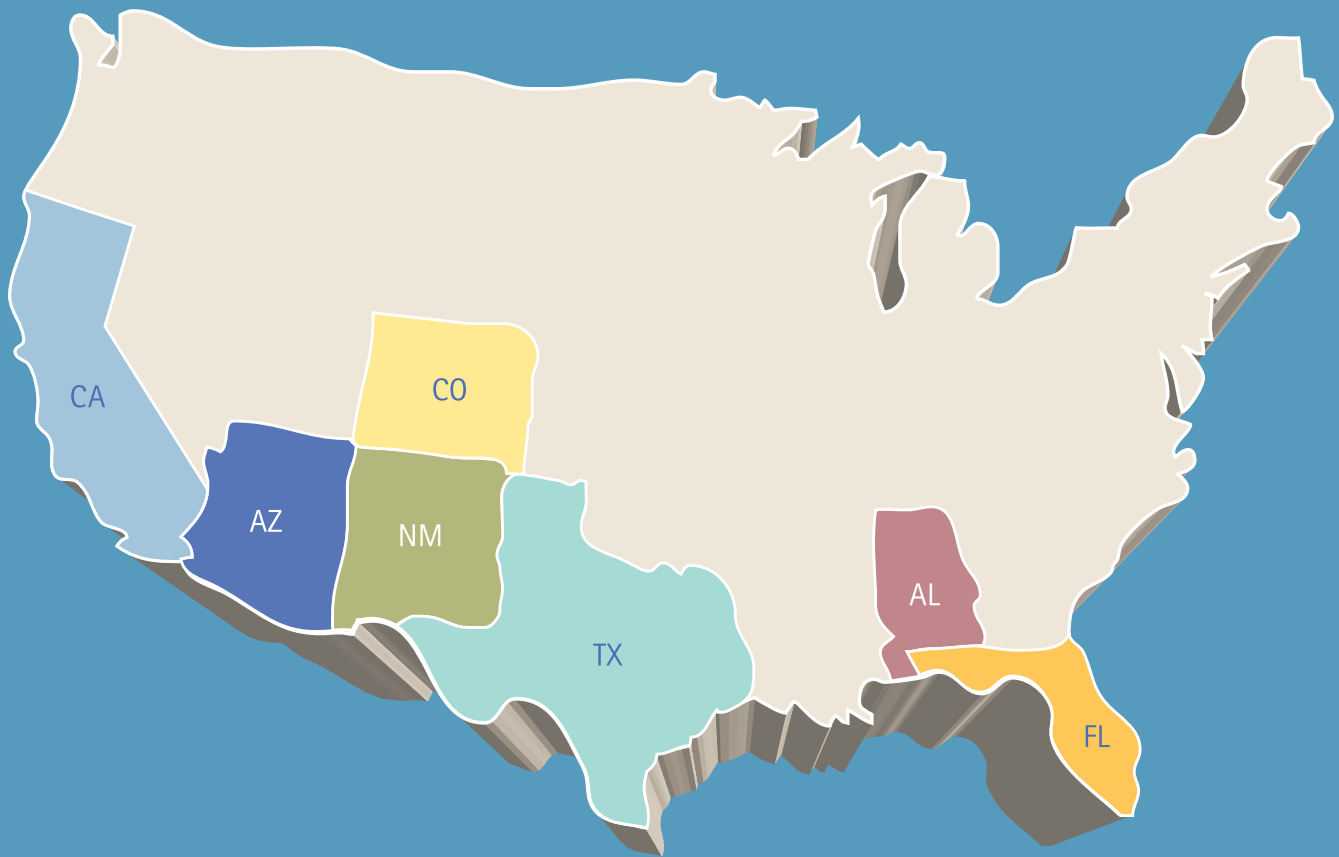


US Regional Watch

Economic Research Department

Third Quarter 2009

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- Economic recovery in the BBVA Compass Sunbelt Region will outperform the U.S.
- The residential housing market has begun the stabilization process
- Commercial real estate hurdles are abundant and will continue to halt improvement
- The state of Texas is a prime example of fiscal prudence during challenging circumstances

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Closing date: August 31, 2009

Third Quarter 2009

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Recent economic indicators confirm that the worst of the downturn is over. We should start seeing positive GDP growth rates beginning in the third quarter. The recovery process will be characterized by a slow expansion rate over a prolonged period of time. Nonetheless, economic growth in the U.S. will remain well above other developed countries. This is mainly a result of highly flexible labor and product markets, a business friendly institutional framework and a leading position in technology and innovation supported by elevated investment in research and development, a high-skilled labor force, strong venture capital flows and close links between universities and the private sector.

At the regional level, states face several challenges that will result in below-average economic growth rates compared to what they experienced during the previous expansion cycle. One key challenge has to do with fiscal pressures. The economic crisis has reduced tax revenues, in turn widening the budget gap. Since states have to balance their budget, many have cut spending and/or increased taxes. This could partially offset the impact of the federal fiscal stimulus and affect long-term growth.

Growth prospects will be also affected by more cautious consumers. The financial meltdown liquidated a large portion of households' financial and real estate wealth, prompting families to strengthen their balance sheets by increasing their savings. In addition, weakness in labor markets has eroded consumers' confidence, making them more reluctant to spend. Given the large relative share of private consumption to gross domestic product, higher savings will soften the pace of domestic demand.

Financial markets have also improved, although they are lagging behind normal conditions. The significant distress shown by several indicators in commercial real estate could obstruct efforts to restore confidence in the financial markets. However, the impact on economic activity will be less severe than the housing crisis. Moreover, fiscal and monetary policy can respond effectively to this problem based on the experience accumulated during the residential meltdown.

In an environment of tighter financial conditions and sluggish domestic consumption, capital investment could slowdown significantly. Thus, economic growth over the next decade will depend heavily on the capacity of each state to attract capital flows.

The BBVA Compass Sunbelt Region will respond differently to fiscal and monetary stimulus; however, there are common elements that will cause the region to outperform the rest of the nation such as solid demographics, industrial diversification, trade openness, a business friendly environment and a highly-skilled workforce. These characteristics will be reinforced by California, which BBVA Compass recently expanded into through the acquisition of Guaranty Bank. We look forward to incorporating California into all articles and forecasts beginning next quarter.

We hope you enjoy reading this issue.

Sincerely,
Nathaniel Karp
BBVA Compass U.S. Chief Economist

Global Outlook

The global economy is coming out of the recession but doubts remain about the sustainability of the recovery and the strength of growth in coming years

Recent data confirms that the global economy is progressing towards stabilization. Incoming second quarter activity data show that in nearly all countries the rate of decline is moderating and, in some cases, the economy is in fact growing when compared to last quarter. In the U.S., GDP showed a lower-than-expected quarterly fall in the second quarter. Also, many developing countries recovered positive quarterly growth rates in the second quarter or accelerated growth (China). The huge support from policy packages and the continuing fall in financial tensions are behind this recent improvement of activity.

A key aspect of this positive cycle has been the policy response to the crisis by governments around the world. In both developed and emerging countries, governments implemented several monetary and fiscal policies to mitigate financial distress and to fight recession and deflation risks. On the monetary side, Central Banks have utilized expansionary policies (conventional and non-conventional), lowering interest rates to historical minimums and taking several measures to increase liquidity. On the fiscal front, governments implemented expansionary fiscal policies that were very useful in avoiding further declines in the already depressed aggregate demands. The effects of these policies were especially felt in the second quarter, and are one of the drivers behind the recent better-than-expected activity data.

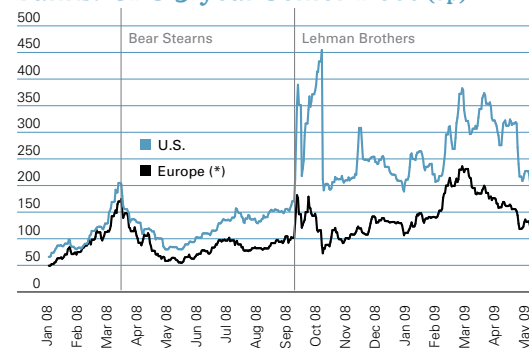
The improvement of financial conditions began at the end of the first quarter and continued through the second quarter. Banks' credit default swaps in the U.S. and EMU are at pre-Lehman failure levels. Interbank markets have also experienced important corrections in the last months, with 3-month OIS spreads at their lowest levels since early 2008. A resurgence of optimism has also been perceived in the stock markets, with general increases both in developed and emerging countries. The reduction of financial tensions generated further optimism from investors and consumers, as reflected in many confidence surveys.

In spite of this general optimism, it is still too early to assure that the recovery will be sustained as the risk of a "double-dip" recession remains a remote possibility. Regardless, the recovery is expected to be sluggish. Some of the forces that will provide a drag on the recovery are: (1) financial systems remain fragile in many countries, with banks still waiting to be restructured and their balance sheets cleaned; (2) the strong support from fiscal policies will diminish next year; (3) households will continue increasing savings and moderating consumption, (4) high unemployment which may become structural through hysteresis effects will further depress consumption; (5) global trade may take several years to recover its pre-crisis importance.

Emerging countries surface less damaged from global crisis

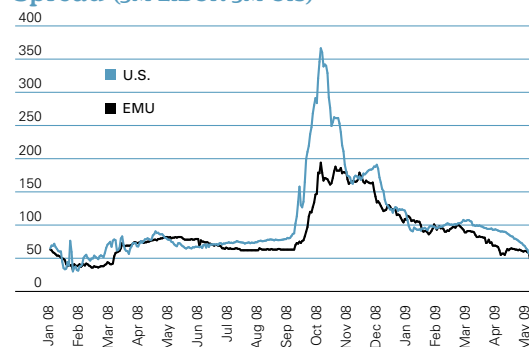
While the abrupt fall in international trade was particularly damaging for small and open developing countries with a small internal market, in general, emerging countries have been affected less than developed ones by the global financial crisis. For instance, China, the biggest emerging economy, showed an impressive growth record in

Banks: CDS 5-year Senior Debt (bp)



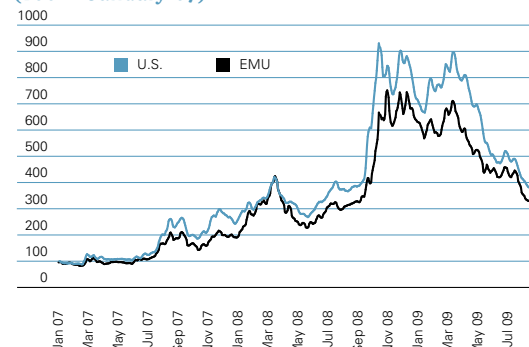
Source: Bloomberg
* Included banks: Barclays, RBS, Lloyds, HSBC, Alliance & Bingley, Standard Chartered, Allied Irish Bank, BNP, Deutsche Bank, ING, Unicredit, UBS, Credit Suisse, Credit Agricole, Societe Generale, Intesa, BBVA, Santander

Interbank Markets: 3 Month Rates Spread (3M LIBOR-3M OIS)



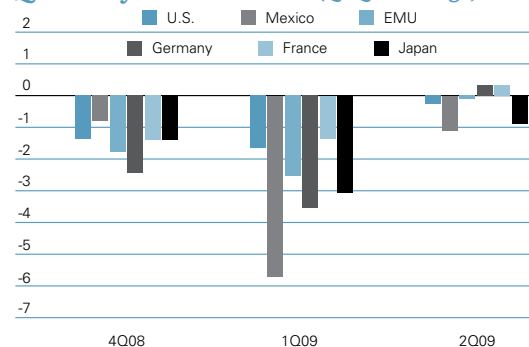
Source: Bloomberg

Financial Tensions Indicator (100 = January-07)



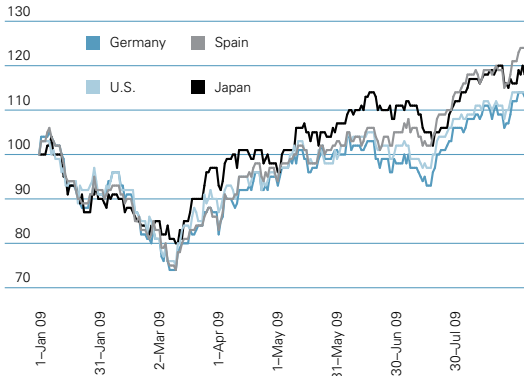
Source: BBVA ERD
First normalized principal component of the following series: OIS spread, implicit volatility, and banking and corporate CDS spread

Quarterly GDP Growth (QoQ % change)



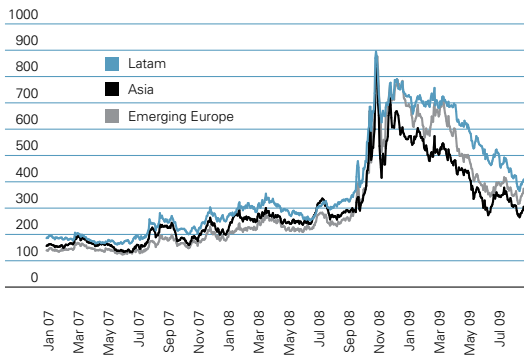
Source: Datastream

Stock Market Evolution in 2009



Source: Bloomberg

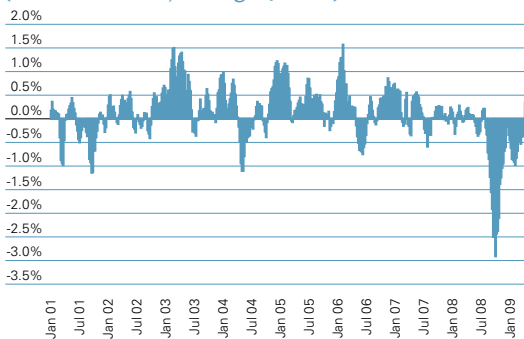
EMBI Spreads



Source: Datastream & JP Morgan

Emerging Economies: Inflows of Fixed Income Retail Funds

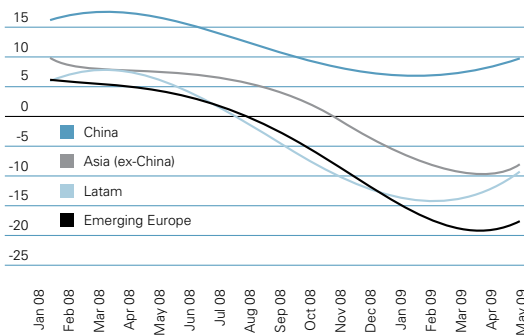
(% of total assets, average 4 week)



Source: Bloomberg

Emerging Markets: Industrial Production

(Trend of YoY % change)



Source: Bloomberg

the second quarter of the year, after the slowdown registered in the last quarter of 2008 and in the first quarter of 2009. This high growth is based on an exceptional easing of bank credit, a massive fiscal plan implemented by the government and a better-than-expected behavior of internal demand that partially compensated the fall in external demand. The rest of Asia also registered improved activity data in the second quarter, with positive GDP growth in 2Q09 which contrasts with the contraction registered in 1Q09.

Latin America was hit hard in the first quarter from the fall in global trade, an initial decrease in commodity prices and the increase in external financing costs. However, the region, led by Brazil, has resisted the impact better than in previous crisis because it was in a stronger fiscal and external position with a more solid financial system, which left room to implement countercyclical policies. As a result, they will probably suffer a comparatively moderate recession this year. In contrast, Eastern European countries were particularly affected by the crisis, with double digit year-over-year (yoy) falls in GDP in the first quarter (notably in Turkey and Ukraine). The combination of a weak external and fiscal position, with large “twin deficits”, and important vulnerabilities in their financial system, imply that the region is particularly vulnerable and that the recovery will be much more difficult.

During the second quarter, as the perception that the global recession was receding and financial tensions decreased in central economies, risk appetite increased in global financial markets and many emerging economies exhibited impressive stock market rises, currency appreciation and capital inflows. The recovery of commodity prices has also propelled stock markets and currencies in many countries.

In coming quarters, the sustainability of the recovery and the strength of growth potential of developed economies will be the key elements to watch

Activity is stabilizing, but it is probable that it will remain subdued in many economies. Of particular importance is whether private consumption and investment will be able to replace government consumption in stimulating demand, once the huge fiscal packages implemented begin to recede. Rising unemployment will depress consumption and activity. As well, concerns about fiscal sustainability underline the need for solid fiscal policy frameworks in the coming years. The manner in which the fiscal adjustment will be implemented will also have differing consequences on the shape of the recovery, and extra care should be taken to avoid a “double-dip” recession.

Monetary policy is expected to be expansive until solid growth is underway and deflationary risks recede. In this sense, despite some upward pressure from recovering commodity prices, global inflation is expected to remain subdued, held back by significant excess capacity. This implies that interest rate hikes are unlikely until 2011.

In the long run, the health of each country’s financial system will be a key aspect to monitor. The shape of the financial system that will emerge from the crisis will determine the profile strength of growth in coming years.

U.S. Economic Outlook

With the green shoots growing taller and their roots deeper, it is evident that the worst of the economic crisis has passed. Economic contraction has eased in the first half of 2009, turning attention to the strength and shape of recovery. Nevertheless, the future outlook is cautious as many risks and challenges lie ahead.

The government launched the popular Cash for Clunkers program in July as part of the American Recovery and Reinvestment Act, which resulted in 700,000 new car deals and the highest number of auto sales since June 2008. This program has had a visible impact on personal outlays, which could push the consumption component of GDP into positive territory in 3Q09 even though spending on other goods and services continues to decline. Nonetheless, now that this program has ended, consumer spending will face many obstacles. For example, consumers are still burdened by debt and credit markets remain tight. Furthermore, job destruction continues at a high rate and the labor market is expected to remain weak even as the economy recovers. As a result, consumers will continue to spend modestly, hindering the resumption of consumption.

The residential real estate market has also received a boost as deep price discounts, the tax credit for first time buyers and favorable mortgage rates have attracted enough interest for new and existing home sales to rise steadily over the past four months. As a result, previously freefalling home prices have stabilized, but new construction and hence, residential investment, will remain subdued due to excess inventories of existing homes.

In addition, non-residential investment (NRI) is expected to contract at a slower rate. Corporate profits remain low, but are improving on a quarterly basis, which will permit greater capital spending. Furthermore, economic indicators are pointing to growth in the manufacturing sector. Nevertheless, the deterioration of commercial real estate due to falling rents and rising vacancy rates could put downward pressure on the structures component of NRI.

Exports are one component that may be outperforming expectations. Some U.S. trading partners are showing signs of growth sooner than expected, which could help strengthen the U.S. recovery process. In particular, exports to China have increased significantly since they hit a low in January 2009.

Lastly, the Federal Reserve's expansionary monetary policy and asset purchase program has aided in slowing economic contraction and stabilizing the financial markets. Although the Fed forecasts economic growth to take hold in the second half of 2009, its expectation of a slow recovery due to abundant economic slack warrants holding the target rate at 0% to 0.25% for a prolonged period of time.

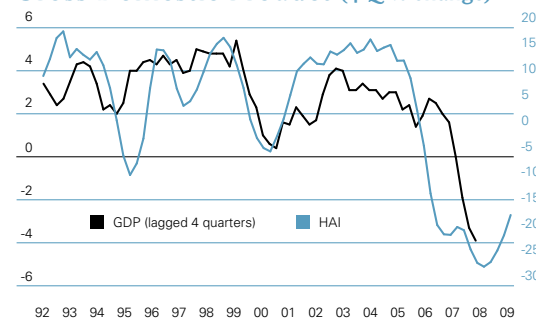
Given the improvement in recent economic data, third quarter GDP is expected to grow for the first time since 4Q07, mainly due to an increase in consumption and slower contraction of other components. Nevertheless, both consumers and businesses will face abundant challenges that will limit the recovery of demand and household wealth. In turn, future economic growth is expected to be slow and wrought with uncertainty.

BBVA U.S. Surprise Activity Index & 10-yr Treasury (Index 2004-07=100 & %)



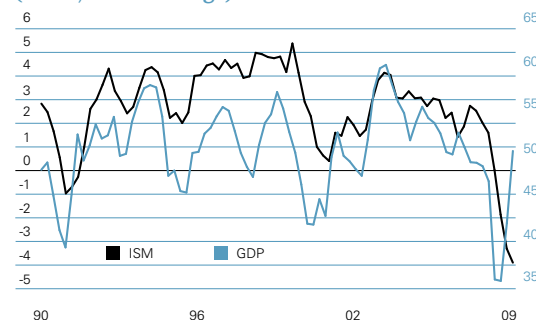
Source: BBVA ERD

BBVA Housing Activity Index & Real Gross Domestic Product (4-Q % change)



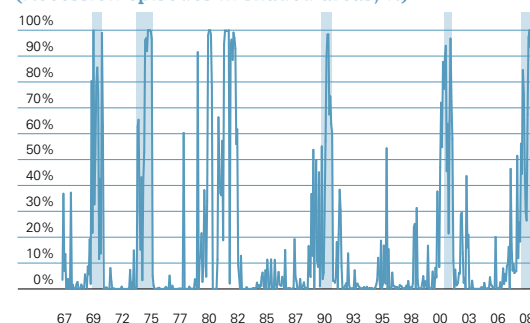
Source: BBVA ERD & BEA

ISM Manufacturing Index & GDP (Index, YoY % change)



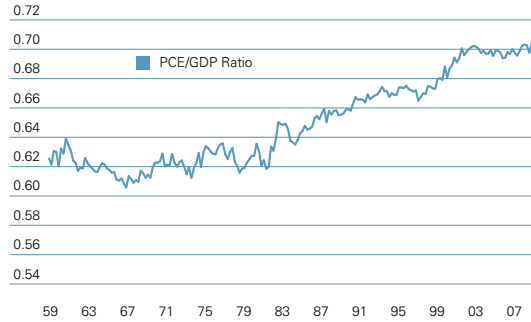
Source: ISM & BEA

BBVA U.S. Recession Probability Model (Recession episodes in shaded areas, %)



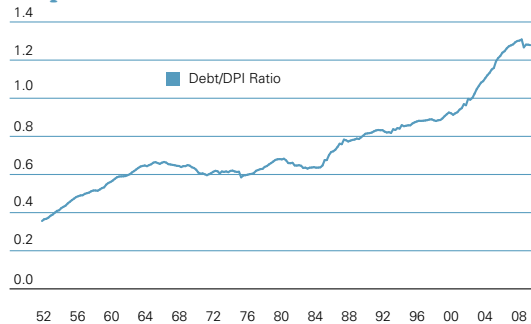
Source: BBVA ERD

Personal Consumption Expenditures & Gross Domestic Product



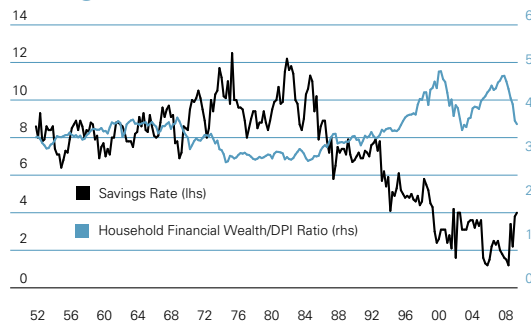
Source: Bureau of Economic Analysis

Household Debt & Disposable Personal Income



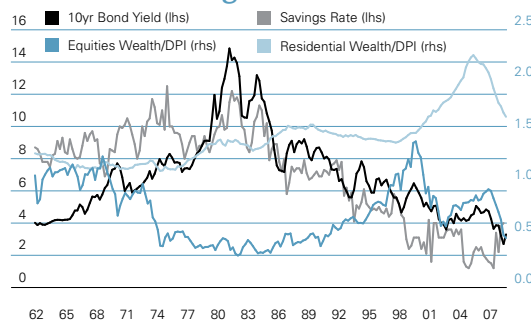
Source: Bureau of Economic Analysis

Savings Rate & Household Wealth



Source: Bureau of Economic Analysis

Household Investment Choices & Savings



Source: Federal Reserve & Bureau of Economic Analysis

The savings rate functions not only as a method of household deleveraging, but also as an indicator of consumption trends. The savings rate is influenced by long-term demographic and fiscal trends. This article will outline our current understanding of the savings rate and how we generally forecast this increasingly important indicator.

Savings measurement and dynamics

At first glance, the household maintains a choice between consuming and saving. The aggregate personal savings rate, estimated by the Bureau of Economic Analysis (BEA), is the proportion of after-tax personal income that remains after subtracting consumption expenditures. Savings are calculated as a residual, meaning that personal outlays are subtracted from Disposable Personal Income (DPI), the remaining portion representing savings and all preceding measurement errors.¹ Additionally, capital gains on stock or holdings of real estate wealth are not considered savings, even though households may decide to park non-consumed income in these forms of capital. Another example is employers' pension contributions, which are treated as income rather than as savings even though these are generally made into 401k retirement accounts. As a result of these issues, the savings rate used to conduct analysis as taken from the BEA is commonly regarded as a conservative measure of savings that is subject to significant statistical noise or variation.² However, one of the advantages of using a conservative conception of saving is that it is directly comparable across time periods.

As a result, we can look back at the dynamics of the savings rate over various time periods. The savings rate is inescapably linked to the household's decision process regarding labor, consumption and debt. Each of these basic decisions interacts with a time element: the household may decide to save more today or tomorrow depending on their perception of how valuable work or how easy access to debt will be in a particular time period. Major influences on the savings rate include financial wealth, labor productivity, liquidity constraints, government spending and demographics.

Financial wealth represents the household's amount of future income from accrued capital investments, most notably corporate equities or pension funds. Housing wealth in the form of the value of the household's real estate functions is another possible influence, although some commentators dispute that housing wealth acts exactly like corporate equity wealth.³ With regard to labor productivity, if households believe that higher labor income as a result of rising productivity will last into the future, then households will save less today since their future income will be higher. Liquidity constraints represent the idea of precautionary saving. If people cannot borrow easily then they will be less able to respond to adverse shocks to their income and will therefore save more to avoid the binding liquidity constraint. The liquidity constraint partially represents the depth of the financial system: in a country with more developed financial products and related infrastructure, borrowing to consumers will be less costly and more

1 Lansing, Kevin, (2005) "Spendthrift Nation," *FRBSF Economic Letter* 30
 2 Marquis, Milt, (2002) "What's Behind the Low US Personal Saving Rate?" *FRBSF Economic Letter* 9
 3 Buiter, Willem, (2008) "Housing Wealth isn't Wealth," NBER Working Paper 14204

efficient, pushing down the liquidity constraint on households.

Beyond the internal decision-making process of households, government and demographics play a role in the savings rate as well. Taxes and incentives regarding spending and investment influence how much people save. Additionally, the social safety net provided by the government allows people to consume more today knowing that their retirement needs are not wholly determined by their current savings rate. As the safety net becomes more or less elaborate, households may commensurately change their savings habits. Demographics play a similar role with regard to the influence of retirement. As the U.S. demographic profile becomes older as a result of the "baby boom" generation and decreasing household size, the increasing ratio of retirees to working-age individuals will tend to increase the savings rate.

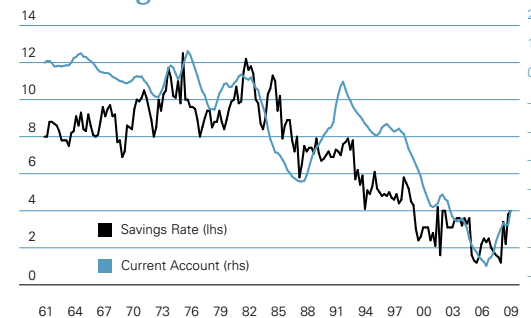
Savings and the financial crisis

With specific reference to the savings rate, the financial crisis manifested itself in two distinct ways: (1) high levels of debt-fueled consumption⁴ and (2) the U.S. current account deficit. Prior to the financial crisis, household debt in the U.S. reached remarkable and historic levels. Previous to this year's recalculation of statistics by the BEA, savings rates were considered partly negative in 2005 and are now officially stated as in the one percent range. Generally, savings in the 2000's were historically low, while debt and consumption were at historic highs. While people enjoyed a high standard of living through increased consumption, households became overextended and ultimately suffered as real estate markets reversed. Given the banking system's troubles, less financial wealth, unemployment, lower expected economic growth, higher government deficits and a host of other possible factors, households are now saving more. Ultimately this unleashes John Maynard Keynes' "paradox of thrift": as more people save, the total demand in the economy drops and exacerbates the crisis.

Second, the savings rate plays a major role in the U.S. current account, which prior to the crisis was unusually large and persistent. The current account represents the trade balance (exports minus imports) and the net financial account (inflows and outflows of U.S. and foreign investments and interest income). In general, developed economies do not historically exhibit persistent high current account deficits.⁵ A number of commentators suggested prior to the crisis that the U.S.'s high current account deficit was unsustainable and would ultimately lead to a serious depreciation of the U.S. dollar that would trigger wide-ranging economic effects for the rest of the world.⁶ Instead, a financial crisis in the U.S. caused not only the reversal of trade balances due to less import consumption, but also savings rate increases, thereby lessening the current account imbalance on the financial flow side. A rising savings rate reduces the U.S. economy's reliance on foreign capital inflows to finance the current account deficit.

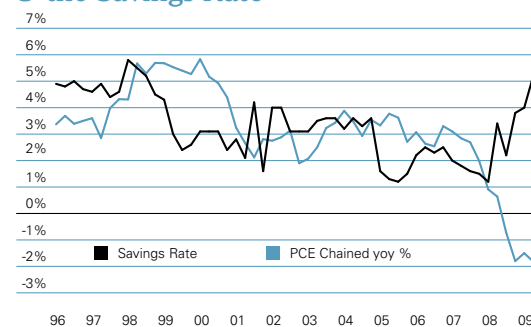
4 Glick, Reuven, Lansing, Kevin, (2009) "US Household Deleveraging and Future Consumption Growth," *FRBSF Economic Letter* 16
 5 Feldstein, Martin, Horioka, Charles, (1980) "Domestic Saving and International Capital Flows," *Economic Journal* 90:314-329
 6 Obstfeld, Maurice, Rogoff, Kenneth, (2004) "The Unsustainable US Current Account Position Revisited," *NBER Working Paper 10869*

U.S. Current Account & the Savings Rate



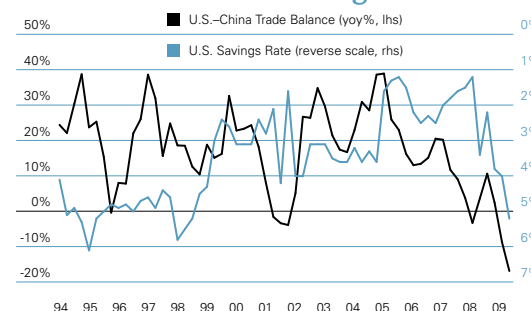
Source: Bureau of Economic Analysis

Personal Consumption Expenditures & the Savings Rate



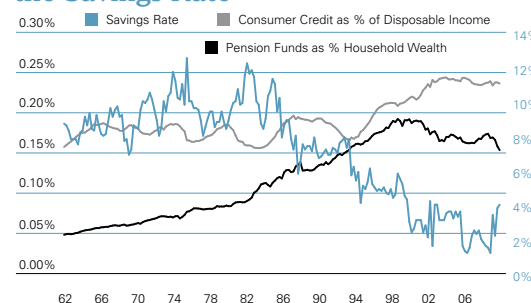
Source: Bureau of Economic Analysis

U.S.-China Trade & Savings



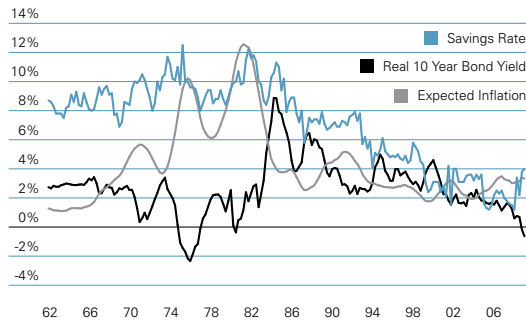
Source: Bureau of Economic Analysis, IMF

Financial Development & the Savings Rate



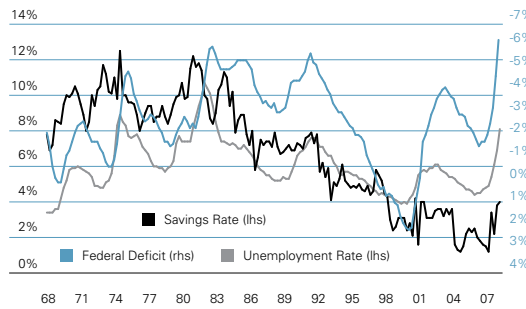
Source: Federal Reserve & Bureau of Economic Analysis

Inflation Expectations, Real Returns & the Savings Rate



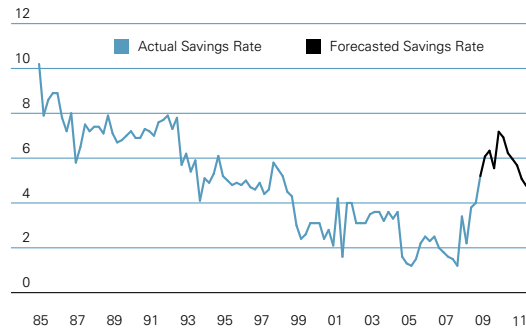
Source: BBVA ERD & Bloomberg

Unemployment, Deficits & Savings



Source: Bureau of Economic Analysis

2009-2011 Savings Rate Forecast (Saving as % of disposable income)



Source: Bureau of Economic Analysis & BBVA ERD

Savings Rate Forecasts & Assumptions

	DOLS	ECM	Savings as % of Disposable Income	Pension
Dec-08	3.8%	3.8%	-4.2%	15.8%
Jun-09	5.2%	5.2%	-8.2%	15.2%
Dec-09	6.3%	4.7%	-13.0%	15.4%
Jun-10	7.2%	3.7%	-11.5%	15.5%
Dec-10	6.2%	3.4%	-9.9%	15.8%
Jun-11	5.7%	3.2%	-8.2%	15.7%
Dec-11	4.8%	3.0%	-6.5%	15.2%
Jun-12		2.8%	-5.3%	14.6%
Dec-12		3.0%	-4.0%	14.2%

Source: BBVA ERD

The path of savings and economic conditions

Given the saving rate's importance to macroeconomic influences such as consumption and the current account balance, forecasting the savings rate represents a useful exercise for economic analysis despite some of the measurement problems of the statistical series itself. The methodological issues in forecasting savings are outlined in the adjacent box. As a quick summary, we utilize two different methodologies for estimating the savings rate, an error-correction model (ECM) and a dynamic ordinary least squares model (DOLS), with the second featuring as the most efficient because it deals with certain finite sample biases that the ECM cannot take into account. For the purposes of forecasting, we estimate the long-term relationship of the savings rate through variables such as: the real rate of return, net worth as a ratio of DPI, the expected inflation rate, the percentage of household wealth in pensions, the federal budget deficit and the ratio of consumer credit debt to disposable income.

The results of the DOLS model suggest that the savings rate will peak at 7.2% in the middle of 2010 and will eventually return to a level of savings above that of the previous decade. Both models concur that the eventual equilibrium will be higher than recent memory. We focus on the DOLS results due to its ability to forecast with the federal deficit as an explanatory variable. A high government deficit will tend to cause people to save more as a precaution against the risk of government finances becoming unsustainable.

Additionally, there are different reasons why U.S. households may save more in the future than in the past decade. For example, uncertainty over the rising cost and reform of healthcare may cause individuals to save more for future health concerns. Secondly, higher taxes on consumption may also motivate people to steer more funds into savings. Lastly, better engineering of financial products using behavioral economics may cause people to save more as we design financial information and products that better circumvent individuals' bounded rationality that typically bias people toward saving less.⁷

Bottom line

Undoubtedly, the equilibrium savings rate of the economy will be higher than in recent memory, which witnessed a consumption boom. The savings rate will act as one element of the household's deleveraging and debt-reduction process. This household debt reduction will result in less consumption growth than we have recently experienced, meaning consumer-driven growth of the economy will be less important going forward. A second element is that the financial system also interacts with the household's process of deleveraging and saving. If debt reduction is achieved through default instead of saving, the banking system absorbs the shock of foreclosures or bankruptcies. What is likely occurring is a mix of both processes – while other consumers save and deleverage, others default or declare bankruptcy. The mix of a weakened banking system and a more conservative consumption profile will bias U.S. economic growth to the downside for the medium term.

7 Thaler, Richard H, (1990) "Saving, Fungibility, and Mental Accounts," *Journal of Economic Perspectives* 4:1:193-205

Forecasting Methodologies

The savings rate as an economic variable is best understood over long periods of time. Unlike some financial variables that are analyzed through daily price movements, the savings rate changes slowly over quarters and is influenced by similarly long-term and evolving variables such as demographics, financial development and households' long-term plans. Some variables that demonstrate an increasing mean, variance and covariance over time are considered non-stationary. Simple ordinary least squares models are not applicable to non-stationary variables and, as such, we must turn to different analytical tools.

Long-run relationships and cointegration

The main problem with using non-stationary models in the classical regression model is spurious regression – the relationship between the variables may be invalid. As a result, we check to see if the variables are cointegrated, that is, if they have a long-term relationship. If through the use of diagnostic tests two variables are found to be stationary after first differencing and there is some linear combination of them that is stationary, then we can say that these two variables are cointegrated. Given the existence of a long-term relationship, we can use an error correction model (ECM) to estimate the effects of each variable on the savings rate:

$$\Delta y_t = \beta_0 + \beta_1 \Delta x_t + \gamma(x_{t-1} - y_{t-1}) + u_t$$

In this equation, Δx_t is defined as $x_t - x_{t-1}$, also known as the error correction term. The model gets its name from the fact that both the levels of variables and the change between variables are estimated at the same time, so information regarding both levels and disequilibrium in the short term is incorporated into the model. In our case, we estimate the following:

$$\Delta \text{SAVRAT}_t = \beta_0 + \beta_1 \text{RR}_{t-1} + \beta_2 \text{CCDI}_{t-1} + \beta_3 \text{LNW}_{t-1} + \beta_4 \text{ECPI}_{t-1} + \gamma \Delta \text{CCDI}_t + \gamma \Delta \text{PENSION}_t + \gamma \Delta \text{DEF}_t + u_t$$

In this equation, SAVRAT, RR, CCDI, LNW, ECPI, PENSION, and DEF represent the savings rate, the real rate of return, the ratio of consumer credit to disposable income, the natural log of net household worth, the expected inflation rate, the percentage of pension wealth of total household wealth, and the federal deficit, respectively. Differenced variables are denoted by Δ . This calculation explains about 63 percent of the variation in the data with high significance of each coefficient. However, the ECM does entail two limitations. First, some of the

variables related to the savings rate may not be strictly exogenous in that there may be some two-way influence between variables. Secondly, the ECM does not have as efficient finite sample properties as newer methods of cointegration analysis.

Using dynamic OLS for forecasting

The issues previously mentioned with ECM can be corrected using a "leads and lags" procedure called Dynamic OLS (DOLS).¹ Following previous work on the savings rate, we estimate the following general specification with four lags and leads of each variable:²

$$\alpha \text{SAVRAT} = \alpha_1 \text{RR} + \alpha_2 \text{ECPI} + \alpha_3 \text{DEF} + \alpha_4 \text{PENSION} + \alpha_5 \text{UR} + \alpha_6 \text{LNW} + \alpha_7 \text{CCDI} + \alpha_8 \text{DEPRAT}$$

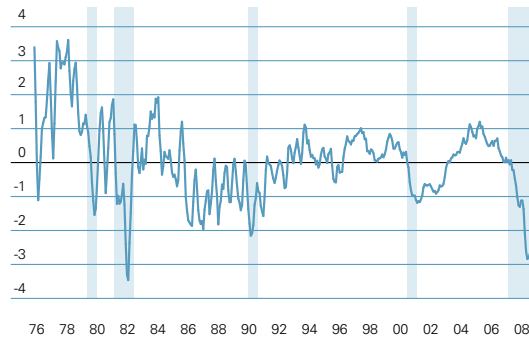
In this equation, UR and DEPRAT represent the unemployment rate and the dependency ratio, respectively. We eliminate structural factors in a stepwise manner on the basis of an incorrect sign or lack of significance. Following this procedure, we dropped the expected inflation rate and the dependency ratio. The resulting model explains 92 percent of the variation in the data and adjusts standard errors for long-term variance. We also perform Hansen (1992) stability tests on the parameters and find that a long-term relationship exists between all the specified structural variables.³ Of all the estimated coefficients, the percentage of pension wealth of total housing wealth imparts the largest negative effect on the savings rate, while the unemployment rate imparts the largest positive effect on the savings rate.

Savings and modeling choice

The DOLS model represents a useful avenue for forecasting the savings rate as it not only corrects for bias, possibly resulting from finite samples or endogeneity, but also translates past behavior of variables more plausibly into future savings rate forecasts. In particular, the influence of the government deficit is believed to represent the key future effect on the savings rate.

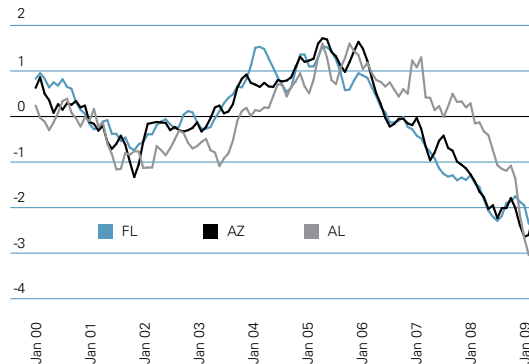
- 1 Stock, James, Watson, Mark, (1993) "A Simple Estimator of Cointegrating Vectors in Higher Order Integrated Systems," *Econometrica*, 61:4:783-820.
- 2 Berube, Gilles, Cote, Dense, (2000) "Long-Term Determinants of the Personal Savings Rate: Literature Review and Some Empirical Results for Canada," *Bank of Canada Working Paper 2000-3*.
- 3 Hansen, Bruce, (1992) "The Likelihood Ratio Test Under Nonstandard Conditions: Testing the Markov Switching Model of GNP," *Journal of Applied Econometrics*, 7:S61-S82.

BBVA Monthly Activity Index: Sunbelt (3mma, shaded areas = recession)



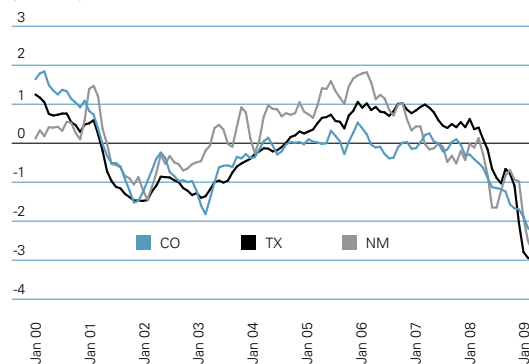
Source: BBVA ERD

BBVA State Monthly Activity Index (3mma)



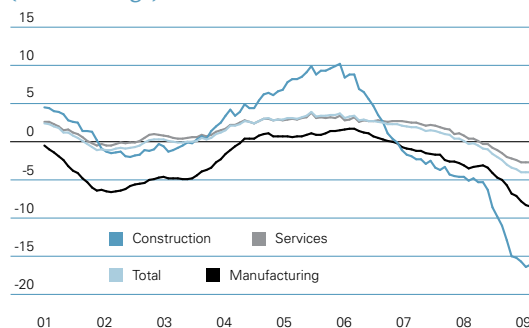
Source: BBVA ERD

BBVA State Monthly Activity Index (3mma)



Source: BLS & BBVA ERD

Sunbelt: Non-Farm Payroll (YoY % change)



Source: BLS & BBVA ERD

Evidence recorded at the end of the second quarter, and early in the third quarter, confirms that the worst for the Sunbelt's economy is behind us. BBVA Compass' State Monthly Activity Index (SMAI) continued to improve, increasing from a bottom of -4.4% in March to -3.1% in July. Yet, the index remains in negative territory, pointing to ongoing weakness in labor markets and a high degree of economic slack. On an individual basis, the SMAI improved modestly in Alabama, Florida and New Mexico, flattened in Texas and declined further in Arizona and Colorado.

Job losses might be stabilizing

In the BBVA Compass Sunbelt Region, job losses have flattened over the past three months. In July, employment decreased by 4% year-over-year (yoy) for the third straight month, which is slightly below the national average (4.2%). Employment's yoy decline has stabilized in all states except in New Mexico, where it accelerated in recent months. Moreover, mass layoff events in the region have eased from a peak of 120 (three-month moving average) in March to 101 in July. However, the pace of mass layoff events in the region is still too high, similar to that registered during the 2001 recession. On an individual basis, mass layoff events have decelerated in Arizona, Colorado, New Mexico and Texas, yet have intensified in Alabama and Florida.

At the industry level, job losses in manufacturing have eased in all states except New Mexico. From January to July, Texas, Florida and Alabama suffered the largest losses in manufacturing; however, relative to the size of their payrolls, Florida's losses were the largest, representing 3.5% of total non-farm employment, followed by Alabama with 1% and Texas with 0.6%. In the services industry, job losses have also moderated. From January to July, Arizona's economy has shed 67,000 jobs from this sector, equivalent to 2.7% of total payroll, the largest share in the BBVA Compass Sunbelt Region. The least affected state in the service industry so far is Texas, with a net loss equal to 0.6% of total payroll. Job losses in construction have already reached a high and have been moderating in some states since the beginning of the second quarter. From January to July, Arizona has experienced the largest losses in construction relative to the size of its payroll.

In July, the Sunbelt region's unemployment rate continued to accelerate; however, it is 0.6 percentage points below the U.S. average. The gap between the U.S. unemployment rate and Sunbelt's has narrowed. In fact, although the unemployment rate in Texas, New Mexico, Colorado and Arizona remains below the national average, it has exceeded this benchmark in Alabama and Florida, as the latter registered an unemployment rate of 11.9%, 2.5 pp. above the national average.

Moving forward, job losses will continue to show signs of stabilization as unemployment insurance claims have flattened in most states, anticipating the end of the recession. The only exception is Florida, where initial claims have not bottomed out yet.

Housing market: encouraging signs in the most affected states

Home prices in Florida and Arizona continue to fall at double digit rates on a yoy basis; nonetheless their downward trend has leveled off. Home prices in Texas and Alabama increased in 2Q09, but at a slower pace than in previous quarters. Prices have begun to decline in Colorado and continue to decrease in New Mexico.

On the demand side, sales of existing homes decreased 2.3% in 2Q09 from -5.7% in 1Q09. A strong rebound has taken place in states with the sharpest depreciation. For instance, Arizona and Florida posted annual average growth rates of 41.5 and 21% respectively. In the remaining states, however, existing home sales continue to decrease on a yoy basis. The outlook for residential construction remains weak although there are some encouraging signs. In June, the building permits' trend, measured by their six-month moving average, increased in the entire region. This was the second consecutive increase for Arizona, Colorado, New Mexico and Texas. Nonetheless, the outlook is still weak on a yoy basis, as permit issuance continued to drop significantly.

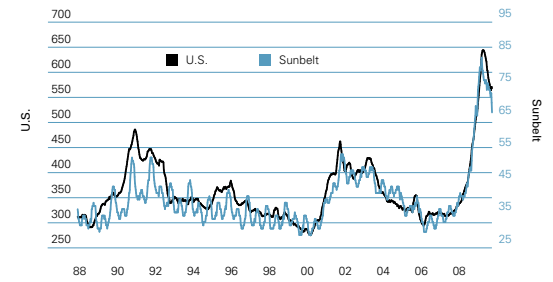
Significant exposure to the global downturn

The BBVA Compass Sunbelt Region has been particularly affected by the worldwide economic contraction. Exports of goods have decreased substantially in the first half of 2009, almost 22.7% on a yoy basis. In 2Q09 this trend accelerated in Alabama, Colorado, Florida and Texas. The global recession imposes risk to those economies in which international trade constitutes a substantial portion of GDP, such as Alabama, Florida and Texas. We expect exports to recover gradually because some important trading partners are likely to lag the U.S. recovery.

The R word

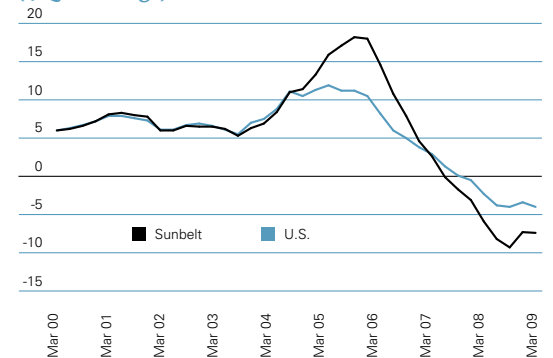
Available economic indicators confirm that the worst of the economic adjustment is over and that the Sunbelt Region's economic adjustment could be near the end. Although labor markets remain subdued in most of the states, the region as a whole continues to outperform the national average. For the next months, we expect Florida and Arizona to show modest positive figures in the housing market. Meanwhile, Alabama and New Mexico are likely to adjust downwards in the short-term. Texas and Colorado are weakening as home appreciation is approaching negative territory and the outlook for some trading partners is far from positive; however, as the U.S. economy stabilizes, these states will experience a milder adjustment than the rest of the nation. Overall we expect the region to recover faster than the U.S. as a whole. The main question going forward is what form the recovery process will take in our region. Although recent developments suggest resurgence is likely to be slow at the national level, states' perform differently, depending on their unique characteristics. For instance, more diversified economies would be able to take advantage of potential changes in industry trends. In that sense, our region is particularly well positioned to benefit from potential changes and incoming investments in industries such as healthcare, education, technology and energy.

Initial Jobless Claim (4wma, K)



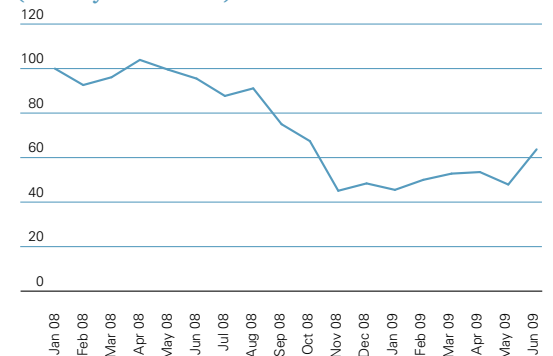
Source: BBVA ERD

FHFA Home Prices (4-Q % change)



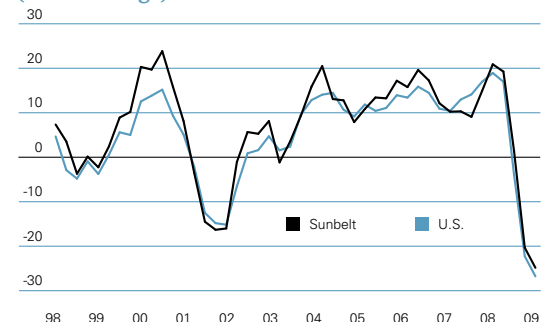
Source: FHFA

Sunbelt: Building Permits (January 2008 = 100)



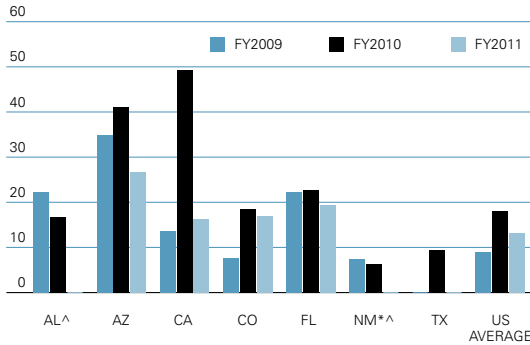
Source: Census Bureau

Exports of Goods (YoY % change)



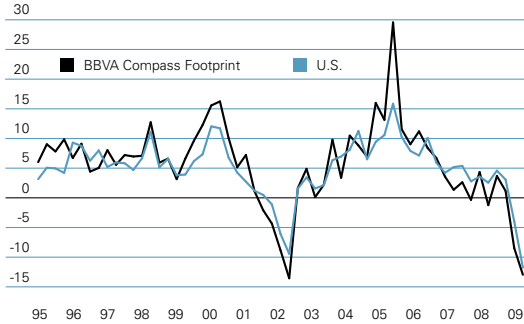
Source: BBVA ERD

State Budget Gaps
(% of general fund)



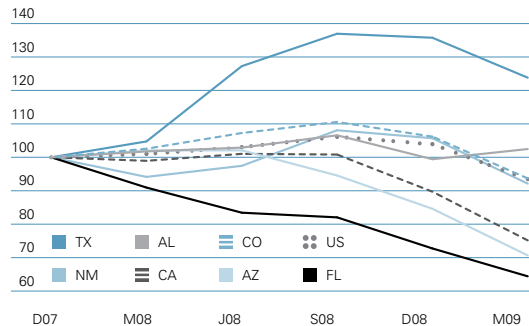
Source: CBPP
 * NM has not yet announced the size of its FY2010 midyear gap
 ^ NM & AL have not yet announced the size of their FY2011 gap

State Tax Revenues
(YoY % change)



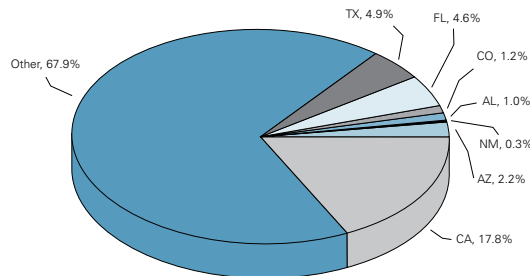
Source: Census Bureau

BBVA Compass Sunbelt States Tax Revenues (Index)



Source: BBVA ERD

Fiscal Stimulus Funds Paid Out by State
(% of Total = \$72.4bn)



Source: www.recovery.gov

State governments, burdened by an increasing demand for social services and falling revenues, are one of the recession's primary victims. Their desperate situation became evident on July 1, the start of the new fiscal year in most states, when many failed to pass a budget. Although California's plight was the most publicized and perhaps the direst, it was not alone. Furthermore, barely a month after the start of the fiscal year, forty-eight states reported budget shortfalls totaling \$162.8bn. Within the BBVA Compass Sunbelt Region, including California, reported budget gaps for FY 2010 equal \$62.8bn.

Five of the seven states in the region have anticipated FY 2010 budget deficits that exceed the U.S. average of 18% of the given state's general fund. California's budget gap is the most severe, amounting to 49.3%, followed by Arizona at 41.1%. In contrast, Texas has reported a gap of 9.5% and New Mexico has declared a shortfall of 6.3%, but that percentage is expected to increase. Looking forward to 2011, six of the seven states foresee future gaps; Texas is the only state expecting a balanced budget.

States face dramatic decline in tax revenues

The decline in state tax revenues accelerated in the first quarter of 2009 by dropping an alarming 11.7% year-over-year (yoy), the second consecutive quarterly decrease and the largest decline in the history of the data. Within the BBVA Compass Sunbelt Region, Arizona and California's revenues plunged the most, by 16.4% yoy and 16.2% yoy respectively. They were followed by New Mexico (-12.8%), Florida (-11.5%), Colorado (-10.1%) and Texas (-8.8%). Alabama, on the other hand, posted an increase of 3.1% yoy after dropping 6.7% in 4Q08.

Each state is unique in its vulnerability to the recession, a declaration that becomes clear when examining tax revenues. Within the BBVA Compass Sunbelt Region, Texas has fared the best with revenue growth exceeding the U.S. average. The higher than average growth throughout 2008 could be one of the reasons that Texas is better positioned with a smaller than average budget gap going into FY2010 and no expected gap for FY2011. Florida, on the other hand, has suffered from sharp declines in taxes since 1Q07, primarily due to falling general sales tax income, which makes up 57% of Florida's tax revenues. Arizona and California have also underperformed compared to the U.S. as a whole, while New Mexico, Colorado and Alabama performed in line with the fifty state average.

Fiscal stimulus package will provide modest buffer

The states will receive some relief from provisions in the American Recovery and Reinvestment Act, which includes measures for funds to be allocated to the states to alleviate some of the stress from budget deficits and to prevent cuts to important programs in areas such as healthcare and education. The funds paid out in 2009 are targeted to an increase in federal support of Medicaid and unemployment insurance programs, with 35% and 19% of the funds going to the Department of Health and Human Services and the Department of Labor, respectively. In total, \$72.4bn has been paid out to states. Moreover, \$23.2bn has gone to the BBVA Compass Sunbelt Region, equivalent to 38% of the region's deficit. Even though the funds will help soften the blow, they are not a solution to the states' budget problems.

Although the total federal funds paid-out is calculated for 2009, while the state budget deficit figures are estimated for FY2010, their proportion to each other can give insight into the impact on each state. Texas, which has the smallest budget gap as a percentage of the general fund, will benefit the most from the stimulus funds because they have thus far covered 101.2% of the shortfall. On the other hand, California, with the largest budget shortfall, will not receive as much relief, as the stimulus funds only add up to 28.4% of the budget gap.

States will have to employ spending cuts and tax hikes to balance their budgets

In response to their budget woes, states have employed a combination of unprecedented expenditure cuts to various state services and programs, many of which target healthcare and education programs. California, for example, reduced expenditures for FY2010 by \$12.4bn. Of this total, 40.5% are from education programs and 16.8% are from healthcare programs. However, the Golden State is not alone. Alabama reduced education funding by 11% in FY2009 and is anticipating a 6% cut in FY2010, which begins October 1.

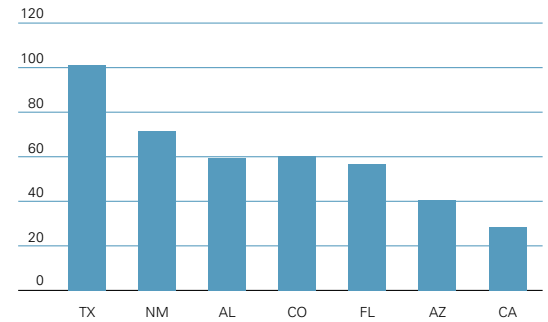
Nevertheless, spending cuts alone will not resolve most states' shortfalls. As a result, thirty states have raised taxes since January 1. Among those are California, Florida and Colorado, whose new tax policies will cover 22.7%, 9.4% and 9.0% of their FY2010 budget shortfalls, respectively. Nevertheless, the states' means vary widely. For example, California implemented a 0.25 percentage point (pp) income tax increase and a 1pp sales tax rise, both of which will affect a widespread base. On the other hand, Colorado will derive most of its additional income from more targeted programs that increase hospital provider fees, raise motor vehicle fees and fines, institute a \$2/day rental car surcharge, extend the sales tax to tobacco products and end the ability to deduct capital gains income derived from assets or businesses located within the state from the income tax. Florida has also instituted programs with a narrower base such as a \$1 additional surcharge tax on a pack of cigarettes, a surcharge of 60% of the wholesale price of other tobacco products and an increase in vehicle registration and license fees.¹

Future Challenges Remain

There are signs that economic growth will begin in the third quarter of 2009, but it alone will not put an end to state budget woes. The employment outlook remains bleak as job creation remains negative and the recovery will be modest once it takes hold. As a result, personal income tax revenues will continue to drop with more people out of work and slower wage growth than in previous years. Furthermore, these factors, along with limited access to credit and a higher propensity to save, will dampen sales tax revenues because low expectations of future income growth will prompt consumers to reign in spending. It is inevitable that states will face additional challenges ahead, but restructuring the budget now could help states develop a more sustainable balance between expenditures and revenues for the future.

¹ Johnson, N., Nicholas, A., Pennington, S. (July 9, 2009) Tax Measures Help Balance State Budgets, *Center on Budget and Policy Priorities*.

Federal Stimulus Paid Out (% of FY2010 budget gap)



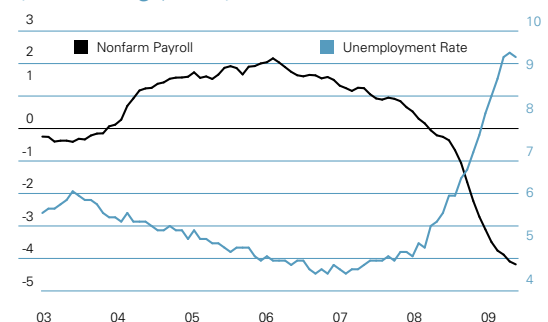
Source: www.recovery.gov & CBPP

California Expenditure Solutions (2009-2010)

Major General Fund Programs	(Millions of Dollars)
Propositions 98	4,463.1
Higher Education	568.8
RED Shift	1,700.0
Corrections and Rehabilitation	785.5
Medi-Cal	1,381.8
SSI/SSP	108.2
CalWORKS	509.6
IHSS	263.5
Developmental Services	284.0
Mental Health	163.9
Healthy Families	178.6
CWS and Foster Care	120.6
Other HHS	361.6
Courts	168.6
Employee Compensation	783.6
Other	575.7
Total	12,417.1

Source: California State Budget 2009-10, California Department of Finance

Nonfarm Payroll & Unemployment Rate (YoY % change, value)



Source: BLS

Fiscal Sustainability

Due to Obama's stimulus package after the financial crisis, the U.S. fiscal deficit is expected to increase up to 13% of GDP in 2009 and government debt will remain elevated for the next decades even with proposed spending cuts. This issue raises doubts to the sustainability of U.S. fiscal policy.

There is no clear definition for the term "fiscal sustainability." But, in general, any fiscal policy is considered "sustainable" if it could be indefinitely maintained without any solvency issues. Croce and Juan-Ramón (2003)¹ use a similar definition for fiscal sustainability but they argue that solvency is a necessary but not sufficient condition for fiscal sustainability. Other than solvency, a country should also be able to continue servicing its domestic or external debt without any substantial extra costs.

As it is well documented in Burnside (2005), government budget and life-time budget constraints are the backbone of fiscal sustainability. The government budget constraint can be written as:

$$B_t - B_{t-1} = I_t - X_t - (M_t - M_{t-1}) \quad (1)$$

where B_t is the quantity of public debt at the end of period t , I_t is the interest payments, X_t is the primary balance (revenue minus noninterest expenditure), M_t is the monetary base and budget constraint evolves over time as it includes time, t . Assuming public debt pays a constant real rate of interest, r , and government can earn seigniorage revenue by printing money, government life-time budget constraint can be written as:²

$$b_{t-1} = \sum_{i=0}^{\infty} (1+r)^{-(1+i)} (x_{t+i} + \sigma_{t+i}) \quad (2)$$

where $b_t = B_t/P_t$ is the stock of real debt, $x_t = X_t/P_t$ is the real primary surplus and $\sigma_t = (M_t - M_{t-1})/P_t$ is the real value of seigniorage revenue.

The government lifetime budget constraint suggests that government finances its debt by: (1) cutting noninterest expenditures (public spending), (2) increasing tax revenues by either new taxes or higher tax rates and/or (3) increasing seigniorage revenue by printing more money.

The government might also have a fourth option: debt

default. If the government becomes insolvent and cannot continue to finance its deficit and/or debt, it might choose to (partially or completely) default on the public debt.

Why is fiscal sustainability important?

Sustainability issues occur when a government increases its debt to such a level that it is no longer feasible to finance its debt or it becomes too costly to continue to finance. Then, it would have four options, each that come with a cost. The first two options (cutting spending and increasing taxes) are both politically unfavorable for politicians and tax payers.

The government might choose to increase its seigniorage revenue by printing more money which leads to inflation if the central bank does not reverse printing money in a timely manner. In the long run, this option could jeopardize the credibility of the central bank making monetary policy ineffective in the future.³

On the other hand, if the government chooses to default on its debt, taxpayers actually benefit directly since "the default is a transfer from bondholders to taxpayers". If the default is on external debt, then the benefit for the tax payers would be even higher.⁴ However, a debt default comes with a crisis and raises several important costs: (1) the exchange rate depreciates sharply and thus reduces welfare by changing the relative price of imports and exports, and causing sector shocks, (2) it disrupts the financial markets by bankrupting many companies which hold treasury securities, or have foreign debt (depreciation increases the amount of debt for those who have external debt), (3) it decreases government credibility and its policies would become ineffective. Debt default would also decrease the country credit rating which harms a country's ability to find domestic or external loans in the future and increases the interest rate on its future debts. Therefore, as Romer put it so well, "...the costs of an attempt to pursue unsustainable fiscal policy that ends in a crisis are almost surely substantial."⁵

Although there are no clear-cut criteria for fiscal sustainability, some ratios are being used to assess countries' fiscal sustainability. High share of debt into GDP, a high ratio of public debt to tax revenue, a high share of external debt to total debt, a lower ratio of broad money to GDP and volatile public revenue might indicate issues.

1 Croce, E., and H. Juan-Ramon. 2003. "Assessing Sustainability: A Cross-Country Comparison." IMF WP 03-145.

2 We skipped many steps for simplicity but for more detail please see Burnside, C. 2005. "Theoretical Prerequisites for Fiscal Sustainability Analysis." in Craig Burnside(Editor) "Fiscal Sustainability in Theory and Practice: A Handbook." World Bank Publications. pp.11-33.

3 Inflation has several costs to both individuals and governments. For more detail see Romer, D. 2001. "Advanced Macroeconomics." 2nd Edition. McGrawHill: New York, NY. pp. 519-23.

4 *ibid.* p. 574.

5 *ibid.* p. 576.

Potential Output Growth in the BBVA Compass Sunbelt Region

Part I: Capital stock accumulation

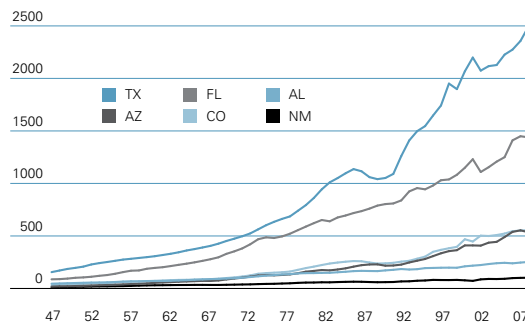
The concept of potential growth has an important place in economic theory and monetary policy discussions. Potential gross domestic product (GDP) is the level of output that an economy can produce without raising the rate of inflation. However, it should not be considered as a production possibility frontier that cannot be exceeded. Indeed, an economy can exceed its actual output, but this comes with a price: inflation. If actual output rises above its potential level, then, due to limited resources, the economy would over heat and inflationary pressures rise. In other words, a growth rate above its potential will be short-lived and create additional problems like inflation. On the other hand, if actual output falls below potential, then resources become idle and inflationary pressures will fall. Although potential growth is crucial, little research has been done on potential growth of states until now. This can be explained by the lack of sufficient series such as capital stock.

Capital stock is one of the most important determinants of economic growth. In economic literature, it is widely accepted that output is determined by capital, labor and technological change. Sometimes, national resources and human capital are also included in these models. The general idea behind the importance of capital stock is that a person faces a trade-off between consumer now and consume later (or save). If a person chooses to consume less, he will be able to consume more in the future. A higher savings rate means higher investment which leads to higher capital stock and capital accumulation expands productive capacity. Therefore, an increase in the level of capital stock of a country or state leads to higher output. In this respect, a measure of capital stock helps us have an idea for a state or country's potential growth.

To analyze the potential growth of each state in the BBVA Compass Sunbelt Region, we start first with an estimate of state level capital stocks.¹ In future issues we will use these capital stock estimates to measure the potential growth rates of the states in our region.

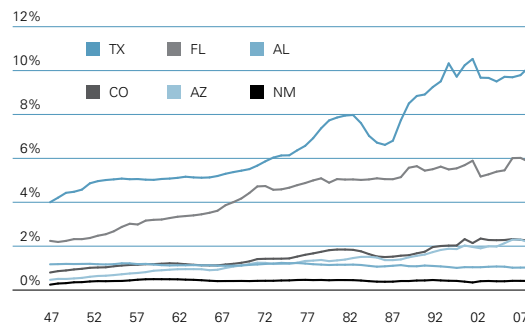
As expected, parallel to its size we find TX having the highest capital stock reaching \$2.5B as of 2007, while AL and NM the lowest capital stock with only \$253M and \$102M, respectively. All of the states in the region with the exception of AL have outperformed by increasing their shares in U.S. total capital stocks. We can interpret these results in two ways. First, based on percentage point gains, TX is the leader with shares increasing 6.1 pp from 4% to 10.1% in the 1947-2007 period. FL followed TX with a 3.6 pp increase reaching 5.9%. AL, however, is the only state whose share contracted from 1.17% to 1.03%. Second, based on percentage change in shares, AZ finds itself at top of the winners list. It increased its capital stock by 368%. CO, FL, TX and NM follow afterwards. On the other hand, AL lost 12.5% of its shares during the same period.

State Capital Stocks (Mn \$, 2000)



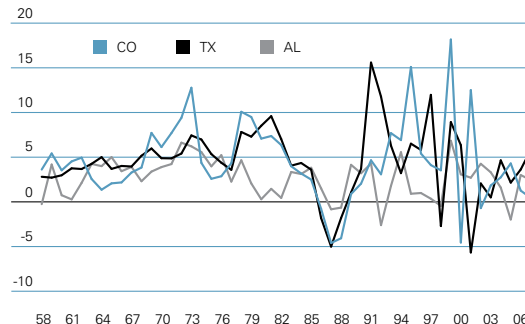
Source: BBVA ERD

State Capital Stocks Share of U.S. Total (%)



Source: BBVA ERD

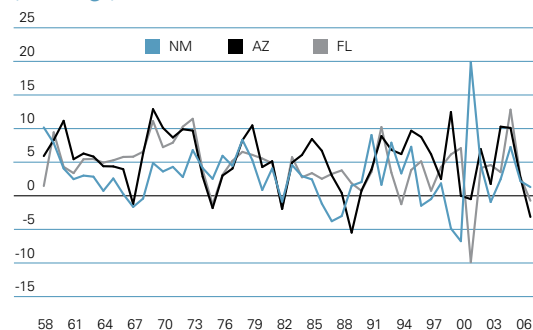
State Capital Stocks (% change)



Source: BBVA ERD

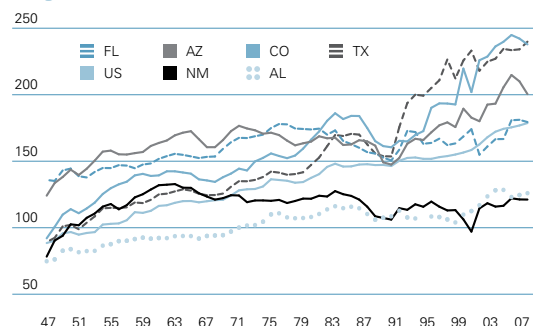
¹ Please see Methodology section for further details on our capital stock estimation.

State Capital Stocks (% change)



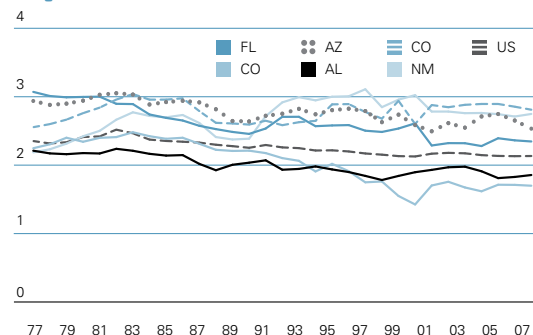
Source: BBVA ERD

Capital Stock/Labor



Source: BBVA ERD

Capital Stock/GDP



Source: BBVA ERD

Table 1 Capital Stock 1947-2007
(% change & pp change as a share of U.S. total)

	AL	AZ	CO	FL	NM	TX
% Change	-12.5%	368.4%	181.9%	161.0%	68.3%	153.5%
pp change	-0.1%	1.7%	1.5%	3.6%	0.2%	6.1%

Source: BBVA ERD

Summary statistics of state capital stocks nestle important information about their behavior through time. Results show CO, NM and AZ have the most volatile capital stocks, approximately 5 times higher than the U.S. average while AL has the least volatile capital stocks approximately 3 times higher than the U.S. In general, since last decade, changes in capital stocks have become more volatile.

Table 2

	AL	AZ	CO	FL	NM	TX	US
Capital Stock Growth Averages							
60s	2.9	5.9	3.6	5.8	1.9	4.2	3.7
70s	4.5	6.5	7.0	6.0	4.8	5.8	3.5
80s	1.7	3.2	2.2	3.2	0.8	3.0	2.8
90s	2.1	6.6	7.1	3.7	2.6	7.1	2.4
00s	2.3	3.5	2.2	3.0	3.8	2.4	2.5
Summary Statistics							
StdDev	2.2	4.2	4.4	3.8	4.3	3.9	0.8
Min	-2.6	-5.5	-4.6	-9.9	-6.8	-5.7	0.8
Max	6.8	12.9	18.2	12.8	19.9	15.6	4.4
Correlation	35.8%	32.4%	22.2%	43.7%	-8.7%	0.3%	100.0%

Source: BBVA ERD

The correlation of capital stocks between states and the U.S. is also important. AL, AZ, CO and FL had positive correlations with U.S. capital stocks implying pro-cyclical behavior of their economies. On the other hand, NM and TX had negative correlation indicating that NM and TX economies have counter-cycle behavior. This is because NM has a large Government sector and its economy depends highly on commodity prices. Government spending, in general, is higher during recessions and higher commodity prices favor NM while dampening the U.S. economy overall. TX has large energy and healthcare sectors which make the state less dependent on U.S. business cycles.

Capital-output and capital-labor ratios tell us whether the economy is labor intensive or capital intensive. Based on our analysis, capital-output ratios of the states fluctuate between 1.4 and 3.1. The U.S. capital-output ratio fluctuates very close to 2. All but NM and AL have higher capital-output ratios indicating more capital intensive economies compared to the U.S. average. TX is the only state that starts below the U.S. capital—output ratio and ends up with much higher than it. As of 2007, CO has the highest ratio at 2.8 followed by TX with 2.7. NM has the lowest ratio at 1.7. Keep in mind that NM's lower capital-output ratio might be due to the high presence of the Government sector.²

The capital-labor ratio indicates very similar results. TX and CO increased their capital-labor ratio from 92 and 89 in 1947 to 238 and 240 in 2007, respectively. Although all states increased their ratios, FL, AL and NM underperformed the U.S. average. TX, CO and AZ increased their ratio more than the U.S. trend indicating that these states become more capital intensive which supports our findings in the capital-output ratio.

² In our analysis, we use private fixed assets for capital stock.

Methodology: Estimation of State Capital Stocks

Little research has been done about capital stock and potential growth of states until now. This can be explained by the lack of sufficient series, i.e. capital stock. Within a neoclassical framework, we need reliable capital stock, employment and technological progress estimates to calculate potential GDP and growth. Among these variables, capital stock is the one which limits researchers to focus on states' potential growth. The Bureau of Economic Analysis (BEA) publishes its estimates for capital stocks only for the entire U.S. and not for individual states. Therefore, we follow Garofalo and Yamarik (2002)^{1,2} to estimate state-level capital stocks with some slight differences.

$$k_t^{ij} = \left[\frac{y_t^{ij}}{Y_t^i} \right] K_t^i \quad (1)$$

$$k_t^j = \sum_{i=1}^m k_t^{ij} \quad (2)$$

where $m=9$ and 19 for periods 1947-1989 and 1990-2007, respectively. i represents the industry and j represents the state. Lower-case k and y represent capital stocks and income earned each state and upper-case K and Y represent capital stocks and income earned nationally in each industry, respectively.

The estimation of the state-level capital stocks is carried out using available data from BEA. We used Current-Cost Net Stock of Private Fixed Assets, Chain-Type Quantity Indexes for Net Stock of Private Fixed Assets and State Annual Personal Income data for the period 1947-2007.

We calculated real capital stocks for each industry in the U.S. using "Current-Cost Net Stock of Private Fixed Assets by Industry" as nominal capital stock and quantity index (Chain-Type Quantity Indexes for Net Stock of Private Fixed Assets by Industry) to transform it into real terms.

The quantity index is equal to 100 in 2000 for the North American Industry Classification System (NAICS) categorized industries and 1996 for SIC categorized industries. Due to the nature of indices, the sum of each industry real capital stock would not perfectly match the figures calculated using nominal industry totals. Therefore, after we calculated real industry capital stocks, we distributed excess amounts to each industry based on their relative size.

The other complication for our calculation is industry level income and capital stock mismatch. The BEA releases annual income data by major industries and is available for 1929-2008. However, it provides these data by 8 industries (Historical) for 1929-1957, 9 industries (SIC – Standard Industrial Classification) for 1958-2001, and 19 industries (NAICS) for 1990-2008.

On the other hand, it releases capital stock estimates using NAICS for 1947-2007 and SIC for 1947-2001.³ Therefore, it is not possible to match income and capital stock series and estimate capital stocks in the state level for 1947-2007 without any intervention.

To overcome this mismatch between income and capital stocks data, first, we used historical averages of wholesale/trade ratio and expand 8 industries into 9 industries and calculate income data for 9 industries for the 1947-1957 period. Then, we calculate capital stocks for 1990-2007 using NAICS 19 industries and 1958-2001 using SIC 9 industries separately by weighting the national capital stock (K_t^i) by relative income earned (y_t^{ij} / Y_t^i) within each state for each industry i as in equation (1). Finally, summing up these estimates for all industries within each state as in equation (2) gives us the state level capital stock estimates for three different sub-sample: 1947-1957, 1958-2001, and 1990-2007.

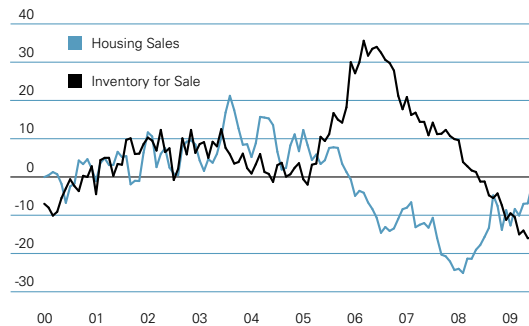
Finally, to reach one capital stock estimate for the whole sample, 1947-2007, we assume growth rates of capital stocks calculated using SIC would be equal (or at least be very similar) to capital stocks calculated using NAICS. Hence, by applying growth rates of capital stocks calculated by SIC in 1947-1990 to capital stocks calculated by NAICS, we calculate capital stocks by NAICS backwards for 1947-1989. Combining these series provides us state level capital stocks estimates for 1947-2007.

1 Garofalo, Gaspar A. and Yamarik, Steven. 2002. "Regional Convergence: Evidence from a New State-by-State Capital Stock Series." *The Review of Economics and Statistics*. May 2002. 84(2): 316-323.

2 The procedure assumes capital-output ratio of each industry is the same across U.S.

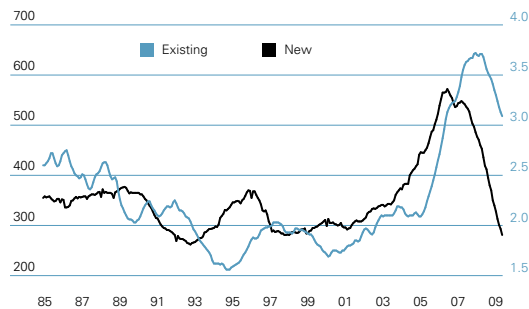
3 BEA no longer provides capital stock estimates using SIC.

Home Sales & Inventory for Sale (YoY % change)



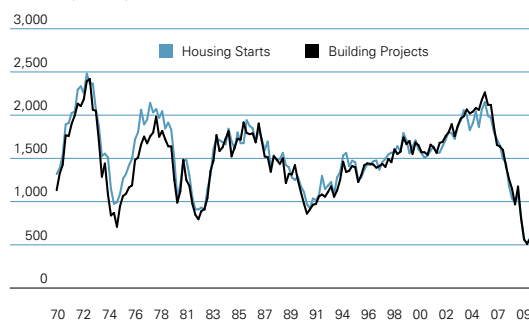
Source: NAR, Census Bureau & BBVA ERD

Single Family Home Inventory New (000's) and existing (mn, saar)



Source: Census Bureau & NAR

Housing Starts & Building Projects Units (000's)



Source: Census Bureau

In the second quarter of 2009, home sales improved and inventory decreased. Building activity slightly rebounded but home builders' confidence still remains very low

In 2Q09, housing sales increased slightly from 1Q09 in both new and the existing home segments. Thus, in 2Q09, the number of new homes sold reached a yearly average of 0.356 million of units (18,000 houses above the first quarter average) while the yearly average number of existing homes sold was 4.76 million, almost 200,000 units over the first quarter average. However, total houses sold in 2Q09 were still 5.5% below the total sales observed a year earlier.

Better affordability ratios, higher consumer confidence and the federal tax credit for first time home buyers approved by the government have been the main factors behind the increase in home sales. Large auctions of homes in foreclosure have also helped housing sales. Although the yoy housing sales ratio has been falling since 2006, it has been improving since mid 2008 and the trend indicates that it could be positive by the end of 2009.

One of the first consequences of better home sales is that the inventory of homes for sale has significantly diminished from a peak of 5.0 million units in 2Q08 to 4.1 million units at the end of 2Q09. However, while inventory of new homes for sale is at its minimum level (below 300,000 units), existing home sales inventory is still large (3.8 million units) and well above the twenty years average (2.8 million units). From a historical point of view, the excess housing supply in 2Q09 could be quantified around a million units, half the excess supply that existed a year ago.

Another consequence of improving home sales is that housing construction has resumed slightly. In 2Q09, yearly housing starts averaged 582,000 units (61,000 units above 1Q09 average) while yearly building projects averaged 570,000 units (59,000 units above previous quarter). However, these positive figures are still at historical lows and well below figures from last year. Compared to 2Q08, housing starts in 2Q09 decreased 46.0% and building projects are down 54.1%.

To have a significant increase in housing production, we need to see a steep fall in existing home inventory, which would require a further increase in sales coupled with fewer foreclosures. Once the oversupply of inventories is eliminated, housing prices would increase. At that point, there would be a strong incentive for households to return to the housing market, increasing housing production.

With increasing demand, home prices will bottom out in the second half of 2009 and could slightly appreciate in 2010

Finally, as a consequence of higher housing demand in the first half of 2009, home prices have depreciated at a lower rate than they did in 2008. In 2Q09, existing home prices had appreciated almost 3% from the previous quarter at the national level. In addition, in 2Q09, new home prices increased 8% from the previous quarter. Overall, home prices may keep improving as demand steadies and distressed properties account for a smaller share of transactions.

According to our forecast, home prices will definitely bottom out in the second half of 2009 and could increase slightly in 2010. However, rising unemployment, stagnant consumer confidence and lower personal income mean a rebound may be slow to take hold. In addition, the increase in home foreclosures will restrain home price recovery.

In 2009, the main affordability ratios are pointing to a better environment for housing demand. In fact, the home price to household income ratio is at its lowest level since 1984. The ratio that relates the cost of mortgage payments to the average family income is also at its lowest level. In the same direction, the borrowing capability of an average household far exceeds the median home price.

In the BBVA Compass Sunbelt Region, existing home sales have improved slightly. This has helped clear excess supply and boosted home building

In 2Q09, Sunbelt Region existing home sales jumped 4.7% from the previous quarter, reaching a total of 1.09 million units sold. This was the second consecutive quarterly increase. On a yoy basis, region home sales dropped 2.3%, the slowest rate since 1Q06. However, there is a great heterogeneity within the region: while existing home sales have increased significantly in FL and AZ (where they bottomed out in 4Q07) and, more slightly, in AL or NM; they are still decreasing in TX and CO, where the housing downturn has been milder and prices are still increasing.

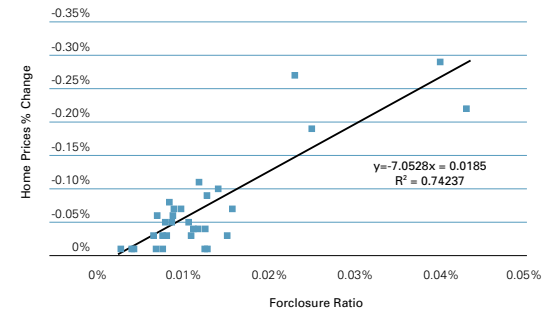
In the major metro areas of the BBVA Compass Sunbelt Region, the increase in existing home sales has helped to clear part of the inventory and excess home supply is back to 2006 levels. From 2Q08 (the peak of excess supply) to 2Q09, inventory of existing homes for sale decreased 18.5% to reach a total of almost 335,600 units for sale in the 16 major metro areas considered.

As at the national level, better home sales have slightly boosted building projects in the region, which have increased 11.3% in 2Q09 in relation to the previous quarter. Building projects have increased significantly in AL, AZ and CO but more slightly in NM and TX. In FL they are still declining.

Home prices are still declining in most of the Sunbelt Region but the first signals of price stabilization are appearing in major metro areas. In 2Q09, existing home prices have declined in the Sunbelt Region compared to previous quarter data, according to FHFA index. However, in some metropolitan areas such as Dallas, Tampa and Miami, home prices bottomed out in 2Q09.

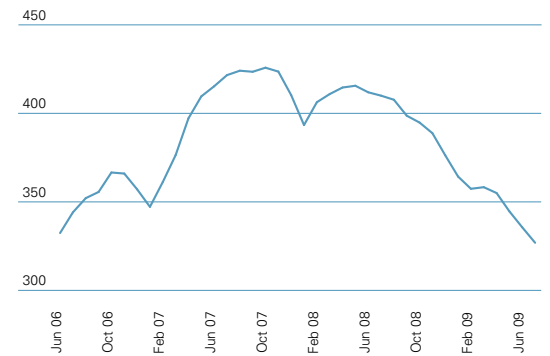
However, home price recovery in the different Sunbelt Region markets will depend on general economic upturn. The improvement in the housing affordability ratios in most of the states (AL, AZ, FL and NM) suggest that housing demand will easily expand as soon as the labor market improves and credit tightening eases. In the long term, the expected high population growth rate of the region will be one of the key factors in housing demand.

Home Foreclosures & Home Prices Relation (As % of loans & YoY % change, States)



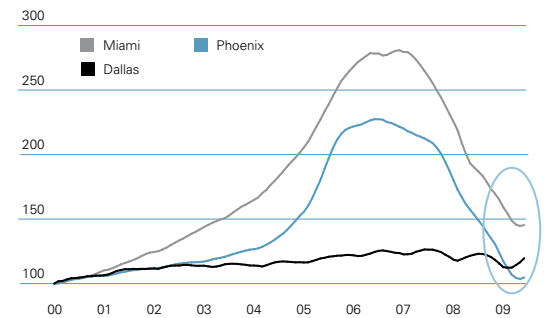
Source: BBVA ERD

Inventory of Homes for Sale 16 Major Metro Areas BBVA Compass Sunbelt Region. Units ('000's)



Source: ACRE, Housingtrading & BBVA ERD

Housing Price Index (Jan 2000 = 100)



Source: S & P

Housing Affordability Ratios

In general, the adjective “affordable” is used to denote inexpensive or reasonably priced. In the real estate business, it is possible to define a set of indicators that would delineate how affordable a house is in relation to the average household income. These indicators are called housing affordability ratios.

The BBVA ERD (Economic Research Department) has created a set of indicators that measures a household’s economic ability to buy a house. The aim of these indicators is to link household income with home prices and mortgage conditions. In doing so, we have developed a tool to estimate the effects that changes in each variable have on housing affordability.

Our housing affordability ratio has three main indicators, with the first measuring the relationship between house prices and household income. The second estimates the average cost of mortgage payments in relation to household income. The third indicator calculates the borrowing power of the average household in current mortgage conditions and relates it to housing prices.

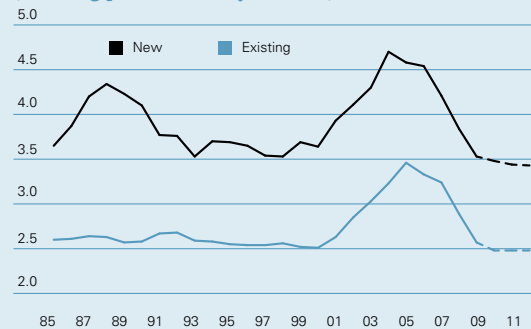
As previously mentioned, the first indicator defines the relationship between home prices and family income; allowing us to make historical or inter-state comparisons. In the first quarter of 2009, the median price of a new house was equivalent to 3.5 times the average income of a U.S. household, while the median price of an existing house was 2.6 times that. Those ratios were 25% below the highest ratios observed for both new (4.7 in 2004) and existing housing (3.5 in 2005). Current ratios are at the lowest level since the mid eighties and according to our forecast they will remain low for approximately three years, which could drive up housing demand.

As home prices exceed family income, households usually request financing in order to buy a house. In this case, the mortgage conditions (loan to value, interest rate and loan maturity) are another factor to take into account. Our second affordability indicator, the ratio of mortgage payments to household income, takes the three mentioned factors into consideration: prices, income and mortgage conditions. In the first quarter of 2009, the cost of the mortgage payments needed to buy a median house was equivalent to 18.2% of the average household income for a new house and 13.3% for an existing one. These ratios are now about 35% below the ratios observed in 2005

for both new and the existing homes. From the historical point of view, this affordability ratio is at its lowest level.

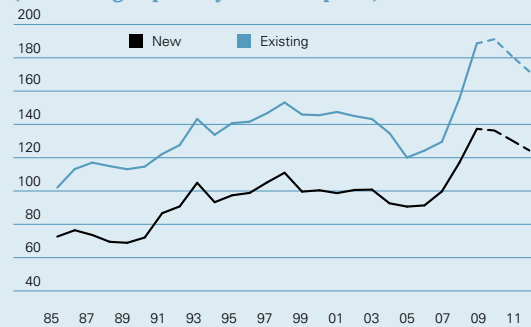
Finally, our third affordability indicator, household borrowing power and housing prices, is used broadly. In fact, the National Association of Realtors (NAR) has developed¹ a housing affordability index that measures whether or not a typical family could qualify for a mortgage loan on a typical home. The NAR indicator is estimated using the median price for an existing home and median family income; as a result, it measures the affordability of a median existing house. With a similar methodology but using average incomes and average prices, the BBVA ERD has built an affordability index for new housing. Both indicators, affordability of new and existing homes, are currently at their peak levels due to the house price adjustment and favorable mortgage conditions. According to our forecast, in the following years these indicators will return to lower levels due to house price stabilization and slightly higher mortgage interest rates.

Housing Affordability
(Housing price to family income)



Source: BVA ERD

Housing Affordability
(Borrowing capability to house price)



Source: BBVA ERD

1 <http://www.realtor.org/research/research/hameth>

Commercial Real Estate: Recovery Remains Far-off

The economic downturn is forcing a growing number of companies to go out of business, in turn increasing the commercial real estate vacancy ratio and lowering rents

Throughout 2008 and 2009, the economic recession has negatively affected commercial real estate (CRE): vacancy rates increased while effective rents decreased. As a result, capital values of commercial real estate dropped significantly.

Between 1Q08 and 2Q09, the U.S. manufacturing industries lost 1.8 million jobs and the private service sector declined by almost 3 million according to the Bureau of Labor Statistics (BLS), which eroded demand for industrial and office space. In addition, a decline in household consumption also negatively influenced demand for retail space. As a result, in 2Q09 office vacancy rates reached 15.9%, which was 3.3 percentage points (pp) above 4Q07 figures. In the same period, retail vacancy rates increased from 7.5% to 10.0%, according to Reis Inc. data. Vacancy rates for rental apartments reached 7.6% of total supply nationwide in 2Q09, almost 2 pp above the 4Q07 rate.

While vacancy rates for office and retail space increased due to an increase in new supply as well as a decrease in occupied stock, vacancy rates for apartments rose because new supply exceeded new demand. Since the first half of 2008, vacancy ratios have increased, while effective rents decreased slightly in the three sectors mentioned above. Compared to last year's data, effective rents in 2Q09 dropped 1.9% for rental apartments, 6.7% for offices and 3.2% for retail space according to Reis Inc.

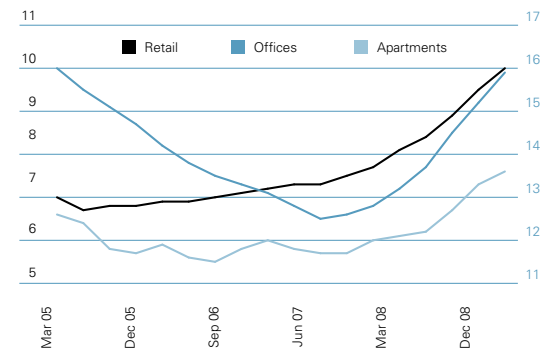
Due to the current environment, returns on CRE investments have been in negative territory since 4Q08 and are continuing to decline. In 2Q09, CRE yearly total returns decreased 19.6%, the deepest and steepest negative downturn since data has been collected, according to the National Council of Real Estate Investors Fiduciaries (NCREIF). Total returns are dropping not only because of lower income flows from rents but also due to the depreciation of CRE properties. In 2Q09, total returns on investment in rental office space fell 22% yoy, while the retail and rental apartment sectors dropped 21% and 13% respectively. The second quarters' returns are the lowest in the last 30 years.

Previous quarters' poor economic performance has led to a significant drop in commercial real estate investment. It is not expected to recover until mid 2010

The dramatic drop in CRE returns has led to several economic and financial consequences. First, CRE investment is declining steeply, contributing negatively to economic growth. Second, CRE mortgage delinquency is climbing, further stressing financial institutions. Finally, lower capital value of CRE is directly impacting companies' wealth and investment capability.

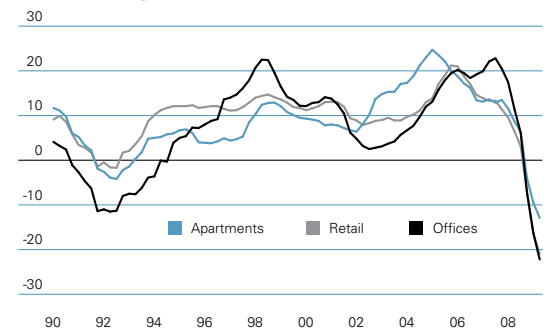
The current downturn in CRE investment is as intense as the one in the beginning of this decade. In fact, during the last four quarters, CRE investment went from a positive growth rate of 14.5% to a negative rate of -16.9%. In the first and second quarters of 2009, the

Vacancy Rates
(As % of total supply)



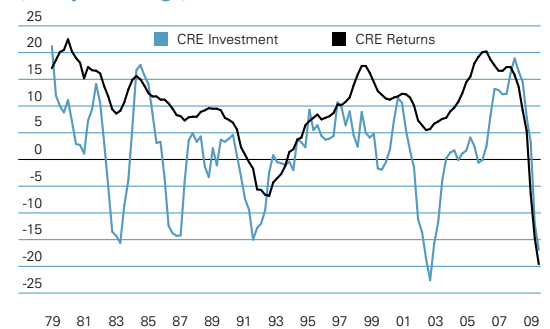
Source: REIS

Property Returns, Total
(YoY % change)



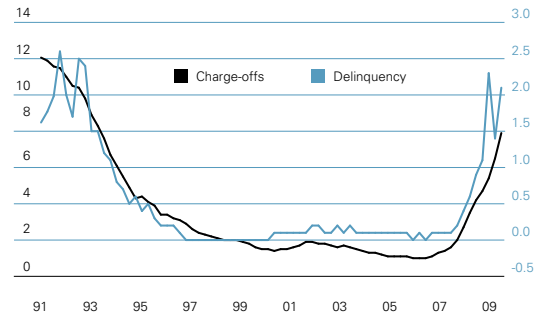
Source: NCREIF

CRE Returns and Structures Investment
(Yearly % change)



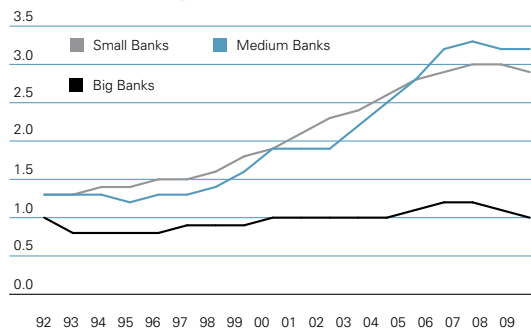
Source: NCREIF & BEA

CRE Delinquency & Foreclosure Ratios
(As % of CRE Loans)



Source: Federal Reserve

CRE & Construction Loan Concentration
(As % of Teir 1 Capital + Reserves)



Source: FDIC & BBVA ERD

structures component of non-residential investment had a negative contribution of 0.4 and 0.7 basis points, respectively, to GDP growth.

Looking forward, our forecast points to a further decline in CRE investment in the second half of 2009; ending the year with an averaged decline of -18.1% yoy. Forecasts for 2010 indicate a change in the trend of CRE investment; although it could remain negative in the first part of the year, it is likely to recover in the second half, ending the year in positive territory.

In the last four quarters, delinquency rates in commercial real estate almost doubled and charge-offs reached levels comparable to those observed in the residential sector

The increasing number of companies going out of business due to poor economic activity also led to higher mortgage delinquency and foreclosure rates in 2008 and 2009. In fact, in 2Q09, the commercial real estate delinquency rate reached 7.9%, 1.5 percentage points above the 1Q09 ratio and 3.7 points above the ratio observed a year earlier. In the same quarter, the commercial real estate net charge-offs ratio increased 0.7 basis points, totaling 2.1% of the portfolio. Although still below 1991 levels, both the CRE delinquency and net charge-offs ratios are accelerating intensively. The negative evolution of the CRE portfolio is putting stress on some commercial banks.

The concentration of CRE loans is higher in small banks (those with total assets below \$1 billion) and mid size banks (those with total assets between \$1 billion and \$10 billion), which are focused generally on regional or local real estate markets, than in bigger banks (those with total assets above \$10 billion). In fact, in 2Q09, CRE investments accounted for more than 45% of the total portfolio of small and mid size banks and were equivalent to 3.2 and 2.9 times the Tier 1 capital and reserves of small and mid size banks respectively. Bigger banks face lower risks because they have a less significant CRE portfolio: in 2Q09, it accounted for only 17% of total loans and leases, and was slightly above the Tier 1 capital plus reserves.

According to our forecast, in the second half of 2009 and the first half of 2010, the commercial real estate segment will continue to deteriorate, with higher vacancy rates and even lower effective rents. This situation will have a significant impact on some commercial banks and will be a negative factor for the financial system as a whole in the second half of 2009.

The Arizona-Sonora Border Region

Marshall Vest, Director, Economic and Business Research Center, Eller College of Management, The University of Arizona¹

The States of Arizona and Sonora represent a modern-day model of regional integration molded on shared ecological systems and long-standing cultural, political, economic and social ties. These ties continue to evolve in the face of political, immigration and global challenges although more recent political and public attention has focused on the illegal flow of people and contraband between Mexico and the United States, and the security and humanitarian concerns of the southern border region.

In 2008, Arizona and Sonora combined had an estimated population of 8,987,788 people, a 7.6 percent increase since 2005, with Arizona growing by 9.0 percent and Sonora by 3.9 percent.

Border crossings and trade flows

The U.S.-Mexico border stretches 1,969 miles from San Diego-Tijuana in the west to Brownsville-Matamoros in the east and is estimated to be the most frequently crossed border in the world. In 2008, nearly 212 million people crossed into the U.S. from Mexico through the U.S. border ports of entry (BPOE). Arizona and Sonora share a 361 mile long portion of the international border and accounted for about 14 percent of all persons crossing the border in 2008. These border ports of entry not only serve as Arizona's passageway to Mexico but as a fundamental gateway for U.S-Mexico trade.

In 2008 alone, \$20.78 billion worth of goods moved through the six BPOEs (imports and exports). This represented 33.3 percent of all trade flows between the U.S. and Mexico, down from the 36.3 percent reported in 2004. Of the \$20.78 billion U.S. trade flow with Mexico, \$13.9 billion were imports.

Arizona-Sonora border economy

The Mexican economy, and primarily the maquiladora industry, are highly dependent on the U.S. economy. It is estimated that over 60 percent of all Mexican imports are from the U.S. with over half of them destined for maquiladora. Most of the U.S. export commodities mentioned above end up in maquiladoras for assembly after which they are exported back to the U.S. as final goods. In 2006, Sonora was home to 210 maquiladora plants with 86,874 employees and 7.2 % of maquiladora employment in Mexico. For Mexico as a whole, employment in the maquiladora industry peaked in October of 2000 at 1,347,803. Employment in maquiladoras located in Sonora peaked in November of 2000.

The downturn in maquiladora production was worsened by the slump in U.S. manufacturing as a result of a strong dollar, low-wage competition as emerging markets and China entered the World Market and 2001 NAFTA rules that eroded duty free benefits for companies outsourcing from non-NAFTA member countries.

These structural changes in the maquiladora sector resulted in losses in employment in certain sectors such as textile and apparel. Proximity to the U.S., quick turnarounds, a focus on high value-added

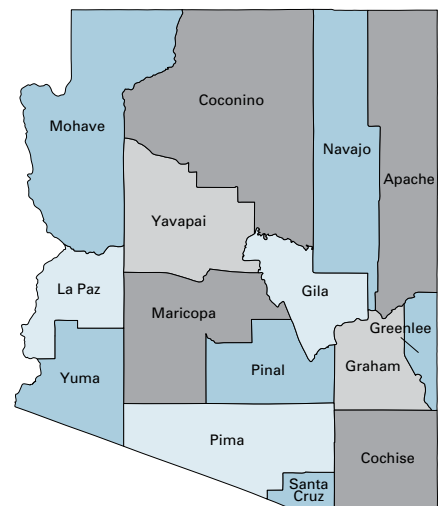
¹ Contributors to this article include Alberta H. Charney, Lora Mwaniki-Lyman, Maile L. Nadelhofer, Vera Pavlakovich-Kochi, and Valorie Rice.

U.S.-Mexico Border States



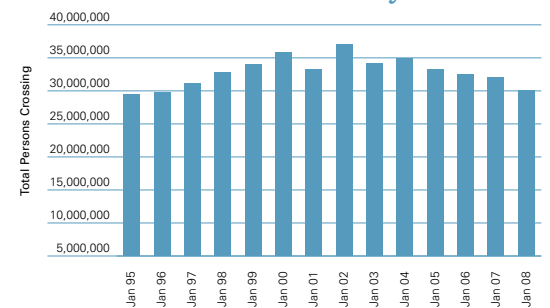
Source: Department of Agriculture, Texas

Arizona Counties



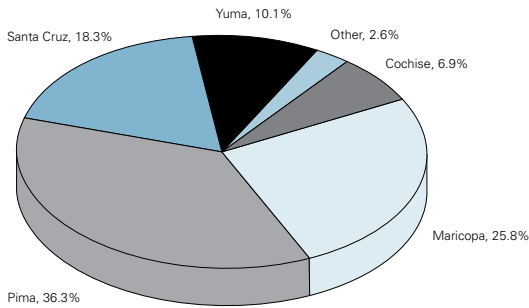
Source: <http://www.az.gov>

Border Crossings at Arizona: Mexico Border Points of Entry



Source: U.S. Customs and Border Protection & U.S. Department of Homeland Security

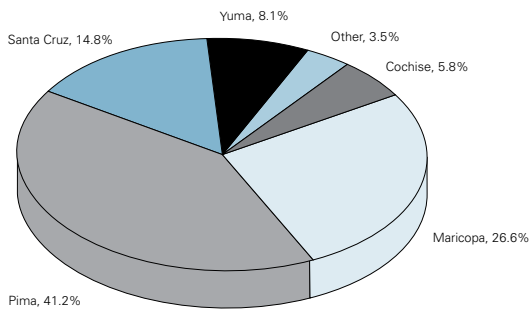
Mexican Visitors to Arizona
(Direct spending impact)



* Other includes other counties and spending for which respondents didn't specify a destination.

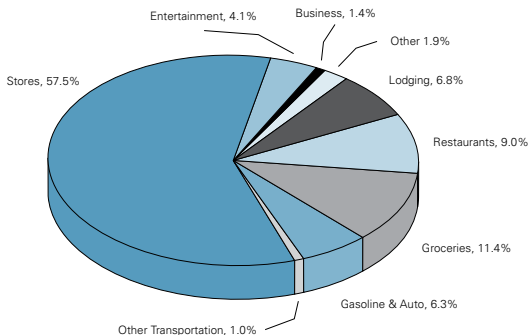
Source: U.S. Customs and Border Protection & U.S. Department of Homeland Security

Mexican Visitors to Arizona
(% Total job impact)



Source: U.S. Customs and Border Protection & U.S. Department of Homeland Security

Mexican Visitor Spending Categories
2007-2008



Source: U.S. Customs and Border Protection & U.S. Department of Homeland Security

products, a highly-skilled labor force capable of being innovative and protection of intellectual rights are some of the reasons the maquiladora sector is holding its own.

Mexican visitors to Arizona and their impacts

Travel and tourism continues to be an important export industry driving Arizona's economy. There were more than 24 million legal aliens crossing the border from Mexico into Arizona between July 2007 and June 2008, 99 percent of whom were residents of the state of Sonora. The volume and impact of Mexican visitors to Arizona powerfully illustrates the economic interdependence of Arizona and Sonora.

Leisure activities are the primary reason for 64 percent of all visitor parties. Business-related reasons are the primary reasons for the remaining 36 percent of visits². Mexican visitor spending in Arizona was almost \$2.7 billion in 2007-2008, a figure more than double the estimated spending in 2001. This spending occurred in mostly retailing, lodging, grocery stores and restaurants.

Almost 23,400 wage and salary jobs in Arizona are directly attributable to Mexican visitor spending. Through local purchases of supplies by businesses and the spending of income derived from visitor-related jobs, these visitors generated almost 7,000 additional jobs in Arizona in 2007-08. These 30,400 jobs account for a total personal income of \$837 million and \$3.61 billion in gross sales.

The largest amount of Mexican visitor spending occurred in Pima County, a county that includes Tucson and extends all the way to the U.S.-Mexico border. Pima County was the recipient of almost \$1 billion in Mexican visitor spending and 41.2 percent of the total job impact. Maricopa County, containing the state's largest metropolitan area and capital city, Phoenix, received the 2nd largest amount of spending (\$694 million) and the 2nd largest share of the total job impact, 26.6%.

Although Pima and Maricopa Counties received the largest spending, the county most reliant on Mexican visitor spending is Santa Cruz County, which contains the largest BPOE. Mexican visitors account for 23.6 percent of all jobs in that county.

Mexican visitor spending has particularly salient impacts on the taxable sales in Arizona's border counties. Mexican visitor spending generates a staggering 48.6 percent of the total taxable sales in Santa Cruz County, 6.3 percent of taxable sales in Yuma County, 5.3 percent in Cochise County, 5.2 percent in Pima County and only 0.8 percent in Maricopa County. The larger the county and the further away the county is from the border, the smaller the share of total taxable sales attributable to Mexican visitor spending.

2 Pavlakovich-Kochi, V. and Charney A., *Mexican Visitors to Arizona: Visitor Characteristics and economic Impacts, 2007-2008*, a report prepared for the Arizona Office of Tourism by the Economic and Business Research Center, Eller College of Management, University of Arizona, December 2008. http://ebr.eller.arizona.edu/research/mexican_visitors_to_arizona_2007_08.pdf

Leading Colorado out of the Recession

Gary Horvath, Managing Director, Business Research Division, Leeds School of Business, The University of Colorado at Boulder

Over the past year, one of the most frequently asked questions about the Colorado economy has been, "What is going to drive the recovery?" To help answer this question, the Colorado Workforce System released a report, Colorado Workforce Data Mining Project, in July that summarizes the industries, occupations, and economic factors that drive each of the state's 64 counties. The report provides a high-level snapshot of similarities, differences and challenges, as well as distinct competencies, between the counties and regions of the state.

Total employment

From an industry standpoint (based on two-digit NAICS codes), slightly more than half of Colorado workers are employed in six sectors which include Government, Retail Trade, Accommodations and Food Services (AFS), Healthcare and Professional and Technical Services (PTS). The largest sector, Government, employs about 18% of total workers, followed by retail with approximately 11%. Roughly half of government workers hold positions in K-12 or higher education. The increase in the number of jobs in government, particularly local government, and education has been driven by strong population growth. Over the past decade Colorado's population has climbed at a rate about twice that of the nation.

The retail trade sector is important to government organizations throughout the state. Retail sales taxes are a significant source of revenue for the state coffers. Many municipalities rely on retail sales taxes to provide up to 60% of local tax revenues. From an occupational perspective (based on two-digit SOC codes), slightly more than half of the state's workers are employed in the following six occupations including Office Administrative Support, Sales, Food Services, Construction and Extraction, Transportation and Education.

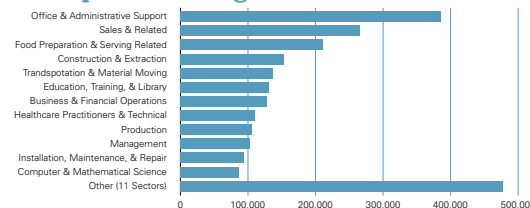
Concentration

Another way to evaluate the importance of an industry or occupation is to compare its concentration using location quotients. This measure compares the local percentage of that industry to the national percentage. If that comparison produces a value greater than 1, then the local area has a higher concentration of that industry compared to the nation. If the location quotient is 1.2 or higher, then it may be a primary industry for the area, or that it pays higher wages and attracts outside investment to the area. Primary jobs are important to an economy because they have a higher multiplier effect. In other words, more indirect jobs can be attributed to primary jobs.

At the NAICS level, 6 of 19 sectors can be considered sources of primary jobs (i.e., they have a location quotient greater than 1.2). From a total employment perspective, they rank beginning with PTS and followed by Construction, Information, Real Estate, Arts and Entertainment (AER) and Mining. The 6 sectors account for almost 23% of total employment.

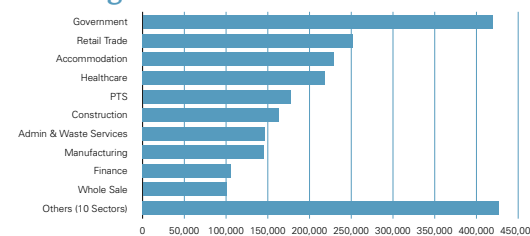
These sectors are significant to the state for different reasons. For instance, when combined, the PTS, Information and Manufacturing (which has a location quotient less than 1) sectors form the Advanced

Colorado Industries SOC Two-Digit Occupation Categories



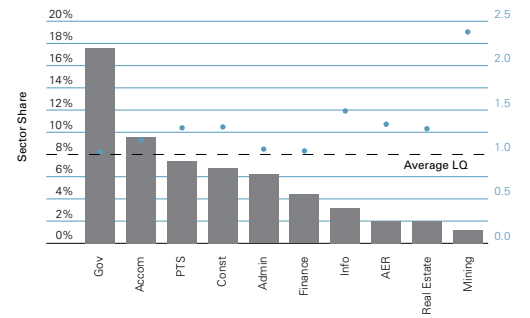
Source: Colorado Workforce Data Mining Project

Colorado Employment NAICS Two-Digit Sectors



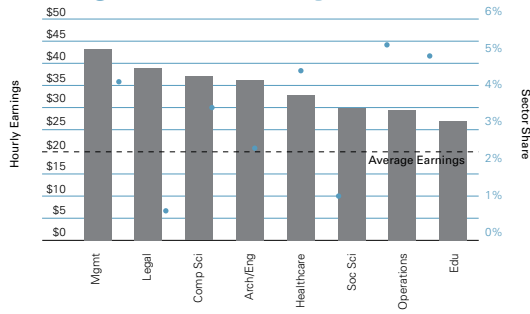
Source: Colorado Workforce Data Mining Project

Colorado 2008 Industries LQ vs. State Sector Share



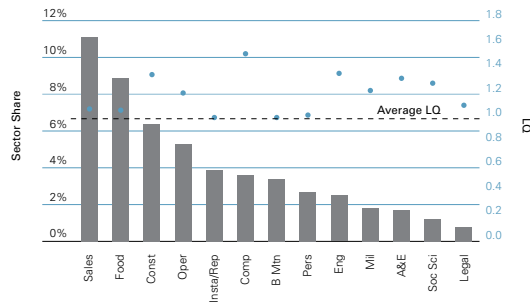
Source: Colorado Workforce Data Mining Project

Colorado 2007 Occupations Hourly Earnings vs. State Occupation Share



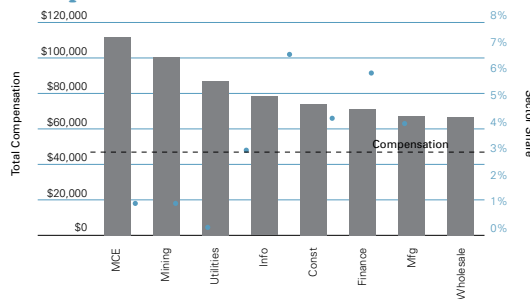
Source: Colorado Workforce Data Mining Project

Colorado Occupations 2008 LQ vs. State Occupation Share



Source: Colorado Workforce Data Mining Project

Colorado 2008 Industries Total Compensation vs. State Sector Share



Source: Colorado Workforce Data Mining Project

Technology (AT) cluster. Approximately 17% of total state employment can be attributed to these three sectors. The combination of the AER sector and AFS (which has a location quotient of 1.16) is the foundation of Colorado's tourism industry. Another point of interest is that the high concentration of the Construction and Real Estate sectors reflects the fact that the state population and workforce have expanded faster than most other parts of the country in recent years.

At the SOC level, 7 of the 23 categories have location quotients greater than 1.2. From a total employment perspective, they rank beginning with Construction and Extraction and are followed by Operations, Computers, Math and Science, Architecture and Engineering, Military, AER and Social Sciences. These occupations represent about 23% of total workers. Many of these occupations reside in the NAICS industries mentioned in the previous paragraph.

Compensation

A final metric for evaluating the state's industries is by their average per person total compensation package. Eight of the 19 NAICS categories have total compensation packages above the state average. These sectors are ranked, in terms of total employment, beginning with PTS and are followed by Manufacturing, Finance, Wholesale Trade, Information, Management of Companies and Enterprises (MCE), Mining and Utilities. The jobs with higher compensation occur in the AT cluster and in the distribution of manufactured goods. In addition, they represent sectors that are crucial to the growth of the energy sector. In all, these 8 sectors account for 28% of total state employment.

From an occupation perspective 8 of the 23 SOC categories have average hourly earnings greater than the state average. These categories are ranked, in terms of total employment, beginning with Education and followed by Operations, Healthcare Practitioners, Management, Computer, Math and Science, Architecture and Engineering, Social Sciences and Legal Occupations. The occupations in these categories account for about 28% of total employment. Many of these occupations are in the AT cluster. They also include the Healthcare and Education sectors, which are areas that are driven by population growth. The Operations and Management occupations cross most NAICS sectors.

Overview

Many of the various industries and occupations are critical to the state economy in different ways. As the state moves out of the recession, it is essential that strong growth occurs in industries and occupations that are primary in nature. In other words, these industries and occupations should have higher than average levels of compensation or location quotients above 1.2.

These industries will drive growth indirectly in other industries, such as the business-to-business and personal services sectors. As credit eases and workforce mobility increases, in migration to the state will increase and other sectors/occupations will expand proportionally. To ensure efficient growth of all industries, partnerships need to be formed between the private sector, government agencies, and education. Together, they will identify the workforce needs of industries and provide the training necessary to help Colorado continue to be one of the country's top performing economies.

Credit Unions, Small Banks & Industry Trends

The banking industry encompasses a number of different organizational forms, each with different corresponding regulatory regimes. Despite these differences, these entities often deliver the same product, such as mortgages or car loans and can often overlap in the type of customer to whom they cater. As a result, a state-chartered bank may compete with credit unions, thrifts, money market funds and so on, to provide basic banking services.

In this article, we will examine the relationship between credit unions and small commercial banks. Over time, the legal boundary ensuring that each type of organization serves different customers has become blurred. Thus, small commercial banks face not only competitive pressures from other commercial banks, but also from credit unions. Due to these pressures, these banks increasingly became exposed to commercial real estate (CRE), which faces high default rates and, in today's market, is a major problem for the U.S. financial system.

Branch growth by small commercial banks and credit unions

One of the indicators of banking industry health is the amount of branch growth relative to deposit growth and general economic growth. In an area of robust economic growth where income per capita is expanding at high rates, one would expect banks to establish branches more rapidly than in other areas.

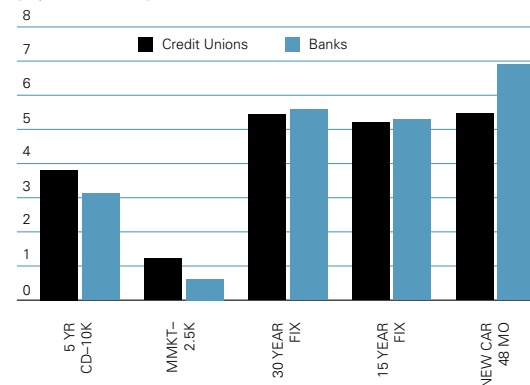
When examining the data on branch growth, a large anomaly arises when viewing the figures for credit union branch growth. Between 2007-08, bank branches in the U.S. grew by 3%, but credit union branches grew by nearly 151%. This trend also exists in the Sunbelt Region where BBVA Compass operates, as these states demonstrated high credit union branch growth in 2007-08. The high growth rates by credit unions are a visible break from previous growth rates, making 2007-08 an anomaly for investigation.

Most of the growth in credit union branches is likely related to the passage of the Financial Services Regulatory Relief Act in 2006, which loosened some regulations on credit unions and spurred their expansion into new products and areas. In particular, this act altered the maximum maturity length of products credit unions could sell to its customers, thereby allowing these entities to compete more directly with small commercial banks with the same product sets.

Competitive responses to credit union branch growth

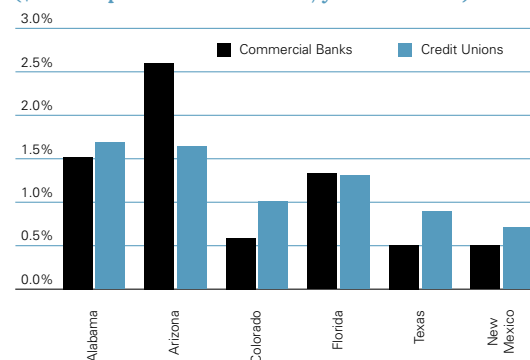
Credit unions are member-owned, mostly tax-exempt banks with greater restrictions on investments and lending than commercial banks. Historically credit unions had very specific membership requirements and offered select services, but due to increasing deregulation, the membership and service provision of credit unions has expanded. Credit unions can offer more attractive rates to customers due to their various tax exemptions. As a result of increased competition for traditional deposit and savings services, small commercial banks have shifted towards increased small business lending, at times backed by nonresidential real estate. According to FDIC data, in the U.S., the 1Q09 exposure of banks with more than \$1bn in assets to nonresidential real estate is 12.56% of all loans, while for banks with assets less than

National Average Rates (% , 2008 data)



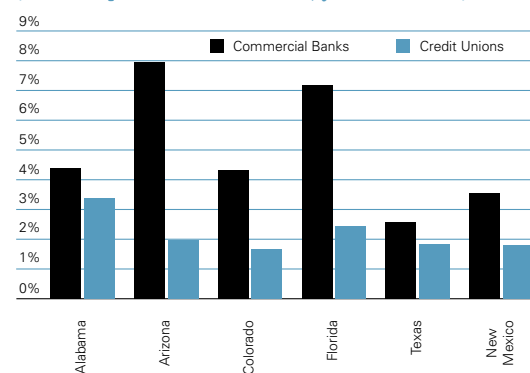
Source: NCUA

Charge-offs Commercial Banks with Assets (\$100mn plus & credit unions, year-end 2008)



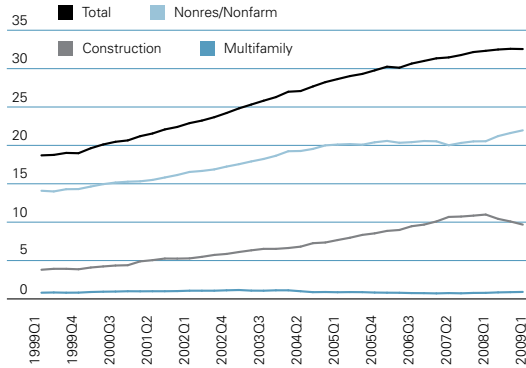
Source: FDIC & NCUA

Delinquencies Commercial Banks with Assets (\$100mn plus & credit unions, year-end 2008)



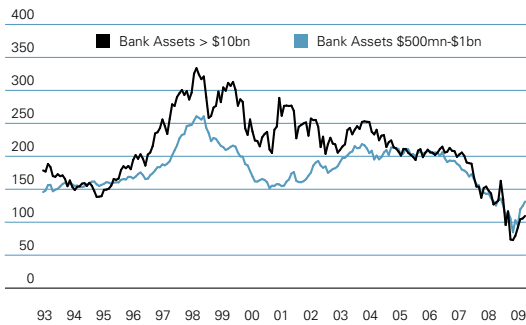
Source: FDIC & NCUA

Texas Small Commercial Banks' Exposure
(% of total loans)



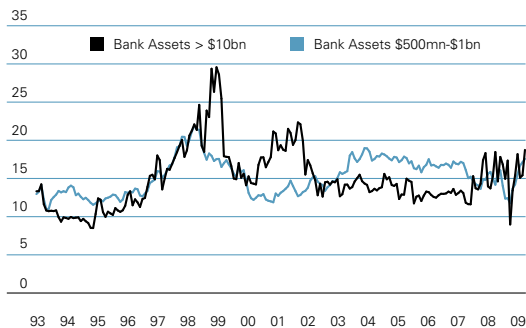
Source: BBVA ERD & SNL Financial

Price-to-Book Ratios of Banks
(Commercial banks by assets)



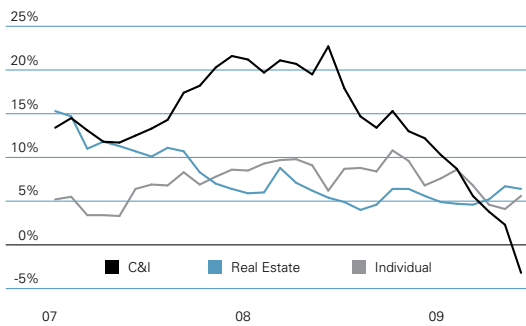
Source: SNL Financial

Price-to-Earnings Ratios of Banks
(Commercial banks by assets)



Source: SNL Financial

U.S. Commercial Bank Lending
(YoY % growth)



Source: Bloomberg

\$1bn this exposure is 29.6%. Small commercial banks typically have strong relationships with community builders, which generally leads to greater construction lending.

One difficulty is separating the effect of a housing bubble: it is possible that small commercial banks were moving to take advantage of a boom rather than responding to credit union expansion. Texas, however, did not experience the same housing appreciation as the rest of the country and maintains a large banking industry. Data on small banks in Texas over the past decade demonstrate that small commercial banks significantly increased their CRE exposure. This expansion into CRE by small commercial banks arrived at a particularly inopportune moment: just before the 2007-09 financial crisis.

Small commercial banks in historical perspective

Given that small commercial banks were taking steps to increasingly expose themselves to CRE, we can perform a cursory examination of how this strategic response was received in the marketplace compared to large commercial banks. Two headline indicators of performance are the price-to-book ratio and the price-to-earnings ratio. The price-to-book ratio, when applied to banks, considers how much value investors expect a bank to create from its balance sheet. The price-to-earnings ratio, in contrast, is a metric of investor interest or demand for a bank stock. It is also frequently described as an indicator of the relative expensiveness of a stock, even though average price-to-earnings ratios can vary from one time period to another.

After suffering lower price-to-book ratios than large commercial banks since 1996, small commercial banks managed to catch up in the early 2000's as they turned towards builders and CRE in an attempt to differentiate themselves. Previous to this period, investors believed large banks were better creators of value from assets and liabilities. From the perspective of price-to-earnings ratios, this change in tactic by small commercial banks resulted in higher interest in these firms by investors than for large commercial banks.

Given that most of the convergence in price-to-book values between large commercial banks and small commercial banks coincided with the housing boom, it appears that following an effective resolution of the current crisis, small commercial banks will likely return to their historical price-to-book relationship as compared to large commercial banks. This will depend on eventual regulatory regimes currently underway in Washington. Large commercial banks may not have the same economies of scale or the same ability to squeeze value out of assets and liabilities as they did during the deregulation wave of the late 1990's, when they started to show higher price-to-book values than small commercial banks. It is somewhat unclear as to what direction small commercial banks will venture given that their recent strategic shift towards construction and CRE is not viable in the near term.

Bottom line

Small commercial banks turned increasingly towards CRE as a response to credit union branch growth. As the economy recovers, it seems that small commercial banks will likely continue to be pressured competitively by large banks as well.

Fact Sheet

	US	Alabama	Arizona	California	Colorado	Florida	New Mexico	Texas
Non immigrant Admissions (I-94 Only) by Selected Category of Admission and State or Territory of Destination: Fiscal Year 2008								
Total	39,381,928	81,349	1,002,557	6,590,690	421,955	5,978,898	226,477	2,802,857
Tourists and business travelers	35,045,836	53,287	844,431	6,007,179	374,473	5,567,596	214,641	2,478,783
Visa waiver	18,621,584	25,877	139,995	2,371,493	179,877	2,700,137	21,677	417,673
Other	16,424,252	27,410	704,436	3,635,686	194,596	2,867,459	192,964	2,061,110
Student and exchange visitors	1,423,511	9,947	21,993	224,015	20,114	84,426	4,598	87,033
Temporary workers and families	1,949,695	13,181	127,654	282,861	23,513	162,678	3,869	190,555
Diplomats and other representatives	314,920	2,284	3,074	18,906	1,712	15,351	2,563	14,750
All other classes	447,477	2,302	2,960	38,387	908	100,888	456	25,239
Unknown	200,489	348	2,445	19,342	1,235	47,959	350	6,497
Financial Contribution of International Students by US State, 2007/08								
Total students	623,805	7,156	9,737	85,009	5,872	26,780	2,536	51,823
Total contributions (US\$mn) *	15,543	127	197	2,452	147	675	45	1,055
Tuition and fees	10,639	78	131	1,376	108	433	31	620
Living exp. and dependents	11,392	94	150	1,847	108	482	36	816
U.S. Support	6,488	44	84	771	69	241	21	381
State contribution as % of U.S. total	100.0	0.8	1.3	15.8	0.9	4.3	0.3	6.8
Per capita, \$	51.1	27.3	30.4	67.6	29.8	36.8	22.9	43.4
* US Support minus the sum of tuition and fees and living								
Foreign Born Population								
% of total	12.5%	2.9%	15.0%	28.3%	10.1%	18.7%	9.4%	15.8%
Country of origin, % share								
Europe	13.4%	15.1%	9.3%	6.9%	14.2%	11.5%	8.3%	4.5%
Asia	26.7%	28.5%	12.8%	33.9%	19.6%	9.6%	10.3%	16.3%
Africa	3.7%	4.8%	2.1%	1.5%	3.9%	1.7%	0.9%	2.9%
Oceania	0.5%	0.7%	0.3%	0.7%	0.7%	0.2%	0.3%	0.2%
Latin America	53.4%	47.3%	71.8%	55.6%	58.6%	73.6%	78.3%	75.1%
North America	2.3%	3.5%	3.7%	1.4%	2.9%	3.4%	1.8%	1.1%
Entered 2000 or later, %	25.4%	40.8%	31.3%	20.0%	30.7%	26.2%	27.2%	26.9%
Entered before 2000, %	74.6%	59.2%	68.7%	80.0%	69.3%	73.8%	72.8%	73.1%
Exports of Goods								
US\$bn	1,300.1	15.8	19.7	144.8	7.7	54.3	2.8	192.1
% of US total	100.0	1.2	1.5	11.1	0.6	4.2	0.2	14.8
% of State GDP	9.2	9.3	7.9	7.8	3.1	7.3	3.5	15.7
% of Sunbelt	na	5.4	6.8	33.1	2.6	18.6	1.0	65.7
2Q09/2Q08 % change	-24.6	-29.8	-30.4	-23.0	-25.0	-13.5	-59.5	-23.1
CAGR 1997-2007, %	5.4	9.3	3.4	3.1	3.7	6.8	3.8	8.2
Top 5 trading partners and share of total goods exports								
1	Canada, 19.2	Canada, 20.5	Mexico, 31.9	Mexico, 14.5	Canada, 28.3	Brazil, 9.3	Mexico, 28.2	Mexico, 33.3
2	Mexico, 11.7	Germany, 13.6	Canada, 13.5	Canada, 11.9	Mexico, 10.6	Venezuela, 8.3	Canada, 20.3	Canada, 8.8
3	China, 6.0	China, 6.2	China, 4.6	Japan, 9.9	China, 7.2	Canada, 6.7	China, 11.6	China, 5.3
4	Japan, 4.9	Mexico, 5.3	UK, 4.4	China, 7.9	Japan, 4.6	Switzerland, 5.7	Japan, 4.8	Netherlands, 4.0
5	UK, 4.5	Japan, 4.7	France, 4.1	Korea, 4.8	Germany, 3.5	Mexico, 4.3	Germany, 4.8	Korea, 3.1
Sum of top 5	46.7	50.6	58.8	49.0	54.4	34.5	69.8	54.7

Source: Census Bureau, Wisetrade, BEA, IIENetwork.org

Forecasts

Year-over-year % change

	1Q09	2Q09	3Q09	4Q09	2007	2008	2009	2010		1Q09	2Q09	3Q09	4Q09	2007	2008	2009	2010
US									Sunbelt								
Real GDP					2.2	1.3	-2.5	1.1	Real GDP					2.1	0.6	-2.1	1.2
Employment	-3.1	-3.9	-4.2	-3.3	1.1	-0.4	-3.6	0.5	Employment	-2.8	-3.5	-3.8	-3.7	1.8	-0.3	-3.5	0.6
Personal Income	-1.6	-2.5	0.0	2.3	5.6	2.9	-0.4	2.4	Personal Income	0.7	-1.2	-1.1	-0.8	6.0	4.3	-0.6	0.7
Home Sales	-7.5	-0.2	2.5	5.5	-22.0	-4.8	5.5	6.3	Home Sales	-5.6	-2.7	-1.4	6.5	-13.4	-13.0	-0.9	3.4
Home Prices	-7.0	-6.0	-3.0	-1.0	1.3	-5.7	-4.3	1.7	Home Prices	-7.3	-7.4	-4.5	-3.9	1.1	-6.8	-5.8	0.2
Alabama									Arizona								
Real GDP					0.9	0.7	-2.3	0.4	Real GDP					1.4	-0.6	-3.6	0.9
Employment	4.0	-2.1	-2.1	-1.6	1.3	-1.4	-0.5	-0.6	Employment	-6.4	-6.7	-6.9	-5.8	1.5	-2.1	-6.5	-0.6
Personal Income	2.8	1.8	6.0	5.5	5.9	4.4	0.8	1.3	Personal Income	-0.6	-2.5	-2.7	-2.7	4.6	2.6	-2.1	1.8
Home Sales	-34.9	-26.3	3.4	24.7	-6.9	-27.9	-15.8	2.7	Home Sales	48.6	38.9	20.0	32.7	-26.5	7.4	33.7	5.1
Home Prices	1.1	0.1	0.4	0.6	5.2	2.6	0.5	1.6	Home Prices	-13.8	-15.6	-2.5	-0.2	0.0	-11.7	-8.4	4.6
Colorado									Florida								
Real GDP					2.0	2.9	-0.5	1.2	Real GDP					0.0	-1.6	-2.2	1.7
Employment	-2.6	-4.0	-4.7	-4.5	2.3	0.8	-3.9	-0.3	Employment	-5.1	-4.7	-4.3	-3.4	0.2	-3.1	-4.4	0.8
Personal Income	3.6	3.2	3.4	3.3	6.0	4.7	-1.2	0.8	Personal Income	-1.2	-2.7	-2.2	-1.1	4.6	2.1	-1.8	1.2
Home Sales	-7.6	-0.6	2.1	8.1	-3.2	-10.9	-14.6	-0.6	Home Sales	23.2	20.6	14.7	12.9	-27.9	-8.8	17.7	1.4
Home Prices	0.4	-1.1	-2.7	-1.5	2.1	0.9	-1.2	0.5	Home Prices	-14.7	-13.8	-11.2	-10.3	-1.3	-14.5	-12.6	2.7
New Mexico									Texas								
Real GDP					2.0	2.0	-1.8	0.9	Real GDP					4.4	2.0	-0.4	1.7
Employment	-1.6	-2.5	-2.7	-2.4	1.4	0.4	-2.3	-0.6	Employment	-0.5	-2.0	-2.9	-3.8	3.3	2.1	-2.3	1.2
Personal Income	2.8	0.9	1.7	2.0	6.1	5.8	1.8	2.3	Personal Income	2.3	-0.1	0.0	-0.5	7.6	6.2	0.4	1.3
Home Sales	-26.6	-17.8	-19.4	-23.2	-23.0	-26.8	-21.8	2.1	Home Sales	-21.1	-16.6	-9.6	0.2	-2.6	-15.3	-12.4	4.5
Home Prices	-2.8	-3.6	-2.6	-1.2	7.0	0.0	-2.6	2.2	Home Prices	2.2	1.1	1.9	1.0	5.8	3.3	1.5	1.7

Source: BBVA ERD, BEA, BLS, NAR, Census Bureau & OFHEO

Economic Structure

	US	Sunbelt	AL	AZ	CO	FL	NM	TX
GDP (2008, \$ Billions)	14,441	2,612	165	246	236	742	75	1,149
Population (2008, Thousands)	304,060	60,741	4,662	6,500	4,939	18,328	1,984	24,327
Labor Force (1Q09, Thousands)	154,926	30,092	2,128	3,145	2,700	9,192	954	11,973
NonFarm Payroll (1Q09, Thousands)	131,692	25,150	1,910	2,434	2,249	7,379	819	10,359
Income Per Capital (2008, \$)	40,187	37,842	33,643	32,953	42,377	39,070	32,091	38,575
Households (2007, Thousands)	115,564	22,122	1,854	2,226	1,886	7,182	746	8,307
Houses/1000 Hab, (2007)	424.0	413.4	461.8	420.8	437.6	477.7	437.6	394.6
Home Price (1Q09, YoY Change (%))	-6.5	-7.4	0.1	-15.6	-1.1	-13.8	-3.6	0.0
Home Ownership Rate (2008, %)	67.8	69.1	78.0	68.7	71.0	72.2	71.5	63.9
Exports of Goods (2008, \$ Billions)	1,300.1	292.5	15.8	19.7	7.7	54.3	2.8	192.1

Source: BEA, BLS, Census Bureau & OFHEO

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