FOURTH QUARTER 2010

Southwest Economy

FEDERAL RESERVE BANK OF DALLAS

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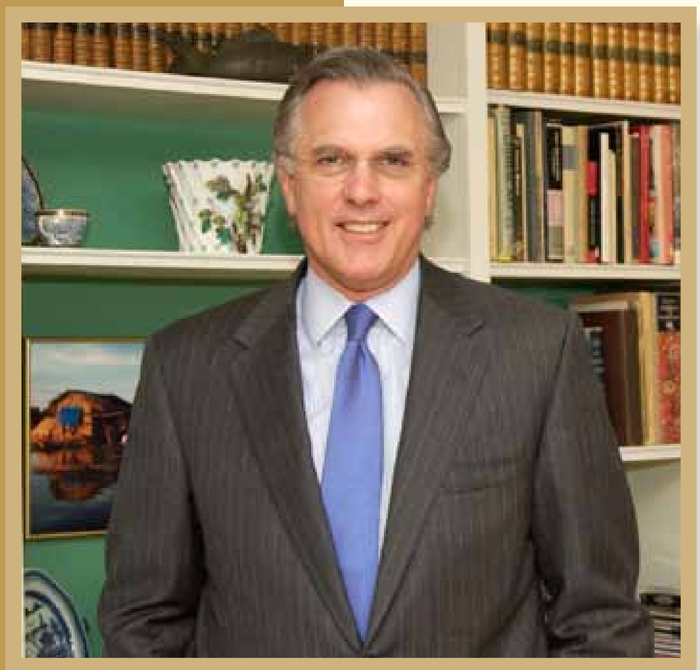


Our political leaders must summon the courage to pull up their socks and deal with our fiscal predicament in a way that corrects for the mismatch between future income streams and liabilities.

Texas has received its share of good press recently. While many states continue to shed jobs, the Lone Star state has added 158,300 since the beginning of the year, accounting for 18 percent of U.S. job growth in 2010. The pace of recovery is stronger here than in the nation so far, but unemployment is stubbornly high and employers remain reluctant to hire.

This hesitancy to add personnel partly reflects a still-uncertain economic environment that we, at the Dallas Fed, are closely monitoring. Anecdotal evidence suggests business decisions are being deferred in the absence of clarity, or as one Texas banker recently noted, "Our bank is flush with cash; people are sitting on the sidelines because of the uncertainty and are putting more money in our bank."

In recent speeches, I have argued that if there were greater certainty about future governmental policies, businesses would be more likely to take advantage of current record low interest rates the Federal Reserve has engineered, release the liquidity they are hoarding and invest in hiring and training a workforce that will propel the nation toward the steady job growth that would bring down the unemployment rate.

Fiscal problems around the country don't help. When the economy deteriorates and enters recession—as it did in late 2007—local, state and national governments typically face budget shortfalls. Over the past two years, Texas stood out because it appeared to encounter only modest fiscal imbalances after entering the recession later than most other states. Today, Texas confronts budgetary headwinds and a two-year shortfall of $21 billion, senior research economist Jason Saving notes in this issue of *Southwest Economy*.

The financial squeeze is a familiar tale around the country: declining tax revenue from slumping sales, property, business and income taxes, coinciding with increasing demand for state aid, most notably health and social services.

Our political leaders must summon the courage to pull up their socks and deal with our fiscal predicament in a way that corrects for the mismatch between future income streams and liabilities. This should simultaneously incentivize businesses to hire American workers while expanding production of goods and services.

When contemplating our situation, I am reminded of what one of the most respected presidential advisers of the last half-century—Jody Powell—once said. When asked why he and others in the Carter administration had taken up bowling, he replied, "Well, it's just too expensive to keep polo ponies." There are limits to what we can afford. No amount of monetary policy accommodation can counter that truism.

Richard W. Fisher
President and CEO
Federal Reserve Bank of Dallas

New Tool Gauges Impact of Exchange Rates on States

By Keith R. Phillips, Steve Brzezinski and Barbara Davalos

The RTWVD index will allow analysts to more precisely identify the exchange rates that most affect a state's economy.

International trade has grown considerably over the past three decades—U.S. exports as a share of gross domestic product totaled 12.7 percent in 2008, up from 9.7 percent in 1980. This expansion has heightened awareness of exchange rate movements and their impact on state economies.

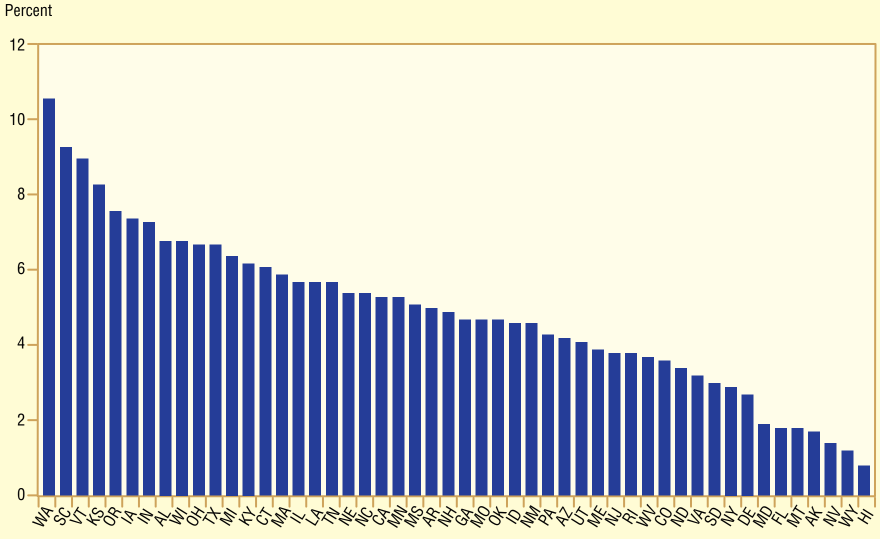
States with relatively more employment tied to international trade are increasingly likely to be sensitive to exchange rate movements.[1] If a significant share of Texas jobs is tied to the manufacture of products sent to Mexico and the value of the peso drops sharply—as it did in 1994 following the Mexican presidential election—Texas might suffer as shipments south of the border decline.

National exchange rate indexes do not always reflect individual state experiences. States at times face sharply different effective exchange rate shifts, often provoked by economic or financial crises.

Analysts need a tool to more effectively gauge the sometimes varied impact of exchange rate movements on states. In past research, the Federal Reserve Bank of Dallas built a real exchange rate gauge known as the Texas Value of the Dollar Index and found it to be a significant leading indicator of the state's economy.[2] This index compares the value of the dollar against the currencies of countries with which the state trades. In this article, we introduce a similar measure for all 50 states—the real trade-weighted value of the dollar (RTWVD) index.

In 2006, before the recent financial crisis, the five states with the largest share of jobs tied to exports were Washington (10.6 percent), South Carolina (9.3 percent), Vermont (9 percent), Kansas (8.3 percent) and Oregon (7.6 percent), U.S. Census Bureau data show (*Chart 1*).[3] The states with the smallest shares were Montana (1.8 percent), Alaska (1.7 percent), Nevada (1.4 percent), Wyoming (1.2 percent) and Hawaii (0.8 percent). The differences among states can be attributed to the presence of exporting industries and manufacturing's share of overall output.

Chart 1
Importance of Exports to Jobs Varies Across States
(Export-related jobs as a share of total private-sector jobs, 2006)



SOURCE: U.S. Census Bureau, Manufacturing and Construction Division.

In Washington, where manufacturing as a share of output ranked 30th, transportation equipment is a large industry and big exporter, representing more than half of what's sent abroad. The other leaders rank among the top half of states in manufacturing as a share of total output. Manufacturing plays a lesser role in states where export-related jobs are a small share of private employment; the five states with the fewest export-related jobs rank at the bottom for manufacturing as a share of output.

To assess the impact of exchange rates on states, the RTWVD weights the U.S. dollar exchange rate with various countries based on a state's share of exports. It is a "real" measure because it adjusts the exchange rate for different rates of inflation. The index will allow analysts to more precisely identify the exchange rates that most affect a state's economy.

Calculating State Exchange Rates

To produce the state measures, real exchange rates between the U.S. and its trading partners were created. State-specific measures were then formed by weighting the real exchange rates by the percentage of the state's exports sent to specific countries. For example, historically, about 45 percent of Texas exports have gone to Mexico, so the real value of the peso is multiplied by 0.45 to calculate the state's RTWVD.

The index is adjusted for each country's inflation rate so that it best represents the purchasing power of the dollar relative to the foreign currency. The Census Bureau's Origin of Movement series, produced by the Foreign Trade Division, is a primary data source. The series is available quarterly back to 1987 and contains current-year export sales from all 50 states to 242 foreign destinations. For a fuller discussion of export data, see the box, "*Estimating State Exports: Data Challenges*."

The index for Texas displays an interesting exception between 1998 and 2001. The series did not increase because Texas exports heavily to Mexico, and the real value of the peso strengthened against the dollar.

A data series showing U.S. exchange rates and the consumer price indexes (CPIs) of the U.S. and its trading partners is used to construct real exchange rates. The data are from the International Monetary Fund's International Financial Statistics program. For the most recent periods, which are unavailable from IMF, the figures are from the Federal Reserve Board of Governors and the Pacific Exchange Rate Service at the University of British Columbia.

A monthly real trade-weighted value of the dollar for each state is obtained using a calculation that can be roughly viewed as the weighted sum of the real exchange rates for the countries receiving a state's exports:

$$RTWVD^s_t = \sum_{j=1}^{25} [(C_{jt}/USD_t) \text{ x } (USCPI_t/CPI_{jt}) \text{ x } (Exports^s_j/Exports^s)],$$

where $RTWVD^s_t$ is the real trade-weighted value of the dollar for state *s* at time *t*. The first two ratios in the equation measure the real exchange rate by multiplying the exchange rate, measured as currency of country *j* (C_{jt}) per dollar (USD_t), times the U.S. consumer price index ($USCPI_t$) divided by the price index of country *j* (CPI_{jt}). To ensure that the real exchange rates are comparable across states, the values for all countries are indexed to equal 100 in June 1995. The indexed real exchange rate is then multiplied by the share of exports from state *s* sent to country *j* ($Exports^s_j$ / $Exports^s$). The export weights are based on average exports from 1997 to 2008.[4]

Comparing Index Values

The West South Central states and U.S. indexes, produced by the Federal Reserve Board of Governors, illustrate the differing movements in the RTWVD (*Chart 2*). The state indexes generally are highly correlated with one another and with the U.S. RTWVD. The index for Texas displays an interesting exception between 1998 and 2001. The series did not increase because Texas exports heavily to Mexico, and the real value of the peso strengthened against the dollar over this period. The RTWVD for Arizona, Mississippi and Tennessee also did not rise as much as the U.S. index during this period because these states ship a significant share of their exports to Mexico. Because Canada is the largest U.S. trading partner, the weakening of the Canadian dollar relative to the U.S. currency helps explain the U.S. RTWVD increase.

Next, the variance in the year-over-year

Estimating State Exports: Data Challenges

The state export data used to create the weights for the RTWVDs come from the Origin of Movement (OM) series compiled by the Census Bureau's Foreign Trade Division. They differ from data used by the Census Bureau to create the employment shares shown in Chart 1. The data in that graphic, which the Census refers to as "Exports from Manufacturing Establishments," measure the Origin of Production (OP) of exports but cannot be used for trade shares because they do not include the destination of exports.

A weakness of the OM series is that exports are designated to a state based on where they began their journey, not where production occurred. The location where an export begins its journey can differ from the production location in several ways. If a company combines several export products together or stores products in off-site warehouses before export, then the state where the consolidation or storage takes place is assigned the exports. Also, the exports of a wholesale or retail company are assigned to its home state, which may not be the location where the products were manufactured. Additionally, the value of the export is measured at the port of shipment and includes domestic shipping costs, inflating the value of goods shipped from the interior of the country.

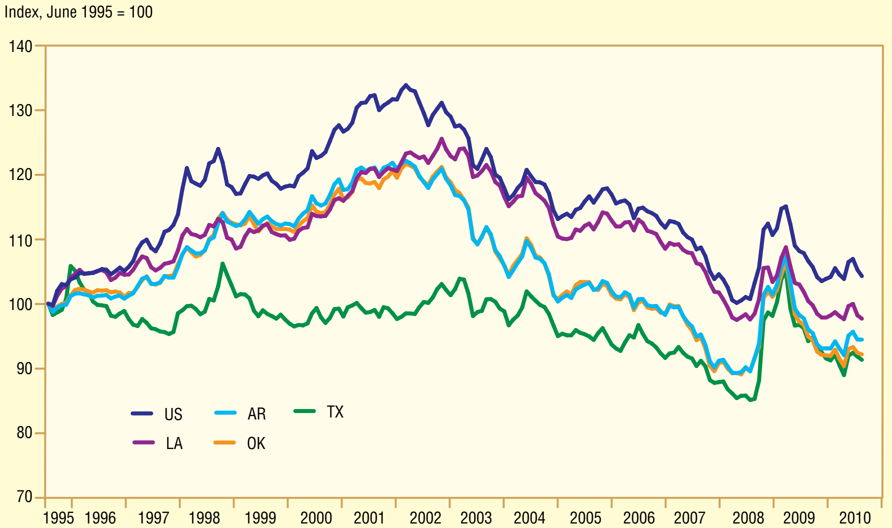
Despite the issues of consolidation and transportation costs, a recent study found that these two main sources of distortion tend to offset each other.[i] The study concludes that the OM data series as a whole may be considered a good representation of the OP series, although exports in some port states are overestimated and the data from small states are measured with the greatest percentage errors. While these criticisms are important, in general they aren't directly related to the use of the series as export share weights. For example, exports from port states may be inflated, but that does not necessarily mean that the shares of their exports by country are distorted. This is a more difficult question left for further study.[ii]

NOTES:

[i] Much of the information in this box is summarized from "State Export Data: Origin of Movement vs. Origin of Production," by Andrew J. Cassey, *Journal of Economic and Social Measurement,* vol. 34, no. 4, 2009, pp. 241–68.

[ii] Historically, a weakness of the OM data involved the volume of U.S. exports not designated to any state. The Census Bureau and Customs and Border Protection require exporters to provide the information used to compile the OM data through the Shipper's Export Declaration. In the early years of the OM series, exporters often left blank the origin of movement question. Beginning in 1988, the Census Bureau allowed the Massachusetts Institute for Social and Economic Research (MISER), now the World Institute for Strategic Economic Research (WISER), to estimate the origin of movement of incomplete forms using an algorithm. However, with the introduction of electronic filing of the declaration, the compliance rate increased sharply and the raw data haven't been adjusted since 2000.

Chart 2
RTWVDs for the West South Central States and U.S.



SOURCES: International Monetary Fund; Federal Reserve Board of Governors; Pacific Exchange Rate Service, University of British Columbia; Census Bureau; authors' calculations.

States have experienced quite different exchange rate movements since mid-1996, particularly during three distinct periods. Variances peaked in January 1998, February 2003 and November 2008.

percent change is calculated across the state indexes for every month in the sample to summarize movements for all 50 states. This change places the focus on broader index movements. If the variance were low and consistent over time, calculating separate indexes for each state wouldn't be useful because the changes in the U.S. RTWVD would sufficiently represent movements of each state.

However, states have experienced quite different exchange rate movements since mid-1996, particularly during three distinct periods. Variances peaked in January 1998, February 2003 and November 2008 (*Chart 3*).

A closer examination of state RTWVDs at these points helps explain the main factors behind some of the sharp historical deviations in exchange rates across states. In 1998, states exhibiting the largest year-over-year percent change in RTWVD were Alaska, California, Hawaii, Idaho, Maine, New Mexico, Oregon and Wyoming. These states experienced an average increase of 12.4 percent from December 1997 to August 1998 (*Chart 4*). By looking at changes in the real exchange rate between these states and their trading partners, we can better understand why the states deviated significantly from their peers.

During 1998, the Asian financial crisis caused the dollar to appreciate relative to most East Asian currencies. The eight states that experienced the largest year-over-year changes in RTWVD traded extensively with Thailand, Indonesia, South Korea, the Philippines, Hong Kong, Malaysia, Singapore and China. These states shipped an average of 46 percent of their total exports to East Asia, representing 53 percent of all U.S. exports to the region.

The sharp increase in the 2003 variance can be explained primarily by an 11 percent year-over-year change in Florida's RTWVD (*Chart 5*). Brazil is Florida's largest trading partner. In 2003, 14 percent of Florida's exports were shipped to the country, representing 23 percent of all U.S. exports to Brazil. Computers and electronic products and transportation equipment accounted for about 70 percent of the exports. Thus, a sharp depreciation of the Brazilian *real* against the dollar amid fears of default following the 2003 Argentinean debt crisis helps explain this episode.

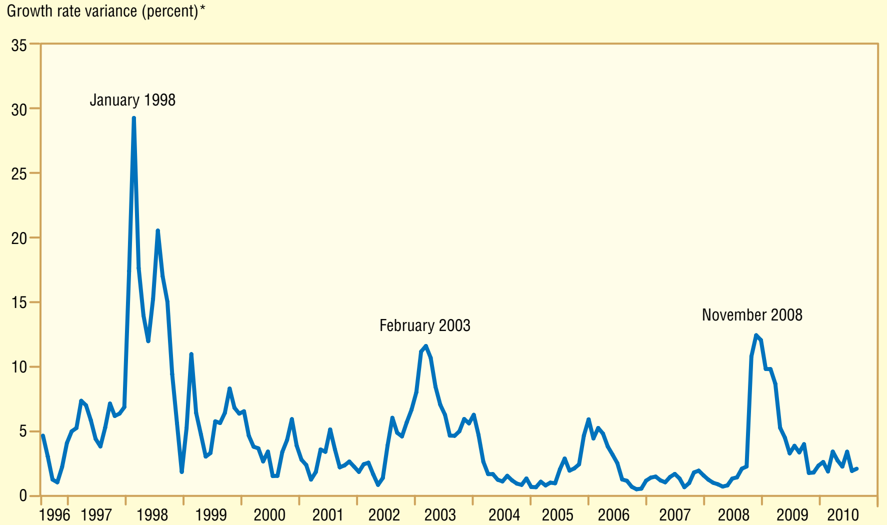
The change in the variance attributable to the Brazilian currency crisis is significantly smaller than the change following the Asian financial crisis in 1998. Brazil's currency woes were relatively milder, with far less global impact. The U.S. also trades much more heavily with East Asia than Brazil.

The third episode, with its peak in November 2008, can be attributed to the global financial crisis that began in the U.S. in late 2007. Between December 2007 and November 2008, 42 states experienced an average year-over-year increase of 14.5 percent in RTWVD. The dollar appreciated against a

> *Between December 2007 and November 2008, 42 states experienced an average year-over-year increase of 14.5 percent in RTWVD. The dollar appreciated against a large number of currencies amid a global flight to safety.*

Chart 3

Exchange Rate Movements Vary Across the States

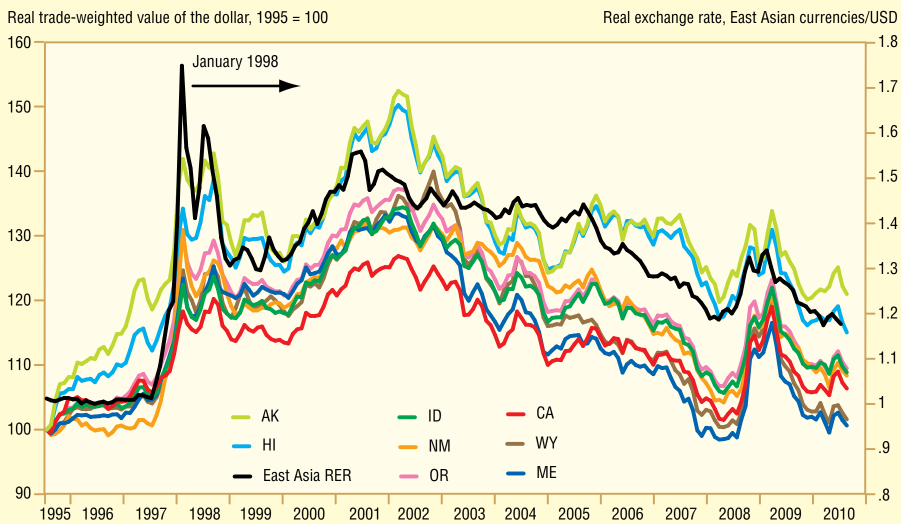


*Variance of the year/year percent changes in the state RTWVDs.

SOURCES: International Monetary Fund; Federal Reserve Board of Governors; Pacific Exchange Rate Service, University of British Columbia; Census Bureau; authors' calculations.

Chart 4

East Asian Crisis Had Big Impact on Many State RTWVDs



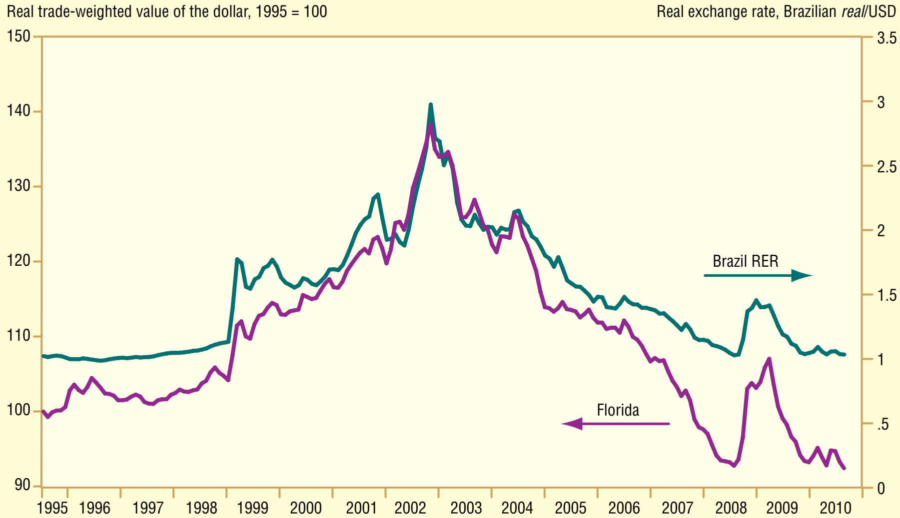
SOURCES: International Monetary Fund; Federal Reserve Board of Governors; Pacific Exchange Rate Service, University of British Columbia; Census Bureau; authors' calculations.

large number of currencies amid a flight to safety during the crisis. Consequently, the trade-weighted value of the dollar rose in all states, with larger increases in states that dealt extensively with developing countries.

Recent Dollar Movements

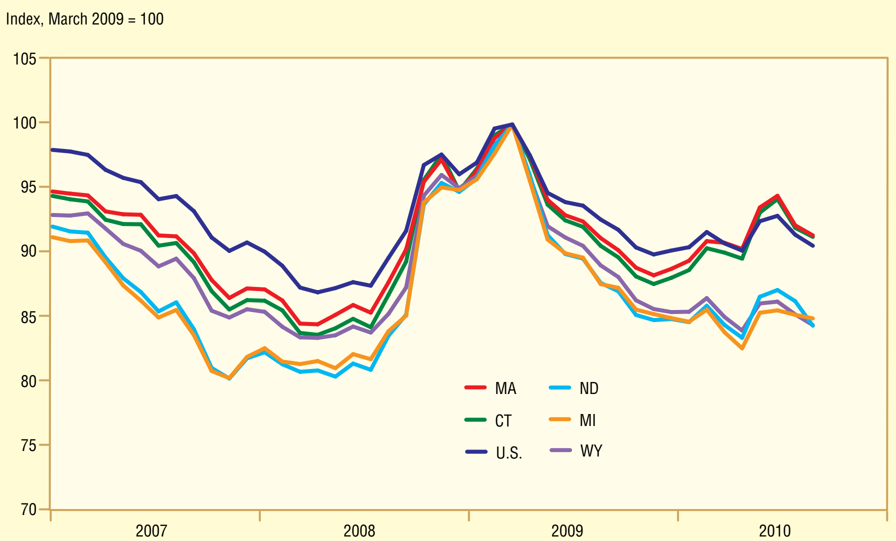
The U.S. RTWVD is down sharply from the high reached in March 2009 and close to prerecession levels of mid-2007 (*Chart 6*). The dollar's rise during the financial crisis likely pressured manufacturers throughout the U.S. as the cost of their products in foreign currencies rose. This price pressure has abated over the past year as the dollar weakened. The year-over-year decline in the dollar has been widely felt across states, as seen in Chart 3.

Chart 5
Real Exchange Rate with Brazil Heavily Influences Florida's RTWVD



SOURCES: International Monetary Fund; Federal Reserve Board of Governors; Pacific Exchange Rate Service, University of British Columbia; Census Bureau; authors' calculations.

Chart 6
Real Value of Dollar Falls from Peak, Approaches Precrisis Levels



SOURCES: International Monetary Fund; Federal Reserve Board of Governors; Pacific Exchange Rate Service, University of British Columbia; Census Bureau; authors' calculations.

While the U.S. index fell 9.5 percent from March 2009 to August 2010, Michigan, North Dakota and Wyoming experienced declines of slightly more than 15 percent, while Massachusetts and Connecticut saw declines of less than 9 percent. But these state RTWVDs generally returned to their prerecession levels, as the U.S. index did.

Thus, across the states, exporters for much of this year have likely benefited from reduced foreign currency prices for their products following the flight to the U.S. dollar.

A More Precise Measure

RTWVD indexes for each U.S. state afford a view of differing exchange rate movements. As the U.S. dollar appreciates against the currencies of countries to which a state typically exports, products become more expensive for the importing country and can lead to a smaller demand for exports. The reverse is true when the dollar depreciates. Some of these effects can be offset by declining costs for imported components and by the exchange rate hedging strategies of exporting companies.

The overall impact of exchange rate movements on a state's economy can be evaluated by examining past movements and how they relate to the state's business cycle or manufacturing output. The state-level RTWVD indexes, which the Dallas Fed will publish monthly, should provide a more precise measure of the exchange rate movements most important to state economies.[5]

Phillips is a senior research economist and advisor at the San Antonio Branch of the Federal Reserve Bank of Dallas. Brzezinski and Davalos were interns at the San Antonio Branch.

Notes

The authors thank Frank Berger for his assistance with calculation of the real exchange rates and other suggestions, and James Nordlund for creating a program that checks for errors in program codes for the state indexes. We also thank Pia Orrenius for helpful comments and suggestions.

[1] While a state's sensitivity to exchange rates is also affected by its international imports, data on state imports by source country are not available for a consistent time period and less is known about the quality of the data.

[2] See "The Texas Index of Leading Economic Indicators: A Revision and Further Evaluation," by Keith R. Phillips, Federal Reserve Bank of Dallas *Economic Review*, July 1990.

[3] While data are available for 2008, we use 2006 data because the global financial crisis may have distorted exports for 2008. To access this data, see www.census.gov/mcd/exports/.

[4] Though export data exist for more than 200 countries, CPI information is much more restrictive. The calculation is limited to each state's top 25 export destinations; complete data are used for most states, with 89 percent of exports covered on average. The indexes begin in June 1995 because of insufficient prior CPI data.

[5] The state RTWVD indexes will be published on the Dallas Fed website, www.dallasfed.org, beginning in March 2011.

OnTheRecord

A Conversation with **Anil Kumar**

Baby Boomers Face a Changing Retirement Landscape

Many baby boom era workers, those born between 1946 and 1962, count on various retirement benefits accumulated during their working years to ensure adequate resources as they grow older. A man turning 65 today can expect to live to age 83; a woman to age 85, according to Social Security Administration data. One in 10 will live past age 95.[1] Dallas Fed economist Anil Kumar discusses the retirement outlook for baby boomers and growth of 401(k)-type retirement accounts.

Q. How has the retirement outlook for baby boomers changed over the past 30 years?

A. One can look at how the situation has evolved by comparing how older members of the baby boom generation are doing relative to those who came before them. Recent studies comparing the wealth of the different groups show that the leading edge of the baby boom generation, which is starting to retire, has on average accumulated roughly as much wealth as those six to eight years older, at the same point in their lives. One study compared the total net worth of baby boomers between 40 and 55 years old in 2001 to groups of the same age in 1983 and 1989 and found little evidence that the boomers were worse off.[2] Though findings differ, the studies lead to the conclusion that, contrary to some analysts' arguments, boomer wealth hasn't deteriorated relative to those who preceded them. It will be interesting to see how succeeding generations fare.

Q. What happened to the employer-sponsored, defined-benefit plans common before 1980 that promised a regular monthly payment to retirees?

A. The popularity of traditional defined-benefit plans has waned since the IRS clarified rules for the now more common defined-contribution plans, such as the 401(k), in 1981. By then, structural changes in the labor market encouraged the trend toward 401(k)-type plans. A long-term decline in manufacturing and an emerging service sector increased workforce mobility and heightened the need for more portable retirement benefits. Technological change through the 1980s and 1990s, led by the emergence of personal computers and later the Internet, also contributed to workers' skills becoming increasingly transferable across companies. The developments reduced the need to reward long tenure through defined-benefit pensions based on years of service at the company and the worker's final salary. Under defined-benefit plans, job jumpers were penalized for not staying at one place long enough to obtain retirement benefits. A secular decline in unionization of the U.S. workforce also contributed to a diminished role for generous pension plans, prevalent among union workers.

As defined-benefit plans grew more difficult to administer and operate, many firms abandoned them. Retirement benefits became problematic when plans weren't in a position to make promised payments. If a defined-benefit plan is inadequately funded, the employer can freeze benefits or, in times of financial distress, even terminate pensions and turn them over to the Pension Benefit Guaranty Corp., a federal agency that assumes payment liability, often at pennies on the dollar. This occurs most often during economic downturns, when many companies have had to switch to defined-contribution/401(k) pension plans. These cost-structure considerations aren't limited to the private sector. Many state and local governments' defined-benefit plans pose particular underfunding concerns after officials made unsustainable pension promises to employees, leaving taxpayers on the hook.

Q. What role does Social Security play for retiring baby boomers?

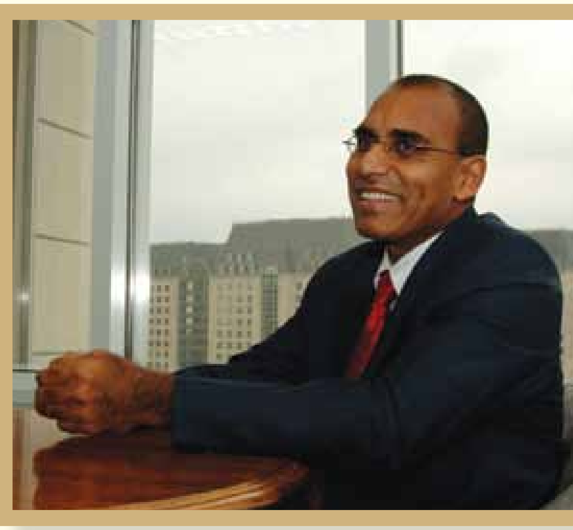
A. Social Security remains the foundation of seniors' retirement income. For about one-third of retirees—including many receiving few or no pension benefits—Social Security accounts for more than 90 percent of income. As the statutory age for receiving full Social Security benefits rises to 67, Social Security will replace a smaller portion of preretirement earnings for low-income workers—49 percent by 2025, compared with 54 percent now.

More troubling, perhaps, is the projection in the 2010 Social Security Trustees' Report that the trust fund is on a pace to become insolvent by 2037, when it will provide just 76 percent of promised benefits. While Social Security will continue playing a central role in workers' retirement income, questions about future benefits will prompt boomers to increasingly rely on personal savings and pensions.

Q. What are the drawbacks of a greater role for defined-contribution plans, such as 401(k) plans, in retirement income? What are the benefits?

A. With 401(k) plans, employees make elective pretax contributions to their personal accounts. The company may match a portion of a worker's contribution. In a typical 401(k) plan with employer payment, the firm matches 50 percent of a worker's contribution up to 6 percent of pay. A central feature of a defined-contribution/401(k) plan is that the employee essentially controls the account and makes all investment decisions.

"A long-term decline in manufacturing and an emerging service sector increased workforce mobility and heightened the need for more portable retirement benefits."



The worker bears the investment risk, the inflation risk (that returns won't meet or exceed the cost of living) and the longevity risk (outliving available funds). There is also the issue of "leakage"—in some instances before retirement, the 401(k) provides an enticing source of cash that can be spent, with income tax penalty, leaving little or nothing for later.

When workers change jobs, they typically get a lump sum distribution of their 401(k) balances from their previous employer. Many may be tempted to spend the lump sum, rather than rolling it over into an Individual Retirement Account or other qualified retirement vehicle.

Compared with defined-benefit plans, participation in 401(k) plans isn't automatic, and about 30 percent of workers don't enroll. Recent research has emphasized behavioral aspects, such as procrastination and inertia, as reasons why workers forgo the plans, often failing to take advantage of employer contribution matching and, thus, leaving money on the table.

Also, workers are exposed to investment risk. What if they make mistakes by investing too much or too little in equities or too much in the employer's company stock? Overconcentration in such shares can be financially devastating if the firm goes bankrupt and the shares lose all their value. Employees need to guard against this "Enron Effect," which wrecked thousands of workers' savings when that company collapsed in 2001.

Despite the challenges, 401(k) plans offer many benefits. They don't involve the significant job-change risk associated with defined-benefit plans. Defined-contribution/401(k) plans are portable, less affected by time spent with a single employer and highly suitable for an increasingly mobile workforce. They are also fully funded as opposed to defined-benefit plans that can suffer underfunding. Also unlike defined-benefit plans, 401(k)s don't provide powerful incentives to retire at a certain age and, therefore, can encourage additional years at work, a desirable goal considering the need to finance more years of retirement because of increasing life expectancy.

Q. How did the Pension Protection Act of 2006 improve 401(k) plans?

A. To overcome some of the problems with employer-backed pensions, Congress passed the Pension Protection Act in 2006. Besides tightening funding requirements for underfunded traditional defined-benefit plans, the act removed legal barriers to firms implementing automatic participation in and contributions to 401(k) plans for new employees. Workers can, of course, opt out of the plan at any time. Once an employee is in, the act provides guidelines for administering automatic contributions, which may escalate to as much as 10 percent of pay.

The legislation also addressed concerns that employee 401(k) investment selections may be inadequately diversified. The act created a default investment option that includes target-date funds that automatically rebalance to more conservative holdings as a worker approaches retirement. The act also required that companies allow diversification out of holdings of the sponsoring firm's stock. Finally, the act lowered legal barriers that limited the advice pension plan managers may provide participants.

Q. What have we learned about defined-contribution plans during the economic downturn?

A. The financial crisis in 2008 exposed 401(k) retirement assets to their stiffest test ever. There was general concern that panicked workers nearing retirement would lose money by moving out of equities near the bottom of the market. Some of these worries appear overblown. Vanguard and Fidelity Investments, two of the largest retirement fund managers, reported that most defined-contribution/401(k) account holders didn't bail out of equities. Vanguard data found that only 16 percent of account holders moved their plan assets from one investment option to another in 2008. There was little evidence of panic trading.

Q. What do the changing trends in retirement income mean for the overall economy?

A. Looking at the ratio of pension wealth to combined wage and salary income suggests that the emergence of defined-contribution/401(k) plans may have increased savings. Private pension wealth as a percentage of private sector wages rose to about 200 percent in 2009 from 46 percent in 1980. Although we don't know exactly how this figure would have changed without the defined-contribution/401(k) plans, it seems to indicate that their growth since the 1980s played a role—a tentative sign that retirement prospects have improved in the past 30 years.

According to classical economic models, a dollar in pensions or Social Security should reduce other saving by an equivalent amount, leaving the overall amount set aside unchanged.

However, in practice, pensions don't appear to crowd out other savings, dollar for dollar, and can, therefore, boost the overall saving rate.[3] Higher saving provides funds for investment and leads to greater economic growth.

Notes

[1] See www.socialsecurity.gov/planners/lifeexpectancy.htm.

[2] "The Retirement Wealth of the Baby Boom Generation," by Edward N. Wolff, *Journal of Monetary Economics*, vol. 54, no. 1, 2007, pp. 1–40.

[3] "Pensions and Household Wealth Accumulation," by Gary Engelhardt and Anil Kumar, *Journal of Human Resources* (forthcoming).

Poor State Finances Deepen Recessionary Hole

By Jason Saving

States are in the midst of perhaps the most challenging fiscal environment of the postwar era.

In the summer of 2009, California paid vendors with registered warrants rather than cash. The warrants, a kind of IOU, were used as lawmakers struggled to close a gap between expenditures and revenues approaching 25 percent of the California budget—a nearly unprecedented shortfall. As the situation deteriorated further in 2010, the governor ordered the wages of more than 150,000 state workers temporarily reduced to the statutory federal minimum of $7.25 per hour and directed the employees to take three unpaid furlough days each month until California's underlying budget problems could be addressed.

Given a rapidly deteriorating national economic environment, it is perhaps inevitable that some states would be especially squeezed—and the particulars of this recession were especially unkind to California. Its geography and zoning laws made it vulnerable to real estate downturns, and some of its leading sectors, such as semiconductors and the Hollywood entertainment industry, are highly tied to world demand. California also has a unique legislative structure in which a two-thirds majority is necessary to make fiscal adjustments that many other states could accomplish by simple majority. A recession that combines a real estate bust *and* a collapse in world demand *and* significant budgetary adjustments would almost inevitably hit California hard.

But practically every state is suffering during this recession, many with quite different characteristics. All 50 states requested and received funds from aid programs such as 2009's American Recovery and Reinvestment Act to weather these extraordinary economic times. And almost every state has undertaken spending cuts or tax increases or both over the past two years, ostensibly tied to the recession from which the nation is only now beginning to emerge.

To examine the fiscal health of states, it's helpful to look at their health immediately before the recession—how many ran in the red and why those shortfalls emerged during good economic times. Looking at the extent to which these figures worsened over the past three years—as the nation struggled through the longest downturn of the postwar era—provides perspective on the depth of the problems. Additionally, why do budget pressures become especially pronounced during recessions and what, if anything, can be done to mitigate them? Finally, there is the case of one state that only now confronts a large shortfall, Texas, and why it came to the party so much later than its peers.

Where States Stood

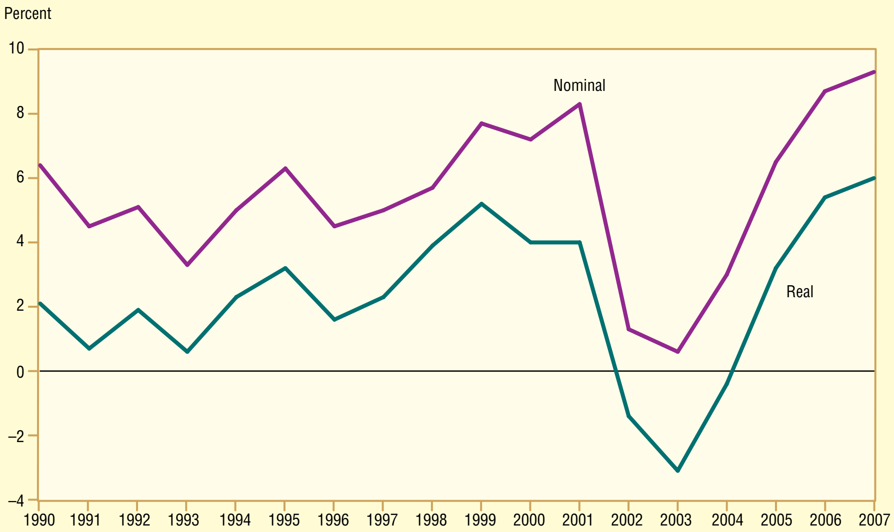
At the onset of the 2007–09 recession, 13 states wrestled with budget gaps totaling at least $23 billion. Another 11 states faced revenue shortfalls and/or expenditure overruns leaving them vulnerable to deficits, especially if economic growth slowed.

Standard economic theory suggests that states should run surpluses during expansions. Extra revenue can be set aside into rainy-day funds to help weather recessions that inevitably follow expansions. How is it that almost half the nation's 50 states experienced fiscal pressures even before the recession?

In 2007, states ramped up spending at a 9.3 percent annual rate (6 percent in real terms)—the strongest such growth in two decades (*Chart 1*). Among states boosting spending at above-average rates were Massachusetts and New York in the northeast, Florida and South Carolina in the southeast, Arizona and New Mexico in the southwest and California in the west—all would be particularly hard-hit in the crisis that followed (*see map*).

A second cause is a greater reliance on borrowing. Between 1993 and 2001, overall state debt grew 5 percent annually, varying only slightly from year to year in response to business cycle considerations. As the 2002–03 recession struck, increased

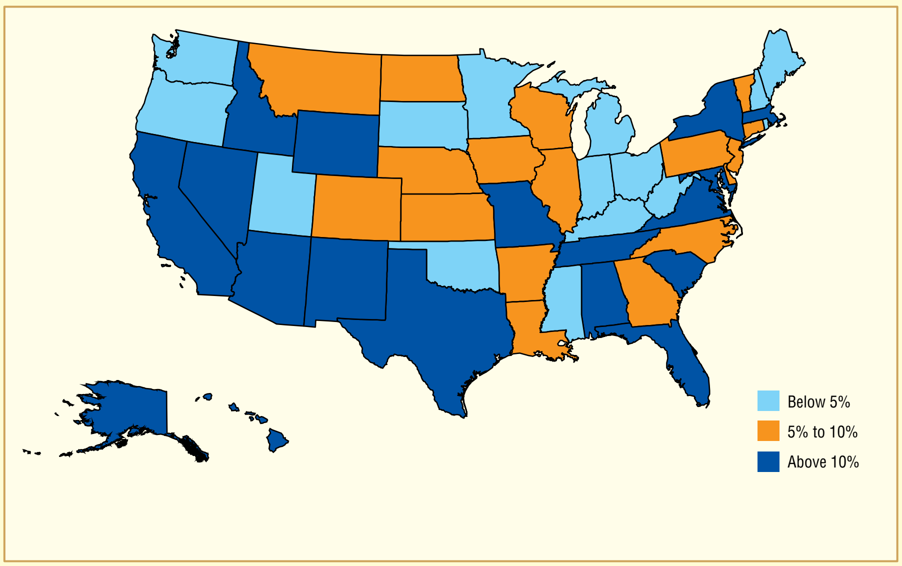
Chart 1
State Budgets Expand During Housing Boom
(Budget changes by fiscal year)



SOURCE: "The Fiscal Survey of States," December 2007, National Association of State Budget Officers.

In 2007, states ramped up spending at a 9.3 percent annual rate—the strongest such growth in two decades.

State Expenditure Growth, Fiscal Year 2007



SOURCE: "The Fiscal Survey of States," December 2007, National Association of State Budget Officers.

demand for state services along with lower-than-expected revenue drove overall state debt above the trend line (*Chart 2*). When that downturn ended, however, state debt levels did not return to trend—as both economic theory and previous experience would predict. Instead, policymakers continued borrowing at the elevated pace they had embarked upon during the recession, spending at historically high rates while also offering small but significant tax cuts. This left states poorly positioned for the financial crisis that soon arrived.

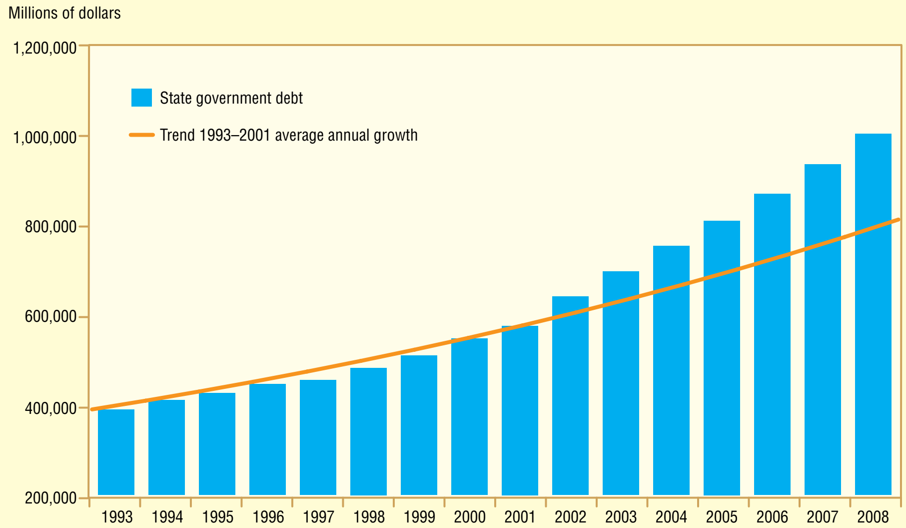
National Recession Strikes

In fiscal 2010, 48 states wrestled with a total shortfall of $129 billion—five times the gap they faced three years before. Re-

Chart 2

State Government Debt Grows Above Trend in 2000s

(Debt outstanding by fiscal year)



SOURCE: Census Bureau.

Texas stands out as a state that faced only modest fiscal pressure over the past two years but now confronts more significant headwinds.

markably, this number is after $63 billion in additional federal funding, such as stimulus aid, arrived. Without that money, the deficit would have ballooned to $192 billion.

The latest figure, along with smaller gaps in 2008 and 2009, led local lawmakers to make painful choices. In those years, 43 states reduced funding for education, including 32 that pared kindergarten–12th grade education funding.[1] Thirty-one states reduced public health and welfare outlays by raising eligibility requirements, curtailing dental coverage or mental health benefits or reducing physician reimbursement rates. And 29 states pared support for the elderly and disabled, often scaling back mental health and in-home nursing care, while also sometimes instituting across-the-board benefit cuts.

These painful choices are reflected in overall levels of state spending, which fell in 2010 for 40 of the nation's 50 states. Several large states with serious shortfalls, including New York and California, reduced spending by less than the national average and still confront difficulties. Others, such as Florida and Nevada, cut spending more dramatically during fiscal 2010.

The arbiter of U.S. recessions, the National Bureau of Economic Research's Business Cycle Dating Committee, declared that the recent downturn ended in June 2009. With the recovery under way, one might expect improved forecasts for 2011 and 2012. That isn't the case. Aggregate state shortfalls exceeding $100 billion are expected for each of the two years, with sizable spending cuts likely as states further retrench from the rapid expenditure growth of the prerecession years. Additionally, at least 30 states increased taxes during fiscal 2009 and 29 did so during this fiscal year, the 12-month period that for most states ended June 30.

This suggests widespread fiscal imbalances across virtually every part of the country during the 2007–09 recession and its aftermath.

Becoming More Recession-Proof?

While it's impossible for a state to be completely recession-proof, economic theory suggests some revenue sources are more resilient than others during downturns. Consumption remains much more stable than income during recessions, for example, because individuals tend to smooth their consumption over time even when experiencing dramatic swings in income, such as following job loss.

Aggregated state revenue figures from fiscal 2009, the most recent year for which complete data are available, show sales tax revenue dropped 6.2 percent during the 12 months. But state income tax revenue fell by almost twice that amount, 11.2 percent, and state corporate income tax revenue declined even more, 16.9 percent. And to the extent those income tax fluctuations are driven by individuals and corporations seeking out lower-cost states, the recession's fiscal impact could linger for some time in areas where net outmigration is occurring.

This doesn't necessarily mean there should be less emphasis on income taxes. States relying on those levies tend to experience revenue booms in good economic times as income growth outpaces consumption—the flipside of enduring greater suffering during busts. Additionally, income-tax-reliant states can maintain greater progressiveness in their tax systems, ensuring that upper-income individuals, with the greatest resources, contribute a disproportionate share of revenue. Also, sales tax regimes run the risk of losing revenue as commerce shifts toward untaxed out-of-state Internet sales. While economists and policymakers have devised sales-tax-like "consumption-tax" plans that overcome these objections, such proposals are controversial too, leading some states to conclude that cyclical revenue sources such as the income tax should remain a significant funding source.

On the expenditure side, some have proposed that state spending be pegged to a constant share of that state's economy, automatically contracting during recessions and rising during expansions. This approach fails to recognize that demand for government services goes the other way—citizens hit by bad economic times increasingly turn to the government for help. This is also true for education and even prisons, as poor job markets induce individuals to return to school or, in some cases, turn to crime. Even short-run reductions in nutrition and learning, and short-run increases in crime, can have long-run consequences.

Thus, there are no easy answers to fiscal volatility. Of course, states could better cope with recessions by making larger deposits into "rainy day" funds during good economic times, as some policymakers have suggested. But this, too, involves sacrifice because these deposits cannot simply appear out of the ether and must be funded by spending less or taxing more. The bottom line: Barring radical changes in state revenue and expenditure systems, one can expect states' fiscal health to deteriorate during future recessions just as it has in past downturns.

What About Texas?

Texas stands out as a state that faced only modest fiscal pressure over the past two years but now confronts more significant headwinds. It entered recession months later than the nation (*Chart 3*) and created more jobs during 2008 than all the rest of the country, bolstering revenue at a time when much of the country struggled. But the lingering aftereffects of recession have ramped up demand for health services through the Medicaid program and other social welfare expenditures. The needs are particularly acute in Texas, which has the greatest proportion of uninsured individuals in the nation. Coupled with a revamped franchise tax bringing in $3 billion per year less than expected from business, a big drop in energy prices and the expiration of roughly $12 billion in stimulus monies, the state now faces a shortfall for the next biennium estimated at up to $21 billion—or 11.5 percent of its $180 billion budget.

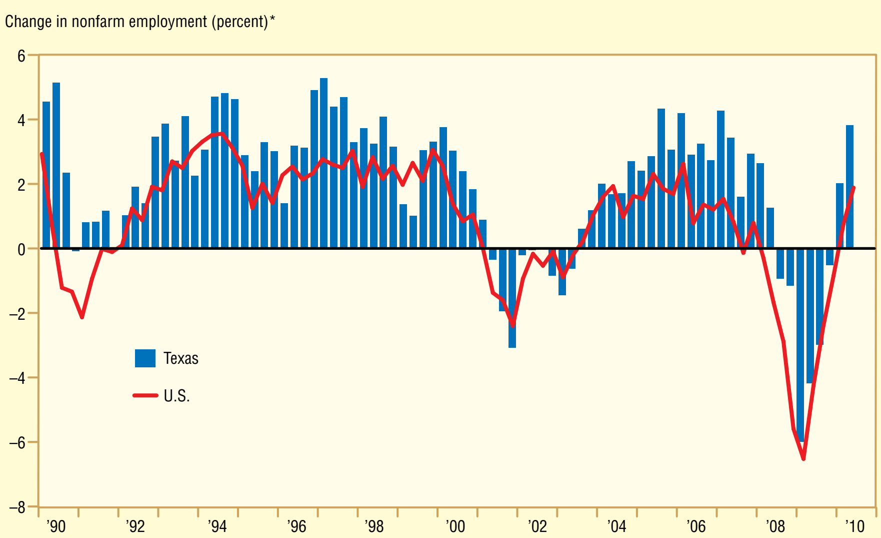
Other states will face similar pressures, even if the national economy gradually regains its footing next year. Of course, large fiscal shortfalls in Texas and other states are not surprising in an era of trillion-dollar federal deficits. The difference is that every state (with the exception of Vermont) is constitutionally required to fill its shortfall—and make painful choices in so doing.

Postwar Era Challenges

States are in the midst of perhaps the most challenging fiscal environment of the postwar era. Spending and revenue patterns broke away from trend in the years leading up to the recession, leaving states relatively poorly positioned to overcome the slowdown. And while they have made adjustments to deal with $100 billion-plus gaps in each of the past two years, further action will be needed in 2011 and 2012. Some states that have skirted the edges of shortfall, thus far, may still face significant fiscal pressure.

Saving is a senior research economist and advisor in the Research Department at the Federal Reserve Bank of Dallas.

Chart 3
Texas Follows U.S. into Recession in 2008



* Quarter-over-quarter, seasonally adjusted, annualized rate; quarterly employment figure is the last month of the quarter.

SOURCE: Bureau of Labor Statistics.

Note

1 "The Fiscal Survey of States," various years, published by the National Governors Association and the National Association of State Budget Officers.

NoteWorthy

QUOTABLE: *"A significant Texas budget shortfall may prompt both spending cuts and tax increases and could pose an important downside risk to the strength of the recovery going forward."*

—Anil Kumar, Senior Research Economist and Advisor

AIRLINES: Texas Carriers Fly Fuller; Mergers Ahead

Texas-based Southwest Airlines and American Airlines have seen more passengers and fuller planes this year. Passenger traffic rose a combined 4.7 percent year over year through October, while the average load factor—a measure of capacity utilization—ticked up 1.5 percentage points.

Carriers experienced a summer of increased demand and strong profit growth as the U.S. airline industry healed from the recession and a rough 2009. Resurgent business travel paced the revenue and profit increases.

In the third quarter, Southwest Airlines Co. reported earnings of $205 million, a sharp turnaround from a $16 million loss in the prior-year period. American's parent company, AMR Corp., followed suit with its first profitable quarter (excluding special items) since third quarter 2007. The load factor for all U.S. airlines in August 2010 rose 0.6 percentage points from August 2009 as demand climbed and capacity was slow to expand. Though heightened, demand remains below what it was before the downturn. In October, Texas air transportation employment fell slightly from the prior month and trailed prerecession levels of June 2008 by 10.1 percent.

Mergers promise change for Texas' airline industry. Southwest plans to take over AirTran Holdings Inc. of Atlanta and keep corporate operations in Dallas, while Houston-based Continental Airlines Inc. merged with Chicago's UAL Corp. on Oct. 1 and began relocating corporate operations from Texas.

—Adam Swadley

INCOME AND POVERTY: Texans Slip During Recession

Benchmarks of economic well-being show that Texas experienced a pattern of highs and lows similar to that of the nation during the recession. However, Texas continues to rank below other states in many of the measures.

Texas' median household income fell 2.4 percent to $48,259 in 2009, well below the U.S. average of $50,221, data from the American Community Survey show. The national decline was sharper, though, at 2.9 percent. Texas' income ranking among the states and the District of Columbia improved to 26th last year from 35th in 2005.

Texas' poverty rate rose 1.2 percentage points to 17.2 percent in 2009, compared with an increase of 1 percentage point to 14.3 percent in the U.S. Nearly 400,000 additional people fell below the poverty line in the state, pushing the total to more than 4 million.

Texas has had the nation's ninth-highest poverty rate for the past four years. Poverty levels were highest in Mississippi, Arkansas and Kentucky. Among Texas counties surveyed, Hidalgo in the Lower Rio Grande Valley posted the highest rate, 35.4 percent, while Williamson near Austin had the lowest, 4.7 percent.

The data also show that Texas had the nation's largest share of people without health insurance coverage. The figure increased 0.4 percentage points to 23.8 percent in 2009. The U.S. share rose 0.5 percentage points to 15.1 percent. Of those without coverage in Texas, about 70 percent live above the poverty line.

—Yingda Bi

GULF OIL SPILL: Costs of Well Disaster Still Piling Up

British Petroleum's Macondo well blew out April 20 as the Deepwater Horizon platform sunk. By the time the well was capped on July 15, an estimated 4.9 million barrels of oil had flowed into the Gulf of Mexico.

The U.S. government and BP are still assembling a definitive estimate of the flow; the final figure is likely to be a source of contention because it will be the basis for determining financial penalties.

Under various environmental protection laws, fines range from $1,100 to $4,300 per barrel. If they come in at the high end of this range, total penalties could top $20 billion. As of Sept. 30, BP's total cleanup, containment and business compensation expenses had already exceeded $11 billion.

The oil spill affected not only the Gulf ecosystem, but also area states' economies. From Texas to Florida, tourism and services activities slumped due to vacation cancellations and lost business.

BP set up the Gulf Coast Claims Facility to compensate those affected. As of Nov. 22, the claims facility had paid out more than $1.98 billion.

The incident also ushered in a deepwater-drilling moratorium that was only recently lifted. A lag in the resumption of drilling activity is likely because of the time required to grant new permits.

—Jackson Thies

Financial Services

Banking Within Reach of More Mexicans

In 2008–09, Mexico was wracked by the global financial crisis, suffering its largest one-year economic contraction since at least the 1930s. But the banking sector withstood the shock and made important strides in one area—bringing previously unbanked households into the financial system.[1]

Access to banking services contributes to the expansion of wealth and provides households with increased security, greater convenience and reduced borrowing costs.

A concerted effort to lower the cost and increase the supply of financial services in Mexico has been effective in improving accessibility. The share of Mexican households with at least a simple bank account rose from less than 25 percent in 2007 to 48 percent in 2009, according to a survey by Mexico's Ministry of Finance.

Banking among young households is even more widespread. Fifty-nine percent of households headed by 19- to 44-year-olds had some type of bank account in 2009, up from 45 percent in 2007. This age group is not only expanding its use of banks, but also beginning to access multiple products (*Chart 1*).

Banking penetration almost doubled in the two-year period in spite of the difficult economic situation and a general distrust of financial institutions. Much of this progress can be attributed to banks' efforts to offer their services outside traditional brick-and-mortar branches.

Many households were unbanked because they were beyond the geographic reach of banks. One of the most successful strategies enlisted traditional retailers—through either bank charters to retail stores or joint ventures between commercial banks and merchants.[2] Generally, services at these locations are limited to basic products such as consumer loans, small savings accounts and deposit accounts linked to debit cards.

Banking regulators also introduced a *banco de nicho*, or niche bank, charter. It differs from a commercial bank charter and is designed to reduce the regulatory burden for small institutions. Niche banks are generally allowed to offer only basic services and must specialize in a specific geographic region, sector of the economy or type of financial service.

Another promising development is banking via mobile phone. In July 2009 and February 2010, Mexico issued regulations expanding banks' ability to use correspondents—or third-party institutions—to open accounts, gather deposits and perform transactions. Each month, customers can deposit up to 2,000 UDIs (inflation-indexed units of account equivalent to about 8,800 pesos, or $716), into accounts linked to their mobile phones.

Customers can open accounts and perform basic account-management transactions—for example, electronic purchases, balance inquiries, money transfers, bill payments and deposits—through their cell phones. Customers also will be able to gain wider access to remittances (money sent home by migrants) without going to a physical branch.

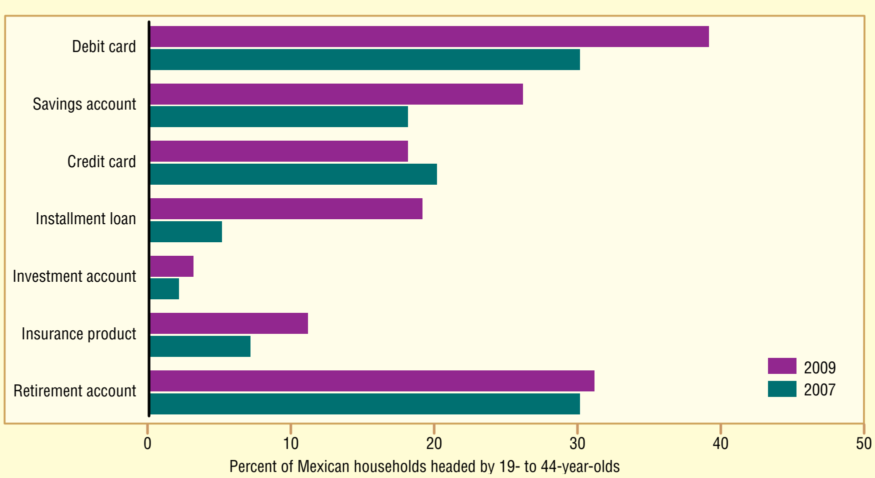
More than 80 percent of Mexican households have a mobile phone, according to an August report from management consultancy Arthur D. Little. Given high mobile phone versus financial penetration, the use of mobile banking services promises to greatly expand access to financial services.

While progress has been made in attracting the unbanked, many households still do not enjoy the full benefits of financial services. Small businesses are particularly hamstrung by a lack of access to formal credit; 60 percent rely solely on supplier-provided credit, a Banco de México survey found. By comparison, fewer than 7 percent of U.S. small businesses report problems finding credit. Forty percent of business failures in Mexico can be attributed to a lack of financing, according to a study by trade group Cámara Nacional de la Industria de la Transformación (Canacintra).

Boosting Mexico's economic development by helping small businesses fulfill their potential depends on improving access to finance and fully linking these engines of economic growth and opportunity to the formal economy.

—Edward C. Skelton

Chart 1
Young Households' Use of Financial Products Growing



SOURCE: Secretaría de Hacienda y Crédito Público.

Notes

[1] For more information about initial efforts to expand the use of financial services, see "Reaching Mexico's Unbanked," by Edward C. Skelton, Federal Reserve Bank of Dallas *Economic Letter*, vol. 3, no. 7, 2008, www.dallasfed.org/research/eclett/2008/el0807.pdf.

[2] In the U.S., retailers are not allowed to own commercial banks, and there is a strict separation of banking and commerce.

District Banks' Exposure to Modified Loans Limited

By Kory Killgo

The current experience with loan restructurings in the district appears to be less a cause for alarm and more a helpful response to some borrowers' difficulties.

Banks in the Eleventh Federal Reserve District are performing better than their peers. [1] However, signs of strain are still evident—with loan delinquencies a prime example—following the recession and financial market crisis. Some banks that restructure troubled loans by granting borrowers easier terms subsequently find the loans delinquent again.

While the number of restructured loans has grown dramatically, these loans remain a small part of the average bank's balance sheet, a review of district data shows. Lenders here are less likely to carry restructured loans than banks around the country, and when they do hold such assets, problems don't appear to be out of line with historical tendencies.

These findings indicate that the current experience with loan restructurings in the district is less a cause for alarm and more a helpful response to some borrowers' difficulties.

How Restructured Loans Work

A restructured loan is one in which a lender makes a repayment concession because the borrower's financial condition has changed, making it unlikely or impossible for the original terms to be met. Concessions include reductions of interest or principal payments. A loan isn't considered restructured if it's extended or renewed under the same terms that a similar borrower would receive on a new transaction.

Banks renegotiate loans when they believe more favorable terms will increase the prospects of repayment. Supervisory guidelines expect such changes to be prudent and infrequent. Regulators encourage bank boards of directors to approve proposed restructurings and require board notification of any that are implemented.

If restructurings are not done prudently, a borrowing that should be classified as nonperforming or declared a loss could masquerade as a sound loan, deferring recognition of problems. In practice, many restructured loans encounter repayment difficulties, despite the concessions made to borrowers. Some industry observers have suggested that the poor performance of restructurings points to an ineffective process that only delays loss recognition.

Assessing whether banks are properly handling problem loans requires detailed knowledge of the banks' restructuring process—the type of in-depth insight supervisory personnel gain during onsite bank examinations. It also requires exam-level data to determine an institution's indirect exposure to restructured loans, often through securities based on them. Even without this internal information, publicly available data provide some clues.

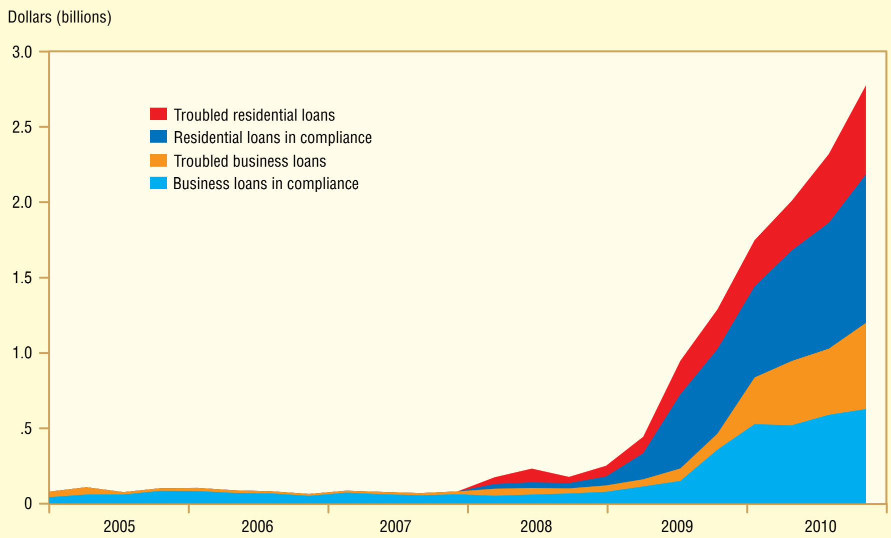
Growth of Restructured Loans

Banks traditionally reported restructured business loans but not consumer loans and borrowings secured by one- to four-family residential properties. In 2008, they began reporting restructured loans secured by these residential holdings.

At year-end 2005, before the financial crisis, restructured business loans at Eleventh District banks totaled just over $100 million, with about $18 million (18 percent) failing to comply with their modified terms (*Chart 1*). In 2008, the dollar volume of restructured business loans began growing and their performance deteriorated—a trend that accelerated in 2009. As of Sept. 30, 2010, district banks reported just over $1.2 billion in restructured business loans, with $573 million (48 percent) in repayment trouble.[2]

One- to four-family residential real estate loans added to the concern. At the beginning of 2008, district banks reported $76 million in restructured residential loans, with $45 million (59 percent) in trouble. By Sept. 30, the figure had soared to $1.6 billion, with $592 million (37 percent) in difficulty. While some of this growth can probably be attributed to government initiatives such as the Home Affordable

Chart 1
Recession Leads to Restructured Loan Surge in Eleventh District



NOTE: Cumulative total depicted. Troubled loans are defined as those 30 days or more past due on their modified terms.

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

As of Sept. 30, district banks held a total of $2.8 billion in restructured loans, with $1.2 billion (43 percent) at least 30 days past due on their modified terms.

Modification Program that were implemented to help avoid foreclosures, reporting requirements don't capture the data that would document that impact.

As of Sept. 30, district banks held a total of $2.8 billion in restructured loans, with almost $1.2 billion (43 percent) at least 30 days past due on their modified terms.

Modified Loan Share

Watching a dramatic increase in any troubled asset category can be unsettling for bankers and regulators. However, it's important to put such an upsurge in context.

It's particularly useful to look at the relative size of restructured loans on banks' balance sheets.

Restructured business loans accounted for 0.9 percent of total district business lending as of Sept. 30. Also, restructured loans accounted for only 10.1 percent of all troubled business loans. Relative to the overall portfolio, the level of restructured business loans appears manageable.[3]

Figures are slightly higher for restructured one- to four-family residential property loans. As of Sept. 30, restructured loans accounted for 2.6 percent of overall residential lending at district banks. Restructured loans accounted for 17.4 percent of total troubled residential loans.

Across the country, restructured business loans rose to $30.8 billion as of Sept. 30 from $1.3 billion at year-end 2005 (*Chart 2*). Such business loans accounted for almost 1 percent of total business lending nationwide as of Sept. 30, slightly higher than the district's 0.9 percent.

Reflecting the deterioration of the housing market nationwide, U.S. banks held about $83 billion in restructured loans secured by one- to four-family residential properties on Sept. 30, up from $19 billion two years earlier. About $31 billion of these were at least 30 days past due. Total restructured residential loans accounted for 4 percent of all residential lending. By comparison in the district, restructured residential loans were 2.6 percent of total residential loans, largely reflecting the relatively moderate decline in Texas housing prices.

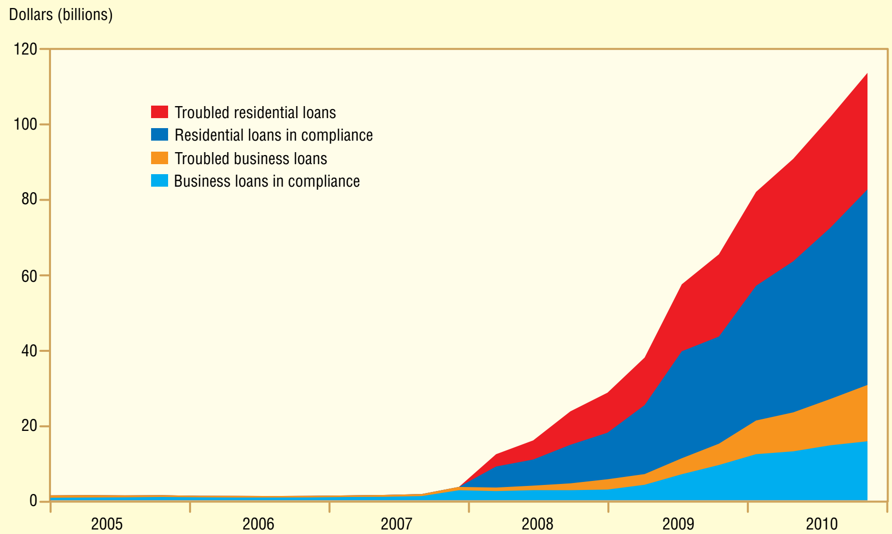
It's also useful to see how widespread restructured loans are in the banking industry.

In the three years leading up to the recession, about 15 percent of banks in the district and the nation held restructured loans. That percentage has trended upward since first quarter 2008, with the rate of increase nationwide outpacing the rate at area banks (*Chart 3*). Thirty-one percent of district banks held restructured loans as of Sept. 30, compared with 51 percent nationwide.

Put another way, despite the jump in restructurings, about 70 percent of banks in the district and half of banks across the country reported no such loans.

Despite the jump in restructurings, about 70 percent of banks in the district and half of banks across the country reported no such loans.

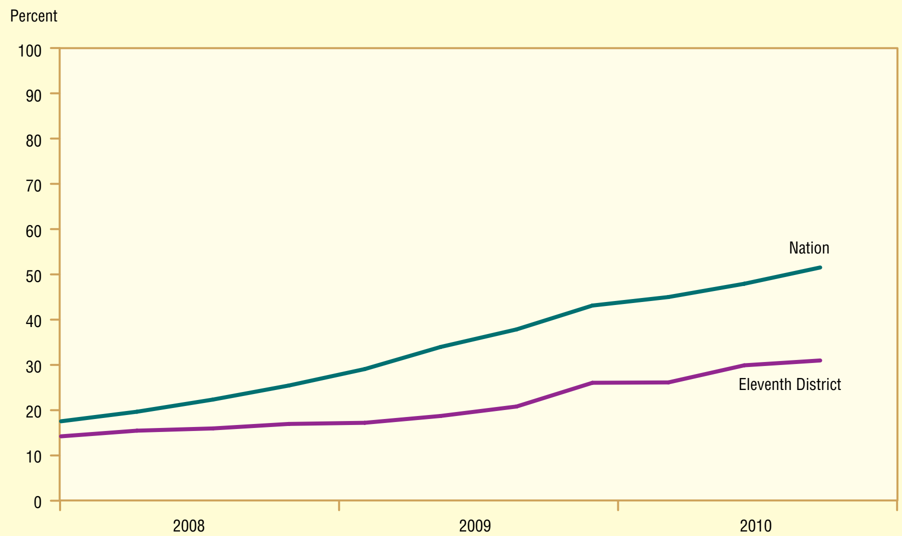
Chart 2
Restructured Loans Rise at U.S. Banks at Recession's Onset



NOTE: Cumulative total depicted. Troubled loans are defined as those 30 days or more past due on their modified terms.

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

Chart 3
Fewer Than One-Third of District Banks Hold Restructured Loans



SOURCES: Quarterly Reports of Condition and Income, Federal Financial Institutions Examination Council; author's calculations.

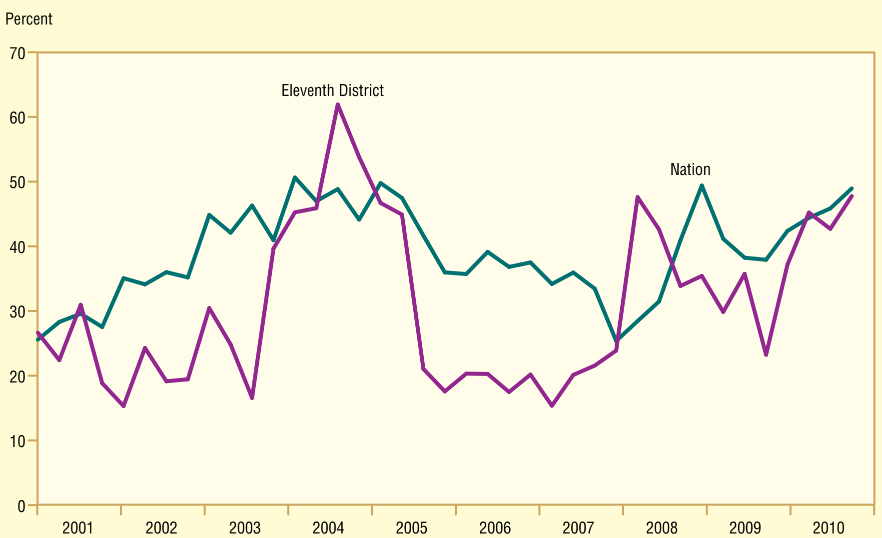
In Line with History

Even with the assistance of beneficially revised terms, many restructured loans fall behind. Could it be a sign that banks have become desperate under the weight of the financial crisis and are imprudently modifying loans to delay loan-loss recognition or hide from regulators the full extent of their credit difficulties?

If bankers became less discerning in pursuing restructurings, proceeding with deals even when the likelihood of repayment was lower than usual, we might expect the restructured loan delinquency rate to exceed historical norms. That doesn't appear to be the case.

The percentage of total restructured business loans failing to comply with modified terms in the district and the nation appears

Chart 4
Restructured Loan Delinquency Rates Remain in Normal Range



SOURCES: Quarterly Reports of Condition and Income, Federal Financial Institutions Examination Council; author's calculations.

While the delinquency rate is high, it has reached similar levels before, consistent with the view that banks are not restructuring loans less carefully.

within the usual range going back to 2001 (*Chart 4*).[4] While the delinquency rate is high, it has reached similar levels before, even when restructuring activity was low, consistent with the view that banks are not restructuring loans less carefully.

Broader Economic Impact

While loan restructuring calls for careful oversight by lenders, borrowers and regulators, it is an important acknowledgment of the uncertainties that are a normal part of doing business. In a tough economic climate, the benefits of loan restructuring can increase for borrowers and lenders and may extend to the broader economy.

Successful residential mortgage loan modifications, for example, help reduce foreclosures and moderate the speed at which these properties come to market. This could lessen both the disruptive impact on borrowers' families and the downward pressure on neighboring property values. Giving borrowers another chance also helps minimize the negative impact on financial markets by averting foreclosure costs. In these ways, prudent attempts at loan restructuring may provide macroeconomic benefits beyond the relief experienced by individual borrowers.

Killgo is a financial industry analyst in the Financial Industry Studies Department of the Federal Reserve Bank of Dallas.

Notes

[1] The Eleventh Federal Reserve District is headquartered in Dallas and includes Texas, northern Louisiana and southern New Mexico.

[2] District bank data are adjusted for merger and relocation activity.

[3] For a broader view of district bank conditions, see "Eleventh District Banking Industry Weathers Financial Storms," by Kenneth J. Robinson, Federal Reserve Bank of Dallas *Southwest Economy*, Second Quarter 2010.

[4] This delinquency rate is equal to troubled restructured business loans divided by the sum of troubled restructured business loans and restructured business loans in compliance with modified terms.

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