus prices. Nevertheless, Brownsville–Harlingen's economy has not performed as well as those of some other South Texas border areas, which is consistent with its index. The likely cause is a sharp decline in apparel manufacturing, which historically has been an important industry for this metro.

Dallas–Plano–Irving. Dallas' business-cycle index illustrates the devastating blows to the metro's economy in

2001—both the high-tech bust and 9/11's negative impact on the airline industry. Dallas' business cycle this decade has followed a pattern similar to Austin's, except that its heavier concentration of airlines and telecommunications firms likely contributed to the larger downturn and weaker recovery.

Fort Worth–Arlington. This trade, transportation and manufacturing center has mimicked the business cycle of the state overall. The area's relatively large manufacturing sector is not as high-tech intensive as Dallas' or Austin's and thus did not suffer as much during the sectors' decline in 2001 and 2002.

El Paso. Since 2000 the El Paso business cycle has mimicked the Texas business cycle. While the El Paso metro area is generally small and might be expected to correlate less with the state and national economies, its economic performance is closely linked to that of Texas and the United States because of the border city's link to the maquiladora industry. Many El Paso service and manufacturing firms provide inputs to the maquiladoras. The El Paso economy has been growing since mid-2003 but at a weaker pace than Texas' economy overall. Recent improvement in the maquiladora industry and growth in military-related employment should boost the El Paso metro index in coming months.

Houston–Sugar Land–Baytown. Houston's business-cycle index stagnated from mid-2001 through mid-2003. A large health care presence and a relatively low share of high-tech industries helped Houston avoid the downturn that hit Dallas and Austin. Since mid-2003, Houston's index has risen at a moderate pace. Expanding industries such as oil and gas, petrochemicals and health care are likely driving the improvement.

Laredo. According to its business-cycle index, the Laredo economy has expanded strongly over the past four years. This is consistent with the metro's solid growth in transportation, warehousing and retail sales, which have benefited from increased international trade and the strong peso.

McAllen–Edinburg–Pharr. McAllen's business-cycle index has risen robustly over the past four years. Strength in the metro's economic indicators is closely tied to the stronger peso and a relatively healthy maquiladora sector in the border city of Reynosa.

San Antonio. San Antonio's economy has expanded slightly faster than the Texas economy over the past four years, according to its business-cycle index. San Antonio has a smaller share of high-tech industries and a larger share of health care—a rapidly growing sector. Historically, the presence of stable industries such as government has allowed San Antonio's business cycle to swing less than those of other metro areas. A reduced federal government presence, particularly military-related jobs, will likely lead to greater business-cycle fluctuations in the future.

—Keith R. Phillips

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Note

The author thanks Kristen Hamden for her skillful programming and automation of the indexes and James Hoard and Kay Champagne for helpful suggestions and comments.

[1] The procedure is described in more detail in "A New Monthly Index of the Texas Business Cycle," by Keith R. Phillips, Dallas Fed Working Paper No. 0401, January 2004. For more detail on the local business cycle using the new indexes, see the following Dallas Fed publications: "Composite Index: A New Measure of El Paso's Economy," by Jesus Cañas, Robert W. Gilmer and Keith Phillips, *Business Frontier*, Issue 1, 2003; "A New Index of Coincident Economic Activity for Houston," *Houston Business*, by Jesus Cañas, Robert W. Gilmer and Keith Phillips, April 2003; and "Steady-as-She-Goes? An Analysis of the San Antonio Business Cycle," by Keith R. Phillips and Kristen Hamden, *Vista*, Winter 2004. All publications are available on the Dallas Fed web site, www.dallasfed.org.

The Texas Metro Business-Cycle Indexes will be published monthly on the Dallas Fed web site, www.dallasfed.org, under "Economic Data."

A Fitter, Trimmer Core Inflation Measure

(Continued from front page)

been smoothed out. Because what is temporary and what is lasting can only be known with the benefit of hindsight, the true core inflation rate for any given month cannot be known with certainty until well after the fact. In real time—as the data arrive and policy decisions need to be made—the best that economists can do is estimate the core inflation rate.

Measures of inflation that exclude food and energy prices are probably the best-known core inflation gauges. In fact, the measures excluding food and energy—which government statisticians include in their releases of the Consumer Price Index (CPI), Producer Price Index (PPI) and the price index for Personal Consumption Expenditures (PCE)—are often spoken of as if they were synonymous with core inflation. Properly speaking, though, they represent just one of many potential core measures. To be sure, because of the high short-run volatility of some food and energy prices, there is some rationale for excluding those prices from a measure of core inflation. But as research over the past decade has made clear, much better estimates can be made by taking a more rigorous approach to the problem of which prices to include and which to exclude.

To date, that research has focused primarily on developing better measures of core inflation in the CPI.[2] This article discusses the application of some of the insights and techniques of that line of research to the Federal Reserve Board of Governors' preferred inflation gauge, the PCE price index. (See box titled "The Fed's Favorite Inflation Gauge.") The result is a new measure of core PCE inflation—the trimmed mean PCE—and a somewhat different characterization of the economy's recent inflation experience.

Food and Energy: Signal or Noise?

Consider the following data from March 2005. More than 200 expenditure categories go into the PCE. Table 1 shows the 10 categories with the biggest price increases from February to March 2005.[3] Note that the price changes are not annualized—they are one-month percentage changes. By way of comparison, the change in the overall PCE price index from February to March was +0.46 percent.

Table 1

10 Biggest Price Increases in March 2005

Component	Change from prior month (percent)
Gasoline and other motor fuel	8.0
Purchased fuel oil	5.8
Airline service	4.2
Hotels and motels	4.2
Medical services: labs	3.2
Farm fuel	2.5
Purchased liquid petroleum gas	2.5
Miscellaneous personal services	2.4
Watch, clock and jewelry repair	2.4
Laundry and garment repair	2.4

Table 2

10 Biggest Price Decreases in March 2005

Component	Change from prior month (percent)
Eggs	−4.4
Fresh fruit	−2.6
Women's luggage	−1.8
Men's luggage	−1.8
Intrastate toll calls	−1.8
Photographic equipment	−1.8
Toys, dolls and games	−1.7
Household operation: natural gas	−1.7
Durable house furnishings: textiles	−1.5
Lighting supplies	−1.5

Table 2 lists the 10 components that had the largest price decreases in March 2005. While it's true that food and energy items show up a number of times on both lists, there are many other items as well. Moreover, not all food and energy items had price changes as large as these. Some food components in particular—such as food consumed away from home—are notoriously stable. For example, the price index for "other purchased meals"—which comprises meals purchased at restaurants and bars—rose by just 0.15 percent in March. That small price volatility is typical for food purchased and eaten away from home—making its exclusion from a measure of core inflation questionable.

Clearly, in any given month, excluding only food and energy items still leaves very volatile components in the price index. And, excluding all food and energy items may throw out some useful information.

The Fed's Favorite Inflation Gauge

Since February 2000, the Federal Reserve Board's semiannual monetary policy reports to Congress have described the Board's outlook for inflation in terms of the PCE. Prior to that, the inflation outlook was presented in terms of the CPI. In explaining its preference for the PCE, the Board stated:

> The chain-type price index for PCE draws extensively on data from the consumer price index but, while not entirely free of measurement problems, has several advantages relative to the CPI. The PCE chain-type index is constructed from a formula that reflects the changing composition of spending and thereby avoids some of the upward bias associated with the fixed-weight nature of the CPI. In addition, the weights are based on a more comprehensive measure of expenditures. Finally, historical data used in the PCE price index can be revised to account for newly available information and for improvements in measurement techniques, including those that affect source data from the CPI; the result is a more consistent series over time.
>
> —Monetary Policy Report to the Congress, Federal Reserve Board of Governors, Feb. 17, 2000

The Trimmed Mean Technique: A Little Off the Top (and Bottom)

How, then, do we decide which items to exclude or include more rigorously? In a study focusing on the CPI and PPI, Bryan, Cecchetti and Wiggins make a statistical case for the use of trimmed means as a method for estimating core inflation.[4] In spite of the arcane-sounding name, the concept of a trimmed mean is simple. In fact, trimmed means should be familiar to any follower of international figure skating. In the wake of the controversies surrounding the judging at the 2002 Winter Olympics, the International Skating Union adopted a scoring system in which a skater's highest and lowest marks are discarded before the skater's average score is calculated. Trimmed mean inflation rates are derived by a similar procedure.

In any given month, the rate of inflation in a price index like the CPI or PCE can be thought of as a weighted average, or mean, of the rates of change in the prices of all the goods and services that make up the index.[5] Calculating the trimmed mean PCE inflation rate involves looking at the price changes for each of the individual components of personal consumption expenditures—the sort of data contained in Tables 1 and 2. The individual price changes are sorted in ascending order from "fell the most" to "rose the most," and certain fractions of the most extreme observations at both ends of the spectrum are—like a skater's best and worst marks—thrown out, or trimmed. The inflation rate is then calculated as a weighted average of the remaining components.[6]

How many components should be trimmed from the top and bottom of the monthly price-change distributions? Since our aim is to create a more accurate real-time gauge of core inflation, we want our trimming to yield a measure that comes as close as possible to the core inflation we've observed in historical data. (See box titled "Optimal Trimming: The Nuts and Bolts" for more detail.) Following the approach used by Bryan, Cecchetti and Wiggins in their CPI/PPI study, we will treat true core inflation as a smooth underlying trend in actual inflation (*Chart 1*).[7]

For data that run from 1979 through 2002, the amount of trimming that minimizes the distance between the trimmed mean inflation rate and the proxy for the true core inflation rate turns out to be substantial. The optimal trim drops roughly the top 25 percent of components (as a fraction of expenditures) and the bottom 21 percent. That is, from each month's data, we discard the 25 percent of expenditure components whose prices rose the most and the 21 percent whose prices fell the most (or rose the least). The trimmed mean inflation rate is then calculated as the weighted average of the remaining expenditure components, the middle 54 percent. Note that

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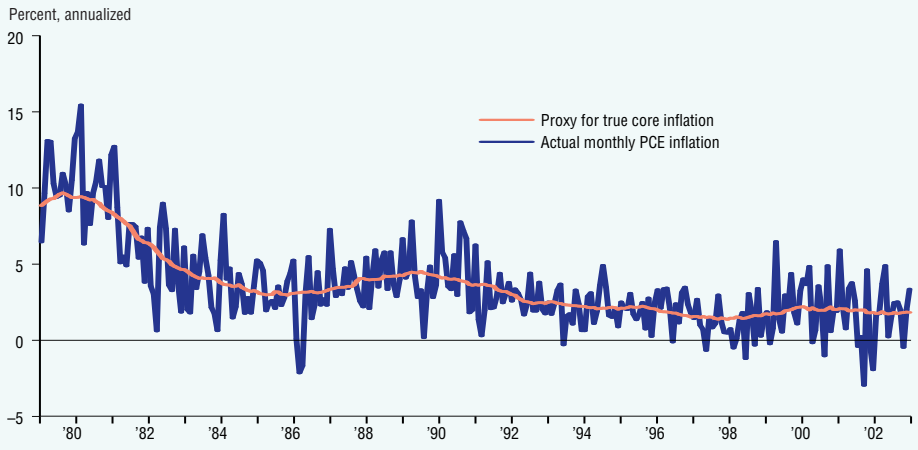
Chart 1

Actual PCE Inflation and Proxy for True Core Inflation



SOURCES: Bureau of Economic Analysis; author's calculations.

The optimally trimmed mean performs much better as an estimator of core PCE inflation than the usual measure excluding food and energy.

the set of goods and services discarded each month—items adding up to roughly 46 percent of expenditures—must include a good deal more than just food and energy, which account for only about 20 percent of total PCE.

So Which Goods Get Trimmed?

As suggested above, some food components, like food purchased and consumed away from home, are rarely excluded when one approaches the trimming problem rigorously. This is a feature of the inflation data that Bryan and Cecchetti (1994) highlighted in their study of the CPI, and it is true of the PCE as well. Chart 2 shows the monthly inflation rate for the PCE component "other purchased meals," together with the upper and lower trim points for the optimally trimmed mean, from 1990 through 2004.

The trim points have the following interpretation. In each month, items whose prices rose by more than the upper trim points in the chart are excluded from the optimally trimmed mean that month, as are items whose prices fell by more (or rose by less) than the lower trim points. There is only a handful of months during this 14-year period in which the purchased meals component was excluded from the optimally trimmed mean.

Food items of this sort are well represented among the components least often excluded from the optimally trimmed mean. Table 3 lists the top 20 least-often-excluded components for the sample period 1977–2004. Food items actually occupy five of the top 10 spots, with "other purchased meals" coming in first. Out of a sample of 335 months, it's excluded only 13 times. The other dominant category in the least-often-excluded list is housing, which shows up in various forms.

Table 4 gives a corresponding list of the top 20 most-often-excluded items. Food items figure prominently here, too, with "fresh vegetables" topping the list. Fuels, financial services and electronics items are also prominent.

How Well Does the Trimmed Mean Perform?

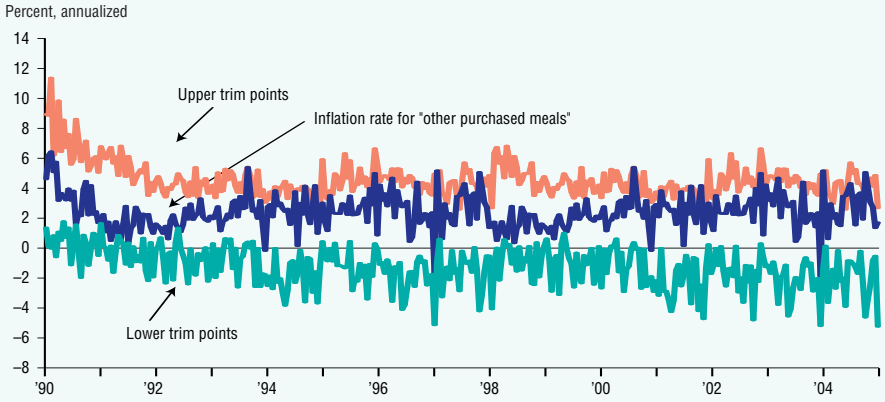
Just as Bryan, Cecchetti and various co-authors found regarding the CPI, the optimally trimmed mean performs much better as an estimator of core PCE inflation than the usual measure excluding food and energy.

In data running from 1979 through 2002, the gain in accuracy from using the optimally trimmed mean rather than the measure excluding food and energy is about 0.77 percentage point annually. That is, compared with the usual measure excluding food and energy, on average the monthly trimmed mean measure would be expected to come closer to true monthly core inflation by just over three-fourths of a percentage point when the inflation rates are expressed in annual terms.

These results compare the performance of one-month inflation rates,

Chart 2

Food Away from Home Is Generally Not Trimmed



SOURCES: Bureau of Economic Analysis; author's calculations.

Table 3

20 Least-Often-Excluded Components, 1977–2004

Component	Number of months excluded (out of 335)
Other purchased meals	13
Owner-occupied stationary homes	16
Casino gambling	34
Tenant-occupied stationary homes	35
Tenant-occupied mobile homes	40
Purchased meals: elementary and secondary schools	41
Purchased meals: higher education	41
Food furnished to employees: military	41
Food furnished to employees: civilian	42
Club and fraternity housing	50
Tenant group room and board	52
Tenant group employee lodgings	53
Auto repair	54
Owner-occupied mobile homes	57
Military clothing	87
Domestic service paid in cash	88
Household operation, not elsewhere classified	91
Social welfare including child care	94
Medical care: other professional services	95
Dry cleaning	96

Table 4

20 Most-Often-Excluded Components, 1977–2004

Component	Number of months excluded (out of 335)
Fresh vegetables	314
Eggs	314
Computers and peripherals	311
Food produced and eaten on farms	304
Airline services	299
Brokerage charges and investment counseling	298
Software	297
Fresh fruit	296
Purchased fuel oil	294
Gasoline and other motor fuel	286
Farm fuel	285
Poultry	285
Video equipment, excluding TVs	285
Auto insurance net premiums	284
Purchased liquid petroleum gas and other fuel	279
TVs	278
Durable house furnishings: textiles	275
Semidurable house furnishings	274
Commercial bank imputed interest	273
Infants' clothing	273

Optimal Trimming: The Nuts and Bolts

As discussed in the text, we want our trimming to yield a measure that comes as close as possible to a specific proxy for true core inflation, in this case a centered, 36-month moving average of actual monthly PCE inflation. What do we mean by "as close as possible"?

The numbers reported in the article are for the case where the closeness is measured with a root-mean-square-error criterion—that is, the trimmed mean's distance from the proxy for true core inflation is measured by the square root of the average squared monthly deviation between the two series. Each possible amount of trimming—5 percent off the top, 10 percent off the bottom, or 20 percent off the top, nothing off the bottom, and so forth—results in a trimmed mean inflation rate that is some calculable distance from the proxy for true core inflation. The *optimal* trim is the one that minimizes the distance between the trimmed mean and core proxy over our sample period, 1979–2002. This turns out to be the trimming: 25.3 percent off the top, 20.6 percent off the bottom.

Table A shows the value of our measure of fit—the root-mean-square error, or RMSE—for inflation horizons of one, three, six and 12 months, for both the optimally trimmed mean and the measure excluding food and energy. The three-, six- and 12-month inflation rates for the trimmed mean are obtained by cumulating the optimally trimmed series of one-month rates to obtain a price index, then taking three-, six- and 12-month annualized percentage changes of that price index. Smaller numbers are better than larger ones in both Tables A and B.

The optimally trimmed mean also performs better than the measure excluding food and energy in terms of its average error, as can be seen in Table B. The average, or mean, error of an inflation measure is simply the sum of its monthly deviations from the true core proxy divided by the number of months in the sample.

To see the relevance of this last point, suppose that true core inflation is zero in two consecutive months. Imagine that one measure (call it X) estimates core inflation as being +0.25 percent in each of the two months, while a second (Y) estimates it at +1 percent in the first month and –1 percent in the second month. Then Y would have a higher RMSE than X—on average, Y is 1 percentage point away from the truth, versus 0.25 percentage point for X—but it would have a smaller average error than X. Y's average error is zero (the +1 and –1 cancel out) compared with X's average error, which, like X's RMSE, is 0.25 percentage point. If the trimmed mean and excluding food and energy measures followed this pattern—one better in terms of RMSE, the other better in terms of average error—we might be hard-pressed to say which was the better measure. Fortunately, Tables A and B show the trimmed mean is better on both dimensions.

Table A

Root-Mean-Square Errors for Various Inflation Horizons (in percentage points)

	1-month	3-month	6-month	12-month
Trimmed mean	.87	.58	.49	.51
Excluding food and energy	1.63	.94	.72	.76

Table B

Average Errors for Various Inflation Horizons (in percentage points)

	1-month	3-month	6-month	12-month
Trimmed mean	.04	.06	.09	.15
Excluding food and energy	.11	.11	.14	.19

For the average person, however, transitory surges in overall inflation are no less inconvenient simply because they are transitory.

which are quite volatile relative to the slower-moving core series. This is true for both the optimally trimmed mean and the measure excluding food and energy, though less so for the trimmed mean. Looking at the CPI, Cecchetti (1997) emphasized the additional noise reduction that can be achieved by examining longer-horizon inflation rates.[8] Cecchetti's point is equally valid with regard to the PCE. Looking at three-, six- or 12-month inflation rates improves the accuracy of both the trimmed mean and the measure excluding food and energy as gauges of core inflation.

For both measures, six-month changes give the highest accuracy in gauging core inflation. While the longer horizons benefit the measure excluding food and energy more than the trimmed mean, the latter is still the more accurate core inflation gauge. For the three-month inflation horizon, the relative gain in accuracy from using the trimmed mean is almost 0.4 percentage point. For the six- or 12-month horizons, the gain in accuracy is 0.23–0.25 percentage point, a not-insignificant difference. (See Table A in box titled "Optimal Trimming: The Nuts and Bolts.")

Chart 3 gives a visual sense of how the trimmed mean performs relative to the measure excluding food and energy. The chart shows the annualized six-month inflation rates in the two measures, together with the proxy for true core inflation. The series are shown for the full sample period used in the optimal trim calculations, 1979–2002.

What Has the Trimmed Mean PCE Inflation Rate Been Telling Us Lately?

Chart 4 shows the recent behavior of the trimmed mean PCE inflation rate, together with the more common excluding-food-and-energy inflation rate for the three different time intervals. Here are the salient points:

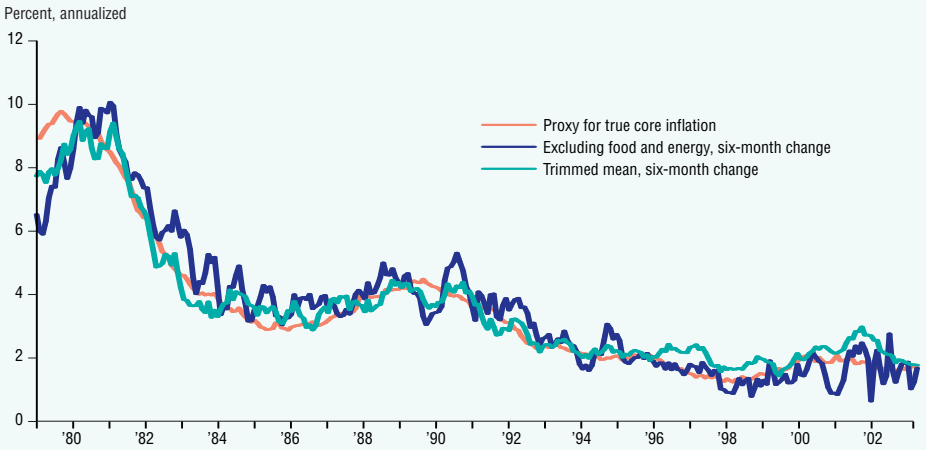
• While both the trimmed mean and excluding-food-and-energy inflation rates decline in 2003, the lows hit by the trimmed mean measure are not nearly as low as those reached by the measure excluding food and energy. For example, the three-month trimmed mean inflation rate falls below 1 percent in only one month of 2003, versus five such months for the inflation rate excluding food and energy. The lows for the six- and 12-month trimmed mean rates are nearer 1.5 percent.

• Both inflation rates began to climb in early 2004. The highs reached in mid-2004, however, are both higher and more sustained in the trimmed mean measure than in the measure excluding food and energy. The three- and six-month trimmed mean inflation rates both spent time in the neighborhood of 2.5 percent.

• Inflation decelerated in the second half of 2004, according to both inflation

Chart 3

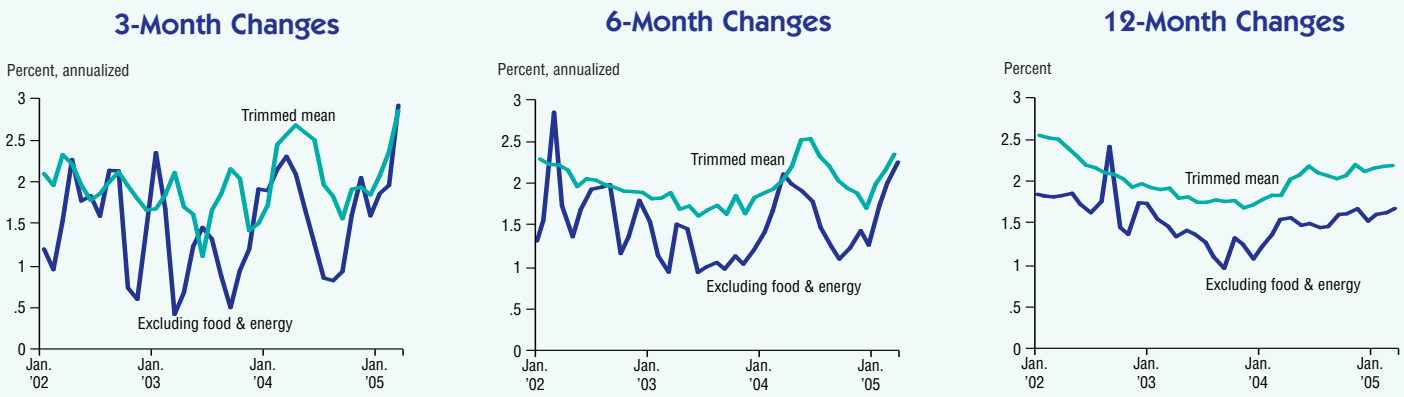
Comparison of Core Inflation Measures



SOURCES: Bureau of Economic Analysis; authors' calculations.

Chart 4

Trimmed Mean and Excluding-Food-and-Energy PCE Inflation



SOURCES: Bureau of Economic Analysis; author's calculations.

measures. This shows up as a decline in the three- and six-month inflation rates and a stabilization in the 12-month rates. The three- and six-month trimmed mean rates bottom out around 1.5 percent, compared with around 1 percent for the three- and six-month troughs in the rate excluding food and energy. Similarly, the 12-month trimmed mean rate stabilizes at about 2 percent, or half a percentage point higher than the 12-month rate excluding food and energy.

• While the 12-month inflation rates in both measures look stable, the three- and six-month rates show that inflation has accelerated since late 2004. Both rates suggest core PCE inflation is currently running above 2 percent.

Why Should We Care?

This article began with a quote from former Fed Vice Chairman Blinder describing a policymaker's difficulties in interpreting monthly movements in the inflation rate. Why the individuals setting monetary policy would care about core inflation—and why, as a result, they continually seek improved estimates of core inflation—is fairly clear. Changes in inflation that are known to be transitory and, thus, soon to be reversed pose less threat to the goal of long-run price stability than more lasting changes.

For the average person, however, transitory surges in overall inflation are no less inconvenient simply because they are transitory. If last month's consumer price inflation was high mainly due to a temporary jump in the prices of food, energy or other items, this does not change the fact that a household's dollars couldn't buy as much food, energy or other items as they otherwise could have.

So why should anyone outside of a central bank care about the latest trimmed mean PCE inflation rate (or any other core measure)? Individuals routinely make decisions that rely, at least implicitly, on forecasts of future inflation—for instance, whether to invest in fixed-income securities or to take on fixed-income obligations. For decisions of this sort, knowledge of whether recent changes in inflation are durable or transitory—signal rather than noise—is likely to be of value.

—Jim Dolmas

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Notes

I thank Mark Wynne and Evan Koenig, who provided numerous helpful comments at various stages of this research, and Jennifer Afflerbach, who suggested many improvements in exposition.

1 "Commentary on 'Measuring Short-Run Inflation for Central Bankers,'" by Alan Blinder, Federal Reserve Bank of St. Louis *Review*, May/June 1997.

2 That more rigorous approach was pioneered by Michael Bryan and Stephen Cecchetti. See their article "Measuring Core Inflation," in N. Gregory Mankiw, ed., *Monetary Policy*, Chicago: University of Chicago Press, 1994. For a good survey of these methods, see "Core Inflation: A Review of Some Conceptual Issues," by Mark A. Wynne, European Central Bank Working Papers Series, No. 5, 1999.

3 All data used in this article are from the Bureau of Economic Analysis via Haver Analytics. The data on the detailed components of the PCE index are as reported in Tables 2.4.4U and 2.4.6U in the "Underlying Detail Tables" section of the Bureau of Economic Analysis web site: www.bea.doc.gov/bea/dn/nipaweb/nipa_underlying/Index.asp.

4 "Efficient Inflation Estimation," by Michael Bryan, Stephen Cecchetti and Rodney Wiggins, National Bureau of Economic Research Working Paper Series No. 6183, September 1997.

5 In the CPI, the weight an individual component receives corresponds to its share in consumer spending, on average, over a two-year reference period. CPI weights are thus fixed for two years at a time. Weights in the PCE are slightly more complicated and change from month to month. To a first approximation, the weight a component receives this month is an average of (1) its expenditure share last month and (2) what its expenditure share would be if consumers bought this month's quantities at last month's prices.

6 The weighted median CPI, which is produced by the Federal Reserve Bank of Cleveland and is perhaps familiar to some readers, is an extreme form of trimmed mean. It corresponds to the limiting case where nearly all the price changes in the upper and lower halves of the distribution are trimmed, leaving only the price change of the single component exactly in the middle. Pursuing the skating analogy from the text, imagine that judging panels consist of seven members. The median inflation rate is analogous to a scoring formula that discards a skater's three highest and three lowest marks.

7 In particular, the calculations in this article use a centered, 36-month moving average of monthly inflation rates to proxy for true core inflation—that is, the true core inflation rate in any given month is assumed to be the average of that month's inflation rate together with the inflation rates of the prior 18 months and those of the subsequent 18 months. In a more technical version of this article (forthcoming), I consider other proxies for true core inflation.

8 "Measuring Short-Run Inflation for Central Bankers," by Stephen Cecchetti, Federal Reserve Bank of St. Louis *Review*, May/June 1997.

Texas Finding Growth in Seeming Disadvantage

Oil booms in the 1970s and early '80s. A high-tech explosion in the 1990s. For more than three decades, Texas led the nation in employment growth by over 1 percentage point annually. The United States faced six recessions over this period, while Texas saw only three.

In the post-1991 recovery and expansion, Texas consistently outperformed the nation, posting a 2.7 percent annualized employment gain to the country's 1.8 percent (*Chart 1*). Overall, Texas employment grew a whopping 32 percent against the nation's 21 percent over the 127-month expansion that ran from March 1991 to November 2001. So in an economic contest with the nation, the maverick state dominated by multiple measures. Game, set, match: Texas?

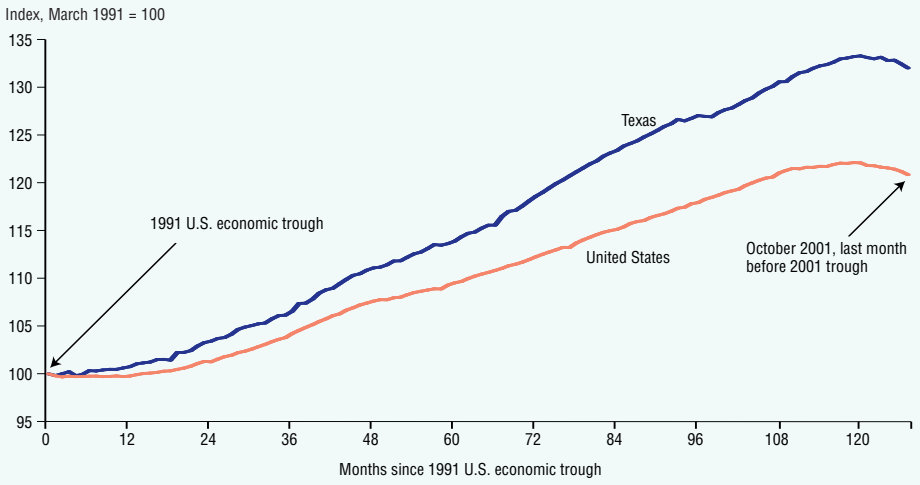
Not quite. Economic progress ground to a halt with the 2001 recession, when both the Texas and U.S. economies lost thousands of jobs. But while the country hit bottom within eight months, the Texas recession dragged on until August 2003.

It seemed as though the rapid growth of the 1990s had set up the weakness that followed in the new decade. The cornerstone of the recession was the dot-com bust, wherein overinvestment in and overexpectations from the nascent high-tech industry led to its downfall. Texas had seen some of the most rapid growth in high tech and then saw a steep plunge.

Chart 1

Texas Outpaces the Nation in 1990s Expansion

(Nonfarm employment)



SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas.

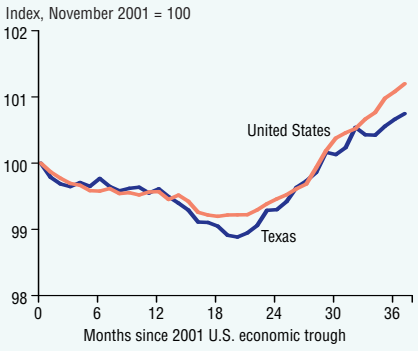
After the November 2001 U.S. economic trough, both the Texas and U.S. economies were lackluster in generating employment (*Chart 2*). But after keeping up with the nation on this front, Texas slipped behind.

So what is holding Texas back and preventing a '90s-style recovery today? Historically, Texas has found reliable drivers of economic growth to propel it above the national average. In the post-2001 recovery, however, some of these drivers seem to have been pulled over for speeding. A comparison of the propellers of economic growth enables a more thorough consideration of how the Texas economy performed during the 1990s expansion and the post-2001 recovery. Merely identifying the high-growth industries is not enough; it is important to understand how key industries combine as a central driving force for the Texas economy and act as the economic base for its business cycles.

Chart 2

Texas and Nation Mostly in Tandem After 2001 Recession

(Nonfarm employment)



NOTE: The data cover November 2001–December 2004.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas.

The Economic Base

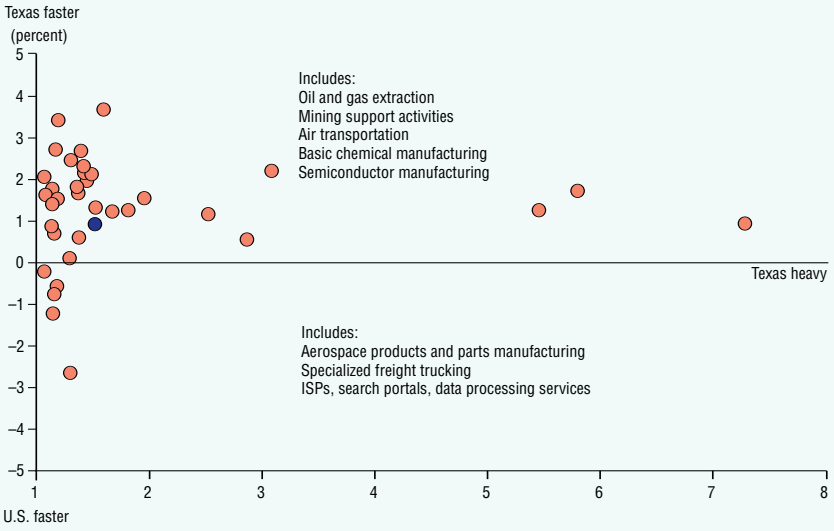
Economists take the perspective that a region cannot sustain strong growth by providing its own subsistence. Although a region may be able to survive as an entity solely on local production and consumption, strong growth is driven by outside income generated through the export of goods and services. The industries generating this export income form the region's economic base.

The Texas base consists of industries that meet two criteria: They produce tradable goods or services, and they command a higher share of Texas employment than their U.S. counterparts do of national employment.[1] For some sectors, such as manufacturing, tradability is fairly easily determined. For others, high geographic concentration (as measured by a Gini coefficient) indicates tradability. If it's also assumed that the productivity of Texas and U.S. workers is similar (and Texans and other Americans have similar tastes), a Texas industry producing tradables and with above-

Chart 3

Differences Between Texas and U.S. Job Growth Rates, 1990s Expansion

(Economic base industries)



NOTES: The vertical axis measures the difference in Texas and U.S. annualized growth, March 1991–October 2001. The horizontal axis measures the Texas–U.S. ratio of each industry's employment share in November 2001.The blue dot represents the economic base's average composition and growth.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors' calculations.

average employment must be producing for export to other states.[2] Combined, these two criteria yield the 35 industries that make up the Texas economic base. (See Table 1 on page 13.)

On average, the industries in the Texas base have a 45 percent higher concentration of workers in the state than in the nation. The Texas base accounts for about 18 percent of private employment, or nearly 15 percent of the state's total nonfarm employment. These industries account for about 12 percent of national private employment, or only 10 percent of total U.S. nonfarm employment.

The 1990s Expansion

As Chart 3 shows, all but a handful of Texas base industries grew faster than their U.S. counterparts during the 1990s expansion. On average, the Texas industries grew faster by more than 1 percentage point a year—a 90 percent faster growth rate. The base set the pace and pulled Texas private-sector employment to a growth rate more than 45 percent stronger than the nation's.

Nonetheless, the composition of the Texas base was not particularly favorable in the 1990s. At the national level, industries in the base fared worse than total U.S. tradables (*Chart 4*). Had Texas base industries grown at national rates, their combined growth would have fallen from an annualized rate of 2.1 percent to 0.6 percent. In contrast, their national counterparts grew at a 1.1 percent annual rate.

The state's strong growth was the result of Texas industries outperforming their national counterparts. Texas base industries grew so fast in the 1990s that they more than made up for the state's compositional handicaps relative to the United States. Even with those disadvantages, Texas base industries gradually edged the growth rates of U.S. tradables and propelled the state to a strong performance.

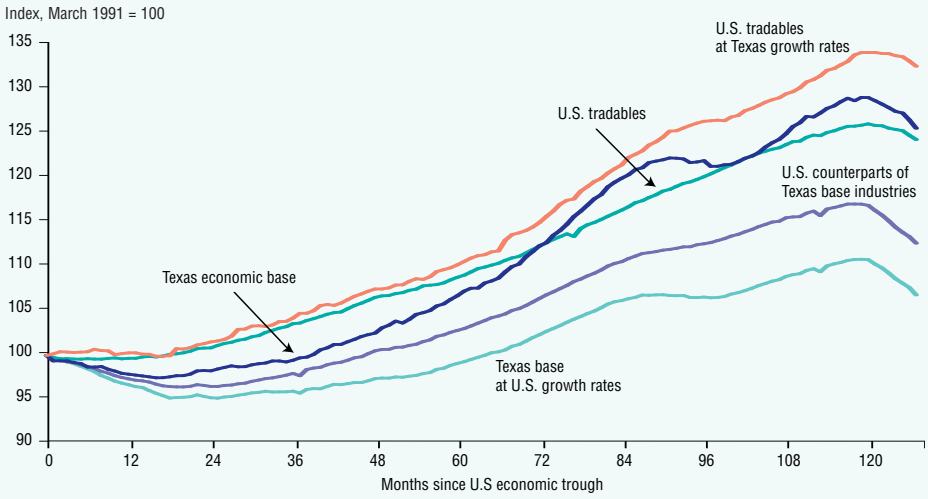
The Post-2001 Recovery

After the 2001 recession, the picture was very different. Chart 5 shows a near-even split between industries in the Texas economic base growing faster in the state and those growing faster in the nation from November 2001 to December 2004. Taking into account the size and growth rates of the individual industries, however, employment in the Texas economic base fell by about 15 percent more than for its U.S. counterpart.

Once again, its economic base had put the state at a disadvantage. The national counterparts of Texas base industries did not generate employment as rapidly as total U.S. tradables (*Chart 6*). Moreover, had the industries in the Texas base grown at national rates, average annual growth would have been −1.9 percent, somewhat better than the actual Texas rate of −2.1 percent but only slightly worse than the −1.8 percent national average for these industries.

Chart 4

The Texas–U.S. Gap, 1990s Expansion

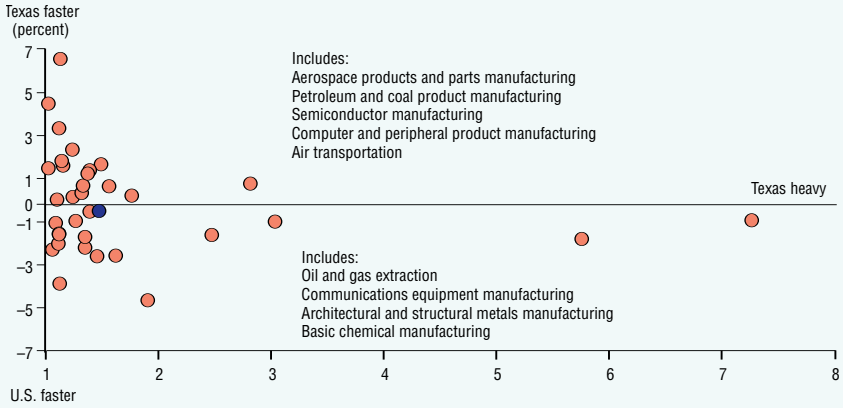


SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors' calculations.

Chart 5

Differences Between Texas and U.S. Job Growth Rates, Current Recovery

(Economic base industries)



NOTES: The vertical axis measures the difference in Texas and U.S. annualized growth, November 2001–December 2004. The horizontal axis measures the Texas–U.S. ratio of each industry's employment share in November 2001. The blue dot represents the economic base's average composition and growth.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors' calculations.

With the economic base performing poorly, what has kept Texas from slipping further behind is stronger growth in the industries that produce tradables but are not part of the base. The tradable industries that are performing badly nationally are doing worse in Texas, but those doing well nationally are doing better in Texas. In magnifying these national trends, Texas is adapting to changing market conditions. Such adjustments take time, but adaptability is important for long-term economic resilience.

Advantage Texas

The Texas economy grew at lightning speed in the 1990s, but such a pace is often not sustainable for that long.[3] Although Texas may not resume that kind of pace in the near future, for now it seems set for growth rates similar to the nation's. The 1990s, however, provide evidence that Texas can generate superlative economic growth from a seeming disadvantage.

During the current recovery, the composition of its economic base has accounted for most of the state's weak performance. Texas has a large share of slow-growing industries in its economic base. In addition, most of those industries are not performing as well in Texas as they are in the nation. Like in the early 1990s, however, Texas is generating good growth from a weak mix of industries. Texas industries that produce tradables but are not in the economic base are outperforming their national counterparts. What is growing is coming to Texas.

To its advantage, Texas has a mix of amenities, property values and wages that attracts workers.[4] While the education system is a potential drag on the economy, plentiful real estate, a large labor pool and generally business-friendly policies can accommodate a transition to a more vital economic base or another great driver of economic growth.[5] The Lone Star State seems to have all the elements needed for an economic resurgence.

— Raghav Virmani
Stephen P. A. Brown

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Notes

1 In this analysis, the U.S. economic trough of November 2001 is used as a fulcrum on which hinge two periods of growth: March 1991 (trough)–October 2001 (the last month before the next trough) and November 2001–December 2004 (the cutoff for data). Throughout this analysis, the Texas economic base is essentially chained to its November 2001 composition.

2 Because this regional methodology ignores exports outside the United States, it actually underestimates the economic base.

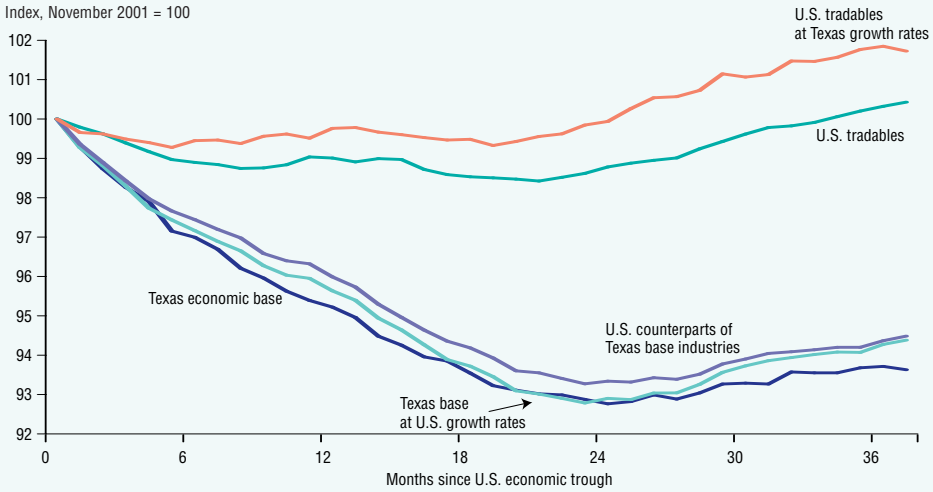
3 For a more detailed account of the reasons for the state's sluggish growth after the 2001 recession, see "A Texas Revival," by Fiona Sigalla, Federal Reserve Bank of Dallas *Southwest Economy*, July/August 2004.

4 See "What Wages and Property Values Say About Texas Cities," by Stephen P. A. Brown and Lori L. Taylor, Federal Reserve Bank of Dallas *Southwest Economy*, March/April 2003.

5 For more on education and the Texas economy, see "Don't Mess with Texas," by Fiona Sigalla, Federal Reserve Bank of Dallas *Southwest Economy*, January/February 2005.

Chart 6

The Texas–U.S. Gap, November 2001–December 2004



SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors' calculations.

Table 1

Components of the Texas Economic Base

Industry	November 2001 Employment Shares (percent)		Annualized Growth Rates (percent)			
			1990s Expansion		Current Recovery	
	Texas	U.S.	Texas	U.S.	Texas	U.S.
Oil and gas extraction	.68	.09	7.85	8.98	–.66	.03
Support activities for mining	.82	.14	4.16	.61	.05	2.09
Pipeline transportation	.19	.03	3.20	1.55	–12.48	–5.25
Basic chemical mfg.	.41	.13	6.92	4.95	–5.27	–4.47
Petroleum and coal products mfg.	.26	.09	6.64	5.81	–.94	–1.89
Agriculture, construction and mining machinery mfg.	.39	.16	1.66	2.21	–3.06	–1.60
Communications equipment mfg.	.31	.16	3.87	1.98	–15.20	–10.04
Air transportation	.76	.44	2.44	1.05	–3.03	–3.42
Architectural and structural metals mfg.	.50	.31	1.86	.91	–3.48	–1.11
Semiconductor and other electronic component mfg.	.69	.45	2.38	.32	–7.40	–8.28
Wholesale chemical and allied products	.15	.10	2.94	1.28	1.35	–.53
Cement and concrete product mfg.	.25	.18	3.59	1.03	–1.65	.74
Wholesale machinery, equipment and supplies	.73	.53	3.44	1.20	–1.82	–1.52
Wholesale professional and commercial equipment and supplies	.71	.52	5.35	2.54	0	–1.62
Computer and peripheral equipment mfg.	.28	.20	2.99	1.25	–5.98	–7.41
Telecommunications	1.29	.97	–4.66	–4.20	–8.50	–6.54
Synthetic rubber/fibers and filaments mfg.	.12	.09	4.39	.61	–5.06	–3.57
Funds, trusts and other financial vehicles	.09	.07	1.40	–.26	–.78	–1.67
Nondepository credit intermediation	.67	.51	–.11	–2.54	5.81	5.24
Wholesale electrical and electronic goods	.37	.30	1.24	1.02	–4.91	–4.17
ISPs, search portals and data processing services	.44	.36	.85	–.44	–5.29	–5.63
HVAC and commercial refrigeration equipment mfg.	.16	.13	3.10	1.76	–1.52	–4.08
Other wholesale durable goods	.43	.39	.46	–1.69	1.33	–.43
Wholesale hardware, plumbing and heating equipment	.20	.18	4.67	2.41	1.65	–.27
Aerospace product and parts mfg.	.43	.39	–1.49	–2.20	3.39	–3.38
Wholesale lumber and other construction materials	.19	.17	–.57	–2.87	1.80	3.30
Cable and other subscription programming	.08	.07	1.61	1.73	.42	–3.14
Specialized freight trucking	.33	.30	5.95	4.18	–.74	1.01
Software publishing	.22	.20	3.72	6.29	–6.07	–2.40
Wholesale grocery and related products	.56	.52	5.34	2.56	–.99	.21
Agencies, brokerages and other insurance-related activities	.66	.62	–1.29	–2.66	2.47	2.20
General freight trucking	.79	.74	2.55	1.22	–1.09	–.26
Wholesale motor vehicles, parts and supplies	.27	.26	–1.48	–2.17	–2.57	–.49
Animal slaughtering and processing	.40	.40	1.32	–.49	.68	–.99
Alumina and aluminum production and processing	.07	.07	–2.99	–4.04	–1.06	–5.71
Total Texas economic base	**14.90**	**10.28**	**2.13**	**1.11**	**–2.11**	**–1.82**
Total private employment	**83.01**	**83.70**	**2.76**	**1.90**	**.04**	**.35**
Total nonfarm employment	**—**	**—**	**2.66**	**1.81**	**.24**	**.39**

NOTES: The 1990s expansion covers March 1991–October 2001. Data for the current recovery are for November 2001–December 2004. *Other wholesale durable goods* includes furniture, furnishings, metals, minerals and miscellaneous durable goods.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors' calculations.

Mexico Emerges from 10-Year Credit Slump

Since the Tequila Crisis of 1994–95, one of Mexico's most persistent and striking economic contradictions has been a recovery in economic growth coupled with stagnation in bank lending. This contradiction has fueled increasing concerns about bottlenecks within Mexico's production chains and about what some analysts view as expansion rates below potential.

Lending typically declines in the wake of a financial shock, and Mexico's Tequila Crisis was no exception. Mexico's currency lost half its value in just a few months. The interbank interest rate rose some 60 percentage points, to over 90 percent, and remained above 20 percent until late 1999. Mexican banks needed most of their resources to resolve problem assets, leaving little room for new lending.

Even worse, credit extended by Mexico's banks continued to fall long after the national economy had recovered. Compared with other countries in similar circumstances, Mexico's stagnation in lending has been unusually severe and long-lasting.[1]

However, Mexican banks report that business loans began to grow substantially in fourth quarter 2004 and that healthy growth rates continued through the first quarter of this year, signaling a possible reversal of the credit slump of the past 10 years. We address the credit slump's possible causes, its implications and what the nascent loan upturn seems to be telling us.

Globalization and Bank Credit

A vibrant banking system that growing businesses can turn to for credit facilitates firms' entry into previously segmented markets, enhancing competition. The availability of finance promotes economic freedom by enabling entrepreneurs to leverage resources in pursuit of business opportunities.[2] Similar considerations apply to consumer credit, which can help individuals tap future income for present critical needs, such as housing and education.

Three years ago, in this same publication, we advocated financial globalization, using Mexico's banks as a case study.[3] We concluded that the growing prominence of foreign firms in the Mexican banking system (*Chart 1*) was not cause for alarm, but would promote world-class banking practices, enhance financial competition and result in greater financial stability. This was not to say Mexico's banking system was in particular need of foreign involvement, but rather represented our view that international competition can promote economic and financial rigor in any country. Our analysis contrasted sharply with globalization's detractors, who broadly claim foreign influences and international linkages are harmful.

Today, many of the benefits we claimed would result from the international openness of Mexico's banking system have been realized, but business lending has been slow to resume. In particular, evidence suggests that certain small- and mid-sized Mexican businesses have lacked adequate financing, resulting in bottlenecks in the production of key goods and services and holding Mexico's economic competitiveness below its potential.[4]

It is in this context that the recent upsurge in business lending takes on particular importance. Consumer lending has been growing rapidly for many years now, but business lending was relatively restrained before the fourth quarter of last year, when real year-over-year growth reached 15 percent (*Chart 2*). Through the first quarter of 2005, aggregate business loans continued to grow strongly at a rate of 17 percent.

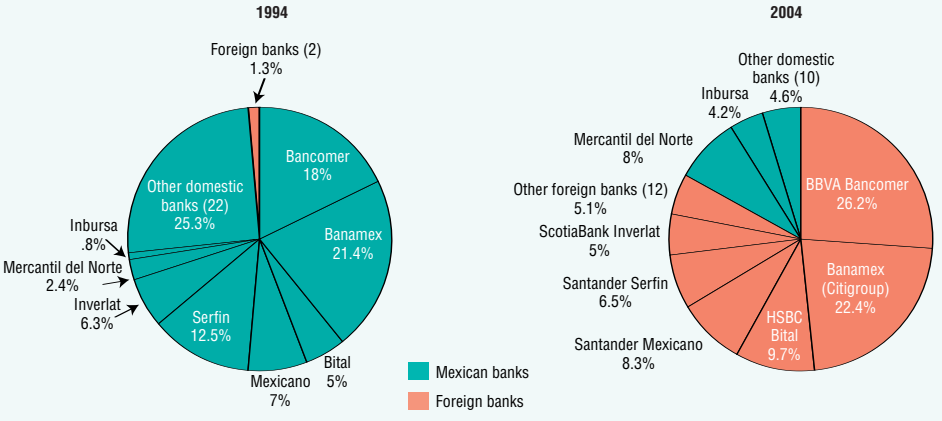
Crisis and the Beginning of Reform

A few years prior to the Tequila Crisis, Mexico privatized its commercial banks after a decade of government ownership. During that decade, the banks had channeled most lending to the federal government. As a result, credit and market risk assessment were minimal.

Once privatized, the banks took

Chart 1

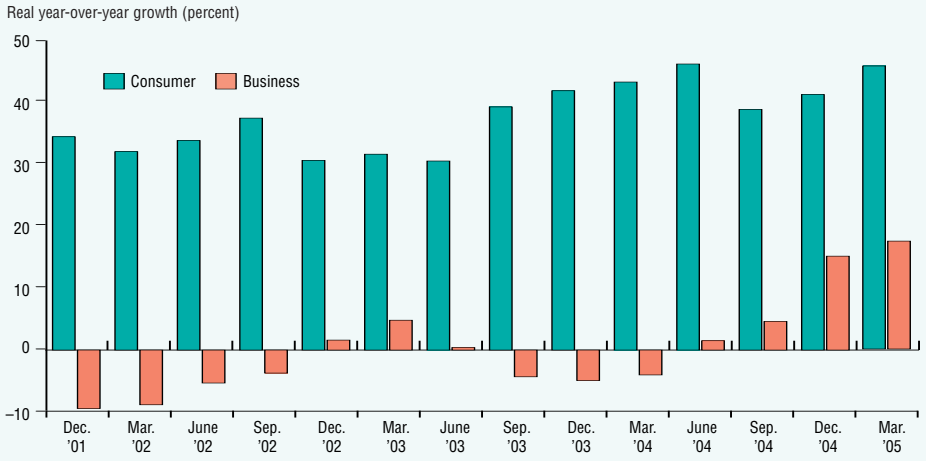
Globalization of Mexican Banking



SOURCE: Comisión Nacional Bancaria y de Valores.

Chart 2

Loan Growth in the Mexican Banking System



NOTES: Government interventions and loan sales preclude accurate and consistent calculations of year-over-year loan growth prior to 2001. Consumer loans do not include mortgages. As of year-end 2004, real year-over-year growth in mortgage loans was 2.4 percent, the first real increase in six years. As of March 31, 2005, mortgage loan growth was sustained, with a portfolio increase of 5.3 percent year-over-year in real terms.

SOURCE: Comisión Nacional de Bancaria y de Valores.

steps to generate high returns and justify the steep auction prices at which they had been bought. The result was high-risk lending to the private sector. Incomplete legal enforcement of financial contracts, an underdeveloped system of supervision and regulation, an implied unlimited government guarantee of bank liabilities and the banks' own inexperience in assessing the risks associated with lending to the private sector aggravated the problem. Bank lending expanded at an average annual rate of 25 percent from 1989 through 1994, resulting in a quadrupling of bank credit as a percent of GDP.

Bank credit to the private sector serves a vital economic role when properly extended, but this undisciplined explosion in lending gave rise to imbalances. At the end of 1994, Mexican banks' risky loans became more precarious with the collapse of the peso and subsequent jumps in inflation and interest rates. The Tequila Crisis devastated the ability, and in some cases the willingness, of borrowers to repay their debt. The banks' financial condition deteriorated severely.

Government programs to support the banking system took on a variety of forms. The government initiated programs to improve bank balance sheets by easing debtor burden. Discounts on loan balances and future payments were offered. Their cost was shared by the government and the banks. For the most part, the general public regarded these programs with indifference.

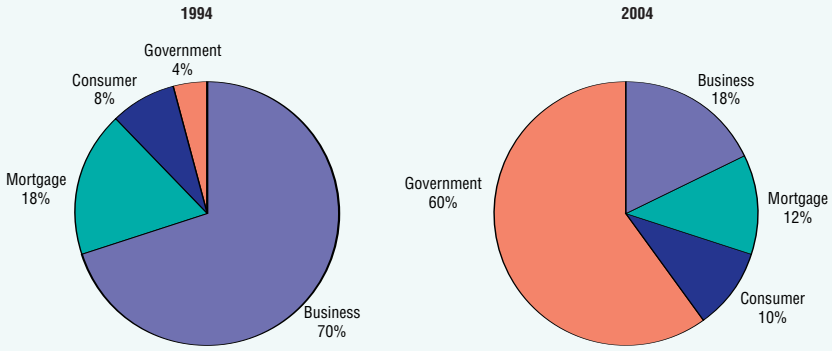
In contrast, the government's forbearance policy for the banks themselves was wildly unpopular. The public viewed it as a taxpayer bailout of bank shareholders. Under the Loan Purchase and Recapitalization Program, the government gave the banks good bonds in exchange for bad loans. Suspicions were widespread that many of the loans were granted or defaulted upon fraudulently or had been extended to insiders. These bonds helped prevent failure, but their high volume and nonnegotiable nature constrained liquidity (*Chart 3*). At the hardest hit banks, shareholder value was substantially reduced or even eliminated.

The crisis' effect on the banks led many to question their privatization. There is much evidence that the source of bank problems was not privatization itself, but the lack of regulatory, risk management and legal infrastructure. Whatever its liabilities, the Tequila Crisis highlighted these problems and motivated change.

The Tequila Crisis devastated the ability, and in some cases the willingness, of borrowers to repay their debt. The banks' financial condition deteriorated severely.

Chart 3

Bank Loan Portfolios in Mexico



NOTE: The government category includes the government notes issued in resolving the banking difficulties of the mid-1990s.

SOURCE: Bank of Mexico.

For most of the largest banks, full balance sheet recovery did not occur until foreign banks began to purchase them. These purchases, which commenced in 2000, often involved infusions of capital.

The Promise of Sustained Loan Growth

An examination of the primary problems inhibiting growth in lending activity over the past 10 years reveals substantial progress toward resolution, suggesting the recent widespread growth in lending will continue.

Reparation. The fallout from the Tequila Crisis explains banks' initial reluctance to lend. Banks had to work out problem loans, raise their low capital levels and engineer a quality-led escape from high funding costs. Other problems included generally inefficient operations and inadequate information technology. In response, the banks streamlined their operations, rationalized costs and generated increased revenue. For most of the largest banks, however, full balance sheet recovery did not occur until foreign banks began to purchase them. These purchases, which commenced in 2000, often involved infusions of capital.

One reason for the delayed business credit recovery involves the nonnegotiable notes the government gave banks in trade for their bad loans. Banks could not sell these bonds and use the proceeds to lend to businesses. Beginning in the fourth quarter of this year, the nonnegotiable notes will begin to mature and will likely be rolled over into negotiable notes. These new notes will provide banks with a fresh source of liquidity, as the notes will no longer tie down bank funds that otherwise could be diverted to support loan growth.

Regulatory and Risk Management Infrastructure. The years following the Tequila Crisis have been a time of profound regulatory change. Mexican regulations now generally conform to international standards—or are even more demanding—in risk management, internal control policies and loan provisioning.

At the time of the Tequila Crisis, and for many years thereafter, credit bureaus were not fully developed and banks did not use them. However, a subsequent regulatory change requires banks to obtain, review and document a borrower's past repayment performance and current financial situation before making a loan. Consumer and mortgage loans extended without following these procedures are subject to a specific reserve requirement equal to 100 percent of the loan balance.

Though reluctant at first, bankers now embrace these procedures. Credit bureaus have grown in importance, and the public now values a good credit rating, helping to establish a positive repayment culture. With the new credit rating infrastructure, consumer lending has experienced strong, sustained growth. Spillovers of these methods and technologies, together with increased regulatory attention on all types of lending, suggest business credit is poised to expand.

Legal Infrastructure. Another impediment to loan growth, and secured lending in particular, has been the legal environment. Understaffing and overwork have plagued the Mexican courts. Court personnel, especially judges, tend to be poorly paid. These problems have been particularly acute at the local level. Many bankers and industry analysts feel the local courts are corrupt and susceptible to political meddling. And, until relatively recently, Mexican bankruptcy and collateral repossession laws were vague and heavily tilted in favor of the borrower. As a result, banks turning to the judicial system to collect delinquent loans often found the proceedings lengthy and unfruitful. Before the recent reforms, observers indicated court decisions on foreclosure and repossession required at least five years.

Recent years, however, have ushered in significant improvements in Mexico's legal infrastructure. In 2000, the Mexican Congress passed a law implementing new processes governing bankruptcy and the repossession of collateral. A subsequent reform in 2003 further clarified the resolution process behind bankruptcy and loan default.

Anecdotal reports suggest the laws overhauling bankruptcy proceedings and detailing collateral repossession have proven generally effective and have greatly shortened the time for a decision. Moreover, most such cases now can be resolved outside the court system. These options have also permitted financial institutions to become more adept at working directly with customers in encouraging payment.

Still, in some cases, contract enforcement may be difficult. Property rights systems involve numerous mutually reinforcing institutions. Some local authorities responsible for enforcing property rights in Mexico are still weak, reflecting the country's not too distant history of authoritarian rule. These circumstances may prove difficult to remedy, as they can involve political institutions or informal customs.[5]

Even so, positive financial system developments associated with improvements in the legal infrastructure are not hard to find. Mexico's burgeoning asset-backed securities market is testament to a growing faith in the enforceability of secured lending contracts. Despite a slight rise in interest rates over the second half of the year, Mexico's securitization market almost quadrupled in 2004, making it the top such market in Latin America. Some examples of new, structured financial transactions include securitizations of truck, auto and credit card loans, as well as municipal and state government debt. Mexico's first mortgage-backed security (MBS) issuance occurred in December 2003. The MBS market increased from a single $53 million issuance in that year to six issuances totaling $477 million in 2004. Continued economic and political stability, emergence of new securitization products for a broader group of assets and liberalization of regulations have all worked to increase institutional demand for securitized assets. All this bodes well for continued expansion in bank lending activity.

Bank Competition. In their continuing struggle to regain adequate financial footing in the wake of the Tequila Crisis, banks invested in government securities, replaced high-cost time deposits and borrowings with low-cost demand deposits, cut overhead expenses through layoffs, shed unprofitable operations, and pushed up transaction volume and service fee income. Opportunities for further advances along these lines appear rather limited. Net interest margins have thinned and stabilized. With increased accuracy in credit scoring, monitoring and contract enforcement, a return to loan markets seems to be the next step in increasing profitability.

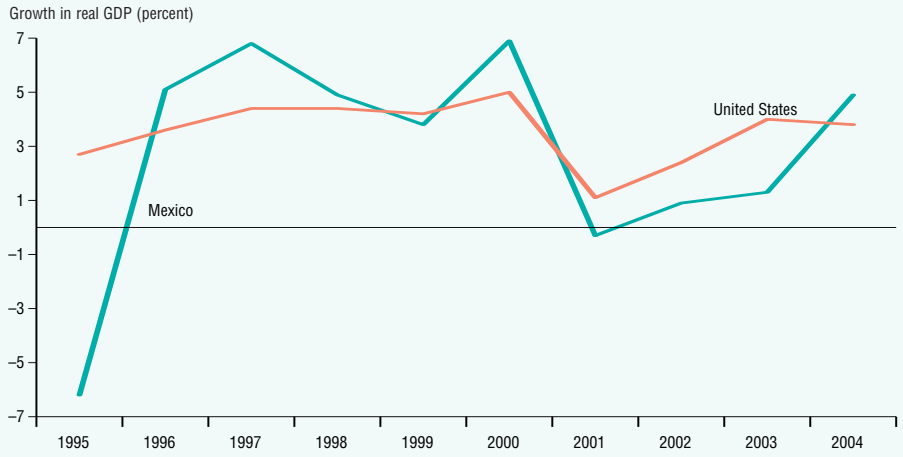
Economic Conditions and Loan Demand. In spite of strong economic growth, high real interest rates and price fluctuations did not moderate in Mexico until 1999–2000. By then, business lending seemed ready to grow, but the subsequent economic slowdown in the United States stalled economic growth in Mexico and ended the momentum behind the initial signs of credit expansion.

Fortunately, economic growth has resumed in both the United States and Mexico. The comovement of these two economies partly reflects the unifying effects of 1995's North American Free Trade Agreement in promoting further integration of their business and economic cycles (*Chart 4*). The increase in loan demand

Recent years have ushered in significant improvements in Mexico's legal infrastructure.

Chart 4

Economic Conditions in Mexico Compared with the United States



By rebuilding capital and improving risk management systems, Mexico's banks have positioned themselves to take advantage of the positive trends shaping business loan demand.

associated with stronger economic activity should work along with the other factors discussed to generate lasting growth in business loans at Mexico's banks.

Outlook

Mexico represents a unique banking opportunity. Macroeconomic conditions are stable and improving, the country's financial infrastructure continues to develop and modernize, and business cycle convergence with the United States should help spur future growth. Slowly but surely, various impediments to the supply of, and demand for, business loans have been resolved. By rebuilding capital and improving risk management systems, Mexico's banks have positioned themselves to take advantage of the positive trends shaping business loan demand. Stable net interest margins and limited ability to raise fees and cut costs will help propel the supply of loans as banks pursue profits to boost shareholder value.

These considerations suggest Mexico's 10-year slump in business lending is over. Lending's rejuvenation is the latest step in the monumental restoration of Mexico's banking system, characterized by sound loan growth and the types of achievements present in the most advanced banking systems.

—Robert V. Bubel
Edward C. Skelton

Bubel and Skelton are international financial analysts in the Financial Industry Studies Department of the Federal Reserve Bank of Dallas.

Notes

[1] "NAFTA and Mexico's Less-Than-Stellar Performance," by Aaron Tornell, Frank Westermann and Lorenza Martinez, National Bureau of Economic Research, Working Paper No. 10289, February 2004.

[2] "Financial Markets and Economic Freedom," by Luigi Zingales, in *The Legacy of Milton and Rose Friedman's Free to Choose*, Federal Reserve Bank of Dallas, 2004, pp. 175–89.

[3] "Financial Globalization: Manna or Menace? The Case of Mexican Banking," by Robert Bubel and Edward Skelton, Federal Reserve Bank of Dallas *Southwest Economy*, January/February 2002.

[4] Tornell, Westermann and Martinez (2004).

[5] "Why Institutions Matter: Banking and Economic Growth in Mexico," by Stephen Haber, Stanford Center for International Development, Working Paper No. 234, November 2004.

Regional Update

Texas continued its steady rebound in the first four months of the year, posting a 1.3 percent employment gain to match the state's 2004 rate. The Texas Coincident Index, an aggregate measure of statewide economic activity, rose at an annualized 2.1 percent, compared with 1.9 percent in 2004.

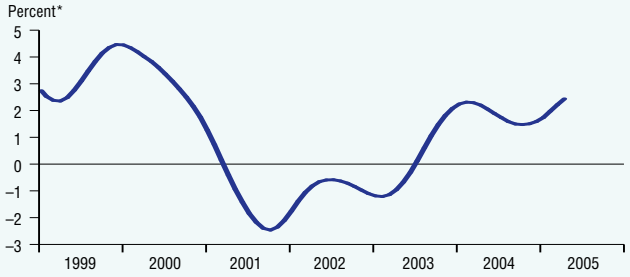
Although still lagging the nation, Texas reported broad-based employment increases. All major sectors posted gains for January–April, although manufacturing and government reported the weakest growth, at 0.1 percent each. Professional and business services jobs sharply increased, growing 4.6 percent for the period, the highest rate for any sector. Other areas showing strong gains were other services, leisure and hospitality services, and information.

Rising crude oil prices may have pushed some prices higher, but the Texas consumer price index remained reasonably low, up 2.6 percent year-over-year in January. The core CPI—which excludes gasoline and food—was up 1.8 percent. Higher energy prices are apparently not impacting pricing in other industries significantly.

The Texas Leading Index showed continued positive growth of 1 percent in the first quarter. Real oil prices and average weekly hours posted sizable gains. Based on the index, Texas can expect job growth of 2 percent in 2005. Temporary-employee hiring, a leading indicator, also picked up sharply, growing at an annualized 9 percent in the first four months. Overall, Texas appears poised for moderate, broad-based growth this year.

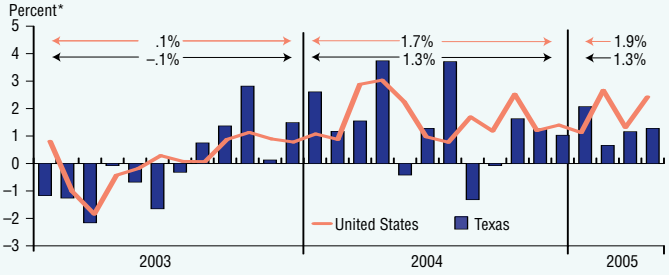
—Kristen Hamden

Texas Coincident Index Shows Steady Rebound



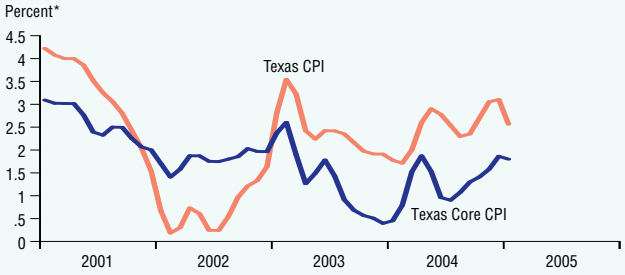
*Month-over-month, seasonally adjusted, annualized rate.

Texas Job Growth Lags Nation's Slightly



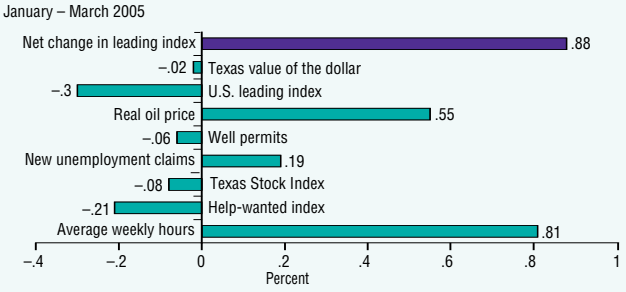
*Month-over-month, seasonally adjusted, annualized rate.

Texas Inflation Remains Reasonably Low



*Year-over-year change.

Net Contributions to the Texas Leading Index



Regional Economic Indicators

			TEXAS EMPLOYMENT*					TOTAL NONFARM EMPLOYMENT*		
	Texas Leading Index	TIPI† total	Mining	Construction	Manufacturing	Government	Private service-producing	Texas	Louisiana	New Mexico
3/05	122.0	129.8	153.2	542.6	883.7	1,665.6	6,305.5	9,552.5	1,929.5	801.4
2/05	121.4	130.1	153.0	541.3	884.1	1,664.7	6,298.2	9,543.1	1,924.8	799.4
1/05	120.2	129.2	152.8	541.8	883.8	1,666.6	6,291.0	9,537.9	1,926.5	799.7
12/04	121.0	129.2	152.5	541.0	885.5	1,665.6	6,275.3	9,521.6	1,916.9	799.1
11/04	119.4	129.1	152.1	540.7	887.2	1,663.7	6,268.1	9,513.5	1,920.3	796.9
10/04	118.6	128.8	151.7	540.3	888.1	1,662.5	6,259.5	9,503.6	1,919.3	795.1
9/04	118.1	129.8	151.9	539.7	888.4	1,659.1	6,249.7	9,490.8	1,913.5	792.6
8/04	117.7	129.4	151.4	539.3	890.2	1,658.6	6,250.0	9,491.4	1,921.3	791.2
7/04	117.2	129.3	151.3	541.4	891.6	1,662.9	6,252.8	9,501.9	1,921.3	791.5
6/04	117.2	128.6	151.0	540.8	888.7	1,655.0	6,235.8	9,473.1	1,919.5	789.4
5/04	117.9	128.7	150.6	541.1	890.0	1,652.1	6,227.4	9,463.1	1,917.9	789.3
4/04	118.1	128.4	150.4	544.5	889.7	1,650.1	6,229.9	9,466.4	1,922.8	789.2

* In thousands. † Texas Industrial Production Index.

For more information on employment data, see "Reassessing Texas Employment Growth" (*Southwest Economy*, July/August 1993). For TIPI, see "The Texas Industrial Production Index" (Dallas Fed *Economic Review*, November 1989). For 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). Online economic data and articles are available on the Dallas Fed's web site, www.dallasfed.org.

Southwest Economy

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