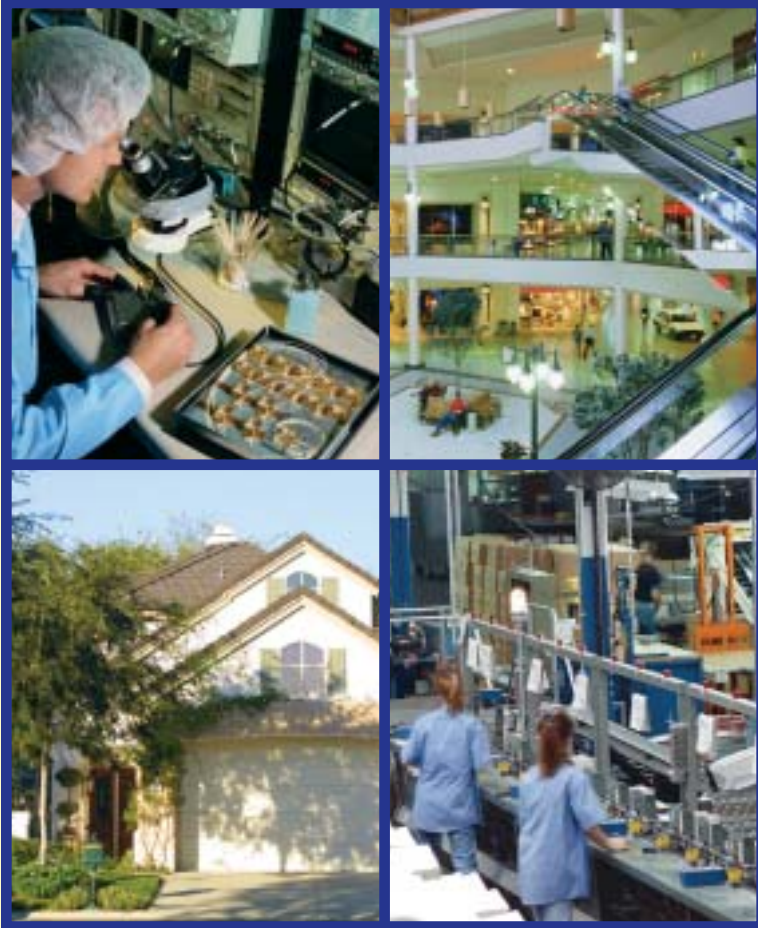


Southwest Economy



What Wages and Property Values Say About Texas

Two principal factors determine which cities experience the most rapid economic growth: business investment and labor growth. Business investment is high in cities where productivity is high relative to the cost of production. Workers are most attracted to cities where the amenities and wages are high relative to the cost of living.

Together, wages and property values convey considerable information about a city's productivity and amenities, and therefore about its growth potential. Taken independently, however, neither provides a complete measure of amenities and productivity. Wages could be low in a city because productivity is low, but they could also be low because people are willing to accept lower wages to live in a place with so many amenities. High wages could indicate either high productivity or the need to compensate workers for a lack of amenities. Similarly, high property values indicate either that high productivity has attracted enough business to bid up property values, that high amenities have attracted enough residents, or both.

A simple economics framework—one that takes into account the role labor and capital

(Continued on page 2)

Debunking Derivatives Delirium

Banks have gotten a lot of bad press lately. Some commentators have gone so far as to declare a banking breakdown, brought on by the free market policies of the 1990s. At the heart of much of the controversy is the explosive growth in banks' use of the sometimes complex financial instruments known as derivatives.

Close examination, however, suggests the potential costs of derivatives are often exaggerated and their benefits downplayed. Moreover, recent data provide evidence that despite talk of a breakdown, the banking system has been remarkably resilient. Contrary to popular claims, the free market policies instituted in the 1990s have contributed to, rather than detracted from, the industry's stability.

(Continued on page 5)

*INSIDE:
The Giant in Mexico's
Rearview Mirror*

Texas offers a combination of wages, property values, natural amenities and government policies that is particularly attractive to labor.

mobility plays in establishing regional market conditions—can be used to sort through the contributions of productivity and amenities to wages and property values. This framework implies that Texas cities range from near to below the national average in productivity for a variety of reasons that range from educational attainment to government policy. One major Texas city ranks above the national average in amenities, but most are below. When Texas' rapid population and employment growth over the past decade is taken into account, however, it is apparent that Texas offers a combination of wages, property values, natural amenities and government policies that is particularly attractive to labor. That attractiveness has helped propel the state's economic growth.

Labor Mobility and Compensation

People seek to live and work in cities or regions that offer the best overall compensation package. The total compensation of living and working in a region takes into account salary and benefits, natural amenities, cost of living, government services and taxes. In a market economy, people's willingness to move between regions fosters adjust-

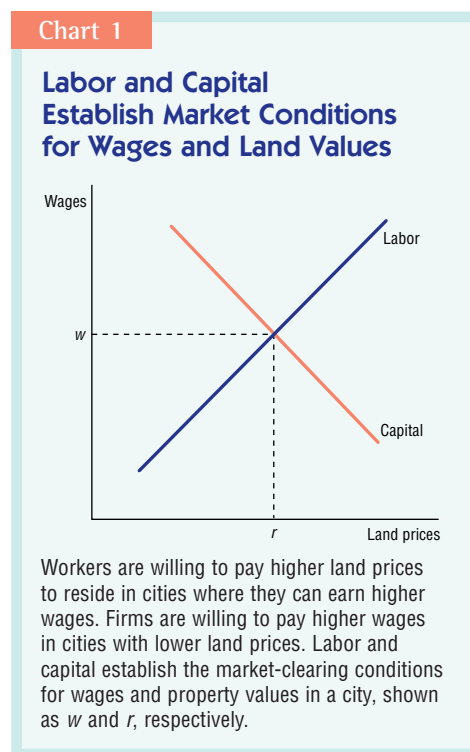
ments in wages (salary and benefits) and property values such that on the margin individuals can expect to find the same level of economic well-being in different cities across the country. For a given set of amenities and government policy, people will expect higher wages to live and work in cities that have higher property values and will accept lower wages in regions with lower property values. For labor, this willingness establishes a positive relationship between wages and property values (*Chart 1*).

To live in communities with greater amenities or advantageous government policy, people will accept either lower wages, higher property values or some combination. The result is lower real wages (that is, wages adjusted for the cost of living) in communities with greater amenities, advantageous government policy or both. To live in regions with lesser amenities or an unattractive government policy, people will demand higher wages, lower property values or both. The result is higher real wages.

Capital Mobility and Returns

When determining where to locate their plants, firms seek the best returns on their capital investment. In any city, the returns to capital are affected by the city's labor productivity, wages, property costs, government services and taxes, and the natural amenities in the region that affect production. In a market economy, the movement of capital between cities ensures that capital earns the same rate of return in each city. For a given level of productivity, amenities and government policy, firms will offer lower wages in cities that have higher property values and will be willing to pay higher wages in regions with lower property values. For capital, this willingness establishes the inverse relationship between wages and property values shown in *Chart 1*.

Firms that locate their operations in regions with advantageous government policy or productive natural amenities will accept higher property values, pay higher wages or both. To locate their operations in regions with less attractive government policies or fewer productive amenities, firms will expect to pay lower property values, lower wages or both.



Regional Market Conditions

Each city's labor and capital markets, taken together, yield a combination of wages and property values that reflect the city's labor productivity and amenities, as shown in Chart 1.¹ In communities where labor is more productive than the national average, nominal wages will be above the national average. If that community also has amenities that are at the national average, property values will be sufficiently above the national average that real wages (that is, wages adjusted for the cost of living) remain at the national average.

In communities with above-average amenities, labor will accept real wages below the national average. If the community's labor productivity is at the national average, nominal wages will also be at the national average. Property values will be sufficiently above the national average to ensure that real wages are below the national average.

Productivity and Amenities in Texas Cities

As described above, nominal and real wages provide a basis for comparing the productivity and amenities in Texas

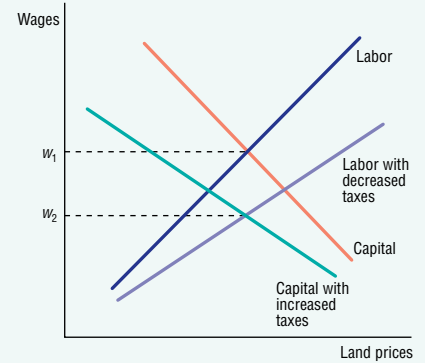
cities with their counterparts in other states. Nominal wages reflect productivity; cities with above-average labor productivity have above-average nominal wages, and cities with below-average labor productivity have below-average nominal wages. Real wages reflect amenities; cities with above-average amenities have below-average real wages, and cities with below-average amenities have above-average real wages.

Therefore, we can use nominal and real wages to measure the productivity and amenities in various U.S. cities.² To create these measures, we adjust nominal wages to account for the occupational mix of each city's workforce.³ To create real wages, we adjust nominal wages to account for the educational attainment and age of the labor force and for differences in the median value of residential property and other geographic differences in living expenses.⁴

As shown in Chart 2, U.S. cities can be classified into four categories on the basis of their productivity and amenities: low productivity/low amenity (Youngstown, Ohio); high productivity/low amenity (Atlantic City); high productivity/high amenity (San Francisco); and low productivity/high amenity (San Antonio, Houston, Dallas, Austin, Raleigh-Durham).

Chart 3

Effects of Increasing the Share of Taxes Borne by Capital



With reduced taxation, workers are willing to accept lower wages at each given property value, which amounts to a reduction in real wages. With increased taxation, the wages firms are willing to pay at each property value also decline. The result is a reduction in wages (from w_1 to w_2) and lower productivity. The effect on property values is unknown.

productivity/high amenity (Raleigh-Durham). Although Dallas is close to the national average in both categories, all Texas cities rank below the national average on labor productivity. Austin is relatively close to the national average in productivity and the only Texas city by this measure that has above-average amenities. Beaumont is decidedly low in both labor productivity and amenities.

One factor that contributes to lower labor productivity in Texas is a younger and less educated population.⁵ Another is the relatively heavy taxation on business and the relatively light taxation on labor income. This taxation pattern reduces the capital-to-labor ratio by discouraging capital formation and encouraging labor in-migration. From the perspective of labor, the relatively light taxation of labor is an amenity that reduces the nominal wage required for each property value (Chart 3). In a real sense, labor considers the state's tax policy an amenity and is willing to accept lower real wages for the continuation of such a policy. From the perspective of firms, the relatively high business taxation is a disamenity that requires lower wages at each given property value. The result is lower nominal and real wages in Texas cities.

Chart 2

Most Texas Cities Below Average in Productivity and Amenities



NOTE: Heavy horizontal and vertical lines indicate average for cities in the study.

Chart 4

Texas Population Growth Outpaces Nation's

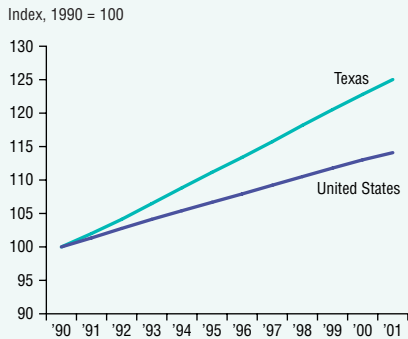
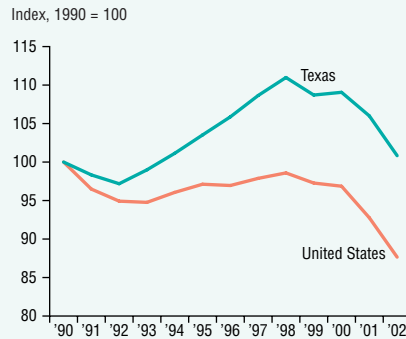


Chart 5

Texas Manufacturing Job Growth Stronger than Nation's



Differential Rates of Regional Economic Growth

Our methodology—evaluating labor productivity and amenities in U.S. cities by comparing nominal and real wages—assumes a general equilibrium in labor and capital markets across the country. This assumption may be unwarranted for cities that have unusually strong growth. More rapid growth occurs in regions where capital and labor can make the highest returns.⁶ More rapid employment growth will occur in cities where labor finds real wages are high (nominal wages are high relative to property values) given the natural and government amenities. More rapid growth of business capital will occur where nominal wages and property values are low for the city's labor productivity.

As shown in Charts 4 and 5, Texas population and manufacturing employment growth greatly outpaces the nation's.⁷ This more rapid growth implies that labor finds Texas cities have an unusually attractive mix of amenities, property values and wages. In other words, a given real wage buys more amenities in Texas than elsewhere in the country, and Chart 2 understates the amenities of Texas cities.

As shown in Chart 6, Texas manufacturing capital grew at about the same rate as the nation's during the 1990s. The similarity in growth rates implies that nominal wages and property values in Texas cities are on par with the state's productivity. Thus, Chart 2 accurately represents the labor productivity in Texas cities.

Productivity and Amenities of Texas Cities

On the whole, the wages and property values in Texas cities appear to accurately reflect the cities' labor productivity. Low educational attainment and a high share of taxes paid by business have helped keep the state's labor productivity below the national average. On the other hand, labor finds that Texas offers an attractive combination of wages, property values, and natural and government amenities—and the low share of taxes paid by workers is one of those amenities. Texas' ability to attract labor has manifested itself in a consistent pattern of population, employment and economic growth that exceeds the national average.

—Stephen P. A. Brown
Lori L. Taylor

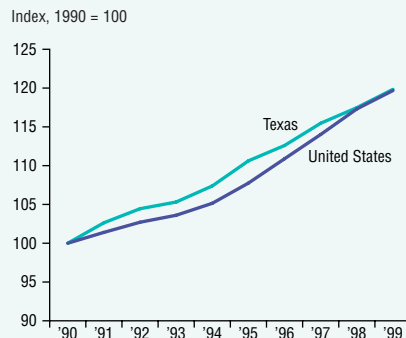
Brown is director of energy economics and microeconomic policy analysis and Taylor is a senior economist and policy advisor in the Research Department of the Federal Reserve Bank of Dallas.

Notes

- ¹ This equilibrium analysis follows Jennifer Roback (1982), "Wages, Rents and the Quality of Life," *Journal of Political Economy* 90 (December): 1257–78.
- ² This methodology follows Patricia E. Beeson and Randall W. Eberts (1989), "Identifying Productivity and Amenity Effects in Interurban Wage Differentials," *Review of Economics and Statistics* 71 (August): 443–52.
- ³ Adjusting nominal wages for occupational mix prevents concentrations of particular occupations from dominating a city's productivity estimates.
- ⁴ These adjustments create a real wage for a person who is comparable across regions.
- ⁵ See Lori L. Taylor (2003), "Region Lags Nation in Education Gains," Federal Reserve Bank of Dallas *Southwest Economy*, Issue 1, January/February, 1–5.
- ⁶ In the process of uneven growth, markets work toward a national equilibrium in which the rate of return on capital is the same in each community; labor is paid the value of its marginal product as seen on a national market; and a combination of nominal wages, property values and amenities leaves market-clearing individuals with the same degree of economic well-being in any community.
- ⁷ The growth in manufacturing employment understates the growth rate differential between Texas and the nation. We use manufacturing employment to maintain comparability with the capital data we have.

Chart 6

Texas Manufacturing Capital Grew at National Rate During the 1990s



Debunking Derivatives Delirium

(Continued from front page)

Then and Now

It's becoming increasingly difficult to recall the boom years of the 1990s, but one hallmark of the period was a policy emphasis on free markets. A good example of those policies involves banks' increasing use of derivatives.

Financial derivatives—such as interest rate swaps, options and futures—may seem arcane, but they influence everyday life more than might be thought. For example, derivatives help improve the terms of home mortgage loans.

Large banks dominate the market in over-the-counter derivatives, which are traded directly between companies without going through an exchange. In the 1990s, policymakers debated whether to regulate these activities. But free market proponents prevailed, and banks' derivatives activities were allowed to develop and grow. Driving these policies was the belief that free financial markets would result in stronger banks. Competition and innovation, it was predicted, would spawn new technologies and practices that would help banks manage risk more effectively.

More recently, the policies adopted in the 1990s have been subjected to much second-guessing. Banks are under

fire for dealing in what some consider an alarmingly high volume of complex and risky derivatives. The thinking is that free markets have encouraged financial innovation all right, but it has taken unexpected and unwanted forms, like hard-to-detect accounting fraud, and has increased, rather than reduced, risk in the banking system. As a result, some advocate greater government control over financial markets, including banks' derivatives activities.

Fact Versus Fiction

Derivatives usage has grown a lot, propelled by advances in information technology and financial theory. But the magnitude of derivatives activities is often exaggerated, contributing to a false sense of alarm.

Based on notional value, the measure the media typically use, U.S. commercial banks now hold about \$55 trillion in derivatives, compared with \$7 trillion in 1990 (Chart 1). Interest rate contracts account for the vast majority.¹

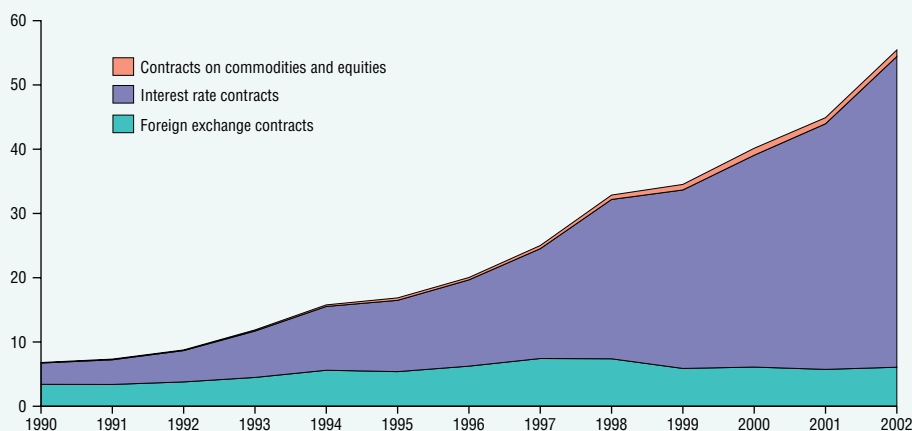
But while derivatives activities have grown tremendously by any measure, notional value overstates their magnitude. The notional \$55 trillion is roughly five times the U.S. economy's annual output. Such an amazing figure should

Competition and innovation, it was predicted, would spawn new technologies and practices that would help banks manage risk more effectively.

Chart 1

Derivatives at Banks

Notional value (trillions of dollars)



SOURCE: Report of Condition and Income, Federal Financial Institutions Examination Council.

The notional value of a derivative greatly exaggerates the dealer bank's credit exposure.

be interpreted with care. For derivatives, notional value is the amount on which interest and other payments are based. Notional value typically does not change hands; it is simply a quantity used to calculate payments. Understanding this distinction requires some detail on how typical derivative contracts work.

An Interest Rate Swap. Consider the most prominent type of derivative, an interest rate swap. A variety of businesses employ swaps, in many different contexts. The following is a highly simplified example.

Suppose a small bank has a portfolio of fixed-rate loans, so that the interest payments remain the same each period. The bank wants to convert these fixed-interest payments to floating, or variable, rate payments, so that they fluctuate with market interest rates. That way, if rates rise and the bank has to pay higher rates on its liabilities, the interest it receives on the loan portfolio will also rise, thereby preserving the bank's profit margin.

The small bank can go to a dealer, typically a large bank, to swap the fixed rate on its portfolio for a variable rate. The small bank promises to pay the dealer the fixed rate, while the dealer promises to pay the small bank the variable rate (*Chart 2*).

When the variable and fixed rates are equal, no payments are traded because they would be the same; they

cancel each other out. However, if the variable rate rises above the fixed rate, the dealer must pay the small bank the difference, so that the small bank can earn the variable rate. Conversely, if the variable rate falls below the fixed rate, the small bank must pay the dealer the difference, so that the small bank still earns only the variable rate. In this way, the small bank always earns the variable rate, holding its profit margin constant.

Credit Exposure. How does the dealer bank record this derivative? As already noted, one measure is the derivative's notional value, which is the principal value of the underlying asset. If the small bank extends \$100 million in fixed-rate loans, the notional value of the derivative is recorded as \$100 million on the dealer bank's books. But this value greatly exaggerates the dealer bank's credit exposure.

Suppose that when the swap contract was written, the variable and fixed rates were both 5 percent, so the annual interest payment is \$5 million. Even this exaggerates the dealer bank's credit exposure since the payments cancel each other out. On net, the small bank owes the dealer nothing, and the dealer owes the small bank nothing.

Of course, the variable rate often deviates from the fixed rate. Suppose the variable rate drops from 5 percent to 4

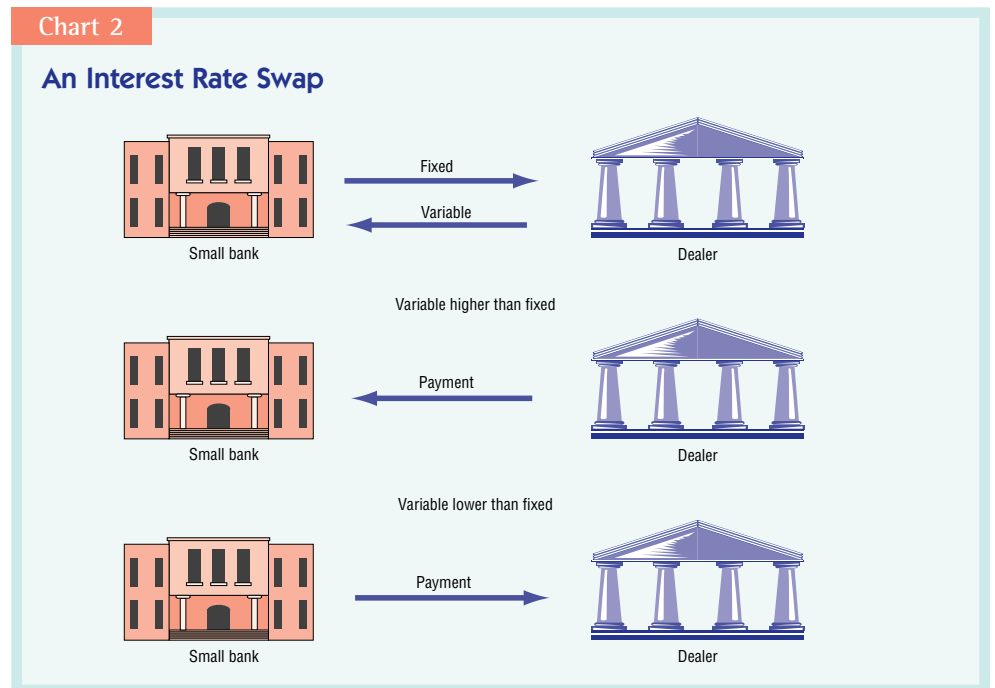
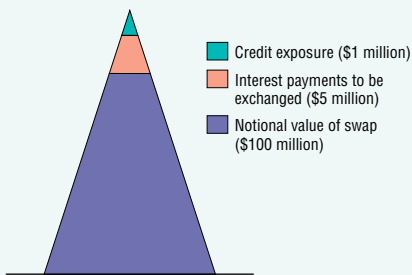


Chart 3

Notional Value Versus Credit Exposure



percent. In this case, the small bank owes the dealer 1 percent. If we assume there is only one period left in the contract, that amounts to \$1 million. Because the small bank owes the dealer \$1 million, that is the amount of the dealer bank's credit exposure.

As you can see from this simplified example, the credit exposure associated with a derivative is much smaller than its notional value (*Chart 3*).

Reflecting the concentration of dealer activities, the vast majority of derivatives in the U.S. banking system are held by 10 large banks. For the 10 as a group, the notional value of derivatives is very high, greatly exceeding total assets. But their current credit exposure, or the risk associated with the possibility that the other party to a derivative contract may not make a required payment, is much

smaller. By this measure, the derivatives exposure of the top 10 is only about 7 percent of total assets (*Chart 4*). This compares with an 8 percent capital ratio and a loan-to-asset ratio of 51 percent.²

Capital Requirements.

Not only does notional value exaggerate the true credit exposure of derivatives, but safeguards within both the banks themselves and their supervisory framework help manage that exposure. Supervisors require banks to hold capital against their derivative positions in two ways. A capital requirement is attached to the credit risk discussed above, and a separate capital requirement is attached to the market risk associated with derivatives.³

In our example, suppose that instead of falling from 5 percent to 4 percent, the variable rate rises from 5 percent to 6 percent. The dealer bank would then owe the end user, rather than the other way around. Dealers use so-called value-at-risk models to gauge this type of risk, which arises from potential changes in market rates, and supervisors require that banks hold additional capital to guard against it.

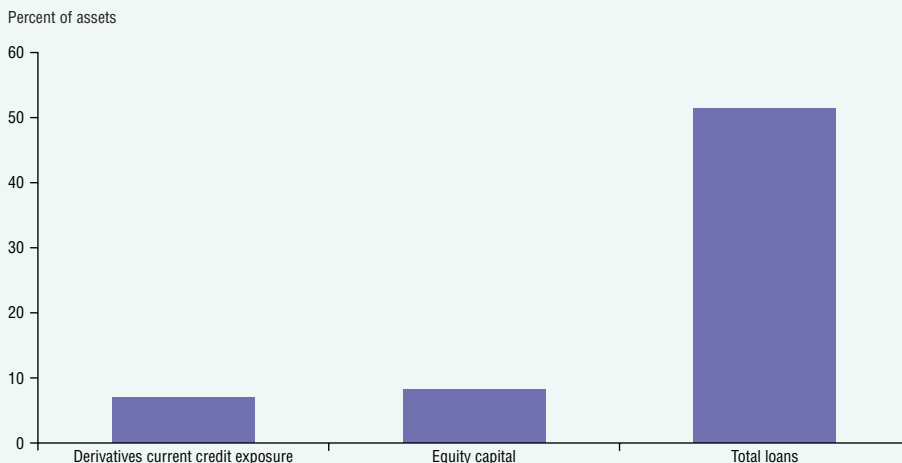
Less or More Stable?

What's the bottom line? Are banks less or more stable? Have free market policies promoted innovation and more effective risk management? Or have banks used their freedom, especially in the area of derivatives, to become riskier than before?

Safeguards within both the banks and their supervisory framework help manage the risk exposure of derivatives.

Chart 4

Derivatives Exposure of Top 10

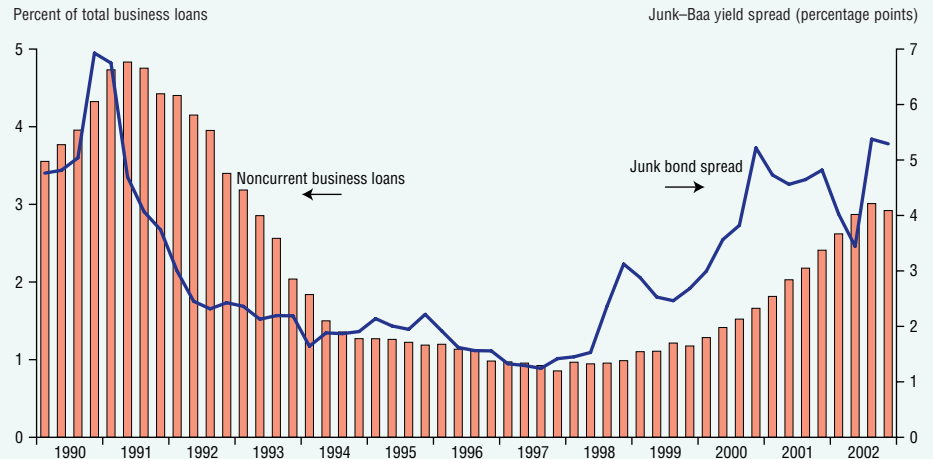


SOURCE: Report of Condition and Income, Federal Financial Institutions Examination Council.

Despite the tough operating environment and associated credit problems, banks have remained healthy, with high profits and capital levels.

Chart 5

Noncurrent Business Loans



NOTE: Noncurrent business loans are past due 90 days or more or not accruing.
 SOURCES: Report of Condition and Income, Federal Financial Institutions Examination Council; Merrill Lynch; Moody's Investors Service; Bloomberg LP.

Resilience in a Tough Environment.

The credit markets have been troubled for some time. Corporate bond defaults have risen, and investors in high-yield corporate bonds, or junk bonds, have demanded higher premiums over investment-grade instruments. Reflecting these trends, problem business credits have been rising at banks (*Chart 5*). Similar difficulties have occurred in consumer lending, as rising bankruptcies have kept problem loans fairly high (*Chart 6*).

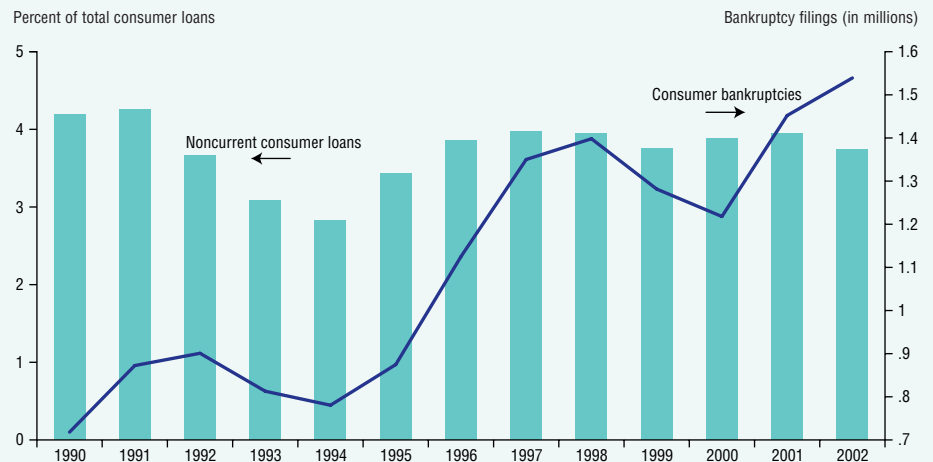
Despite the tough operating environment and associated credit problems,

banks have remained healthy, with high profits and capital levels. While some loan problems have surfaced, the banking system's return on assets has not only held its own, it has increased. In the 1990–91 recession, credit market difficulties were associated with low bank profits. Bank profits have been more resilient during the current round of credit problems (*Chart 7*).

The banking system's resilience is also evident in bank stock prices. Since the market began falling, small-cap, mid-cap and large banks have all out-

Chart 6

Noncurrent Consumer Loans

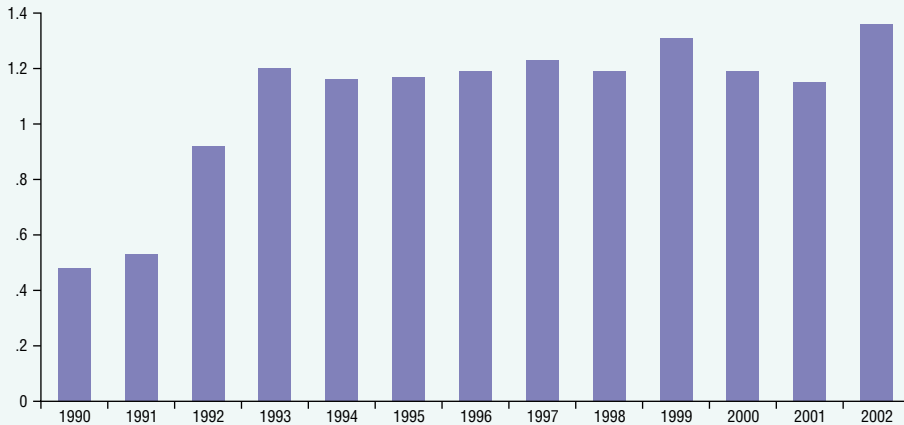


NOTE: Noncurrent consumer loans are past due 30 days or more or not accruing.
 SOURCES: Report of Condition and Income, Federal Financial Institutions Examination Council; Administrative Office of the U.S. Courts.

Chart 7

Bank Profitability

Return on assets (percent)



SOURCE: Report of Condition and Income, Federal Financial Institutions Examination Council.

performed the Standard & Poor's 500 (Chart 8). The especially strong performance of small- and mid-cap banks partly reflects the absence of widespread asset-quality problems, as the worst credit difficulties have been concentrated at certain types of large corporate borrowers, the traditional customers of larger banks. Even the large banks have managed to hold their valuations, despite deterioration in their business loan portfolios. These overall performance measures suggest the banking system has become more, not less, stable.

Innovation and Resilience. Many factors may have contributed to banking system resilience, but the growing use of risk management tools, including derivatives, has played a major role. Financial innovation opens new doors for segmenting and dispersing risk. As shown in our interest rate swap example, the end-user bank was able to convert fixed-rate payments into variable-rate payments. The dealer bank, in turn, may find a party that wants to convert a variable payment to a fixed one. Asset securitization and derivatives in the form of credit

default swaps are other examples of innovations used to segment and disperse risk.

As a result, banks can better manage risk by dispersing it to those most able to bear it. Organizations with little dependence on short-term liabilities, such as insurance companies and pension funds, often benefit from holding some of the risk segmented and dispersed through derivatives. When risk can be divided up and reshaped, so that it comes to the purchaser custom-made, financial market participants enjoy greater flexibility and efficiency.

A Remarkable Performance

The banking system's recent performance suggests free market policies have lived up to their promise of promoting innovation and more effective risk management. Banks have proven remarkably resilient in the face of several threats. Of course, given a sufficiently adverse operating environment, almost any banking system would find itself in serious straits. But with the recession, the war on terrorism, corporate governance and accounting scandals, and a declining stock market, banks have so far withstood a pretty severe test.

Along with innovation come greater financial complexity and perhaps a greater supervisory challenge. Supervisors are responding with better disclosure requirements and enhanced capital standards. Beyond that, instituting greater government control over derivatives is a bad idea.

—Jeffery W. Gunther
Thomas F. Siems

Gunther is research officer in the Financial Industry Studies Department of the Federal Reserve Bank of Dallas. Siems is a senior economist and policy advisor in the Research Department.

Chart 8

Bank Stock Prices

Index, January 1996 = 100



SOURCES: Standard & Poor's; Bloomberg LP.

Notes

- ¹ Credit derivatives, not shown in Chart 1, are relatively new and growing rapidly, with a notional value of \$642 billion.
- ² Current credit exposure covers only derivatives for which risk-based capital requirements specify a capital charge.
- ³ In addition to current credit exposure, capital requirements also take into account the potential future credit exposure over the life of a derivative.

The Giant in Mexico's Rearview Mirror

Mexico is growing increasingly concerned about its ability to compete with China in North America. The stakes, admittedly, could hardly be higher. The United States accounts for nearly 90 percent of Mexico's exports.

On several occasions, the Fox administration has accused China of luring investors away from Mexico with practices that violate international trade agreements. Along the U.S.–Mexico border, anecdotes abound of trade officials offering investors financial incentives to move their operations to China. Mexican manufacturers also complain that their labor costs are rising faster than those of their Chinese counterparts. These concerns were compounded two years ago, when the six-year expansion of Mexico's exports came to a screeching halt. Since then, half a million manufacturing jobs have been lost.

In reality, the current weakness of Mexico's industrial sector has little to do with China. In fact, Chinese exports to the United States have not fared much better than Mexico's in most sectors. Similarly, although foreign investment has weakened, this is largely due to the tapering off of U.S. investments of all types in fall 2000. The United States accounts for three-quarters of all foreign investment in Mexico.

The truth is that Mexico remains an attractive place to do business. In spite of the peso's supposed overvaluation and the relative rigidity of the country's labor markets, there is no evidence that labor costs have risen faster than labor productivity (*Chart 1*). By that measure, Mexican labor is not more expensive today than it was eight years ago. Additionally, in the past 10 years endemic fiscal and monetary uncertainty has been replaced by a remarkable commitment to policy discipline, in jarring contrast to other Latin American nations. Inflation is near historical lows, and recent Mexican administrations have spared no effort

to bring fiscal deficits down to less than 1 percent of gross domestic product. Finally, Mexico continues to offer unbeatable access to North American markets and a workforce more qualified than China's.

There is little doubt that in sectors where transportation costs, skill requirements and added value are low, China's expanding capacity will erode Mexico's market shares in North America. In textiles, for instance, Mexico has benefited from prohibitive tariffs the United States has imposed on non-NAFTA imports, but those tariffs are to come down under the aegis of the World Trade Organization (WTO). No country stands to benefit more from this opening than China, the WTO's latest member.

Like industrialized nations a generation ago, Mexico may have to concentrate on sectors in which its competitive advantage is strongest. In the automotive and household appliance industries, to name two, transportation costs remain a significant deterrent. China does not appear ready to overcome Mexico's 40

years' experience in sectors where skills and supply networks require time to develop.

To preserve its edge in those areas, it would serve Mexico well to address chronic weaknesses that, unlike the elusive Chinese threat, are within its control. These old problems include the high cost of electricity and the fiscal uncertainty that plagues the export sector, particularly maquiladoras. Because competition is restricted at all levels of the supply chain, electricity demand outpaces capacity. This issue has become a priority for the Fox administration, but no progress has been made yet. As for fiscal uncertainty, the recently approved budget makes permanent some of the privileges of maquiladoras, which is a step in the right direction. Structural reforms of this sort will help Mexico's export sector pick up where it left off in fall 2000.

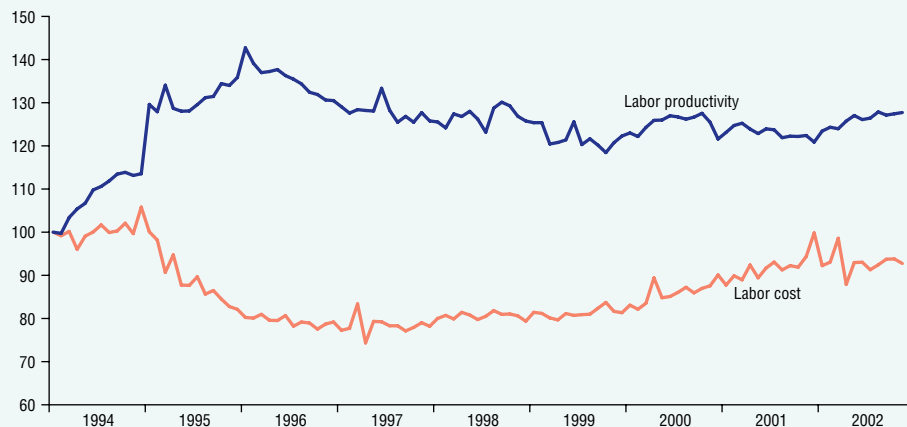
—Erwan Quintin

Quintin is a senior economist in the Research Department of the Federal Reserve Bank of Dallas.

Chart 1

Labor Productivity and Costs in Mexican Manufacturing

Index, January 1994 = 100 (in 2002 pesos)



NOTES: Labor productivity is the real value of production divided by hours worked. Labor cost is the total real compensation divided by hours worked.

SOURCE: Instituto Nacional de Estadística Geografía e Informática.

Regional Update

Despite looming global uncertainties, data suggest the Texas economy has improved slightly in recent months. Economic indicators are mixed, but there are positive signs going forward.

Texas payroll employment was flat throughout 2002. But while the employment situation didn't improve, Texans' take-home pay did. Texas personal income has risen for five consecutive quarters, with the strongest growth coming in the last two quarters for which we have data (second and third quarters of 2002). The coincident index (our timeliest measure of current conditions in Texas) has also emerged from negative territory—barely. Overall, the evidence suggests Texas may have entered a period of jobless recovery.

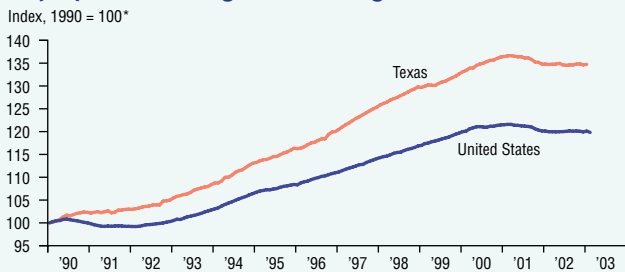
The leading index for Texas improved over the last quarter of 2002, which may signal a future upturn in the economy. Most of the components were positive, including higher well

permits and an improved Texas value of the dollar. Declines were posted in the help-wanted index and average weekly hours. Real oil prices during the fourth quarter also put a slight strain on the Texas economy, but recent developments in the energy sector suggest this will not be the case in upcoming months.

The Texas economic climate is lukewarm at present. Energy and defense-related manufacturing are doing reasonably well, and the decline in the transportation sector has begun to slow. But telecom continues to fare poorly, and the construction sector has weakened. While the economic fundamentals are sound in Texas and there is reason for optimism, the starting date for a full-fledged recovery remains unclear.

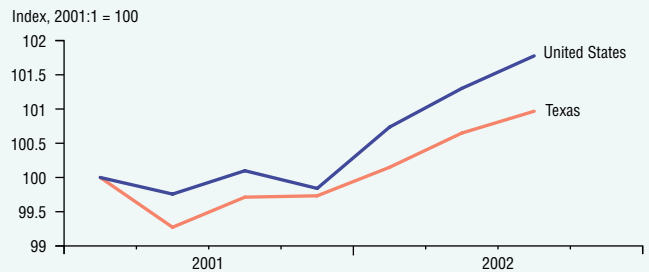
—Jason L. Saving
Priscilla Caputo

Employment No Longer Contracting

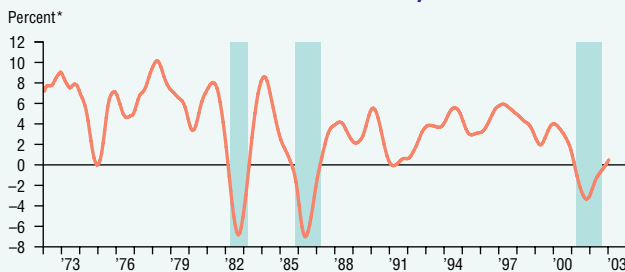


*Total nonfarm employment.

Personal Income Continues to Rise



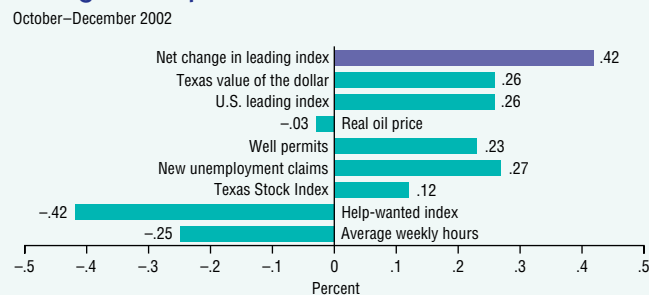
Texas Coincident Index Positive—Barely



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

NOTE: Shaded areas indicate recession.

Leading Index Improves Over Three-Month Period



Regional Economic Indicators

	TEXAS EMPLOYMENT*							TOTAL NONFARM EMPLOYMENT*		
	Texas Leading Index	TIPI† total	Mining	Construction	Manufacturing	Government	Private service-producing	Texas	Louisiana	New Mexico
12/02	112.3	124.5	155.9	559.6	990.4	1,632.2	6,066.4	9,404.5	1,919.8	764.3
11/02	112.4	124.7	156.0	556.8	993.4	1,630.6	6,068.3	9,405.1	1,919.0	766.4
10/02	111.6	124.8	156.2	556.3	996.0	1,628.1	6,070.8	9,407.4	1,921.2	764.1
9/02	111.8	125.3	155.8	556.0	998.5	1,626.5	6,076.6	9,413.4	1,920.4	759.5
8/02	113.5	125.1	158.2	556.3	1,001.9	1,621.5	6,081.4	9,419.3	1,922.0	759.6
7/02	113.0	125.3	156.8	558.9	1,005.1	1,618.2	6,082.7	9,421.7	1,912.5	762.8
6/02	114.6	124.9	158.0	559.3	1,006.2	1,621.7	6,112.3	9,457.5	1,916.7	762.5
5/02	115.8	125.0	159.3	559.9	1,009.7	1,614.4	6,117.2	9,460.5	1,919.9	761.0
4/02	115.9	124.5	160.1	559.7	1,012.6	1,610.3	6,119.6	9,462.3	1,921.4	761.1
3/02	115.3	124.1	159.5	560.0	1,014.0	1,609.8	6,117.6	9,460.9	1,923.5	762.5
2/02	114.7	124.4	160.8	559.4	1,018.0	1,606.7	6,113.9	9,458.8	1,922.9	762.9
1/02	115.5	124.5	161.7	561.1	1,024.8	1,603.4	6,112.3	9,463.3	1,926.1	762.2

* 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 Internet web site, www.dallasfed.org.

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