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President's Perspective



Colleges and universities are the wellspring for the intellectual talent that will forge the Texas economy of the future.

I love to brag on Texas. There is more to say in grace over in the Lone Star State than most anywhere else: We are blessed with a rich history, hardworking people, abundant resources, beautiful landscapes and a vibrant culture.

One thing I wish I could do more bragging about is the quality of Texas' universities. They are good. But they are not good enough. They need to be much better to secure our economic future in the Knowledge Age.

U.S. News & World Report's latest survey on overall educational excellence ranks the University of Texas at Austin 47th in the nation. Texas A&M places 60th. Southern Methodist University is 70th, Baylor 81st and Texas Christian University 105th. Rice ranks 17th, making it the only truly "elite" university in Texas.

If we broaden our aperture to look at the Association of American Universities, whose 62 members most scholars regard as the cream of the crop of research institutions,

we find that Texas lags behind. Research at these schools often spills out into their local economies, leading to cutting-edge commercial applications and fast-growing new enterprises. California is home to nine AAU schools. New York has six. Texas has only three: Rice, UT Austin and Texas A&M—less than the number of AAU schools in the Los Angeles area alone.

An irrefutable link between education and income can be seen between individuals, across countries and over time. We even see it within the United States. Massachusetts and California, for example, place third and 11th, respectively, in college graduates per capita, and first and 10th in per capita income. Texas ranks 29th in college graduates and 29th in per capita income—in the bottom half of the nation. You really do earn what you learn.

The brain is to the Knowledge Age what the motor was to the Industrial Age. In an economy driven primarily by high-value-added services, education is the fuel that propels prosperity.

How can Texas compete with overseas workers who can produce goods and services much more cheaply? How can we stay ahead of them as they move up the value-added ladder into services, engineering, technology and health sciences? The answer: by incessantly honing our stock of human capital. Colleges and universities are the wellspring for the intellectual talent that will forge the Texas economy of the future. We Texans must do better.

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



Explaining the Increase in Remittances to Mexico

By Jesus Cañas, Roberto Coronado and Pia M. Orrenius

Over the last decade or so, inflation-adjusted remittances have grown at an average annual rate of 15.6 percent. Since 2000, the rate has risen to 20.4 percent.

Mexicans living in the United States sent a record \$23.1 billion back home in 2006, putting remittances third after oil and maquiladora exports as a foreign-exchange generator for Mexico (*Chart 1*). Over the last decade or so, inflation-adjusted remittances have grown at an average annual rate of 15.6 percent. Since 2000, the rate has risen to 20.4 percent.

What's driving the rapid growth of remittances to Mexico? It's a question that has puzzled researchers for years because the most likely economic forces don't seem to be in play. Fundamental factors, such as the size of the Mexican migrant population, their income and the strength of their bonds to Mexico, haven't grown as fast as remittances. Other variables, such as the peso-dollar exchange rate and Mexican economic conditions, have been relatively stable since at least 1996.

What *have* changed are money-trans-

fer costs, which have plummeted since 2000, and Banco de México's measurement techniques. Together, these factors likely account for the bulk of unexplained remittance growth in the last few years.

Destinations and Origins

For Mexico, remittances are an important source of income and stability. In poorer parts of the country, such as the central and southern states, the additional income from family members in the U.S. is crucial to sustaining living standards and propping up local economies.

Banco de México has good data on where remittances go within Mexico (*Table 1*). The central-western states attract most of these financial flows, with Michoacán at the top with almost \$2.5 billion, 16.1 percent of gross state product (GSP). Guanajuato follows at \$2.1 billion (14.8 percent), then Jalisco at \$2 billion (2.4 percent) and Estado

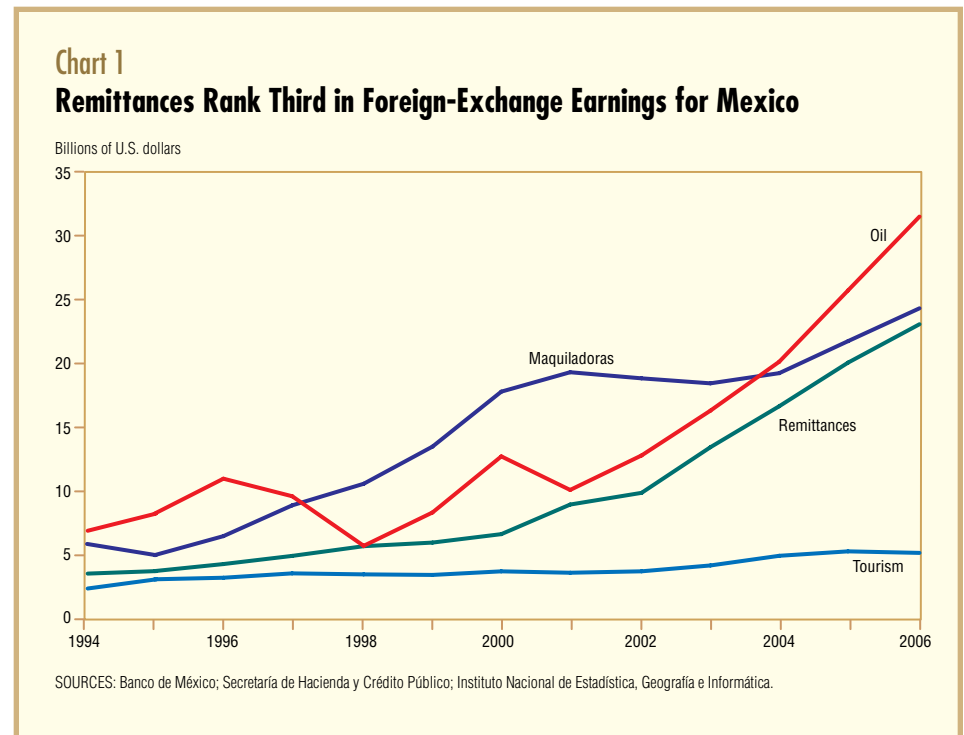


Table 1
Where Remittances Go in Mexico

Rank		Millions of U.S. dollars	Share (percent)	Per capita (dollars)	Share of GSP (percent)
1	Michoacán	2,472	10.7	617	16.1
2	Guanajuato	2,055	8.9	414	14.8
3	Jalisco	1,993	8.6	291	2.4
4	Estado de México	1,926	8.4	135	6.3
5	Distrito Federal	1,551	6.7	176	.7
6	Veracruz	1,415	6.1	196	3.7
7	Puebla	1,386	6.0	253	4.4
8	Oaxaca	1,198	5.2	337	8.6
9	Guerrero	1,157	5.0	367	10.3
10	Hidalgo	853	3.7	358	1.6
11	Chiapas	808	3.5	185	4.8
12	Zacatecas	610	2.6	441	9.1
13	San Luis Potosí	607	2.6	248	3.5
14	Morelos	528	2.3	323	4.7
15	Querétaro	467	2.0	287	3.2
16	Sinaloa	420	1.8	159	2.6
17	Aguascalientes	378	1.6	348	3.9
18	Durango	371	1.6	242	3.4
19	Chihuahua	369	1.6	112	.8
20	Tamaulipas	356	1.5	116	1.2
21	Nayarit	328	1.4	341	7.2
22	Nuevo León	286	1.2	67	.6
23	Tlaxcala	258	1.1	236	5.0
24	Baja California Norte	232	1.0	80	.7
25	Sonora	216	.9	89	.9
26	Coahuila	216	.9	85	.7
27	Colima	167	.7	289	3.9
28	Tabasco	150	.7	74	1.2
29	Yucatán	114	.5	61	.9
30	Quintana Roo	79	.3	67	.7
31	Campeche	63	.3	82	.5
32	Baja California Sur	25	.1	47	.5
	National total	23,054	100	220	2.7

NOTE: All data are 2006, except share of GSP, which is 2004.

SOURCES: Banco de México; Instituto Nacional de Estadística, Geografía e Informática; authors' calculations.

de México at \$1.9 billion (6.3 percent). As a share of GSP, remittances are also significant in Guerrero, Zacatecas, Oaxaca and Nayarit.

In contrast, the northern Mexican border states of Baja California Norte, Sonora, Chihuahua, Nuevo León, Coahuila and Tamaulipas are among recipients with the fewest remittances. Together, they receive less than \$1.7 billion, which represents only 0.9 percent of their joint GSP.

The border states have lower remittances because they're among the wealthiest Mexican states and aren't typically the source of low-skilled migrants to the U.S.

the Latino immigrant population in each state. In Texas, foreign-born Latinos are more likely to be young, unmarried workers from Mexico. They're also more likely to be from Mexican border states and carry money home on return visits—a form of transfer not recorded as remittances in the survey.

In an era when more workers are crossing borders, Mexico's double-digit annual growth in remittances isn't unusual. Looking at real remittances for a group of developing countries from 1994 to 2005, many have growth rates as high as or higher than Mexico's (*Chart 2*). Remittances more than doubled in real terms over this

While Mexico tracks remittances' destinations, we know less about the money's origins within the United States. No state-level data track remittances to Mexico. Texas, as home to a fifth of all Mexican immigrants in the U.S., no doubt accounts for a large share of remittances. We get a sense of that by looking at the Inter-American Development Bank's annual survey of remittances to Latin America, which ranks Texas second with \$5.2 billion in 2006, up 64 percent from 2004 levels (in nominal terms).¹ California leads in remittances to Latin America with \$13.2 billion, and New York is third with \$3.7 billion.

The IADB survey also shows that 47 percent of Latin American adult immigrants residing in Texas regularly send money home, compared with 63 percent in California and 77 percent in New York. These differences probably result from the composition of

period for, among others, India, the Philippines, China, Bangladesh, Poland, Colombia, Guatemala, El Salvador, the Dominican Republic, Nigeria, Ecuador, Indonesia, Sri Lanka and Jamaica.²

Driving Factors

What determines how much money Mexicans send home? Overall, remittances tend to increase when the migrant population rises, its income grows, the peso-dollar exchange rate rises, money-transfer costs fall or economic crisis strikes the home country. As migrants spend more time away from home, their remittances decline, particularly if migrants bring their families to live with them or they form new families in the host country.

These factors have contributed to the rise in remittances since 2000, but even collectively they haven't been dynamic enough to account for the entire increase.

Real remittances grew 170 percent from 2000 to 2005, but in the U.S., the Mexican-born population grew only 20 percent. Estimates indicate Mexican immigration—legal and illegal—actually declined in 2001, 2002 and 2003 as the U.S. economy entered a recession, followed by a rather weak labor market recovery.³ In-migration in 2004 was still well below 2000 levels.

Meanwhile, real median weekly earnings among U.S. Hispanics rose only 18 percent over this period, and the dollar appreciated only 7.4 percent vis-à-vis the peso. The modest change in currency value reflects the Mexican economy's relative stability, with its most recent crisis over a decade ago.

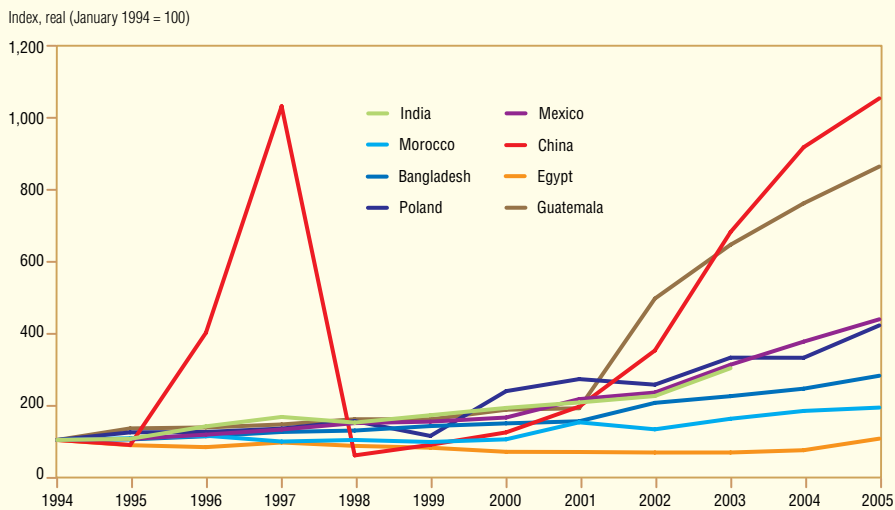
Among the remittance drivers, the biggest change came in the average transaction cost of money transfers, which has fallen more than 50 percent since 2000.⁴

One factor has been greater competition. More than 100 money-transfer organizations served Mexico in 2005, compared with only five in 1995.⁵

Another factor in cutting costs has been technology, including debit and credit cards and such transfer options as the Federal Reserve System's Directo a México automated clearinghouse system. Banco de México estimates that electronic transfers have risen from 53 percent of remittances in 1996 to 85.8 percent in 2003 and 93 percent by 2006.⁶

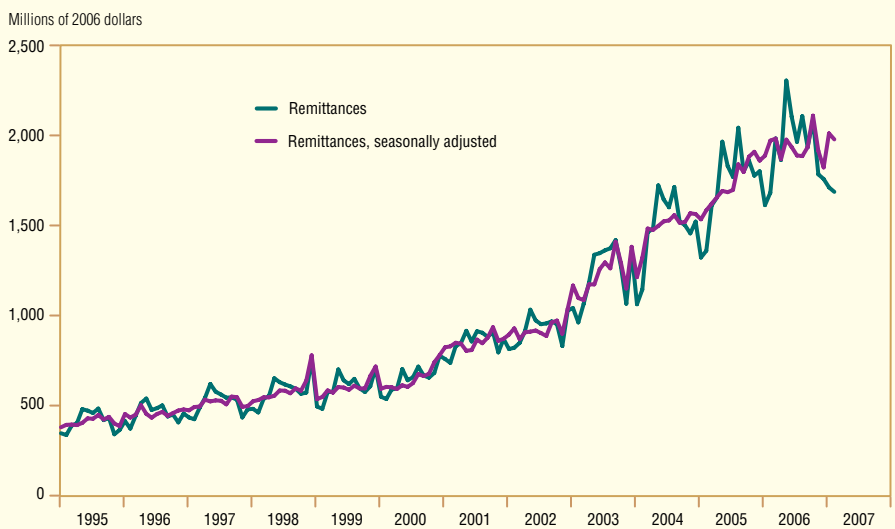
Spurred by declining costs for both senders and receivers, migrants increasingly have been transmitting remittances through

Chart 2
Remittances Rising for Many Countries



NOTE: Data for India are available only through 2003.
SOURCE: International Monetary Fund, International Financial Statistics database.

Chart 3
Measured Remittances Climb Faster Since 2000



SOURCES: Banco de México; authors' calculations.

formal channels rather than informal channels, such as carrying cash back home. Less return migration and increased difficulties crossing the border have also contributed to the growing use of formal channels.⁷

Measuring Remittances

Formal money transfers are easier to keep tabs on, and some of the displacement of informal remittances has been counted as increases in overall transfers. In this way, better measurement has contrib-

uted significantly to the higher remittance growth rate in recent years.

Banco de México overhauled its procedures for collecting and recording remittance data in 2000. Efforts initially focused on recordkeeping within the central bank and then on collection from sources outside the bank.⁸ In October 2002, Banco de México issued rules under which all banks and wire-transfer companies had to register with the central bank and report monthly remittances by Mexican state of destination.

Before 2002, monthly remittance levels were inferred from an outdated 1990 census of financial institutions, money exchange houses and electronic wire-transfer companies. The new census of companies, mandatory reporting and growing formal transfers all led to faster remittance growth.

The result was much improved data collection and a clear break with past trends. Setting aside the 2000–02 transition period, the remittance growth rate appears to have roughly two phases that correspond to Banco de México measurement changes—pre-2000 and post-2002 (*Chart 3*). Remittances' annual average growth rate was 10.3 percent in the first period. It rose to 20.6 percent in the second period, although recent months have seen a slight decline (*see box titled "A Slowdown in 2007"*).⁹

The data also show greater seasonality in 2002–06.

Even with the new and improved measurement techniques, counting informal remittances remains a challenge. Banco de México addresses the underreporting of informal transfers by conducting annual surveys of returning migrants and incorporating estimates of the cash and goods they carry home. However, it's unlikely they've been able to capture such informal transfers with the same precision as the formal ones.

A consequence of the new methodology is a growing discrepancy with other sources of data on Mexican remittances. As calculated by Banco de México, remittance volume and growth are much higher than other measures, including one from the U.S. Department of Commerce's Bureau of Economic Analysis. The BEA estimates that remittances to Mexico were \$10.7 billion in 2005 and \$11.1 billion in 2006. These estimates are roughly half those of Banco de México (*Chart 4*).

The two series track closely until 2000, diverging around the time that Banco de México adopted its new measurement methodology. The BEA and Banco de México, however, have always had very different remittance estimation techniques. The BEA methodology isn't based on direct reporting by banks and other fund transfer companies but on a remittance model built on informed assumptions regarding migrant remittance behavior and estimates of the size and characteristics of the migrant population.¹⁰

In addition to government, or macro, measures of remittances, there are survey-based, or micro, measures of remittances

for senders and receivers.

According to a household survey of Mexican migrants called the Mexican Migration Project (MMP), 79 percent of Mexican workers in the U.S. remit an average of \$350 per month.¹¹ If MMP migrants were representative of all Mexican workers in the U.S., these numbers would be consistent with official remittances of over \$20 billion. However, MMP is overwhelmingly made up of return migrants who, because of their strong ties to the homeland, remit greater sums with higher frequency than average Mexican immigrants.

Recipient-based micro data on remittances also differ from the Banco de México estimates. Looking at a large, nationally representative household survey in Mexico called Encuesta Nacional de Ingresos y Gastos de los Hogares, Gerardo Esquivel and Alejandra Huerta-Pineda find that 1.4 million Mexican households received an average of \$2,560 in remittances in 2002. Based on these figures, remittances totaled \$3.6 billion in 2002, only 37 percent of official estimates for that year.¹²

A Slowdown in 2007

The latest Banco de México data show that growth in remittances has tapered off in recent months—although flows remain at near-record highs.

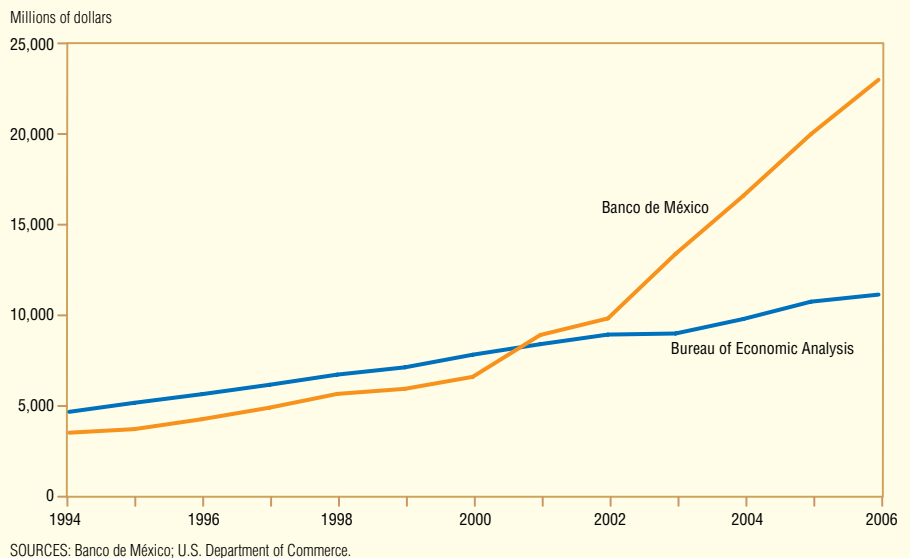
After starting out strongly in 2006, monthly remittances peaked in October 2006 at \$2.1 billion. In the first half of 2007, real remittances were 1.4 percent below flows in the same period of 2006.

Explaining the sudden slowdown is difficult, but statistical models suggest Mexican remittances are strongly related to overall U.S. economic activity. Thus, it's likely that the slowdown is tied to recent U.S. economic deceleration, particularly in sectors such as construction that employ a large number of Mexican immigrants.

As the U.S. economy slows and labor demand ebbs, fewer Mexicans cross the border to seek work. Indirect confirmation can be found in U.S. Border Patrol apprehensions of undocumented migrants, which were down 31 percent in the first quarter of 2007, compared with the same three months of 2006. U.S. gross domestic product growth was also weak in the first quarter, below 1 percent.

As the U.S. economy regains momentum, the flow of workers should pick up and remittance growth should resume.

Chart 4
U.S., Mexico Remittance Data Diverge After 2002



Some Mexican officials have questioned the discrepancy between the macro and micro data. They claim the Banco de México methodology, designed to capture familial transfers (*remesas familiares*), doesn't do enough to exclude transactions made for illicit business reasons, such as payments to human smugglers or drug traffickers, or legitimate nonfamily transfers, such as donations to nonprofit organizations.¹³

Anecdotal evidence suggests that illicit cross-border money transfers have been increasing over time. In response to heightened monitoring of wire transactions within the U.S., including Arizona, smugglers are reportedly having more of their payments wired to border states on the Mexican side.¹⁴ Nevertheless, the geographic breakdown of remittances within Mexico correlates well with known migration patterns among the population and doesn't show disproportionately large transfers to Mexican border states.

Modeling Remittances

With a host of recent changes to the remittance data, it might be interesting to know what a forecast based on the "old" data would have predicted for post-2002 remittances.

To explore this question, we construct a simple model with several macroeconomic variables, including U.S. and Mexican GDP, the peso-dollar exchange rate, the U.S. Consumer Price Index and maquila-

dora employment.¹⁵ The model generates a forecast by projecting the fitted values of remittances as of fourth quarter 2002.

The model predicts that macroeconomic factors would have led to remittances of \$21.5 billion in 2006 (*Chart 5*). Banco de México reported \$23.1 billion. Our model thus explains 93 percent of the official estimates in 2006. The \$1.5 billion gap is partly due to the new methodology, which increased the growth rate of remittances by incorporating newer, fast-growing firms into the recordkeeping, and to falling transfer costs, which compelled remitters to switch from carrying cash and goods to sending formal transfers.

Adding control variables to capture the effect of the post-2002 change suggests the new methodology's impact amounted at most to \$700 million in 2006.¹⁶ Estimates of the cost elasticity of remittances show that cheaper transactions likely boosted 2006 transfers by more than \$1 billion.¹⁷

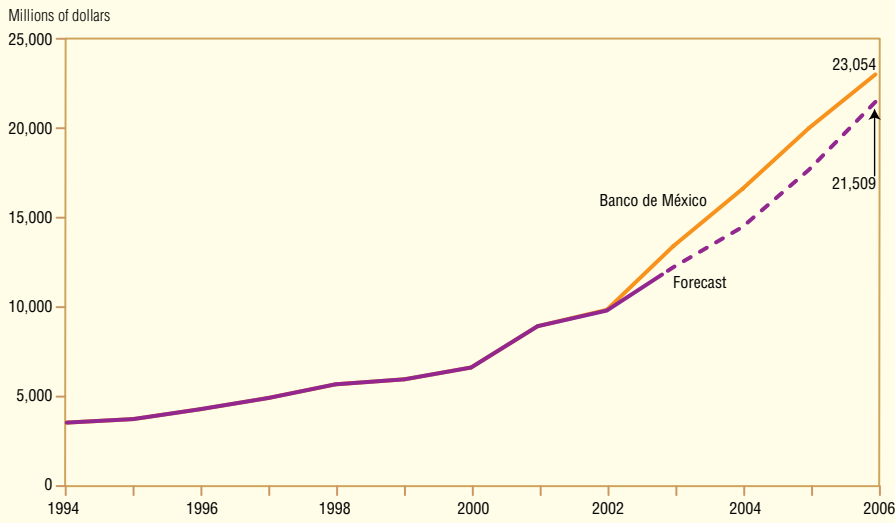
Our analysis suggests better measurement and falling transfer costs are important factors in recent increases in remittances to Mexico and their faster growth rate in the post-2000 period. Formal transfers are now being measured more accurately, and informal transfers are shrinking as remitters make greater use of formal channels.

Policy Implications

Remittance data worldwide have historically been of poor quality and grossly underestimated migrant transfers for years.

Chart 5

Model Captures Most of Post-2000 Surge in Remittances



SOURCES: Banco de México; authors' calculations.

As we have seen, the Mexican government has taken important steps to address these issues. The benefits of remittances are profound. Studies have shown that migrants' transfers home reduce poverty, increase investment in children's schooling, boost health spending, finance small businesses and increase access to financial services.¹⁸

A global effort to standardize the definition and measurement of remittances is currently under way, led by a group of multinational institutions, including the World Bank and International Monetary Fund. Better data will facilitate cross-country comparisons of remittances.

Efforts to improve data come at a crucial time. As the monies have grown, policymakers have taken greater interest in remittances and their effects.

In host countries, governments are struggling with how to block money flows to terrorist groups or other criminals while permitting legitimate transfers. Other policymakers have decried remittances, suggesting they be discouraged through taxation and senders be subject to more stringent identification and reporting requirements.

In recipient countries, remittances have been tapped to fund public projects, normally paid for by resident taxpayers, and governments have struggled to regulate growth in financial service institutions that typically disburse transfers. As measurement and standardization issues get resolved, the policy issues will dominate future debates over the money migrants send home.

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Notes

The authors thank Bill Gilmer for comments on earlier drafts of this article.

¹ "Sending Money Home: Leveraging the Development Impact of Remittances," Inter-American Development Bank, Multilateral Investment Fund, 2006. See www.iadb.org/news/docs/remittances_EN.pdf.

² Data for India are available only through 2003.

³ "Rise, Peak and Decline: Trends in U.S. Immigration 1992–2004," by Jeffrey Passel and Roberto Suro, Pew Hispanic Center, September 2005.

⁴ "Migraciones y remesas en América Latina y el Caribe: Los flujos intrarregionales y las determinantes macroeconómicas," by Manuel Orozco, Sistema Económico Latinoamericano y del Caribe, May 2006.

⁵ "Development Impact of Remittances," by Yira Mascaró, paper presented at the Federal Reserve Bank of Dallas Cross-Border Banking Conference, San Antonio, May 11, 2007.

⁶ "Improving Central Bank Reporting and Procedures on Remittances," by Jesus Cervantes, paper presented at the Federal Reserve Bank of Dallas Cross-Border Banking Conference, San Antonio, May 11, 2007.

⁷ "Remittances: Transaction Costs, Determinants and Informal Flows," by Caroline Freund and Nikola Spatafora, World Bank Policy Research, Working Paper no. 3704, August 2005.

⁸ Cervantes (2007).

⁹ Average annual growth rates were 16 percent in 2000–02.

¹⁰ Bureau of Economic Analysis estimation has the advantage of being low cost and not excluding transfers made through

informal remittance channels, but it's very sensitive to assumptions made about who is remitting and how much. Also, while BEA defines remittances as those transfers by migrants who have been in the U.S. for at least one year, a General Accountability Office report suggests the BEA model may capture some of those initial transfers after all. In any case, the exclusion is not large enough to make up the difference.

¹¹ "Remittances and Their Microeconomic Impact: Evidence from Latin America," by Catalina Amuedo-Dorantes, in *Migration, Trade, and Development: Proceedings of a Conference Sponsored by the Federal Reserve Bank of Dallas*, James F. Hollifield, Pia M. Orrenius and Thomas Osang, ed., Dallas: Federal Reserve Bank of Dallas, forthcoming.

¹² "Remittances and Poverty in Mexico: A Propensity Score Matching Approach," by Gerardo Esquivel and Alejandra Huerta-Pineda, El Colegio de Mexico, unpublished paper, 2005.

¹³ "Omite BdeM contabilizar remesas no familiares," by Alma E. Muñoz, *La Jornada*, Feb. 13, 2006.

¹⁴ "Human Smugglers Have New Fee System," *Dallas Morning News*, Oct. 14, 2006, p. 2A.

¹⁵ We construct an autoregressive integrated moving average model with quarterly data. We difference the data to ensure stationarity and use cross-correlograms and autocorrelation functions to estimate the lagged structure of each variable and the residuals vis-à-vis remittances. Then we run the model of remittances on its determinants and lagged values of itself, including current and lagged values of independent variables. For more information about transfer function model estimation and forecasting, see *Forecasting With Dynamic Regression Models*, by A. Pankratz, New York: Wiley and Sons, 1991.

¹⁶ To approximate the effect of the change in methodology, we fully interacted the model with a post-change dummy variable that takes the value 1 starting in fourth quarter 2002.

¹⁷ The cost elasticity of remittances is assumed to be -0.4 and is based on estimates in Freund and Spatafora (2005).

¹⁸ "Leveraging Remittances for Development," by Dilip Ratha, in *Migration, Trade, and Development: Proceedings of a Conference Sponsored by the Federal Reserve Bank of Dallas*, James F. Hollifield, Pia M. Orrenius and Thomas Osang, ed., Dallas: Federal Reserve Bank of Dallas, forthcoming.

The View from San Antonio

Blake Hastings, who became vice president in charge of the Dallas Fed's San Antonio Branch in December, discusses how international connections are paying off for the San Antonio and South Texas economies.

Q: Start by telling us a little about yourself and what you bring to the Dallas Fed.

A: I received an M.B.A. in international business, and most of my career has been focused on trade, starting with two years at the U.S. Trade and Development Agency in Washington, D.C., working mostly in the Asia-Pacific region. After a stint at a food services export company, I came to the Free Trade Alliance (FTA) San Antonio in 1995. It's a business organization that promotes foreign investment and trade for the San Antonio region. I was its executive director from 2001 until I joined the Dallas Fed.

Q: How did the North American Free Trade Agreement change the environment for trade?

A: Before NAFTA took effect in 1994, Latin America didn't get the same priority as our other trading partners. But that all changed with NAFTA, and the agreement's impact has been felt well beyond our neighbors to the north and south.

Not only did trade with Canada and Mexico boom, trade with the rest of the world started to grow by leaps and bounds. It wasn't because of NAFTA directly; it was more about companies changing their mind-sets to be more trade-oriented as a result of NAFTA coming online.

Q: How did this new mind-set manifest itself in and around San Antonio?

A: San Antonio is an example of that new mind-set at its best. Prior to NAFTA, San Antonio's trade numbers were minuscule, but that's not to say the city hadn't already recognized that its future was linked with trade. When NAFTA became a political issue, San Antonio became a lobbying machine to get it passed. The business community really rallied behind the legislation, a move that paid off. By 1999, the region's international



trade had increased fivefold.

Some companies have really taken advantage of NAFTA. The San Antonio-based H-E-B grocery chain now has more than 30 stores in northern Mexico and a Monterrey distribution center. Just like in Texas, everything they sell is within a day's drive of that hub. Because of NAFTA, they've been able to copy the business model that has worked so well in Texas.

San Antonio remains committed to internationalization. Years ago, former Mayor Henry Cisneros set up sister cities around the world to prepare San Antonio to be a more global player. In fact, those forward-looking actions directly resulted in Toyota coming to San Antonio. A city committing itself over the long haul was rewarded 20 years later with a \$1 billion home run.

Q: So what comes next for the city?

A: Interestingly, just as trade with Mexico really started to take off, new opportunities arose in China. The FTA recognized that Chinese companies were going through the same metamorphosis as Japanese companies did a generation ago but on a grander scale and at an accelerated pace.

So the organization is pursuing China as a trading partner in the same spirit that it earlier pursued Japan. The question with the Chinese was not a matter of how but of how quickly we could get a relationship up and running. Today, we have a representative office for San Antonio in Guangzhou, which opened in February 2006.

Q: What about the rest of the South Texas region?

A: San Antonio certainly isn't the only community that has deliberately projected itself on the global stage. Corpus Christi, McAllen and Laredo have also accepted that they don't have the same name recognition as Dallas, Houston, New York, San Francisco and other trade centers. They, too, have overseas representatives and ongoing initiatives.

All of these communities are learning that you can't just wait for trade to come to you; you've got to get out there and grab it for yourself. McAllen, for example, is aggressively pursuing Chinese investment through its economic development corporation, and Laredo's mayor led a delegation to China last year. You see similar efforts from these communities and San Antonio in other parts of the world—like Brazil, Canada and Europe.

Q: Has South Texas felt any repercussions from slowdowns in U.S. manufacturing and housing?

A: Laredo is in the midst of a significant slowdown. Though we've yet to see anything play out in the hard data, we do know cross-border retail sales and sales tax revenues have taken hits in recent months. And we know that commercial truck crossings are down so far this year. Remember, though, that all these declines are coming off the double-digit gains posted last year, so the region is still in relatively good shape.

As for the other side of the border, it's still too early to tell. I'm hearing anecdotally that retail sales are slowing in northern Mexico. Remittances are down in the first half of 2007. What we do know is that what's starting to happen has the potential to be

*“San Antonio remains committed
to internationalization.”*



big when you consider how important remittances are to the Mexican economy, coming in third to oil and maquiladora exports as a source of foreign revenues.

Q: Has NAFTA been beneficial on both sides of the border?

A: You get a lot of antitrade types who say that NAFTA hasn't had the desired impact on the Mexican economy. But most of what I've seen has been tremendously positive. Trade has manifested itself in a burgeoning middle class, and the cross-border shopping fueled by this middle class has become an economic engine in and of itself in South Texas.

It might have been even more beneficial. Mexico missed a huge opportunity presented by NAFTA by not investing more of the gains in the infrastructure and education that would have moved it up the value-added chain to more successfully compete. They didn't invest in their future back then, and they've come to regret it.

Q: What are the potential threats to trade?

A: I recall my experience with CAFTA, now known as the Dominican Republic–Central America Free Trade Agreement. While at the FTA, I lobbied hard to get CAFTA passed in Washington, recognizing that it was a key domino in striving to establish a free trade area of the Americas. Though we won that

battle, I learned a lot about trade's opponents in the process.

As Congress takes a more protectionist posture, our trade negotiators are increasingly perceived to have less clout in their deliberations with other nations. This has the effect of delaying or even preventing future negotiations.

Special interests, such as U.S. agriculture, make us appear more hypocritical still. Our inability to put our own subsidy programs on the table and protection of such products as sugar rob our ability to negotiate trade liberalization with developing nations like Brazil.

Trade opponents will undoubtedly blame any economic slowdown on globalization and foreign competition. The challenge is to help policymakers see the whole story.

Q: Why do we see a swing toward protectionist thinking?

A: We pay lip service to taking care of those displaced by trade, but we never seem to appropriately fund programs to retrain and find new jobs for workers who have been impacted. The retraining programs that were in place have run out of money and unnecessarily created anti-free-trade sentiment. We have to be careful to not create a vocal group of opponents.

In addition, we can't let the fear of terrorism create an isolationist mentality. We can negotiate new trade deals but effectively make them impotent if we erect barriers related to security. Examples are onerous rules for car-

go, making it more expensive and less efficient to ship goods.

It also doesn't help that many Americans only get the protectionist viewpoint on trade. They rarely hear how protectionism distorts the economy, leads to higher prices, breeds mediocrity in service and product quality, and reduces variety.

Q: Are we our own worst enemy?

A: As anti-Americanism grows around the world, other countries' political willingness to negotiate trade liberalization with us has waned.

It can't help that we're tightening the rules dictating foreign travel to the U.S. In doing so, we not only hurt tourism but trade as well. If our customers and business partners can't get visas to visit our businesses, trade will undoubtedly suffer. Examples already exist of foreign investment not coming to the U.S. because foreign executives don't want to wait in three-hour lines to get visas at our embassies and consulates.

Q: What is the best route to ensuring we continue to reap trade's rewards?

A: The businesses and workers who are benefiting most from trade and a more globalized economy are too busy to take the time to advocate for continuation and expansion of open markets. The key to trade's future is resisting the urge to sit on our laurels.



Regional Labor Force Growth Mix of Native, Immigrant Workers Varies

America's labor force added 6.7 million workers from 2000 to 2005, a 4.7 percent national rate of increase that masks substantial regional differences.

Led by Arizona and Nevada, the Mountain region posted the strongest expansion in labor supply (*see table*). The South Atlantic, driven by Florida, came in next, followed closely by Texas and surrounding states.

The Pacific region and the upper Midwest recorded relatively moderate gains. The Middle Atlantic, New England, the interior South and the Midwest's industrial heartland experienced the slowest workforce growth.

Such regional differences are driven in part by the natural rate of increase in a state's existing population. They're also spurred by labor demand, which attracts new workers to a state.

These factors suggest labor force growth will be higher in regions with younger populations, larger families and stronger economic growth. Increases in real GDP from 2000 to 2005 line up with labor force growth—except for the anomaly of the East South Central region.

Those who migrate from within the United States reflect an ongoing relocation of people from traditional population centers in the Northeast, Midwest and Pacific Coast to the South and Mountain West.

For the five years starting in 2000, New York, California, Illinois and Massachusetts had the most out-migrants, and Florida,

Arizona, Nevada and Georgia drew the most domestic in-migrants.¹ Texas ranked sixth in gains.

The destination regions also had higher natural rates of labor force growth.

International migration has become increasingly important as U.S. labor force growth has slowed, largely due to aging of the workforce. Im-

migrants, responsible for an estimated 38 percent of the national growth in the 1990s, accounted for 45 percent in 2000–05.

Once again, regional differences are telling. Parts of the country experiencing domestic out-migration have become heavily reliant on newcomers from overseas to replenish their labor force (*see map*). From 2000 to 2005, for example, the foreign born accounted for 94 percent of labor force growth in the East North Central region and 73 percent in New England.

Immigrants made a smaller but still significant contribution to labor force expansion in the fastest-growing regions. In the South Atlantic, the foreign born drove 49 percent of labor force growth. They accounted for

37 percent in the West South Central region, which includes Texas.

America's labor force is growing at different paces in different places, with fast-growing regions acting as magnets for migrants. The factors that determine labor force growth change only gradually, which suggests recent trends will persist. Immigrants will continue to account for a large share of the growth until at least 2020, when the labor force will have adjusted fully to the retirement of the baby boomers.

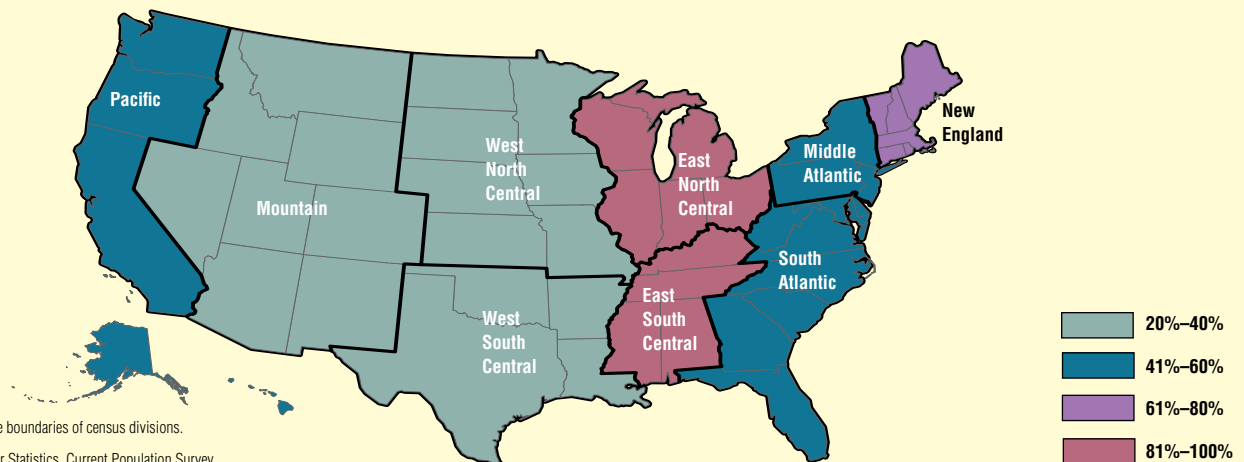
—Pia M. Orrenius and Michael Nicholson

Labor Force, GDP Growth Largely Align, 2000–05

Census divisions and states	Labor force (percent)	Real GDP (percent)
Mountain: MT, ID, WY, NV, UT, AZ, CO, NM	10.4	17.6
South Atlantic: WV, VA, NC, SC, GA, FL, DC, MD, DE	7.3	17.0
West South Central: TX, OK, AR, LA	7.3	12.9
Pacific: WA, OR, CA, AK, HI	5.7	12.8
West North Central: ND, SD, NE, KS, MN, IA, MO	3.8	11.6
Middle Atlantic: NY, NJ, PA	2.9	10.9
New England: VT, ME, NH, CT, RI, MA	2.9	8.1
East South Central: MS, AL, TN, KY	1.4	12.7
East North Central: WI, IL, IN, MI, OH	.7	5.5

SOURCES: Bureau of Labor Statistics, Current Population Survey; Bureau of Economic Analysis.

Foreign-Born Share of Labor Force Growth



Banking Industry Evolution Along the Texas–Mexico Border

By **Joaquin Lopez and Keith Phillips**

For their size and income, Texas towns along the U.S.–Mexico border have a large number of big banks. They exist to serve not only local citizens but also customers from across the border. In a very real sense, these banks are an export industry that brings in outside capital and provides an important source of jobs and income.

In the new century, the border banking industry is doing business in a changing environment. Mexico has attained a degree of economic stability, and its bank sector has become more competitive. At the same time, remittances from Mexicans living in the U.S. have risen sharply.

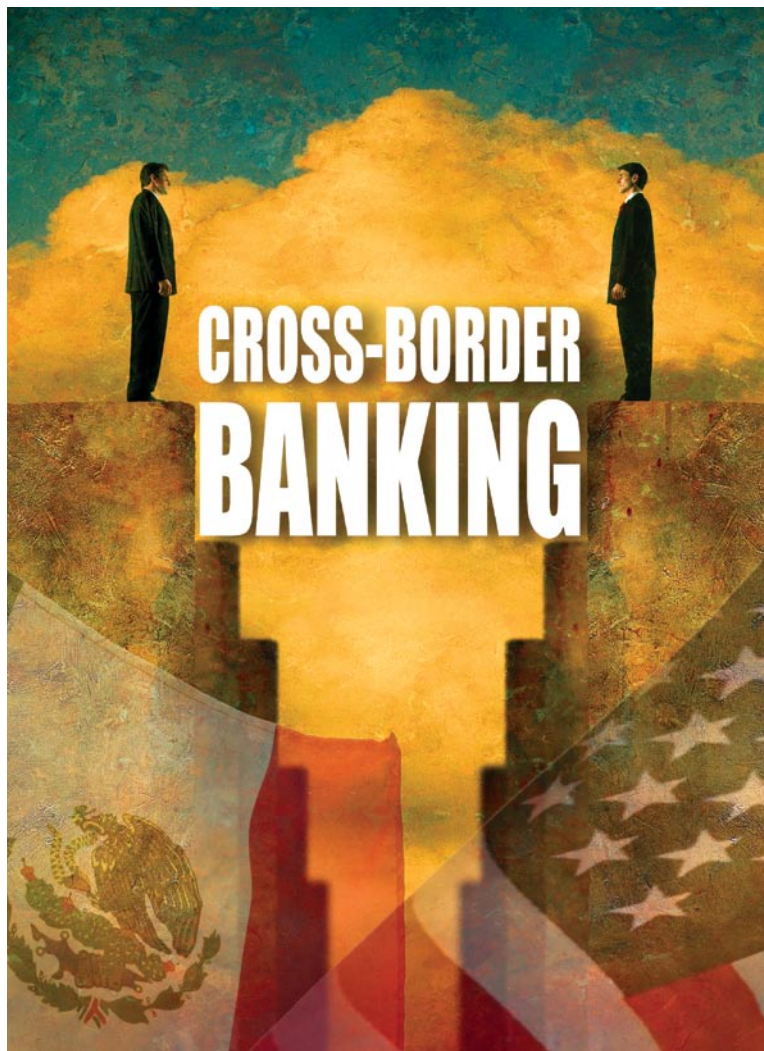
The border banking industry's adjustment to these changes and its prospects for future growth were the focus of May's Cross-Border Banking Conference, sponsored by the San Antonio Branch of the Federal Reserve Bank of Dallas.

Bankers, analysts, academics and central bankers from Mexico and the U.S. gathered in San Antonio to discuss important cross-border banking issues, such as regulation in host countries, determinants of international bank lending, the role of remittances and cross-border market strategies.

The following presents a synopsis of the conference.

International Issues

For decades, border region banks served as an alternative to a Mexican financial sector plagued by instability and inefficiency. Though still small relative to other emerging markets, Mexico's financial sector



has in recent years become very dynamic, with developments that have improved investors' ability to diversify and expand.

Edward Skelton, an international financial analyst at the Dallas Fed, pointed to the emergence of a yield curve as a sign of Mexican financial stability (*Chart 1*). After the 1994 economic crisis, Mexico couldn't issue debt with over one year to maturity. Interest rates were high. By 2000, Mexico could issue five-year bonds at lower rates. In the past year, the country has begun issuing 30-year fixed-rate bonds.

With greater stability, Mexico has

been able to broaden its financial system to include securitization, the pooling of previously illiquid assets and sale of their future income streams to investors. Born of a single \$178 million issuance in December 2003, Mexico's securitization market has grown explosively, increasing almost tenfold in four years. Mexico became a global player in this market virtually overnight, with its mortgage-backed securities market now ranking second only to South Korea's among emerging economies.

Securitization has given Mexican lenders access to capital and lowered their cost of funds. One side effect has been a boom in home mortgage loans, another example of an invigorated financial system. In Skelton's view, the mortgage industry's development will boost Mexico's economy by encouraging higher-quality housing, increased savings and greater wealth creation.

The Mexican financial system's efficiency and

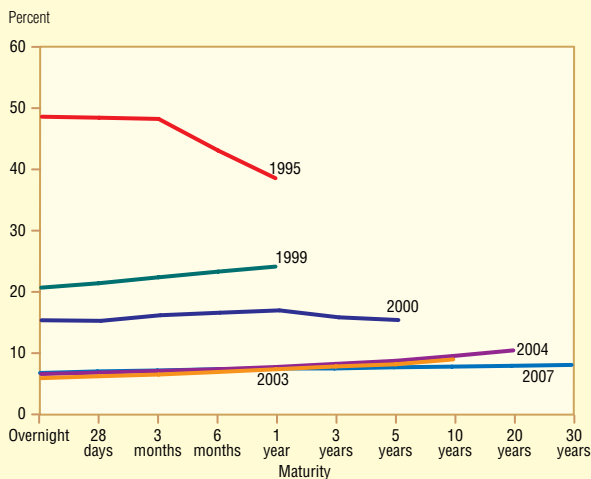
health are linked to foreign banks, which own more than 80 percent of the banking system. This foreign dominance not only brings greater competition and better risk management, it raises issues for Banco de México, the central bank.

Pascual O'Dogherty, the central bank's director of financial system analysis, stressed the difference between branches and subsidiaries. Branches don't have separate legal status from their parent banks, while subsidiaries are incorporated under host-country laws, making them stand-alone entities.

When a branch fails, the parent bank

Chart 1

Mexico Grows a Yield Curve



SOURCES: Banco de México; authors' calculations.

The industry is likely to continue to expand its size and customer base, and the border between U.S. and Mexican financial systems will continue to fade.

is legally bound to ensure its solvency. With subsidiaries, a parent bank's legal obligations are limited to invested capital. In practice, a foreign bank's decision to support a subsidiary is based on a balance of future profits and expenses, including legal and reputation costs. Host-country financial authorities can't rely on the assumption that foreign parent banks will always support their subsidiaries.

Parent banks may have incentives to take greater risks at subsidiaries because legal limitations and diversification across countries reduce their exposure, O'Dogherty said.

Since subsidiaries usually consolidate their financial statements with parent banks, home-country regulations ultimately prevail over host-country laws in most cases. Regulatory differences between the two nations

might affect subsidiaries' operations and host-country financial markets.

Such issues result in conflicts of interest between host- and home-country authorities and misunderstandings on how to resolve failed global banks. Convergence of regulatory, legal and accounting frameworks would be the ideal solution; short of that, O'Dogherty stressed the importance of carrying out crisis-simulation exercises and communication between host and home countries' regulators.

From the early 1990s to the Asian financial crisis of 1998, most capital flows to emerging markets came in the form of international bank lending, especially short term. The past decade has seen a boom in foreign banks' presence in emerging markets.

According to Marian Micu, senior researcher at Barclays Global Investors, increased lending by international banks established in emerging economies doesn't seem to be a substitute for cross-border lending.

He mentioned that both push and pull factors play a role in international bank lending to emerging markets. Push factors in the lending country, such as real GDP and real interest rates, typically determine the size of capital flows. Pull factors in the borrowing country, such as creditworthiness, exchange rate risk and financial market performance, help determine the geographic allocation of lending.

Micu found that U.S. banks tend to have a countercyclical lending pattern to emerging markets, while European and Japanese institutions have a procyclical pattern. Furthermore, U.S. lending tends to be less risk sensitive, possibly because U.S. banks have more diversified portfolios.

Increased integration in global capital markets has reduced long-term interest rates and made them more similar across countries.

According to Harvey Rosenblum, executive vice president and director of research at the Dallas Fed, current global interest rates imply that markets perceive

very little risk of recession or rising inflation. Rosenblum expressed some concern that in this new environment, risk may be difficult to ascertain. However, he warned that the likelihood has increased that any given shock could unsettle the remarkable calm in the world's financial markets.

Banks and Remittances

Remittances represent a major flow of financial resources from the U.S. to Mexico. They help reduce poverty and domestic economic risks. Researchers have analyzed remittances' determinants, economic impact and measurement.

Carlos Vargas-Silva, a postdoctoral fellow at the University of Vermont, found remittances are strongly correlated with cyclical fluctuations in U.S. output. This suggests they may be another channel by which U.S. economic trends transmit to Mexico.

Looking at remittances from the Mexican side, Vargas-Silva noted the existence of a two-way relationship. Such factors as economic hardship, exchange rates and returns to investment determine the amount of remittances. But remittances also have an impact on such variables as the real exchange rate.

As remittances grow, it becomes more important to measure them as accurately as possible. Jesús Cervantes González, director of economic measurement at Banco de México, said improvements in data recording, together with substantial increases in the number of migrants and lower transaction costs, explain the rapid growth of remittance inflows to Mexico.

Regulation has been a key to improving the remittance statistics. Since October 2002, all fund-transfer service providers have been required to register at Banco de México. Currently, the intermediaries' accounting records provide 98 percent of the data on the value of remittances and the number of transactions. The remaining 2 percent comes from direct transfers of resources in cash or kind (goods), tracked by Banco de México for many years through its Survey of International Travelers.

After Banco de México became involved in remittance reporting, financial intermediaries improved their recordkeeping. Better data allowed the industry to better understand the market's size and business opportunities.

Cervantes pointed to increased use of formal channels as an important factor in

remittances' growth. The trend implies that cross-border banking now plays a bigger role in these transactions.

According to Yira Mascaró, senior financial economist at the World Bank, financial institutions involved in cross-border banking still need to overcome certain challenges. Among the obstacles she singled out: competition from money transfer operators, distrust of banks, suspicion in pricing of services and limited financial sophistication among remitters and receptors.

According to Mascaró, financial training and improved services such as debit card technology and lower transaction costs are ways in which cross-border banking can gain a bigger share of this industry.

Mexican Banks' New Role

Mexico's turbulent financial history led some citizens to hedge against swings in the peso's value by holding dollar-denominated accounts in U.S. banks. This is perhaps the simplest example of cross-border banking.

More recently, however, Mexican banks and their parent institutions have begun moving into the U.S. market. They're motivated by Mexicans' willingness to hold accounts abroad and by the large percentage of Mexicans living in the United States without banking services.

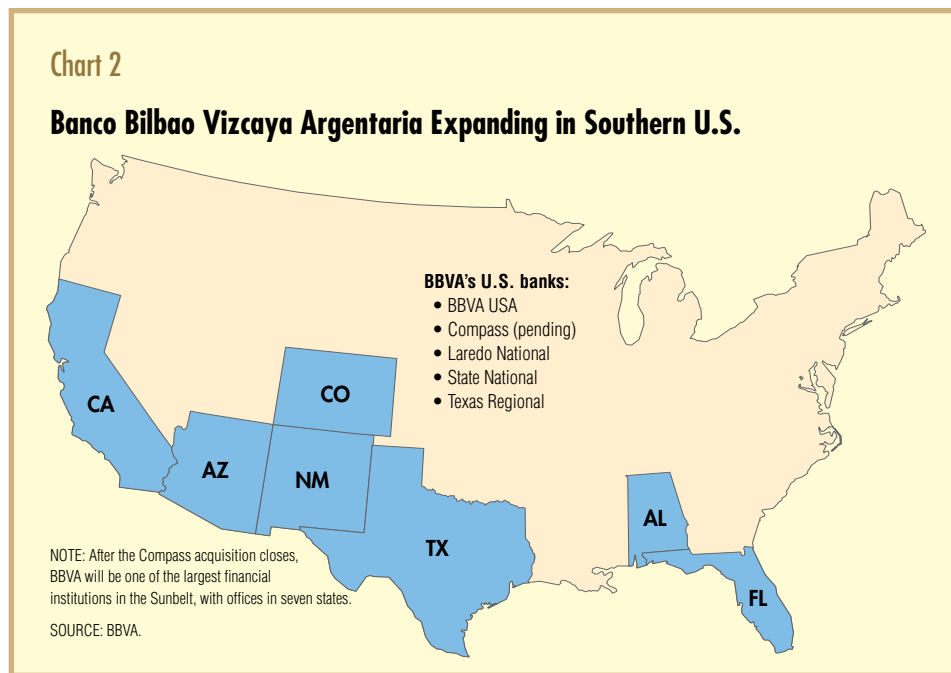
Spain's Banco Bilbao Vizcaya Argentaria (BBVA)—parent of BBVA Bancomer, Mexico's largest bank—acquired Laredo National Bancshares, Texas Regional Bancshares and State National Bancshares in recent years to become one of Texas' largest banks. In late 2006, Banorte, the only Mexican-owned bank, acquired 70 percent of McAllen-based INB Financial Corp.

Carlos Garza, president and CEO of INB, said the goal is to be a binational, bi-currency financial group delivering financial products and services in U.S. dollars and Mexican pesos.

In Garza's view, Mexican banks' U.S. participation makes them more competitive in the Mexican market. Many Mexicans hold deposits in U.S. banks, and Banorte hopes to offer them integrated services such as binational credit cards, loans and mortgages.

BBVA has expanded well beyond Texas. Indeed, its U.S. acquisitions have given it a broad presence in the southern reaches of the U.S. (*Chart 2*), according to Manuel Sanchez, president and CEO of Laredo National Bank.

Sanchez added that border banks



could profitably expand their role in trade financing in Texas and the U.S., especially with China and Latin America.

Challenges and Opportunities

Susan Rico, senior vice president of Wells Fargo Bank in El Paso, said her company developed a strategy for the U.S.–Mexico border market more than 12 years ago. While a stable economy and improving country risk ratings make Mexico a more attractive loan market, significant challenges to cross-border banking remain, she said.

Political and legal actions that limit the flow of people, goods or capital across the border with Mexico can hamper cross-border banking, Rico said. In particular, the Patriot Act and related regulations have increased both the cost of doing business with Mexican companies and individuals and the risks associated with noncompliance.

Eduardo Berain, executive vice president of Frost National Bank in San Antonio, mentioned that Mexico's economic and banking stability has increased consumer confidence in the country's banking system, allowing Mexican institutions to compete more heavily for middle-market businesses.

Andrés Rivas, assistant professor at Texas A&M International University, said banking industry consolidation and the arrival of so many foreign banks have probably increased efficiency but have also raised concerns among the smaller community banks along the Texas–Mexico border.

Rico also pointed out longstanding challenges such as countries' different legal

systems, accounting standards and corporate structures. One way banks can mitigate commercial and country risks is to use insurance products, including services offered by the U.S. Export–Import Bank.

Patrick Crilley, director of the Southwest regional office of the Ex–Im Bank, described how his agency levels the playing field by providing the same credit risk protection and loan guarantees that competitors in other countries can obtain from their governments. In 2006, the Ex–Im Bank's financial products facilitated more than \$1.6 billion in international trade in Texas.

Vibrant Industry

Conference participants generally agreed that new opportunities for cross-border banking exist in a rapidly growing business environment. At the same time, competition is increasing both in Mexico and South Texas.

Against this backdrop, the industry is likely to continue to expand its size and customer base, and the border between U.S. and Mexican financial systems will continue to fade.

Lopez is an economic analyst and Phillips is a senior economist and policy advisor at the San Antonio Branch of the Federal Reserve Bank of Dallas.

Note

Presentations from the Cross-Border Banking Conference can be found on the Dallas Fed web site at <http://dallased.org/news/research/2007/07crossborder.cfm>.

QUOTABLE: “While Texas new-home construction and home sales are trending down, the state hasn’t witnessed the dramatic price declines seen in other areas of the country.”

—D’Ann Petersen, Associate Economist



MEXICO: Sluggish Growth May Pick Up in Second Half

Deep economic ties mean many Texans keep a close eye on Mexico’s economy, which has been plugging along at a more modest pace this year.

After rising 4.8 percent in 2006, Mexico’s real growth slowed to 2.6 percent in the first quarter, reflecting in part the U.S. economic slowdown. Private analysts surveyed by Banco de México in June expected a slight pickup in Mexican economic activity during the second half.

They now forecast inflation-adjusted GDP growth of 3.1 percent in 2007. These analysts had called for 3.5 percent real growth just five months ago.

Recent months have brought small but inconsistent gains

in industrial production and capital formation. After slowing to 5 percent at the start of 2007, year-over-year export growth had spikes of 10 percent in April and 7 percent in June.

Retail sales remain sluggish, echoing the slowdown of private consumption growth this year. Consumer credit has been growing at a slower pace, and remittances from Mexicans working in the U.S. have been declining since October.

Inflation, measured at the consumer level, seems to be coming down slowly, although it remains above Banco de México’s 3 percent goal. Inflationary expectations over the medium term also remain stubbornly above target.

—Erwan Quintin



NEW BRAUNFELS: Adding Jobs on Edge of Austin, San Antonio Areas

New Braunfels is proof of that old saw about what matters in real estate—location, location, location.

With fast-growing San Antonio to the south and booming Austin to the north, New Braunfels and surrounding Comal County have been doing quite well in recent years.

County employment grew 6.4 percent in 2005 and 5.8 percent in 2006.

Besides strong job growth, Comal County also had a relatively high per capita income in 2005 of \$32,522, slightly above Texas’ \$32,460.

High-paying jobs in the surrounding metros help boost per capita income. Half of Comal’s residents work outside the county—similar to such communities as The Woodlands near Houston, Plano near Dallas and Georgetown near Austin.

Higher incomes usually reflect education. A third of county residents have at least a bachelor’s degree—7 percentage points above the state average. Nearly 90 percent of adults have at least a high school diploma, compared with 79 percent in Texas.

New Braunfels also appears attractive to retirees. A total of 13.3 percent of Comal County residents are over 64, exceeding the average of 12.1 percent for the nation and 9.6 percent for the state.

The New Braunfels area offers good schools and attractive Hill Country living, which should be magnets for additional commuters and retirees.

—Michelle Hahn



‘STAFF PAPER’: Exploring Links Between Globalization, Lower Inflation

Countries that are more open to the rest of the world tend to have lower inflation rates, a fact first documented in 1993. Subsequent research has proposed theories about why countries that trade more with the rest of the world tend to have better monetary policies.

In a Dallas Fed *Staff Paper*, “Openness and Inflation,” Mark Wynne and Erasmus Kersting expand the notion of openness beyond what has been included in most existing research—namely, trade in goods and services. They consider other dimensions of openness, such as cross-border flows of capital and labor.

Wynne and Kersting’s model shows the various ways

international economic integration may change the trade-off between economic growth and inflation.

The model suggests that the positive effect on employment from a given monetary expansion is smaller in more open economies, giving their central banks greater incentive to choose lower rates of money growth.

Globalization’s impact on monetary policy is difficult to judge because these forces are relatively new. The *Staff Paper*’s extension of a previous study suggests that foreign capacity utilization may be replacing domestic capacity utilization as a significant contributor to U.S. price pressures, but the findings are tentative.

Broad measures of economic activity suggest that the Texas economy has been expanding at a slower pace this year.

Total employment increased 2 percent through June, well below the vigorous 3.4 percent pace of 2006 (*Chart 1*).¹ The Dallas Fed's Texas Business-Cycle Index, an aggregate measure of the state's economic health, has averaged year-to-date growth of 3.5 percent, compared with 4.2 percent last year.

Service-sector employment grew at a respectable 2.2 percent in Texas during the first half of 2007, but the state isn't getting the boost it did last year from the goods-producing sector. Growth in the goods sector slowed dramatically, from 5.3 percent in 2006 to an annualized pace of 1.3 percent this year (*Chart 2*).

The slowdown in goods-sector job growth occurred in all three major industry categories—construction, manufacturing and energy.

Construction and manufacturing have been hindered by weakness in the housing sector, according to recent data and the July Beige Book, the Dallas Fed's anecdotal re-

port on the Texas economy. Energy-sector activity remains at high levels but has been restrained by lower natural gas prices, a tight labor market and higher costs, including wage pressures.

Housing Measures Down

The housing sector is becoming a drag on economic growth in Texas as homebuilders across the state continue to curb new-home construction in response to weaker demand and higher inventories (*Chart 3*).

Single-family building permits have fallen 34.5 percent since June of last year, and starts are down 12.2 percent. Single-family contract values are 20 percent below June 2006 levels. While the Texas housing market remains better off than other areas of the country, the recent Beige Book found builders don't foresee a revival in the near future.

Manufacturing employment rose in the second quarter after falling the previous three months. Still, year-to-date factory employment is down 1.1 percent, matching the national decline.

Several key industries contributed to the Texas loss (*Chart 4*). Employment fell by 4,000 (6.9 percent) at computer-related firms, largely due to outsourcing and restructuring in the high-tech sector. Jobs were down by 500 (5 percent) in electronic equipment, including home appliances. They fell by 1,400 (2.8 percent) in construction-related manufacturing, a result of the housing downturn. Together, these three industries make up 25 percent of Texas factory employment.

Some areas of strength remain. Commercial construction activity continues to expand, retail sales receipts through May indicate healthy growth and Texas exports recently rebounded, growing 4.5 percent in May.

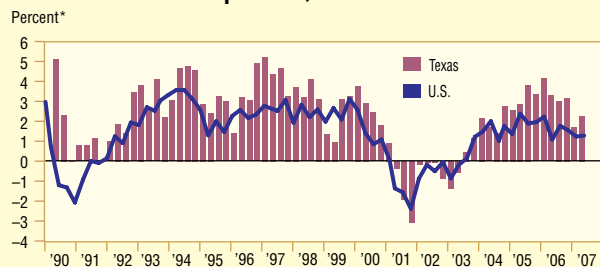
The outlook for the Texas economy continues to be positive, with the Dallas Fed's Texas Leading Index suggesting 2007 job growth of about 2.8 percent—right at the historical average for the state economy.

—Laila Assanie and D'Ann Petersen

Note

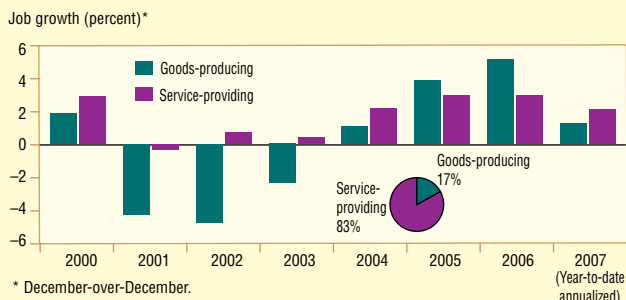
¹2007 employment data are subject to revisions. Past revisions have been substantial.

Chart 1 Job Growth Picks Up in Texas, U.S. but Trails 2006 Pace



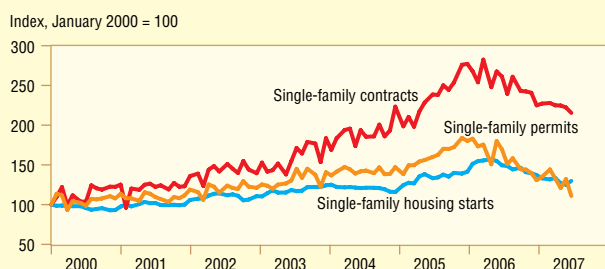
* Quarter-over-quarter.
SOURCE: Texas Workforce Commission, seasonally adjusted by the Dallas Fed.

Chart 2 Texas Goods Sector Loses Steam in 2007



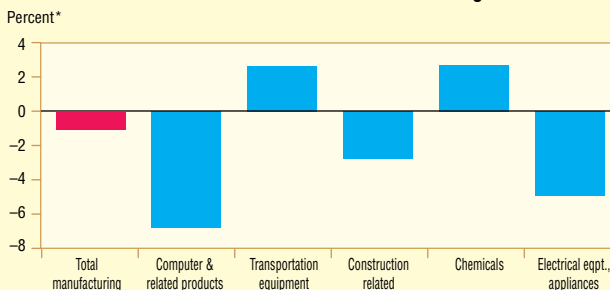
* December-over-December.
SOURCE: Texas Workforce Commission, seasonally adjusted by the Dallas Fed.

Chart 3 Texas Builders Continue to Pull Back



SOURCES: Census Bureau; McGraw-Hill; Dodge Construction.

Chart 4 Job Growth Mixed in Selected Texas Manufacturing Industries



* June-over-December.
SOURCE: Texas Workforce Commission, seasonally adjusted by the Dallas Fed.

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