BBVA | RESEARCH

Economic Outlook

United States

Second Quarter 2011
Economic Analysis

- Emerging markets are taking actions to mitigate the risk of overheating, but this concern remains relevant
- U.S. private employment is edging upward and will support moderate economic growth this year
- Health-conscious food and beverage products are the new targets for food manufacturers; expansion into international markets will drive revenue growth
- Natural gas from newfound shale plays introduces an abundant domestic source of energy that is stimulating new investment to fully develop this resource
- Despite financial restructuring, the municipal bond market remains the favored method of public finance

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Closing Date: May 17, 2011

1. Editorial

Several reports on education indicate that during the past few years, gains in performance standards have slowed down and lag other countries. International rankings put the U.S. below other developed economies. If these trends continue, the U.S. may lose its competitiveness and attractiveness for investment, which would imply both lower economic growth and living standards. These risks are even more relevant at a time when the labor market remains challenged by elevated and prolonged unemployment, partially due to a mismatch between high-skill labor demand and low-skill labor supply. For nearly a century, education performance in the U.S. ranked at the top in all categories, resulting in the highest educated labor force in the world, and thus increasing productivity growth rates and income levels. According to the OECD, only eight of 34 middle and high-income countries have lower graduation rates than the U.S. Moreover, among 15-year-olds, the U.S. ranks average in reading and science and below average in mathematics.

Some critics argue that these trends are likely to accelerate as states and local governments implement budget cuts in education. In fact, 34 states are reducing K-12 funding while 43 states are doing the same in tertiary education. Others fear that a higher share of low-skilled immigrants and the retirement of high-skilled workers will worsen the average quality of the labor force. This underscores the fact that immigrant children are more likely to drop out of school. However, some experts advocate reducing wasteful public spending and political involvement, while increasing parents' participation and social awareness of the challenges. The second place standing that the U.S. holds for education spending per pupil and its low student-to-teacher ratio support these views. Others stress the need to foster private education citing that these schools tend to perform better. Some studies conclude that socioeconomic factors explain a substantial variation of performance. For example, the achievement of the immigrant population is no different than non-immigrants when controlling for socioeconomic background. These results support recommendations to direct public resources to socio-economically disadvantaged areas.

International comparisons suggest that to achieve excellence in performance standards, the educational system should promote complex learning and creativity, aim for high results, consider the expectation that all students can achieve at high levels, build a climate of respect and trust between educators and the community, respect diversity, upgrade teacher standards and ensure accountability. Therefore, the path to regain leadership in education performance lies in America's ability to select and apply the best practices from other nations. Over a century ago the U.S. borrowed universal schooling, modern research facilities, high-quality technical schools and leading private institutions from other countries. In a more integrated and globalized world, where technology has revolutionized communications and the workplace, the need to update the educational system is essential to foster innovation and provide an ample supply of high-skill jobs. Other countries are catching up fast and improving their ability to offer high-skill labor at lower costs.

Maintaining the best research facilities in the world and attracting top talent requires considerable effort from all stakeholders. Eliminating the achievement gap will avoid a major crisis, alleviate structural unemployment and boost GDP growth. According to the OECD and the Hoover Institute, increases in performance could result in gains ranging from $41 to $103 trillion. The U.S. must be open to change and avoid complacency to implement a successful strategy. Relying on reputation and tradition alone is unlikely to foster these changes. However, the ability to transcend challenges is one of the greatest assets of this remarkable nation and accomplishing a major transformation of education should be a top priority.

Sincerely,
Nathaniel Karp
BBVA U.S. Chief Economist

2. Global Outlook

The global economy will continue growing strongly, but risks are tilted to the downside

The global economy is expected to expand a robust 4.4% annually in 2011 and 2012, supported primarily by emerging economies. However, the threat coming from high commodity prices (especially oil) increases uncertainty and introduces risks to growth and inflation in most regions. At the same time, as this global shock develops, local risks identified in the previous issue of the U.S. Outlook are still present. Financial stress in Europe continues, especially in Greece, Portugal and Ireland. The political noise surrounding fiscal consolidation proposals in the U.S. is adding uncertainty in the markets; however, we believe that some agreement will be reached. Finally, overheating pressures in emerging markets continue, although given tailwinds from commodity prices, attention will turn to South America.

High commodity prices represent a global risk, but they should be readily absorbed

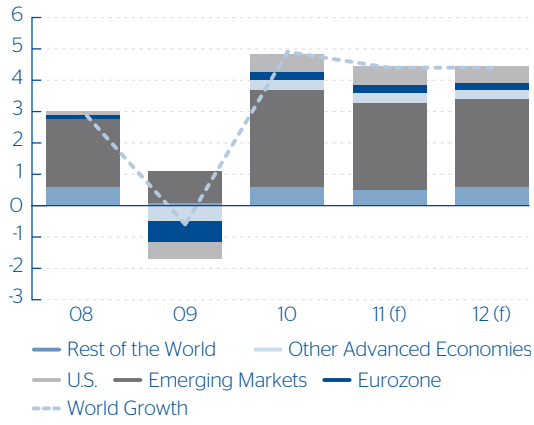
The greatest global risk stems from the rise in oil prices. Their sharp rise was attributed mostly to political instability in the Middle East and North Africa (MENA). Although uncertainty remains high and protests in the region are still unfolding, in our view, contagion that disrupts oil production in other countries beyond Libya will not occur. Thus, the geopolitical risk premia incorporated into oil prices will gradually decline, given ample OPEC spare production capacity and OECD inventories -both are above historical averages. Nonetheless, we expect oil prices to remain high at 110-120 dollars per barrel (dpb) during most of 2011, and slowly retreat to around 100 dpb in 2012.

Along with increases in the prices of other commodities such as food and metals, developed countries and most of emerging Asia will experience the most negative effects. On the other hand, the main beneficiaries of improved terms of trade will be the Middle East and Latin America due to windfall revenue. However, we expect that a price shock of this magnitude will be easily absorbed by the global economy without reducing economic activity. Along with relatively strong data in the first quarter of 2011, the oil scenario implies a moderate upward revision to our 2011 forecasts for Mexico and South America. We maintain our prior quarter growth forecasts for other areas. Europe will continue to grow (mainly in core countries), while risks to the U.S. growth forecast shift from a prior upward bias to a more neutral bias that is balanced by higher oil prices.

High oil prices will push up headline inflation, bringing forward expected central bank interest rate increases in most areas

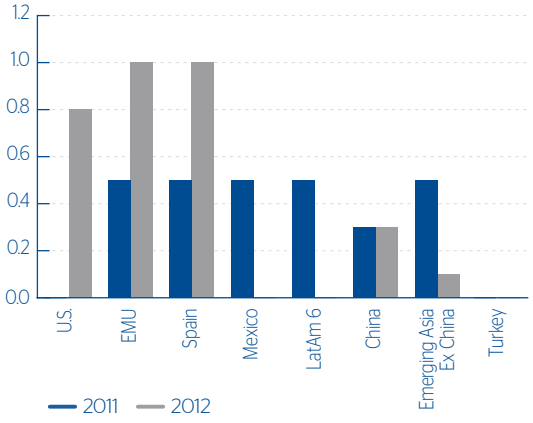
The main effect of the oil shock will be felt on prices. Rising inflation in 2011 and 2012 will prompt monetary authorities push for more aggressive interest rate increases sooner rather than later. Nevertheless, there is still wide heterogeneity in the approaches of central banks in managing risks from higher commodity prices. For example, in the U.S. and euro zone, central banks are shifting their focus from supporting growth and preventing a risk scenario of very low growth and deflation to maintaining stable inflation expectations. As a consequence, the balance of risks has tilted towards a higher probability of earlier rate hikes. The timing of the first hike will depend on the perceived need to react to risks from sharp increases in actual and expected inflation. The European Central Bank's (ECB) hawkish approach seeks to avoid risks by being pre-emptive and thus it hiked its target rate for the first time in April. On the other hand, the U.S. Federal Reserve, focusing more on the lack of sustainability in the recovery, prefers to wait and act only if risks materialize. Between these two approaches, emerging economies seem open to more front-loaded hikes if needed, but they are keeping a watchful eye on excessive capital inflows and exchange rate appreciation.

Chart 1
Global GDP Growth and Contributions



Source: BBVA Research / IMF

Chart 2
Changes in Year-end Expected Official Interest Rates Relative to February 2011



Source: BBVA Research

Financial tensions in peripheral Europe will remain high given lack of decisive action to deal with solvency concerns

In Europe the agreements reached during the March summits are useful for the medium term both in terms of economic reforms and to help prevent future crisis. In addition, the changes introduced to the EFSF/ESM are positive to address liquidity concerns. However, financial market tensions in the three peripheral countries with international support (Greece, Ireland and Portugal) will continue as long as doubts persist about the solvency of some countries and thus the risk of debt restructurings that include private investors. These lingering doubts will continue hindering the funding to these economies and sustaining high sovereign spreads and could spread to other countries, even those with high solvency credentials. Thus, a comprehensive approach to debt resolution in case of insolvency is urgently needed, but one that takes into account that undergoing a hard debt restructuring that includes haircuts to private investors has a very high risk of contagion to the rest of Europe, so it will have to be designed carefully.

For its part, Spain has been able to differentiate itself from these three peripheral countries given advances in fiscal consolidation and economic reform including, in particular, those aimed at the financial sector and the labor market. However, continued decoupling and a meaningful reduction in spreads will depend crucially on the satisfactory completion of the recapitalization of the financial system, with a prompt entry of private capital, on continued fulfilment of fiscal consolidation targets, including in the regional governments, and continuing advancing reforms, especially in the labor market.

Overheating concerns continue in emerging economies, but going forward, they may become more acute in South America, given tailwinds from commodity prices

Emerging economies continue to show risks of overheating, but with marked heterogeneity. Some countries are beginning to confront these risks through more restrictive monetary policy and, in some cases, also fiscal tightening. In the important cases of China and Brazil, we think that overheating risks are manageable, but moving forward, they will become more pronounced in South America. A commodity price increase provides a growth tailwind for South America but cooling headwinds for emerging Asia. In addition, uncertainties surround the effect of the earthquake on Japan's economic activity, and a more pronounced slowdown would negatively impact most of Asia, given extensive trade links and integrated production chains. Furthermore, higher current account surpluses in much of Asia provide a larger buffer for these countries compared to South America.

3. U.S. Outlook

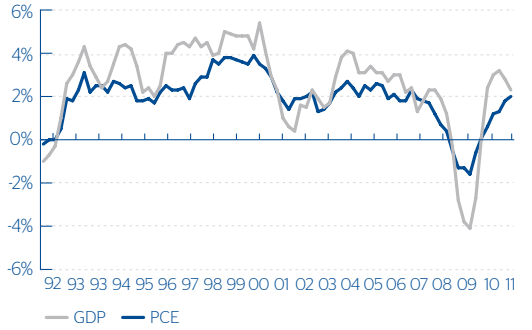
In the first quarter the U.S. economy grew 1.8% (QoQ, annualized) on a seasonally adjusted basis compared to 3.1% in the previous quarter. The latest estimates indicate a significant slowdown in the economic recovery. The main driver for this slowdown was the drop in government consumption expenditures and gross investment which subtracted 1.1 percentage points (pp). Real federal government consumption expenditures and gross investment decreased 7.9% QoQ, mainly due to a sharp decline in national defense spending which dropped 11.7% QoQ. However, we expect the government sector to contribute positively to economic growth throughout the year. Personal consumption expenditures (PCE), private inventory investment and nonresidential fixed investment positively contributed to the economic growth in the first quarter. Although PCE growth slowed, it grew 2.7% QoQ and contributed 1.9pp. Economic activity in the residential sector remained weak, while nonresidential investment slowed down. Moreover, the change in real private inventories contributed 0.9pp to the first quarter growth, after subtracting 3.4pp in the previous quarter.

For the remainder of 2011 consumption is expected to continue as the main driver of economic activity. Although the economy will continue to suffer from ongoing deleverage due to high unemployment and strict credit conditions, a steady increase in personal income, government support programs and tax incentives will support personal spending.

Labor market conditions are improving but at a slow pace. The U.S. economy created approximately 1.3 million new jobs in the last 12 months but it was not enough to alleviate high unemployment. While the unemployment rate declined one percentage point from 9.8% to 8.8% in only four months, most of this decline can be attributed to a fall in the participation rate. These trends suggest that a mismatch exists between the demand for labor and skills of the unemployed. In this scenario, the unemployment rate will decline at a slower pace than in previous recoveries.

Chart 3

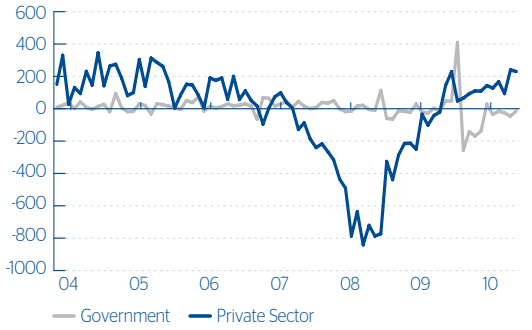
Real GDP & Consumption (PCE), YoY % change



Source: BEA / Haver Analytics

Chart 4

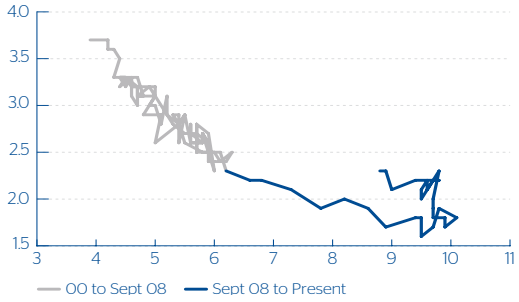
Nonfarm Payrolls, MoM change, (th)



Source: BLS and BBVA Research

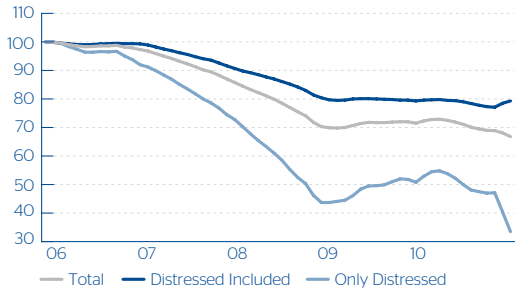
Even with the economy on positive ground again, housing demand is up in the rental market because the slow pace of job creation heightens uncertainty and housing prices continue to fall in many markets. In addition, although affordability ratios are very attractive for buyers, tighter loan conditions are inhibiting demand from would-be buyers. In line with our expectations, the housing sector remains a weak component of the economic recovery. Both housing starts and housing sales have remained low and purchase prices continue to slide. However, the slight improvement in home sales observed in the last two quarters has helped reduce the excess supply to half of its prior peak. In the second half of 2011, we expect an uptick in the residential market as economic activity and employment growth accelerates.

Chart 5
Job Openings and Unemployment, %



Source: BBVA Research, BLS and Haver

Chart 6
Housing Price Indexes, Peak 03/2006 = 100



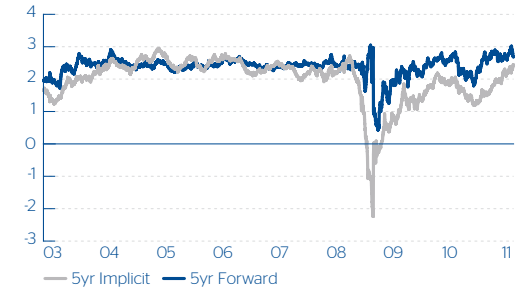
Source: CoreLogic and BBVA Research / Haver Analytics

Political events in MENA are keeping oil prices above $100 per barrel. Our baseline scenario assumes that the increase in energy prices is temporary and therefore will have a limited effect on consumption, business activity and inflation. This period of higher oil prices and uncertainty counterbalance the upside risks to growth that we previously anticipated. Our baseline scenario of a temporary oil price spike also assumes that political conditions return to normal within a few months. We have witnessed similar episodes in various oil-producing countries in the past, and the impact on U.S. economic growth and inflation remained limited. While we believe that higher oil prices will increase average inflation to 2.8% YoY in 2011, the pass-through effect to core inflation will be limited.

We continue to believe that the Fed will maintain the target Fed Funds rate unchanged throughout the remainder of 2011. While we expect the Federal Reserve to complete its current large-scale asset purchase program at the end of 2Q11, we believe that the reinvestment of principal from maturing assets will continue until financial and economic conditions warrant a change in policy, probably through August or September. The cessation of principal reinvestment is one of the first steps of its exit strategy. Assuming that the inflation rate remains within the Fed's comfort zone and longer-term inflation expectations are stable, the Fed will delete the wording "extended period" from the statement a couple of meetings before the first rate hike. Our baseline scenario assumes a first rate hike in March 2012.

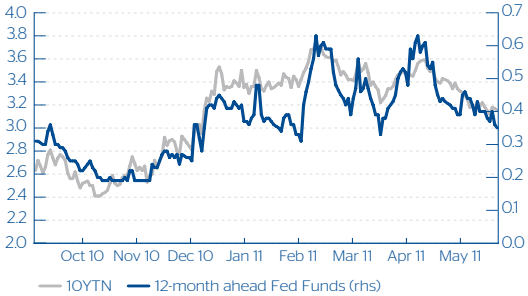
Overall, our forecasts indicate 3.0% growth in the U.S. economy in 2011, but downside risks are greater than the upside potential. The inflation rate will increase to 2.8% in 2011 while core inflation remains under 2%. The Fed will be in no rush to raise interest rates in an environment with substantial resource slack, limited core inflationary pressures and stable longer-term inflation expectations. The timing of policy actions (balance sheet normalization, in particular), will depend on the evolution of data during the summer.

Chart 7
Inflation Expectations, %



Source: Federal Reserve / Haver Analytics

Chart 8
10-year Treasuries & Fed Funds Futures



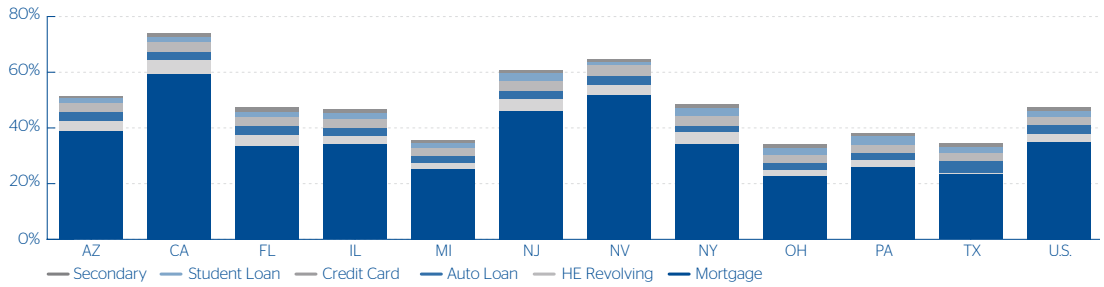
Source: BBVA Research, Treasury & WSJ

4. BBVA Compass Sunbelt Outlook

The previous decade brought people and prosperity to the Sunbelt. The 2010 Census revealed the extent of the population growth in this region as Alabama, Arizona, California, Colorado, Florida, New Mexico and Texas collectively expanded by nearly 15% from 2000-2010. This rate more than doubles the gains experienced throughout the rest of the country, as the other states expanded 7.1% during this same period. These seven states alone now account for nearly 1/3 of the population of the entire U.S., up from slightly more than 30% a decade ago. This population gain, however, occurred alongside a housing investment bubble whose collapse triggered a severe recession and has left some Sunbelt residents deeply in debt. We are left to assess whether the rapid expansion in some areas was sustainable. We firmly believe that the Sunbelt offers bright prospects for the future, as non-housing related private-sector investment also flowed into the states during the past decade and raised living standards. The consequence is that all seven of the BBVA Compass Sunbelt states are home to some of the best performing metropolitan areas that have comparatively younger populations, greater dynamism and concentrations of high-technology and high value-added manufacturing sectors that are essential for future growth.

Chart 9

Composition of Debt Balance Per Capita,* YoY % change



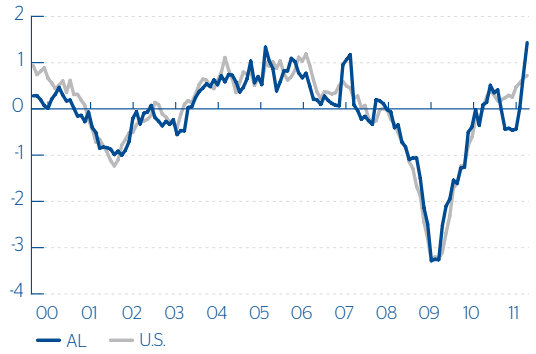
* Based on the population with a credit report
Source: FRBNY Consumer Credit Panel

However, risks remain as some areas in the Sunbelt suffer from high poverty and the rapid growth is changing the demographics of the region. Our analysis reveals that the smaller metropolitan areas which experienced a surge of growth but have a less-diversified industry mix concentrated among low-value added services face the greatest re-alignment. Many of these areas are concentrated in California, Nevada and Florida, as low-initial home prices and surging home values attracted real estate investment, but they may not have attracted a similar level of corporate investment. Overall, the Sunbelt has been leading the recovery and continues to expand at a faster pace than the rest of the U.S. In the first quarter, California's positive job creation, although nascent, is a welcome sign that the private sector led recovery has taken hold in the Sunbelt.

Alabama's manufacturing and exports are leading a surge of activity

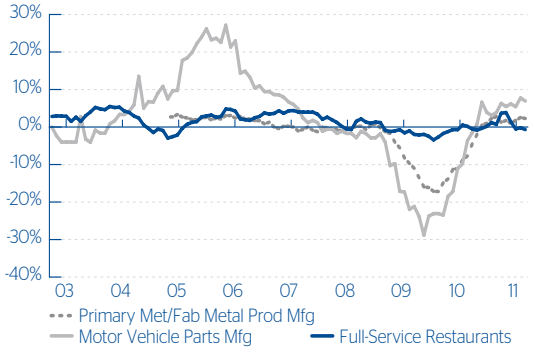
The three-month moving average (3mma) BBVA Compass State Monthly Activity Index (SMAI) suggests that Alabama is on a positive growth trajectory after a slowdown in late 2010. During the first quarter, total nonfarm employment increased by 8,100 (0.4%), with the largest gains occurring among the administrative and waste management services, manufacturing, construction and state government sectors. We anticipate that private sector hiring will continue alongside a sizeable 2.5% expansion of GDP in 2011.

Chart 10
State Monthly Activity Index, 3mma %



Source: BBVA Research

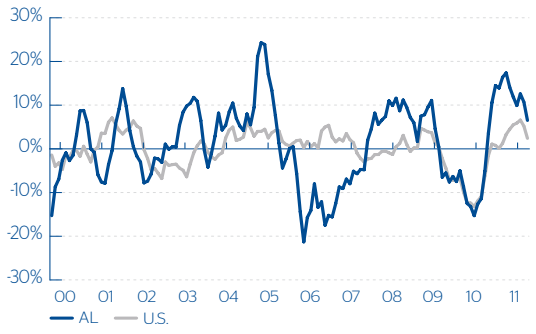
Chart 11
Industry Employment, YoY % change



Source: BLS / Haver Analytics

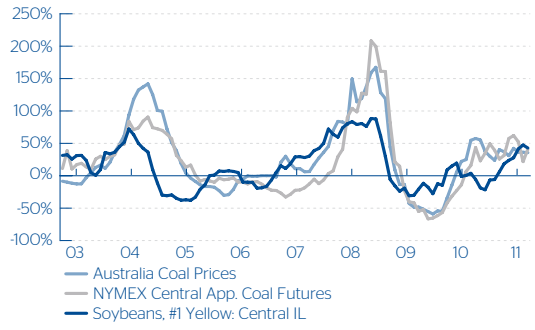
We have previously commented on the role of exports in driving the state's recent growth. An article follows in this publication that updates the recent developments that have transformed the state into a significant exporter. While the co-location of transportation firms and their related exports are largely responsible for this transformation, recent increases in commodity prices have boosted the value of the state's coal and soybean exports. Indeed, Alabama's coal production surged at double-digit growth rates last year, but has now moderated. Exports remain up more than 20% on the year, which is boosting Alabama's GDP significantly. Last year, the share of Alabama's exports to China and Hong Kong doubled, and China jumped ahead of Germany as the state's number two trading partner. As some emerging markets are taking steps to dampen growth to mitigate a bust, we expect the pace of exports to moderate throughout the year.

Chart 12
Coal Production, YoY % Change, 3mma



Source: Census/Haver Analytics

Chart 13
Coal and Soybean Prices, YoY % Change



Source: Dept. of Energy, Wall St. Journal and World Bank / Haver Analytics

We maintain our outlook of a slow recovery in the United States as consumers save more and de-leverage to reduce their debt service obligations. As a consequence, auto sales will not rebound quickly to 2007 rates; however, they will gradually edge higher in 2011, and this rise will create jobs and boost the sector's manufacturing output in Alabama. High value-added manufacturing industries have led the recovery due to a rebound in capital investment, inventory restocking and seemingly insatiable foreign demand. As the world economy grows, and the U.S. exports more of its products, Alabama's export-oriented transportation industry will lead to increases in per-capita income and attract skilled labor. We expect solid growth to continue in Alabama that will result in rising living standards due to an approximate 2% annual increase in per-capita output during the next 5 years. We expect North Alabama to lead this charge due to its leading position of high-potential technology and manufacturing industries. Going forward, Alabama's leaders must ensure that their efforts help the state improve its national competitiveness in education and other government services.

Texas presses on at full speed, propelled by energy

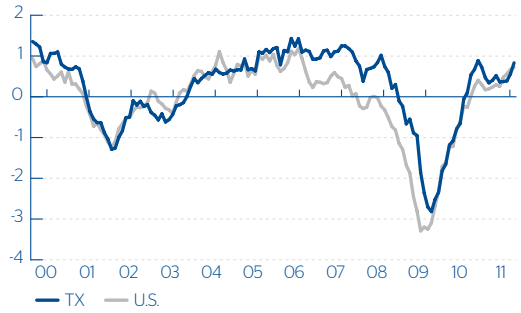
During the past year, Texas has led the nation in total job creation of more than 250,000 workers. The pace of hiring returned earlier than many other states, and has remained consistently positive since late 2010. This job creation along with rising energy prices will lead to a rapid expansion of 3.7% in real GDP this year and further improve Texas' attractiveness. Living standards will improve above the Sunbelt average: we project that GDP per capita will continue to increase about 1.9% per year throughout the next five years.

The energy sector continues to propel Texas, and the rise in prices has spurred investment. Technological advances have enabled the ability to tap new oil and gas reserves. During episodes of high oil prices, Texas' nominal output skyrockets, but real output growth is often dampened due partly to lower domestic demand and rises in production costs. New drilling methods, however, have the potential to limit the rise in production costs, and extract oil and gas from areas that were previously deemed unproductive or too costly. Given the expected growth in emerging markets and the global increase in energy demand, Texas' industrial concentration will buoy the state's future. Apart from actual oil and gas drilling, oil field service companies will provide their expertise abroad. In Houston alone, employment in the mining support activities sector is up nearly 17% during the past 12 months.

Aside from energy, however, Texas has a concentration of high-potential manufacturing and service industries whose employment is skyrocketing. Technology-related semiconductor manufacturing and software design services are attracting workers in the Austin area, transportation and aerospace manufacturing is surging around San Antonio, employment in financial services is rebounding strongly in Dallas and Fort Worth, and employment in the software design services, truck and water transportation and retail trade sectors are driving rapid gains in the Houston area.

Chart 14

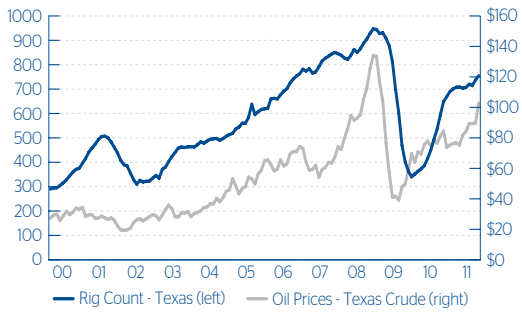
State Monthly Activity Index, 3mma %



Source: BBVA Research

Chart 15

Rig Count and West Texas Crude Oil Prices

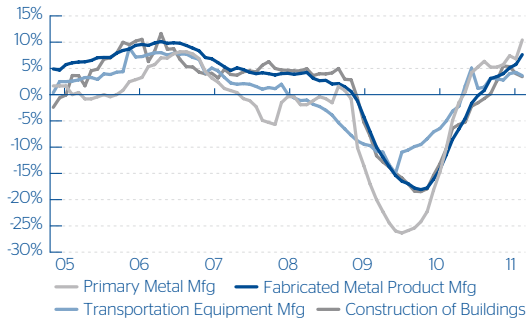


Source: Dallas Fed / Baker Hughes

Texas' retail sales are up approximately 4% at the state level as of January. In late 2010, the increase was the strongest in El Paso, followed by San Antonio, Laredo, Austin, Brownsville and McAllen. Sales spiked in Houston in early 2010, but subsequently moderated, while Fort Worth's sales are on an upward trend, and the Dallas-Plano-Irving area has yet to experience a surge in retail spending. We expect sales to strengthen in this area in the coming months as the pace of consumer de-leveraging moderates.

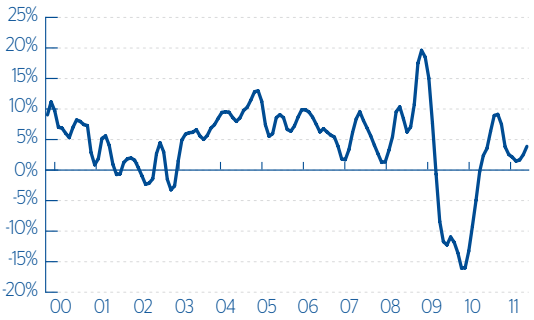
As a whole, Texas' consumers are in a far better position than other states; the most recent New York Fed data on credit conditions illustrates that their total and mortgage debt burdens are the second lowest above Ohio. This lower debt burden has limited the impact of the de-leverage cycle on consumer spending in Texas, and has thus contributed to a more stable economic environment during the downturn and recovery. Areas with highly-indebted consumers may still face restrained consumption growth as households re-align their current and expected income and net worth with their debt burden.

Chart 16
Industry Employment, YoY % change



Source: BLS / Haver Analytics

Chart 17
Retail Sales, YoY % change



Source: Texas Comptroller of Public Accounts / Haver Analytics

Housing price appreciation is expected to slow. While our initial data assessment reveals that prices are stabilizing in some of the hardest hit markets on the east and west coasts, the rate of appreciation of home prices in the center of the country (including Texas) is moderating and prices are pulling back slightly in some areas. We expect the commercial real estate market to remain subdued for the remainder of the year.

In summary, we are confident that Texas stands on a solid foundation for the future. Texas' sustained and above-average population growth vaults its potential expansion among the top 10 in the country. The state, however, will have to confront demographic changes and ensure that the education system is adequately preparing all residents.

California leads the U.S. in private sector job creation for the year, while Arizona struggles to absorb idle workers

Arizona and California have experienced a boost in productivity in spite of slow nonfarm employment gains as average hours worked per employee has risen sharply and GDP is expected to grow more than 3% this year in both states. As a recovery in employment typically lags GDP, the recent upturn in California's private sector hiring is encouraging and hints that a self-sustaining recovery is underway.

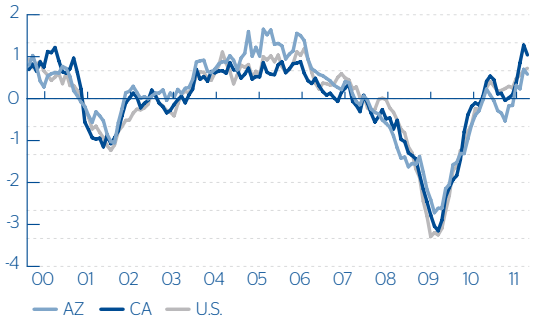
At the end of 2010, Texas led the nation in total private sector job creation; however, in the first quarter, California has pulled ahead of other states and added more than 160,000 private sector workers. Consequently, it leads the nation with the creation of 260,000 total private-sector jobs during the past 12 months. Of course, California has a longer road to recovery, because during the 12-month period from August 2008 to August 2009 the private sector lost more than one million workers. This rapid turnaround is certainly welcome, but it has yet to take hold in some of California's hardest hit metropolitan areas such as Riverside, Vallejo, Bakersfield and Napa. Statewide, the level of private sector workers is approximately 92% of the peak in late 2007. In California's technology hubs of San Francisco, San Jose and San Diego, this level is near or above 94% and climbing.

California has benefited from strong demand from China and surging demand for technology products. The technology sector will continue to propel California forward, as businesses invest to upgrade their information systems and increase collaboration among employees. Technology companies that are developing products to reach the mass market are attracting capital and creating jobs in software design. Although some have assailed California's business and tax climate as hostile in attempts to attract companies to neighboring states, as one writer quipped, "Shangri-La hasn't moved to the desert."

The sheer size of the California economy and its diversity are helping it to recover, and California's leadership in technology and access to foreign markets provide a solid foundation to attract young and educated workers. Nevertheless, the state must confront its governance challenges and improve its fiscal position to allay bond markets, attract new investment apart from technology venture capital and restore prosperity to inland metropolitan areas.

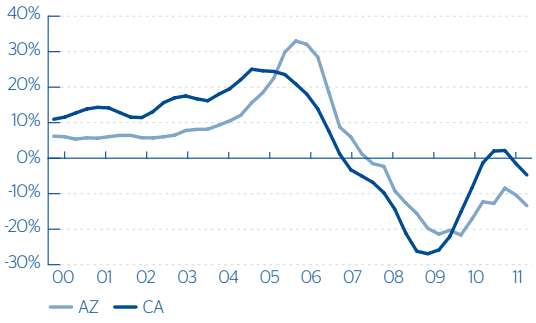
On average, Arizona's year-over-year (YoY) employment gains are very low at only 0.2%. We expect growth to increase this year; however, the lack of a surge in the construction sector will leave many workers on the sidelines. The employment recovery is occurring faster in the Flagstaff and Phoenix areas, as the computer technology manufacturing sector is adding workers along with the wholesale trade and transportation industries. Flagstaff is also seeing a surge in professional and business services; however, this sector is still shedding workers in Phoenix. Total nonfarm employment also remains down on a YoY basis in Tucson, as its manufacturing sectors have not grown rapidly, and hiring in the services remains depressed.

Chart 18
State Monthly Activity Index, 3mma %



Source: : BBVA Research

Chart 19
Home Price Purchase Index, YoY % change



Source: FHFA / Haver Analytics

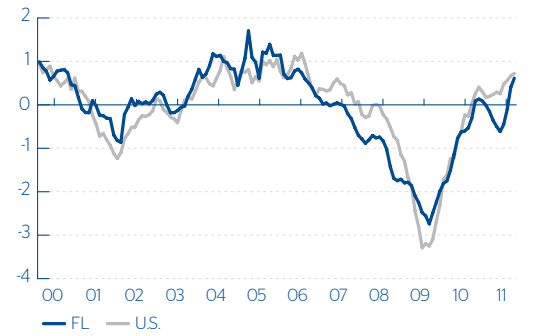
The residential real estate market has recovered in some of California's coastal MSAs and large cities; however, prices are still showing declining trends in inland areas and in Arizona. Indeed, the rate of decline of the home price purchase index accelerated in Phoenix, while prices are already growing in San Jose and San Diego. Taken as a whole, these trends suggest that Arizona will face persistent stress in its real estate market throughout 2011 that will limit the speed of the recovery. The re-alignment of Arizona's real estate and construction sectors will take their toll on employment growth; however, this re-balancing is essential for sustained growth going forward. Furthermore, the collapse of these sectors has left the state budget with a significant shortfall that leaders must address.

Florida is poised for a slow, but sustainable recovery

Along with Arizona, Florida's employment recovery continues at a slow pace. While Alabama, Texas and California's durable goods manufacturing sectors were able to boost output in response to the inventory cycle and robust foreign demand, Florida's manufacturing sector has remained on the hiring sidelines. This trend appears to be changing, as hiring in the manufacturing sector has picked up along with total payroll. We expect growth in Florida to be at the U.S. average of 3% in 2011.

Chart 20

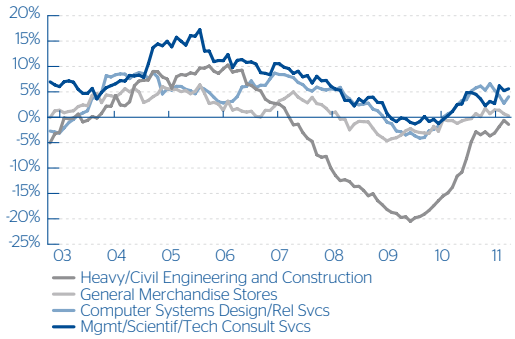
State Monthly Activity Index, 3mma %



Source: BBVA Research

Chart 21

Industry Employment, YoY % change



Source: BLS / Haver Analytics

The weak real estate market continues to weigh on Florida's recovery, as elevated housing inventories and a slower foreclosure process have contributed to sliding prices and diminished expectations of a rebound. Consequently, construction hiring remains weak. We expect residential investment to make a small positive contribution to GDP in the latter part of the year; however, absent this driver, Florida will struggle to grow quickly. Heading into the summer travel season, the economic improvement during the past year will bolster Florida's tourism industry which was battered not only by the slow national recovery, but also last year's oil spill. Tourism has a substantial impact on Florida's GDP growth, and thus we expect hiring to pick up in this sector as visitors return.

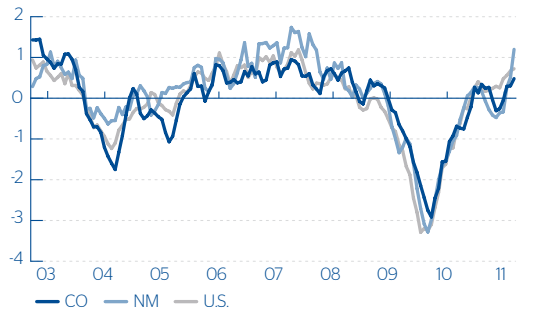
On the fiscal frontlines, Florida's legislative leaders are girding for a showdown as they must reconcile the budget proposals that the state Senate and House have each passed. Both proposals enact substantial cuts to make up for the expected deficit; the principal area of contention currently surrounds Medicaid spending cuts, but it is likely that a suitable agreement will be reached early in the second quarter. While some states have resorted to tax increases to finance spending, the Florida legislature is focusing on targeted spending cuts to keep their promise of no new taxes. The governor is also championing a reduction in the corporate income tax rate to enhance Florida's competitiveness.

Colorado adds to its base of skilled labor, while New Mexico faces difficulties ahead

Colorado and New Mexico are experiencing a later fallout in their residential real estate markets compared to the coastal areas. On a YoY basis, the decline in home prices did not register until 4Q07 in Colorado and 2Q08 in New Mexico compared with 4Q06 in California and 2Q07 in Florida. Furthermore, while the YoY peak appreciation in Colorado's home prices was 6.1% in late 2005, this peak topped 25% in Florida and California and 15% in New Mexico.

Chart 22

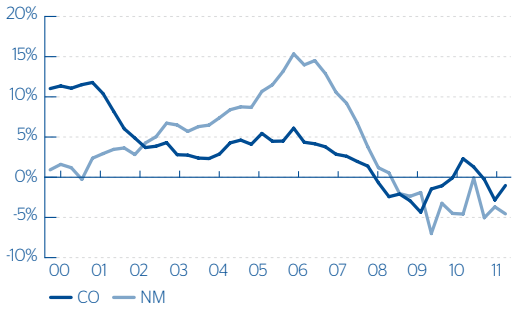
State Monthly Activity Index, 3mma %



Source: BBVA Research

Chart 23

Home Price Purchase Index, YoY % change



Source: FHFA / Haver Analytics

Thus, we expect a more limited fallout from the housing bubble in Colorado compared to New Mexico, and we believe that the private-led recovery has taken hold in Colorado despite a depressed construction sector and modest overall employment gains. Across industries, the durable goods manufacturing and mining sectors are adding workers at a rapid pace along with wholesale trade, education and health and leisure and hospitality services. The professional and business services sector presses ahead, while the information, finance and retail trade sectors pare their workforce. The state is adding to its skill base through the creation of jobs in these sectors.

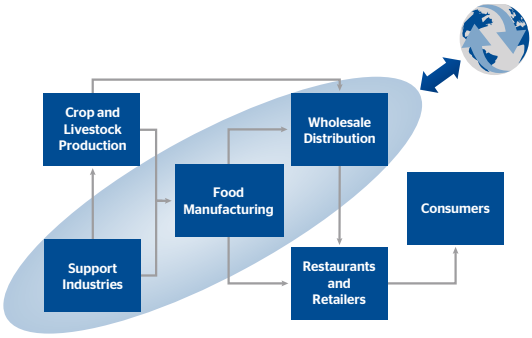
More worrisome, New Mexico's overall employment gains have yet to register a significant YoY increase, and the residential real estate market continues its descent along with the construction sector. Prices have not yet stabilized, and many high-skill sectors such as professional and business services are still shedding workers at a rapid rate. Sustained international trade with Mexico has helped the transportation and warehousing industry add workers, and a rise in consumer spending has added a few workers to the retail sector, but, given that nearly 25% of the state's workforce is employed by the federal, state or local government, planned cuts in that workforce will impact growth this year.

For 2011, we expect Colorado to expand at 3.1%, above the U.S. average, while New Mexico grows at 2.8%. Furthermore, due to its slightly lagged recovery, we expect Colorado's growth to accelerate to 3.5% in 2012.

5. A Recipe for Success: Food Manufacturing and Wholesale Distributors

In the coming decades, the food industry as a whole will benefit from population and income growth in developing countries as well as further advances in biotechnology. These trends, combined with our additional analysis, place the food industry among industries with high potential. From the crop fields to the dinner table, however, the food industry encompasses a range of processes and players. The production chain starts with ranchers and farmers and extends upward to food manufacturing companies. Both of these industry segments are supported by biotechnology and equipment manufacturing advances that enhance productivity. Food manufacturing companies process and package raw food and develop beverage products that they sell through retail and wholesale distribution channels. Our analysis reveals that the highest value-added in the food industry occurs in the ancillary support, manufacturing and distribution segments.

Chart 24
Flow Chart of Industry Structure



Source: BBVA Research

The global market for manufactured food products is currently valued at $6.0 trillion and is projected to surpass $7.0 trillion by 2014. Of this total, the largest share belongs to Europe (36.8%), followed by Asia (32.3%) and the Americas (24.0%). While much of the market is dominated by large, multinational companies, such as Danone, Kraft, Unilever, Nestle, Coca-Cola and Pepsi, there are still ample opportunities for small and mid-size firms to develop new products.

In this article, we assess the potential for food manufacturing industries and delve into the distribution of their products. We believe that successful firms in these industries need to tap international markets and offer products that appeal to the growing health-consciousness of consumers and are different from the products of large, multinational food manufacturing companies. As to distribution, we expect further consolidation as mid-size firms adopt logistics technology. Larger distributors are more attractive to all food manufacturing companies – particularly those that produce niche products - because those distributors can supply a broad market.

Combining population and income growth along with expansion in international trade will generate revenue growth during the next decades

Population and income growth in developing countries is driving global demand for food products. According to the United Nations, world population will reach 9 billion in 2050. Emerging economies will account for virtually all of the increase, while the population of developed countries will flatten. The rapid economic growth in emerging economies is translating to rising per-capita incomes. In China, for example, per capita disposable personal income increased by almost eight times during the past thirty years. This process is producing a rapidly-growing middle class that is buying food products and spending more at restaurants as they substitute away from home production.

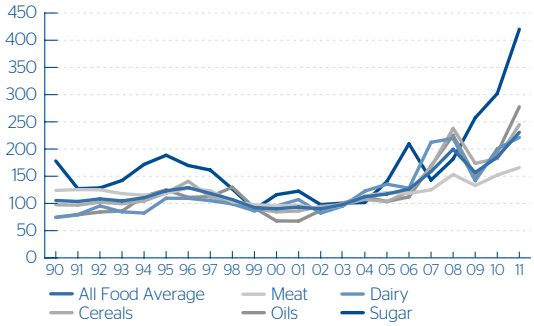
U.S. producers are already benefiting from this trend. Food and kindred products are the ninth-largest export commodity by value in the U.S. and their value share of total exports has increased from 2.9 to 4.0% from 2006 to 2010. Undoubtedly, NAFTA has played a key role in the intensification of international trade, as almost 40% of food exports go to Mexico and Canada. Nevertheless, food exports to China are gradually gaining share, and thus developing Asia is no longer inaccessible to domestic producers.

Interestingly, food prices were actually declining between 1990 and 2003, and did not appear to anticipate the fast growth of emerging markets. After 2004, alongside a booming U.S. economy, this upsurge in global demand began to translate into quickly rising exports and food prices. While the price appreciation in some consumer staples products experienced a check in 2009 due to the prolonged recession in developed economies, as the U.S. economy has strengthened, food prices and exports have surged. For instance, meat prices are up nearly 25% during the past two years, while dairy and cereal prices are up 56% and 41%, respectively during this same period. Furthermore, prices of each of the key consumer staple products are above their pre-crisis peaks. We have yet to decompose the principal sources of rising prices after 2004; however, the existence of government subsidies and the promotion of biofuels have likely contributed to accelerating prices. Consequently, rising prices have led to higher production and revenue in the global food industry.

Indeed, in the U.S., the domestic food manufacturing industry experienced a milder downturn and a faster recovery as indicated by industrial production statistics. Regionally, of the industry's total contribution to GDP, Georgia, Illinois, California, Pennsylvania and Texas each contribute more than 5% to that total, followed by Minnesota, Wisconsin, Iowa, North Carolina and Ohio who each add between 3 and 5%.

Chart 25

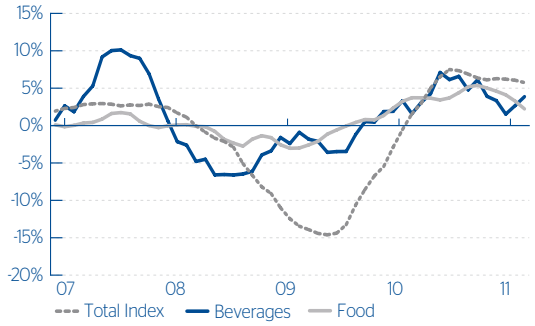
Food Price Indices, (2002-2004=100)



Source: Food and Agriculture Organization of the United Nations

Chart 26

Industrial Production YoY % change (seasonally adjusted)



Source: Federal Reserve/ Haver Analytics

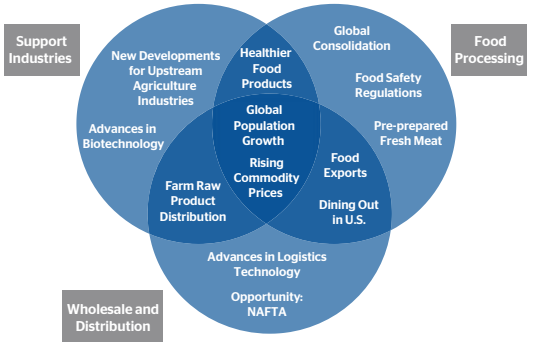
Adapting rapidly to changing consumer preferences is a must for profitable companies

While international markets provide an attractive base of new consumers, the domestic market offers an affluent base of consumers who are spending a greater share of their incomes on food. The size of the U.S. market for food products was estimated at approximately $1.3 trillion in 2009, or around 11% of personal income. Food spending remained resilient throughout the downturn. As a consequence of rising commodity prices and the necessity of food, the share of spending on food has increased across all income levels during the past four years. Along with this stable spending, U.S. consumers are becoming increasingly conscious of food production methods and ingredients, and many are willing to pay a premium for healthy food products. Food manufacturers and distributors must keep abreast of shifting consumer preferences to meet this demand. For example, household spending patterns indicate an ongoing shift towards fish, fresh fruits and vegetables, non-carbonated beverages, wine over beer, and other minimally processed food products. In line with these changing preferences, the far-reaching U.S. government dietary guidelines recommend a reduction in the daily intake of fats, sugars and salt. As an example, during the next few years, these new guidelines will affect the institutional demand for food products at public schools, prisons and hospitals.

Blending productivity gains, low concentration, niche markets and international exposure highlights attractive industries

Chart 27

Synthesis: Interaction of Trends



Source: BBVA Research

While these changing consumer buying habits are opening doors for new products, the entry costs are not insignificant. First, many of the food manufacturing industries from breakfast cereals to snack food and confectionary products are dominated by multi-national companies who are introducing successful products across the globe. Second, food safety guidelines and government regulations are stringent, and must be adhered to. Third, new entrants must establish distribution channels with wholesalers and retailers, some of which have exclusive contracts with competitors.

In addition, unexpected changes in consumer behavior, consolidation and competition from global companies present risks to returns on an investment. Furthermore, some manufacturing firms operate with low profit margins, and thus the volatility of commodity prices can erode these margins and render a product unprofitable. This risk is particularly acute for small to medium size firms that specialize in certain products. Other risks to profitability include global recalls, and downstream consolidation that is increasing the bargaining power of grocery stores and hypermarkets.

We assessed 27 sub-industries based on five characteristics.[1] First, the industry's productivity as measured by value added per worker, second, the growth in this value added per worker, third, the intensity of exports as measured by their share of output, fourth, the growth of exports and fifth, the industry's concentration ratio. Subsectors that exceeded the industry average in most of these categories were considered "attractive" from a mid to long-term point of view. The analysis identifies perishable prepared food, starches and vegetable oils, wineries, animal food, breweries and distilleries among top food manufacturing industries.

We conducted the same exercise with distributors; however, since most of them operate only in domestic markets, we ranked them based on sales per employee, sales growth, gross profit, gross margin and concentration. Distributors of specialty and local beer, wine and local spirits, fish, poultry, dairy and vegetables and specialty grocery products stand out as top performers as they enjoy relatively higher margins. Alcoholic beverage distribution in the U.S. has remained exceptionally lucrative due to state and federal regulations and the bargaining power of the large producers.

But, wholesale food and beverage distribution is not without its own risks. Fuel price volatility affects profitability. Due to the lack of international exposure, distributors are vulnerable to the relocation of manufacturing facilities to other countries. In addition, they have limited bargaining power against big retailers. Other risks include the consolidation of both manufacturers and grocery retailers that reduces the need for intermediaries, and the inability of specialized distributors to adjust to unexpected changes in consumer preferences.

Bottom Line

The food manufacturing and distribution industries are poised to gain from foreign economic growth along with rising affluence and shifting preferences toward healthy products in the domestic market. Segments of the food manufacturing and distribution industry will benefit heterogeneously, and high returns will accrue to those firms that offer of healthy and fresh products, access international markets, and are able to avoid competing directly with the largest multinational incumbents.

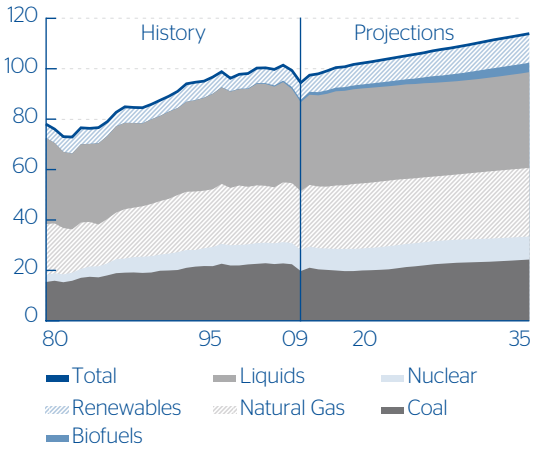
[1] Sectors correspond to the 5-digit level of the NAICS classification code.

6. Natural Gas: Fueling the Future

The U.S. currently relies on fossil fuels for more than 80% of our energy needs. Fossil fuels have many advantages because they are storable, abundant in the U.S. and can be traded internationally. On the downside, however, burning fossil fuels produces carbon emissions that contribute to climate change. While renewable energy sources such as solar and wind have made significant technological advances during the past decades, they remain fringe sources of generation because it is impossible or too costly to store their output.

Chart 28

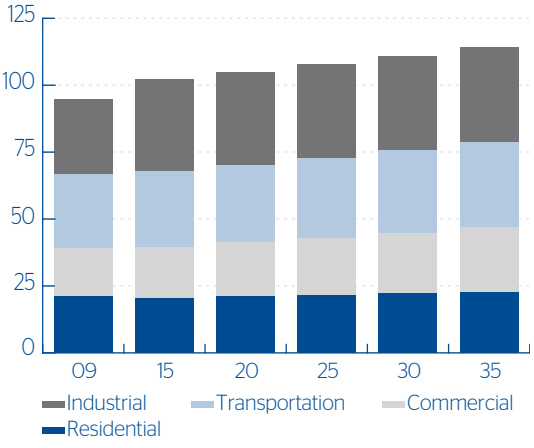
Primary Energy Use by Fuel, 1980-2035 (quadrillion Btu)



Source: Energy Information Administration, AEO 2011

Chart 29

Primary Energy Use by End-use Sector, 2009-2035 (quadrillion Btu)



Source: EIA

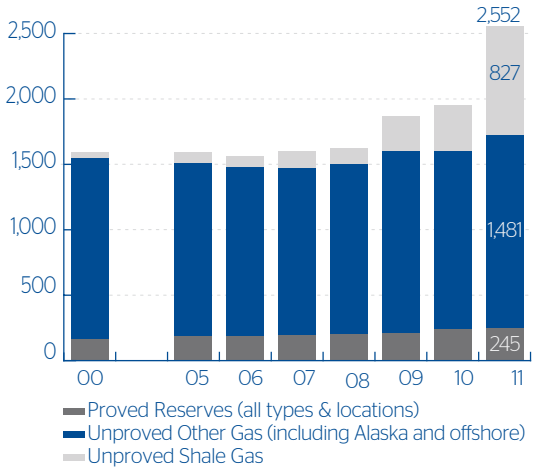
The quest for viable alternative energy sources is intensifying as oil prices are on the rise and environmental concerns return to the forefront. Since the recovery began in 2H09, the price per barrel of oil is up more than 70% and the NYMEX coal futures price is up more than 75%. While oil prices have undoubtedly jumped due to political instability in the Middle East, the recovery in the U.S., along with strong growth in emerging markets, is also responsible due to higher demand. As emerging markets continue to develop, they will consume more fuel for transportation and will need more resources to generate energy. But, high oil and energy prices threaten our recovery: in the face of stagnant wages and elevated unemployment, many consumers are left with less discretionary income in the near term as they must pay more at the gasoline pump. Secondly, the prices of other goods and services will begin to rise as production costs increase and firm margins erode. Thus, the debate surrounding U.S. energy efficiency, environmental impact, infrastructure and independence from foreign oil has been re-energized.

Contrary to the prices of other fossil fuel sources, however, the price of natural gas is currently up only 25% since 2H09, and futures markets project a stable, low price during the next six to twelve months. The price remains low and stable due to advances in drilling technology that have enabled cost-effective harvesting of fuel from recently discovered natural gas reserves called shale plays. Consequently, as the price spread between natural gas and other fossil fuels continues to widen, attention is turning to further commercialization of gas. In a future in which oil prices continue to rise, and environmental sustainability concerns only heighten, any sensible discussion of domestic energy policy must include natural gas, as it has the potential to transform our energy supply.

Advances in drilling technology have boosted reserves and domestic production from shale gas

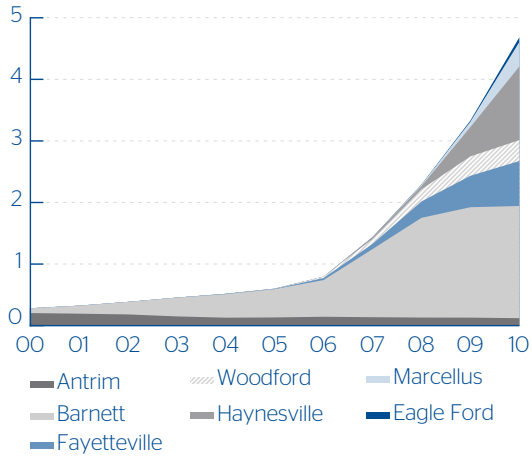
The Energy Information Administration pegs current estimates of total recoverable natural gas reserves at more than 2,500 trillion cubic feet. Of the total amount of natural gas consumed in the U.S., nearly 90% was produced domestically and nearly 90% of the remaining supply arrives via pipeline from Canada. Thus, natural gas enhances our security and reduces our dependence on foreign sources of energy commodities. At the current consumption rate of around 23 billion cubic feet per year, the proven domestic reserves are sufficient to supply our needs for more than 110 years. Of course, given the low price and ample supply, consumption will increase over time, but, technological advances will also increase the amount of technically recoverable natural gas.

Chart 30
U.S. Dry Gas Resources (trillion cubic feet)



Source: EIA

Chart 31
U.S. Annual Shale Gas Production (trillion cubic feet)



Source: EIA

In the past three years alone, technology has led to a more than 60% increase in total recoverable natural gas reserves due largely to the ability to extract shale gas. Today, more than one third of total recoverable reserves – approximately 862 trillion cubic feet - are now comprised of shale gas, and this year's estimate of recoverable shale gas reserves is more than twice that of the prior year. Shale gas is expected to make the largest contribution to the expected growth in gas production and, by 2035, will account for 46% of all U.S. natural gas production.[1]

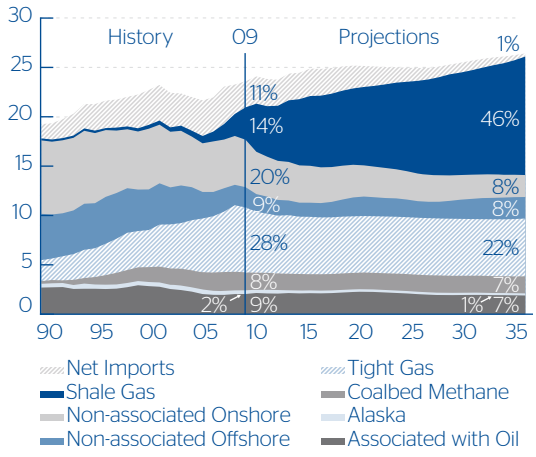
Two significant advancements in drilling methods have enabled the cost-effective extraction of shale gas. Shale gas is trapped deeper in the ground in low permeable shale rock versus conventional gas which migrates closer to the surface but is trapped under a layer of impermeable rock. After drilling through this layer, the gas can be easily extracted from highly-permeable reservoir rock. On the contrary, shale gas requires deeper wells, and was not cost effective to extract until horizontal drilling and hydraulic fracturing ("fracking" or "hydrofracking") methods were developed. Horizontal drilling allows producers to drill directly into the shale rock at an angle, and then hydraulic fracturing injects a mixture of water, sand and chemicals at high pressure into the rock to create fissures and allow the gas to flow up into the well.

Drilling and hydrofracking techniques were pioneered by George Mitchell at the Barnett shale in Fort Worth and have become standardized in the last decade. The adoption of these methods has led to a surge in investment in new wells and spawned the search for natural gas from Texas to Pennsylvania, into Utah, Wyoming Montana and North Dakota. Currently, new wells are proliferating in the Haynesville shale that lies on the Texas-Louisiana border and east of Dallas, and in the Marcellus shale that stretches from Kentucky through Ohio and West Virginia into Pennsylvania and New York.

[1] Energy Information Administration. 2011 Annual Energy Outlook. Released April 2011.

Chart 32

U.S. Dry Gas Consumption Sources (trillion cubic feet per year)

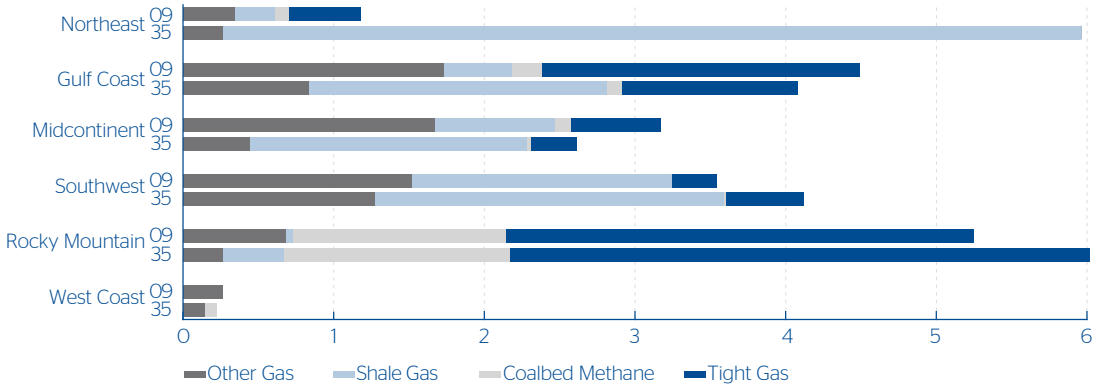


Source: EIA

The medium-term consequences of this recent increase in domestic production are twofold. First, as domestic production is projected to grow faster than consumption, shale gas will displace imports and other sources of production. The share of shale gas in consumption is projected to increase four-fold throughout the next 35 years, while imports decline from 11% today to less than 1% by 2035. The U.S. could actually become a net exporter of natural gas products over time. Second, the dramatic rise in supply will maintain low prices and reduce their volatility. The price mechanism should provide sufficient incentives for consumers, industry and electric utilities to intensify their use of natural gas in vehicles, industrial equipment and electricity generation.

Chart 33

Lower 48 Onshore Natural Gas Production by Region, 2009 and 2035 (trillion cubic feet)



Source: EIA

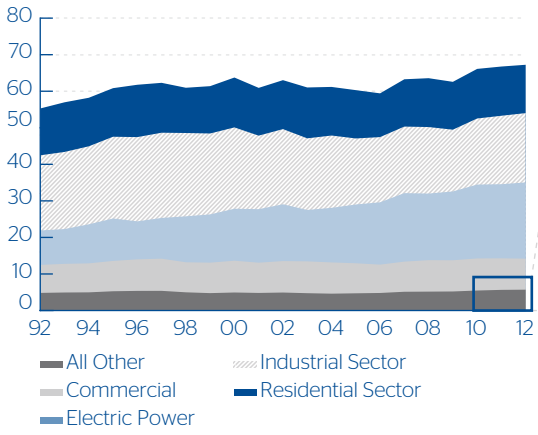
While the energy efficiency of end users continues to improve, the use of natural gas will intensify in the electric power generation sector

This year, total energy demand in the U.S. is expected to surpass 99 quadrillion Btu and grow to 114 quadrillion Btu by 2035. To put that number in perspective, total per-capita energy consumption is approximately 325 million Btu and almost 42 million Btu are required to power a residence that consumes 1000 kilowatt hours of electricity each month. Both per-capita demand and energy consumption as a share of GDP will continue to decline as end-users increase efficiency and the share of the less-energy-intensive services sector in GDP rises. Energy end-use is classified into four primary sectors: residential, industrial, commercial and transportation. On average, the residential and commercial sectors consume slightly more than 40% of total energy, while the industrial and transportation sectors demand the remaining 60%. Of the total energy demand, around 25% is currently satisfied with natural gas.

The consumption of natural gas is tracked across seven end-use sectors. These seven include the four major groups: residential, commercial, industrial and vehicles, and adds lease and plant

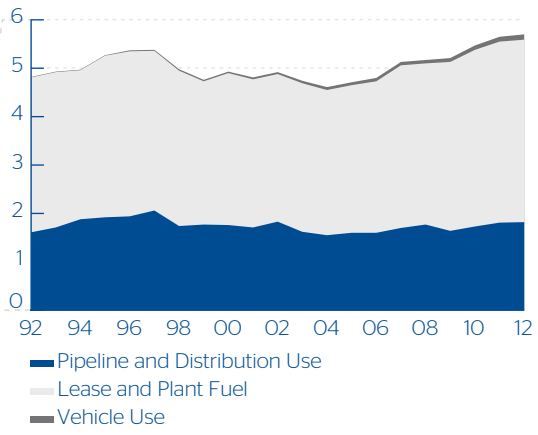
fuel, pipeline and distribution and the electric power sector. Throughout the 1990s, the largest consumer of natural gas was the industrial sector which demanded more than twice the amount of the electric power sector. Today, however, the largest consumer is the electric power sector followed closely by the industrial sector. Residential demand has remained essentially flat during the past 20 years, and use is steadily increasing in the commercial sector.

Chart 34
Total Natural Gas Consumption by Sector (billion cubic feet per day)



Source: EIA

Chart 35
Consumption of All Other Sectors (billion cubic feet per day)



Source: EIA

The average annual total natural gas consumption projected during 2010-2012 has increased nearly 8% from the 2000-2009 average. Further demand from the residential sector is limited by the continuing improvements in the efficiency of home lighting and appliances. New homebuyers desire more energy efficient construction. Thus, while natural gas powered innovations, such as tank-less water heaters are being installed, the net increase in residential gas usage is minimal due to declines in total energy usage. The Energy Information Administration expects the flat trend to continue, and thus annual growth of gas demand in this sector will average 0%.

The commercial sector is projected to have sizeable growth in both electricity and natural gas demand due to the continuing expansion of the service economy and the need to maintain energy-hungry computer equipment. Thus, additional power generation will be needed to support this sector, and new construction may include natural gas heating systems. Furthermore, large commercial office buildings may require low-cost natural gas electricity generators for emergencies to maintain 24/7 operations.

Industrial use is driven by heavy manufacturers. Bulk chemicals, refining, paper, steel and food manufacturing are the top five energy-consuming industries in this sector, and together they comprise more than 60% of the sector's total demand. As these sectors ramped up output after the global recession and exports surged, their energy use also grew. Bulk chemicals are projected to decrease their energy demand after 2016 due to rising competition from abroad and a switch from oil-based industrial fuels to lighter, natural gas and natural gas liquid (NGL) fuels. This switch is due primarily to the rising spread between oil and natural gas prices favors long-term consumption growth of natural gas in the industrial sector.

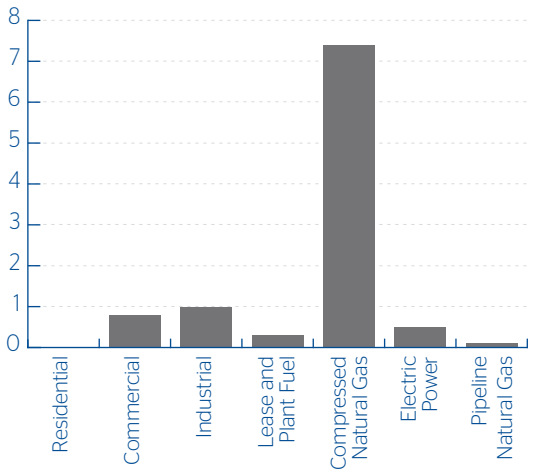
The largest source of the increase in demand for natural gas will come from the electric power generation sector, because as older coal powered generation plants are retired, new plants that use only natural gas or both coal and natural gas are brought online. The projected average annual use in this sector is more than 26% higher than the annual average of the prior decade.

Electricity generation companies have been steadily increasing their consumption of natural gas relative to coal, although coal-fired power plants remain the principal source of generation in the

U.S. Two regulatory changes are behind this shift. First, concerns about the high level of carbon emissions of coal plants have led to stricter environmental regulations that require operators to install expensive carbon sequestering technology to clean their exhaust. Thus, the installation of this scrubbing equipment erodes the low-cost advantage of coal. As the Environmental Protection Agency (EPA) steps up enforcement of the Clean Air Act, operators are increasingly making the decision to retire the oldest coal plants rather than upgrade them to comply with the law's emission requirements.[2] The high probability of new regulations also favors investment in other generation technologies. Natural gas generation plants, while not carbon-free, emit approximately 50% less carbon dioxide.[3] Although nuclear power plants are recognized as having near-zero carbon emissions, the disposal of radioactive waste remains a challenge, and the tragic disaster in Japan will spur policymakers to revisit the safety of nuclear plants. Thus, investment in new nuclear technology in the near-term is highly uncertain.

Chart 36

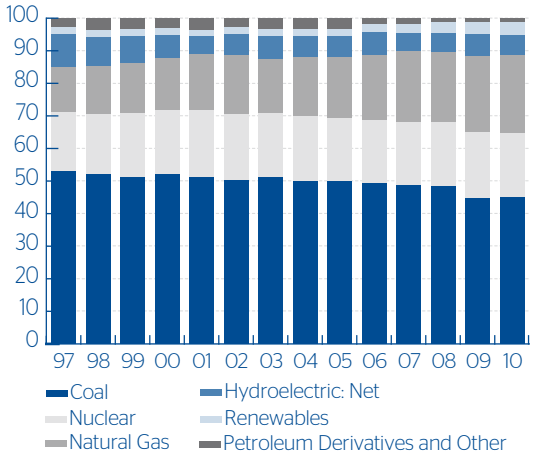
Projected Annual Growth of Demand, 2009-2035 (%)



Source: EIA

Chart 37

Net Generation by Energy Source, 1997-2011 (%)



Source: EIA

Second, the deregulation of electric utilities during the 1990s opened the doors for independent power producers. These companies invested primarily in new natural gas plants for several reasons. Because the generating capacity of the plants can be specifically tailored to meet an area's needs, construction and fixed costs are lower than comparable coal and nuclear facilities. Also, proposed plants meet less resistance from environmental groups. As these new plants came online in the late 1990s and early 2000s, the generation capacity of natural gas fired power plants exploded. The initial wave of investment resulted in an overbuilt market. Today, many plants operate at just above 40% operating capacity, and thus natural gas comprises the largest share of capacity, but it is responsible for far less actual generation.

The lower operating capacity is efficient because natural gas fired power plants are less costly to start up and shut down and require less time to get running compared to coal and petroleum plants. Thus, they have been the ideal candidates to supply peak load generation, while coal plants supply the majority of the base load. Despite the capacity increases, power producers remained wary of this fuel source for base-load generation, because price spikes during the early 2000s and 2008 revealed unanticipated risks. Furthermore, as late as 2008, the Energy Information Administration was forecasting declining domestic natural gas supplies and increasing exports, and thus generation companies remained cautious and maintained using gas to satisfy peak demand.[4]

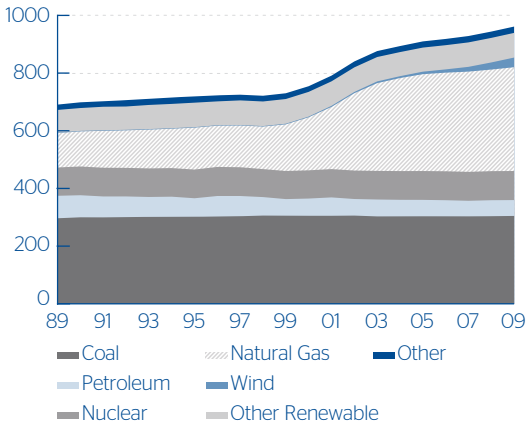
[2] "Aging Indiana power plant to shut down, cutting Chicago-area air pollution." Chicago Tribune. May 5, 2011.
[3] U.S. Environmental Protection Agency. Available: http://www.epa.gov/cleanenergy/energy-and-you/affect/air-emissions.html
[4] "Utilities Turn From Coal to Gas, Raising Risk of Price Increase." New York Times. February 5, 2008.

Throughout the next decades, due to the positive supply shock from shale gas, we firmly believe that natural gas has the greatest potential to transform base-load electricity generation. While renewable energy sources (primarily wind) will also attract investment, the lack of predictability of wind patterns and the current inability to store renewable-generated power means that most power plants will have to use a combination of renewable and fossil fuel technologies. Today, for example, an ideal combination might consist of wind turbines that can generate a sizeable base load and natural gas plants that can supplement to meet peak demand and insure against a non-windy day.

A 2010 Congressional Research Service report analyzed a sample of natural gas combined cycle power plants and determined that doubling their operating capacity to 85% could theoretically displace nearly one-third of coal generation and reduce carbon dioxide emissions from power generation by almost 20%. In this scenario, total natural gas consumption would need to increase by approximately 4.8 trillion Btus – or more than 20% of the current total gas consumption.[5] While these back-of-the-envelope calculations reflect a multitude of unrealistic assumptions, they illustrate the potential of natural gas given the current generation capacity. As aging coal plants are retired, the conversion of coal to natural gas power generation will also require complementary investments to improve transmission and pipeline networks.

Chart 38

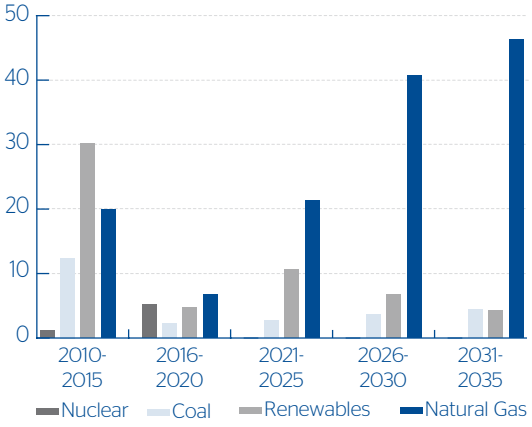
Generation Capacity at Electricity-Only Plants, by source (gigawatts)



Source: EIA and BBVA Research

Chart 39

Electricity Generation Capacity Additions by Fuel Type, 2010-2035 (gigawatts)



Source: EIA

Other sectors to watch

While the largest source of current and future gas consumption growth lies with electricity generation and the recovering industrial sector, the projected averages of demand in the vehicle and lease and plant fuel sectors have jumped more than 75% and 17% compared to the prior decade's averages, respectively.

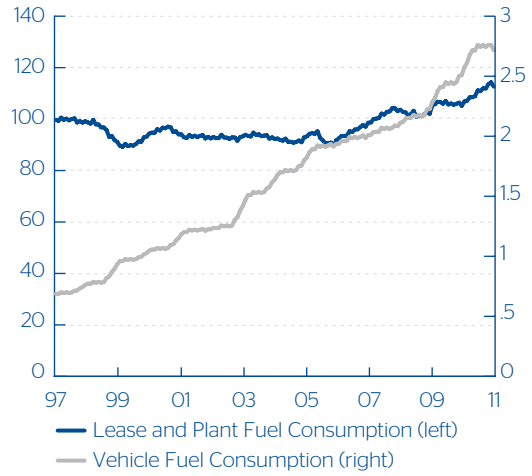
The lease and plant fuel segment is also projected to contribute to an increase in total gas consumption. The largest sources of demand are arising from the surge in drilling operations that consume power in the field and from natural gas processing plants that prepare the fuel for end-use purposes. Due to the discovery of shale gas, additional processing plants will be needed throughout the country.

While Texas and Louisiana currently process slightly more than 50% of the total processed gas outside of Alaska, new processing capacity will be needed in the northeast to handle the output from the Marcellus shale. Processing plants (and additional pipelines) will need to be built in New

[5] Kaplan, Stan Mark. "Displacing Coal with Generation from Existing Natural Gas-Fired Power Plants." Congressional Research Service Report. January 19, 2010.

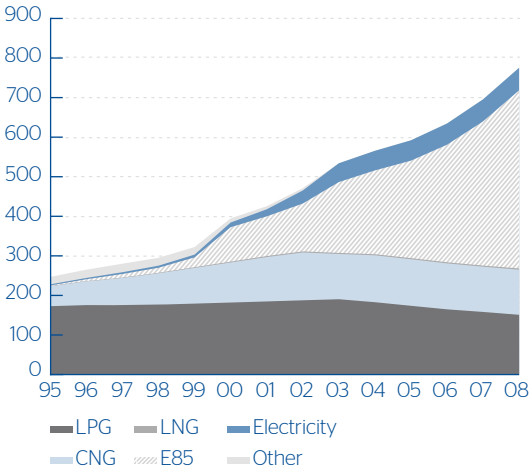
York, Pennsylvania and possibly New Jersey and Ohio. These states currently have minimal (or zero) processing capacity, yet they will be extracting vast amounts of shale gas. Furthermore, these areas will demand more fuel as more drilling rigs are brought online.

Chart 40
Monthly U.S. Natural Gas Fuel Consumption (million cubic feet)



Source: EIA

Chart 41
Estimates of Alternative Fuel Vehicles in Use, 1995-2008 (thousands)

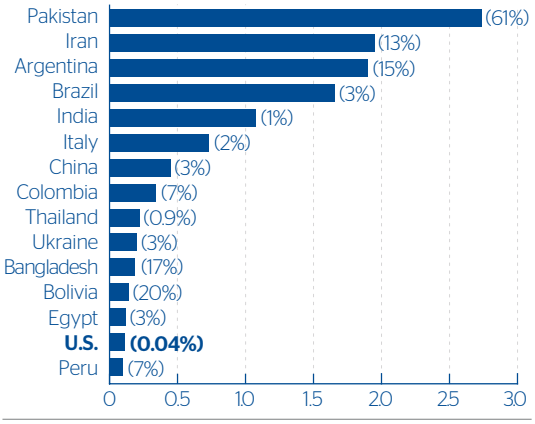


Source: EIA

In the vehicle sector, the largest source of this growth appears to be deriving from fleet vehicles, as local governments along with distribution and delivery companies are making investments in natural gas powered cars and trucks. The lack of a retail distribution network for compressed natural gas is inhibiting widespread production and consumer adoption of natural gas powered vehicles. In the U.S. market, only Honda makes a new version of its Civic model powered by compressed natural gas (CNG). Other than individuals who log many miles on southern California highways, an owner would likely need to install a home refuel station.

Trucking and delivery companies are considering the switch to natural gas from diesel; however, the lack of a distribution network is also a hindrance. Furthermore, natural gas truck engines are significantly more costly than diesel engines due to their low-volume of production. U.S. subsidy programs are helping to assuage these high switching costs. According to the Wall Street Journal, a UPS delivery truck with a natural gas engine costs nearly twice as much as its diesel counterpart and the company only recently decided to purchase these trucks after receiving a $4 million subsidy from the federal government. Additional subsidy money will likely be needed to convert or install the pipeline infrastructure.[6]

Chart 42
Natural Gas Vehicles in Use, million (% of all vehicles), 2010



Note: Vehicle numbers include motorcycles and mopeds
Source: NGV Global

While other countries are further along with natural gas powered vehicles, U.S. government subsidization of biofuels such as corn-based ethanol and tighter fuel economy standards have encouraged manufacturers to promote electric, hybrid gasoline-electric and

[6] "Natural-Gas Trucks Face Long Haul." Wall Street Journal. May 17, 2011.

high-ethanol content fuel (E85) powered vehicles that reduce emissions and have lower operating costs. The rising price of corn, however, is eroding the cost-advantages of ethanol and leaving many to question its long-term viability if government subsidies were to disappear. The federal government's portfolio of fleet vehicles reflects these policies.

Thus, we do not expect consumers to rapidly adopt natural gas powered vehicles during the next decade, unless oil prices continue their ascent to new heights and remain high. In this scenario, consumers would likely first shift to electric or gasoline-electric hybrid vehicles to improve fuel efficiency due to the already-available network of fuel stations. Even at current prices of $3.80 per gallon for regular gas and $2.10 per gallon of gas equivalent for natural gas, a comparison of the 2011 Honda Civic hybrid and natural gas models estimates annual fuel costs of $1390 and $1212, respectively.[7] The lower operating cost advantage would widen if an individual logged more highway miles versus city miles (due to the small variation between city and highway MPG of the hybrid technology), but it would be eroded if CNG prices rose to $2.50 per gallon of gas equivalent.

Furthermore, while a lower fuel price can currently be obtained with a home refuel station, these machines cost upwards of $3000 and the base price of the natural gas vehicle costs $1440 more than the hybrid version and nearly $9700 more than the gasoline powered version. Clearly, this large disparity between the initial costs of the different technologies makes the adoption of natural gas powered vehicles unattractive to all but commercial fleet operations who can centralize refilling and those individuals who drive thousands of miles per year on highways.

Natural gas has high potential, but we remain vigilant on risks

U.S. natural gas is abundant, storable, cleaner-burning and has the potential to supply ample amounts of energy for the foreseeable future. The ability to extract shale gas has truly changed the energy equation. We believe that its largest growth potential lies with electricity generation, as tighter emissions regulations and the comparatively lower cost of construction of natural gas power plants favor increases in natural gas generation capacity. A risk of further use of natural gas for electricity generation lies with unanticipated price spikes, as utilities and power producers would not want to shift entirely to 100% natural gas fired plants if prices display too much volatility. On the production side, risks from lower cash flow due to low prices along with elevated inventories will limit production this year, although the search for new drilling sites will remain in high gear. An additional risk to the future of shale gas stems from possible new environmental regulation that might seek to curtail the use of hydrofracking chemicals.

Finally, the abundant U.S. supply of natural gas could potentially turn the U.S. into a net-exporter of natural gas. While most of the pipeline exports will be transported to Canada and Mexico, exports of liquefied natural gas (LNG) will pick up due to the growing energy needs of emerging markets. Liquefied natural gas is produced by cooling natural gas to induce a phase change. As a liquid, the gas can be transported by ground or water over large distances, although at substantial cost because of the need for cryogenic storage. In liquid form, LNG can be exported across the world. Prior to 2009, nearly 100% of U.S. LNG exports were destined for Japan. In 2009, a small amount was shipped to South Korea for the first time, and in 2010 this volume more than quadrupled. Also in 2010, producers began exporting to India, Brazil, Spain and the UK. Thus, while total exports of LNG fell in 2008 due to lower demand from Japan, they recovered to 2005 levels last year due to fast-growing emerging markets. Exports to these new destinations are continuing, and will be a source of transforming the U.S. into a world leader of energy exports.

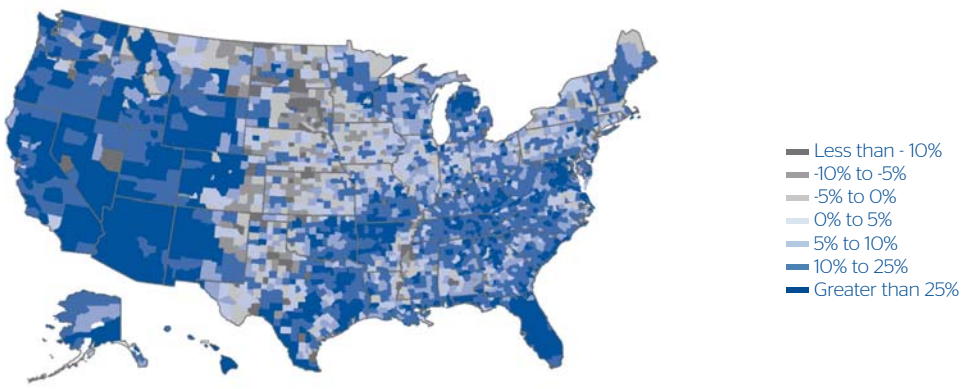
[7] Calculated at fueleconomy.gov side-by-side comparison. Assumptions: 15,000 annual miles, 75% city/25% highway. Regular gas price: $3.80 per gallon. Natural gas price: $2.10 per gallon of gas equivalent.

7. Population Dynamics, 1970-2010

The recently released 2010 census county population estimates offer a first glimpse into the realignment of the U.S. economy during the past decade. We present our preliminary analysis in this brief, and we compare the past decade's regional growth with prior decades. Qualitatively, the maps reveal four decades of alternating growth patterns.

Map 1

Growth from 1970-1979; U.S. Average: 10.5%

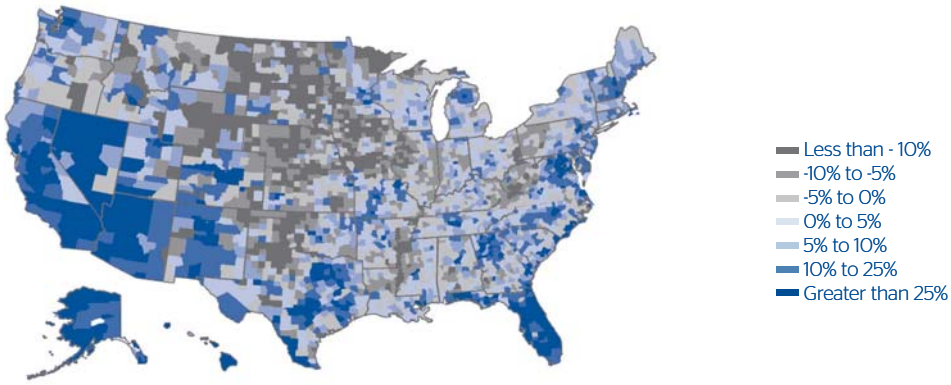


Source: BBVA Research and Census

During the 1970s, population grew throughout the country, and initially smaller counties grew faster on average than their larger counterparts. This development was perhaps due to the continuing movement of residents to suburban areas from large cities. The ongoing reallocation of workers from the manufacturing sector to services was pronounced in the 70s, as nearly 1/3 of workers were employed in goods-producing industries in 1969 but slightly more than 1/4 of all workers fell into this sector by 1980.

Map 2

Growth from 1980-1989; U.S. Average: 9.0%

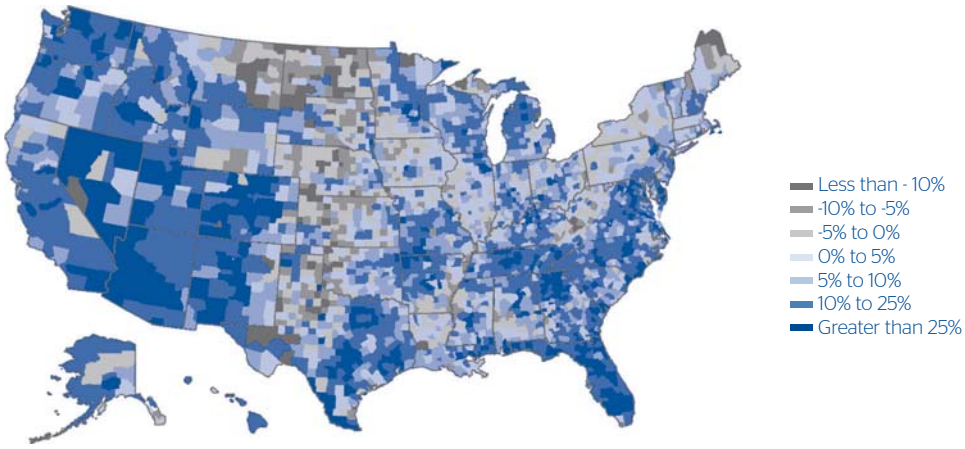


Source: BBVA Research and Census

Growth during the 1980s exhibited some similarities to the past decade, as people migrated south and westward. Florida, Arizona, California, Nevada and Texas' border and metropolitan areas surged during this decade, while the Midwest from the Texas Panhandle up into Minnesota and east into Montana lost significant population. During this decade, some areas (for example California) also experienced a rapid appreciation in home values. In the latter half of the decade, population growth became more concentrated, as we see that from 1985 to 1988, the share of growing counties dropped below 50%.

Map 3

Growth from 1990-1999; U.S. Average: 11.8%

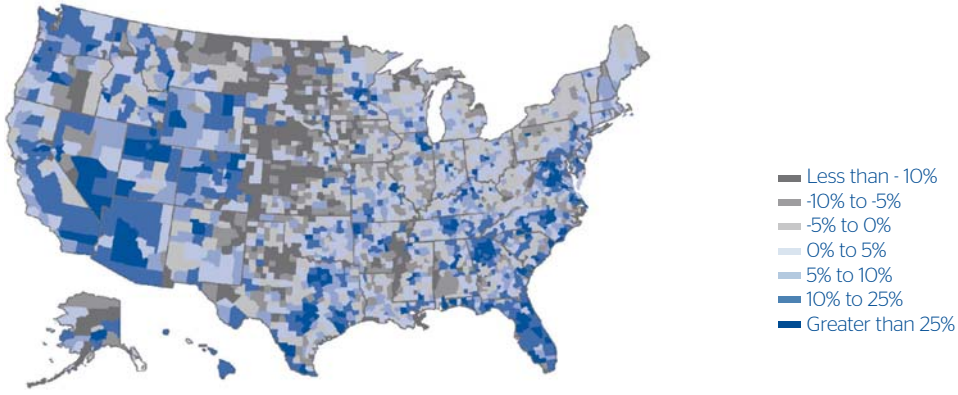


Source: BBVA Research and Census

The 1990s marked a return to prosperity for much of the country, as population expanded nearly 12%, and gains were more evenly dispersed throughout the country. The share of expanding counties skyrocketed to more than 75% in 1991 and remained above this threshold until 1997. One hypothesis suggests that low and stable inflation and borrowing costs during this period combined with a declining real price of energy provided ample resources for people to move throughout the country. Furthermore, the rapid expansion of personal computers, the Internet and mobile technology during this time created new industries that could succeed outside of urban environments and away from the agglomeration economies of large cities.

Map 4

Growth from 2000-2010; U.S. Average: 9.5%

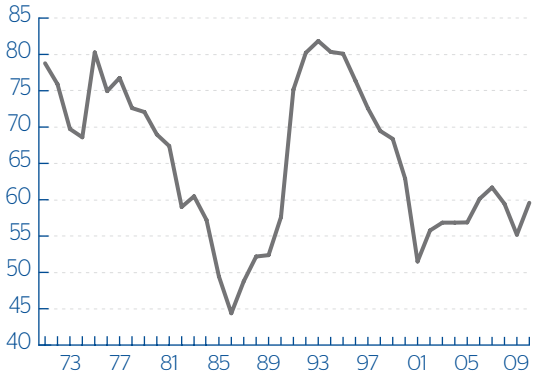


Source: BBVA Research and Census

During the 2000s, population growth was concentrated between 50-60% of counties, while the remaining 40+% experienced a reduction in population. This decade was marked by two defining time periods. The first half encompassed a recession that was followed by a slow recovery in the labor market, and the second half was marked by a housing bubble that fueled rapid growth in popular metropolitan areas. Consequently, the turbulence indicator, which had remained steady since 1990, peaked in 2006 and has subsequently dropped to its lowest level ever confirming not only slower population growth during the recession, but also lower mobility due to a weak labor market.

Chart 43

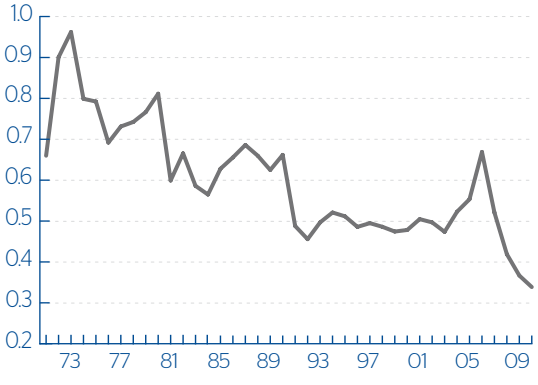
Share of Counties Experiencing Population Growth



Source: BBVA Research

Chart 44

Population Turbulence Indicator



*Calculated as the variance of the absolute deviation of the annual changes in the population shares of all U.S. counties. A rise in this statistic indicates a realignment of the population.
Source: BBVA Research

The labor market is beginning to recover, and thus mobility should increase in the coming years. Our initial review of the last decade's population growth suggests that some of the prosperous areas during the first decade of the 21st century were also some of the top performers in the 1990s. The correlation between the growth rates during these decades was more than 75%. Furthermore, counties with a larger initial population in 2000, a higher share of college educated workers and comparatively fewer retirees attracted residents at the fastest rates. Many college educated young people under 40 are seeking urban environments with greater amenities. Homes are now being torn down and re-built in central areas to meet the demands of new residents and families. Particularly as oil prices have risen, the financial cost of commuting becomes a significant factor, in addition to the required commuting time.

Going forward, even as expected population growth slows across the U.S. due to lower birth rates and the aging of America, urbanization should continue. Areas with high concentrations of college-educated workers will continue to benefit, as a service economy demands workers with different types of skills who are adept at learning new jobs quickly. New services proliferate as per-capita wealth rises and time becomes ever more valuable.

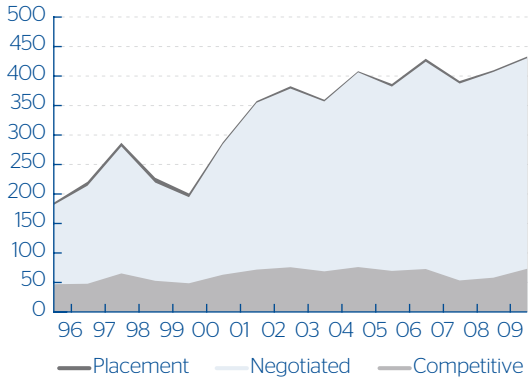
8. The Banking Industry and Public Finance

During the first quarter of 2011, state and local governments issued municipal bonds at the slowest pace in 11 years. State and local governments are experiencing the effects of post-crisis austerity measures following years of high borrowing growth. According to the Securities Industry and Financial Markets Association (SIFMA), municipal issuance for 2011 YTD reached $47.3 billion, which is down from $104.4 billion at the same point in 2010. Due to budget shortfalls, state and municipal governments increased their reliance on private finance. While both loans and bonds increased, the municipal bond market remained the largest financing segment. In this article we take a closer look at the mechanics of municipal bond finance and the role of regional banks in underwriting and the provision of lines of credit. Successful bond underwriting requires expertise in deal-making and a well-functioning sales distribution network. Both of these elements represent hard-to-acquire institutional knowledge.

State and Political Subdivision Loans and Bonds

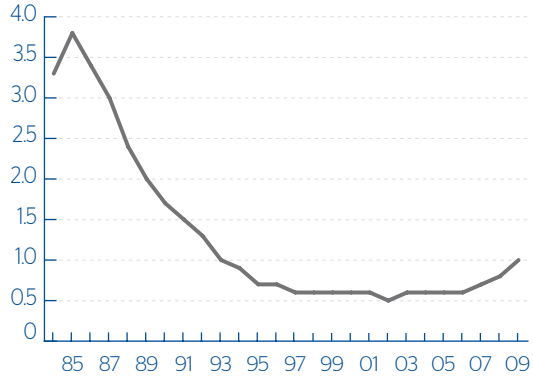
In 2009, loans by commercial banks to state and political subdivisions amounted to $61.5 billion. In nominal terms, this figure exceeds the previous peak level established in 1985, but as a percentage of net loans and leases, today's figure is far below that of the 1980s, when state and political subdivision loans represented 3.8% of net loans and leases. During the same time period, municipal bonds outstanding increased from around $500 billion to $2.4 trillion, or around 16% of GDP. Since $61.5 billion is an outstanding figure, the amount of originations is substantially lower and is in stark contrast to the $400 billion in municipal bond issuance in 2009. Both loan use and issuance are expected to remain robust for the next two years as governments deal with excessive budget deficits. While spending will progressively become curtailed, financing from the private sector will continue to be necessary until income coverage of spending stabilizes in states and municipalities. In our baseline macroeconomic scenario[1], during the next two years, the default rate could increase to 0.74% from a 10-year average of 0.10%.

Chart 45
Municipal Bond Issuance, 1996-2010, $bn



Source: SIFMA

Chart 46
State and Political Loans as a Percent of Net Loans and Leases, %



Source: FDIC

Bank lending is not a direct substitute for municipal bonds, but may be complementary. The amount of bank lending to state and political subdivisions does not appear correlated with spreads in the municipal bond market, although it does appear related to federal budget deficits. Bank lending represents a complement to bond underwriting as some firms provide credit enhancements through lines of credit to state and political subdivisions. When these credit lines

[1] See US Outlook article on page 5.

are tapped, they become state and political subdivision loans on the banks' books. According to Federal Deposit Insurance Corporation (FDIC) data, nearly half of all state and political subdivision loans in 2009 are attributed to banks headquartered in Ohio and North Carolina, suggesting a handful of large banks dominates the direct loan business and a disadvantage for smaller firms in some areas of public finance. The FDIC's loan data attributes loans to states based on the charter of the bank; as a result, large banks headquartered in a small state may register more loans in a particular state than in reality.

Bond Market Economics

Of the $61 billion in outstanding state and political subdivision (S&PD) loans reported in 3Q10, the BBVA Compass Sunbelt Region represents 8.4% of the total or $5.1 billion. These loans are typically extended by banks operating within the same area, especially in the case of municipalities or other special political subdivisions. Of the $400 billion in municipal bond issuance nationwide, around one-fourth is by states within the BBVA Compass footprint, namely, California, Alabama and Texas. Profits from underwriting arise from two sources: first, the underwriter generates a fee, and second, the underwriter distributes the bonds to asset management firms or wealth management clients and generates a price spread. As state residents benefit from tax provisions tied to bond issuance by their home state, a local wealth management presence is beneficial.

A third source of income arises from cross-selling opportunities, as banks or other financial entities may act as financial advisors to state or political subdivisions. Financial advisors confer with their public client about financing conditions, interest rate swap conditions or other matters pertaining to municipal finance. Historically, bond underwriters garner $5 in fees per $1000 of bond underwritten, but this fee has increased in recent years. Bond underwriters also typically generate $2.5 per $1000 of bond distributed to clients from price spread gains. These figures represent a lower bound. Risk is spread across many holders of bonds, although default presents a reputation risk to the underwriter.

Barriers to Entry: Competition and Institutional Knowledge

Municipal bond underwriting requires significant specialized expertise in underwriting, a network of clients for distribution and a strong municipal bond trading platform. The underwriter essentially provides a bridge between issuer and investor and is responsible for the successful pricing and selling of a new issue.

Currently municipal bond underwriting is dominated by large commercial banks and broker-dealers, however, a number of medium-sized boutique firms and regional banks play a significant role. Regional underwriters, often broker-dealers themselves, leverage their local footprint and their access to local decision-makers. Texas' municipal bond issuance for 2010 is particularly concentrated, with the top four firms comprising 87% of all issuance.

Although large firms carry heft in the municipal bond underwriting market, regional underwriters can still leverage their in-market contacts, sales force and wealth management clients to feed the pipeline of municipal bond underwriting. The cost structure of regional underwriters supports smaller-sized transactions neglected by the larger players. Regional underwriters utilize lower cost of living and lower office space costs that generate lower staff compensation costs. On the other hand, regional firms face disadvantages in that they do not have a national retail client base and may need to specialize in particular types of municipal bond offerings (water and sewage, infrastructure, etc.) in order to distinguish themselves from larger players. Regional firms may also encounter difficulties in extracting concessions from institutional investors due to their less-frequent bond pipeline. It is likely that regional firms will specialize in bond issuance that is (1) high in volume in the firms' footprint, (2) less competition in a particular specialty and (3) have generated a reputation or expertise in the particular area. All of these advantages and disadvantages suggest a focus on underwriting deals below $200 million is achievable with a relatively small deal team.

One major source of demand for municipal bonds is from commercial banks' treasury departments. Some municipal securities are granted a "bank qualified" status if they are issued by a municipality that has borrowed $30 million or less in the year of issuance (this is a new limit as a result of crisis-era recovery legislation that may have expired with legislation). This allows banks to earn tax-exempt interest, although an interest-rate differential may exist for bank-qualified securities. Bank treasury departments therefore invest in these municipal securities to the extent they ameliorate the payable corporate taxes of the firm.

Although municipal bonds represent a large market, regional firms should be wary of counterparty risk, interest rate risk and regulatory risk. Counterparty risk occurs when one member of a contract fails to live up to the terms of the contract, or in other words, default. Interest rate swaps are already available to municipalities to match their assets and liabilities. The role of the financial advisor is to best advise a municipality about the future disposition of interest rates and adjust the municipality's funding strategy accordingly by devising swap utilization policies, independent evaluation of swap structures, risk assessment and stress-testing, swap structuring and pricing and other services. Additionally, some outstanding regulatory issues face the S&PD market. Regulators are still considering compliance and other alterations to municipal financial advisors and underwriters. These changes will become clearer as the year progresses with Dodd-Frank-related rulings.

Bottom line

Although state and political subdivisions face a lengthy financial restructuring due to austerity measures, the municipal bond market remains the favored method of public finance. Thanks to preferential tax treatment, individual and institutional investors still regard municipal bonds as a valuable investment. Additionally, we still expect a limited uptick in defaults, but nothing that would cause a systemic event. Regional banking institutions can leverage their unique local contacts, regional sales footprint and municipality category-specific expertise to gain an edge over larger rivals. Overall, the municipal bond market's size and liquidity are salient features in the landscape of municipal finance.

Table 2

Lead Underwriters, 2010 by State

Alabama	Amount
Morgan Keegan & Co Inc	$10,666,250,000
Merchant Capital LLC	$5,844,135,000
Frazer Lanier Company Inc	$4,854,425,000
Prager Sealy & Co LLC	$3,711,185,000
Citigroup Global Mkts Inc	$3,560,830,000
Morgan Stanley	$2,808,860,000
Joe Jolly & Company Inc	$2,528,390,000
Gardnyr Michael Capital	$1,658,815,000
Wells Fargo Bank N.A.	$1,604,230,000
Banc of America Merrill	$1,593,030,000
Samuel A Ramirez & Co Inc	$1,165,450,000
Loop Capital Markets	$953,100,000
Sterne Agee & Leach Inc	$886,305,000
Protective Securities	$864,590,000
First Southwest Company	$377,650,000
Robert W. Baird & Co Inc	$279,360,000
Thornton Farish Inc	$259,240,000
W.R. Taylor & Company LLC	$160,960,000
Synovus Securities Inc	$134,635,000
Goldman Sachs & Company	$134,000,000
Duncan-Williams Inc	$86,580,000
H-T Capital Markets	$70,265,000
Merrill Lynch & Company	$43,230,000
BB&T Capital Markets	$17,925,000
First Tuskegee Bank	$17,000,000
Lawson Financial Corp	$8,965,000
Terminus Securities LLC	$7,400,000
JP Turner & Company LLC	$6,110,000
Blaylock Robert Van LLC	$4,500,000
Crews & Associates Inc	$709,056
Grand total	**$44,308,124,056**

Texas	
Banc of America Merrill	$4,881,894,730
Barclays Capital Inc	$2,809,130,000
Citigroup Global Mkts Inc	$2,184,065,000
First Southwest Company	$1,894,641,686
Coastal Securities	$645,189,198
Bosc Inc	$296,534,165
Estrada Hinojosa & Co Inc	$289,546,086
Cabrera Capital Markets	$233,290,000
Cain Brothers	$108,620,000
B.C. Ziegler & Co Inc	$79,040,000
Crews & Associates Inc	$28,165,000
Dougherty & Company LLC	$21,250,000
First Southwest Auction	$13,653,662
Edward Jones	$10,375,000
Bernardi Securities Inc	$4,800,000
Duncan-Williams Inc	$2,731,363
BLN Securities	$2,199,865
D.A. Davidson & Co	$2,150,000
American Bank of Commerce	$2,090,000
Braymen Lambert & Noel	$580,000
Grand total	**$13,509,945,756**

Source: Bloomberg

9. University Technology Transfer

Margaret R. Cotrofeld, IC² Institute, The University of Texas at Austin

Building on the theme of regional economic development through science and technology commercialization as presented in the 1Q11 *U.S. Regional Watch*, this article highlights an IC² Institute program with Portugal that works to increase the speed and efficiency at which university-based knowledge moves from lab to market.[1] A multi-year program launched by Portugal's Foundation for Science and Technology (FCT) and several international partners, including the IC² Institute at The University of Texas at Austin, is fostering academic exchange and collaborative research that are resulting in new startups and international markets for Portuguese technologies, with benefits not only for the Portuguese economy but also for firms in Texas with whom these new companies might partner.

Now in its fifth year, UT Austin's International Collaboratory for Emerging Technologies (CoLab), centers its academic exchange and research activities in Advanced Computing, Digital Media and Mathematics. A unique element of Portugal's partnership with The University of Texas and the IC² Institute features the University Technology Enterprise Network (UTEN), which is working to establish a highly professionalized and internationally focused technology transfer network among Portugal's universities. UTEN has three main activities: international internships, technology screening and market assessment training and observation and assessment. What follows is a review of these activities with an emphasis on UTEN's economic development achievements and the potential for the UTEN model to assist developing countries in building more effective science and technology commercialization systems.

UTEN's International Internships

An important part of UTEN has been the internship program for technology transfer officers (TTOs) from Portuguese universities. Central to UTEN's success were two intense two-week training programs for interns in Austin, where they received briefings from more than 50 experts from across Texas, including incubator managers, venture capitalists, economic development professionals, IP attorneys, university professors and researchers. In addition, managers and directors of offices of technology commercialization (OTCs) from UT Austin, UT Dallas, UT San Antonio and Texas A&M shared information that ranged from operational logistics to discussions of trends and how to avoid common errors.

The Portuguese interns built trust and awareness among themselves and with select international partners as they engaged in the training. Based on individual feedback, being removed from the Portuguese home environment and sent with their peers to Austin for this training was an extremely valuable experience for the participants.[2] Following these classroom training "boot camps," interns were placed for 4- to 12-week positions at a variety of institutions across Central Texas, including the University of Texas at Austin OTC, the South Texas Technology Management (STTM) office in San Antonio, Texas A&M University's OTC and the Borlaug Institute, Hulsey IP, Emergent Technologies Inc. and the IC² Institute's Austin Technology Incubator.

Technology Screening and Market Assessment

As part of their training at the IC² Institute, interns worked with their technology portfolios to provide specific deliverables, including technology screening and market assessment. On their return to Portugal, the interns helped integrate these methods into their home TTOs. An emerging benefit is that the Portuguese TTOs are building regional databases using standardized methods, which provides the potential development of a national database of Portuguese science and technology assets.

[1] Bruce Kellison, "Technology Transfer and Wealth Creation," *U.S. Regional Watch*, First Quarter 2011, p.31-33.
[2] David Gibson and Heath Naquin, "Investing in Innovation to Enable Global Competitiveness: The Case of Portugal," *Technology Forecasting and Social Change, forthcoming.*

The UTEN technology screening and assessment methods are particularly effective to help identify specific gaps and challenges for non-U.S. companies in their approach to the U.S. market. The first level of assessment, *Readiness*, is established through initial conversations with an inventor or entrepreneur. The interns have this information in hand on arrival, since this responds to the most basic questions regarding a technology, its current development status and the inventor and/or company team. It can be described as "where the inventor or entrepreneur thinks the technology is," in terms of potential products, products, customers, markets and which (if any) strategies are currently being employed toward commercialization goals.

The second level of assessment[3] can be defined as "where the TTO thinks the technology is" and consists of four- to eight-hour reviews in seven categories: *inventor support, institution support, development status, intellectual property status, ownership status, market opportunity and market relevance*. At this stage, the TTO can sometimes determine if a technology is not currently viable for commercialization. If barriers are not revealed, technology assessment advances to the *MarketLook*, a 40- to 60-hour assessment that involves interviewing industry experts to determine a sense of "market response" to the new technology or, "where the market thinks the technology is." This assessment provides a deeper view of the strengths, as well as any gaps, in the technology potential to move forward into a specific market (in this case the U.S. market).

After selecting potential customers, distributors, collaborators or sometimes competitors, the intern initiates telephone contact to determine answers to questions (which carefully do not compromise IP) such as, "would you find it valuable if a product were able to *x-y-z*...." A wide variety of information can be gathered through this method, including identifying potential competitive advantages, new partners and more. As with the first two levels of assessment, this assessment will reveal that some technologies are not viable for further commercialization activities. As they progressed through their training—reviewing their technology portfolios with their new skills and growing networks—eleven interns identified 270 business prospects, received 51 expressions of interest, initiated 13 negotiations, made 3 private equity presentations, procured 10 licenses and negotiated 4 on-shoring deals. Two technology case studies that illustrate the benefit of this process are described below.

Technology Case Studies

Paper-e. This technology applies transistor technology on paper that serves as an active and integral part of a functioning transistor (as the structural support and the dialectric for either field effect transistors or non-volatile memory transistors). This technology from the New University of Lisbon received the 2009 Academic R&D award from IDTechEx Printed Electronics in the U.S. Since paper is lighter weight and lower cost than silicon, Paper-e opens the way for inexpensive or even disposable and biodegradable paper displays, smart labels, RFID technology, logic circuits with or without memory effects and disposable non-volatile memory circuits. Assessment results were generally positive with all experts agreeing that the products are potentially transformational. One of the largest barriers in this particular case was the relatively high technology status of the innovation. Through this process, Texas Instruments proved to be the most promising partner, and an agreement was reached to place the technology in TI's Kilby Labs Innovation Center for further development. Implementing the lessons learned through this process, UNL's technology transfer managers are working with their researchers to develop technology descriptions targeted to potential market concerns. They are also conducting MarketLook studies on many of their other technologies, and researching more diverse applications for the technologies they represent.

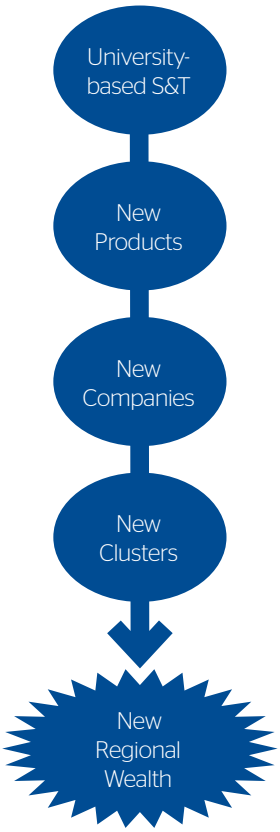
Solefish food additive. Researchers at the University of Algarve's Center for Marine Sciences developed an additive for solefish food that increases the fish's natural "predation" instinct to search for food and increase their growth rate, without artificial stimulants. The RapidScreen technology assessment showed that, while the technology's development status is still early and ownership status needs clarification, the technology is strong in inventor engagement. The MarketLook assessment revealed significant market interest, including a researcher from

[3] The RapidScreen assessment methodology was developed by Cliff Zintgraff, Greg Joyce, and Kurt Stodgill, within the Master of Science in Technology Commercialization degree program, IC[2] Institute, 2006.

Mississippi State University who provided connections to a research group working with flounder, which is similar to solefish in eating habits. While previous additives in the aquacultural fishfood market have targeted improvement of the "diet" of fish, no current product exists to stimulate fish to "eat more." Overall, the MarketLook process created two opportunities for R&D collaboration in the U.S., and licensing opportunities are being pursued.

Observation and assessment

Program assessments have been overwhelmingly positive, both by Portuguese participants and by an international external review committee. Participant surveys show that UTEN has markedly increased inter-institutional cooperation in a variety of international projects and technology transfer activities. This has attracted real dollars and projects to the Portuguese innovation ecosystem and it is believed that network collaborations will continue to grow. Additionally, the tangible metrics of provisional patent filings and, perhaps more importantly, international patent filings, which denote potential globally competitive IP, have increased significantly during the period of UTEN activities. Similarly, the number of licenses, option agreements, R&D agreements and new university spin-off and start-up companies all have increased.



UTEN's Reverse Internship

In a new learning experiment, a reverse internship is currently underway, in which a technology transfer officer from the UT Austin Office of Technology Commercialization is working for three months at the University of Minho in Portugal with the TecMinho TTO group. In this case, the Texas intern has taken a portfolio of U.S. technologies to promote in the Portuguese and other European markets. Portugal provides an ideal launching pad for U.S. technologies because expenses are relatively low on the European scale, while allowing geographic and cultural access to a euro-based economy. UTEN thus engages both a "push" and "pull" effort toward technology sharing and win-win international market expansion between Texas and Portugal.

A potential new tool for economic development

Early success parameters suggests that the UTEN model for commercialization of university technology may prove to be an important new economic development tool for countries such as Portugal, that have scientific and technological systems that are not yet fully developed. Often these countries show low levels of private R&D, with disproportionately high government R&D expenditures.[4] Such a situation emphasizes the high relevance for employing the UTEN model to improve the ability for small countries to access international markets in order to help achieve economic return on research investments. If new technologies help spawn new products, new companies, new clusters and ultimately new regional wealth, then the ability to bring a technology out of the laboratory, through product development and dispersion, becomes increasingly important for universities and their surrounding regions.

It is beneficial for society at large to exploit commercialization opportunities worldwide. Since creative inventiveness does not always coincide with business acumen, a university technology transfer office can help university inventors commercialize new inventions and discoveries, and over time these efforts can help serve as a local engine for regional wealth creation. By investing in academic research that is both multi-disciplinary and collaborative across national and international institutions (through CoLab and similar agreements), while increasing the capacity of their academic technology transfer system through UTEN, Portugal has applied this theory beyond the regional level to the national level with beneficial results for itself and its international partners.

[4] Manuel Heitor and Marco Bravo, "Portugal at the crossroads of change, facing the shock of the new: People, knowledge and ideas fostering the social fabric to facilitate the concentration of knowledge integrated communities," *Technological Forecasting & Social Change, 77* (2010) 218-247.

10. Exports: A Key Factor in Alabama's Economy

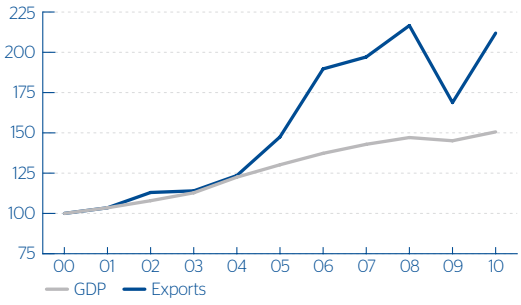
Carolyn Trent, Socioeconomic Analyst, Center for Business and Economic Research, Culverhouse College of Commerce, The University of Alabama

Hit hard by the recession, but a positive force in the recovery

Boosted by strong growth in auto manufacturing, Alabama's merchandise exports more than doubled from 2000 to 2008, rising 116.6% in current dollars to total $15.85 billion. That compares to a 66.4% increase in U.S. goods exports during the same period. Exports contributed to stronger current dollar state GDP growth compared to the nation during the same period—Alabama GDP rose 47.1% between 2000 and 2008 versus a 44.4% U.S. gain. After a drop of 22.0% in 2009, Alabama exports have regained strength, rising 25.5% in 2010. By comparison, U.S. exports saw an 18.1% decline in 2009 and a 20.6% increase during 2010. In recent years, Alabama's export growth has generally outpaced increases in the state's GDP.

Chart 47

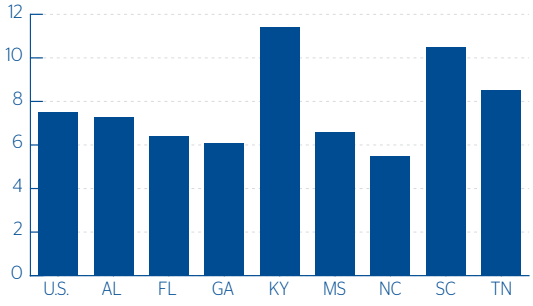
Alabama Exports and GDP (Index, 2000=100)



Source: U.S. Bureau of Economic Analysis, U.S. Census Bureau, and Center for Business and Economic Research, The University of Alabama

Chart 48

Southeastern States Merchandise Exports as Share of GDP, 2009



Source: U.S. Census Bureau, Foreign Trade Division

The importance of exports in the southeast is on par with the national average

The state's exports grew 46.0% from 2005 to the 2008 peak, the third highest increase among a peer group of seven other southeastern states, behind Florida with a gain of 62.2% and Mississippi's 82.1% growth. Looking at 2009 exports as a percent of GDP, Alabama's 7.3% share was slightly below the nation's 7.5% and ranked fourth in the Southeast, ahead of Mississippi, Florida, Georgia and North Carolina. The state's 22.0% drop in exports in 2009, the worst in the region, pulled the contribution of exports to GDP down significantly from the 11.6% share seen in 2008.

On a per capita basis, Alabama's 2008 export total amounted to $3,395 for every resident. While this was below the U.S. average of $4,230, the state ranked fourth in the Southeast. Despite the drop in exports in 2009 and subsequent decrease in per capita value to $2,624, Alabama retained this ranking. More than 20% of the state's manufacturing employment and 8.4% of all private sector employment during 2008 was in export-supported jobs.

Table 3
Merchandise Exports Per Capita (dollars)

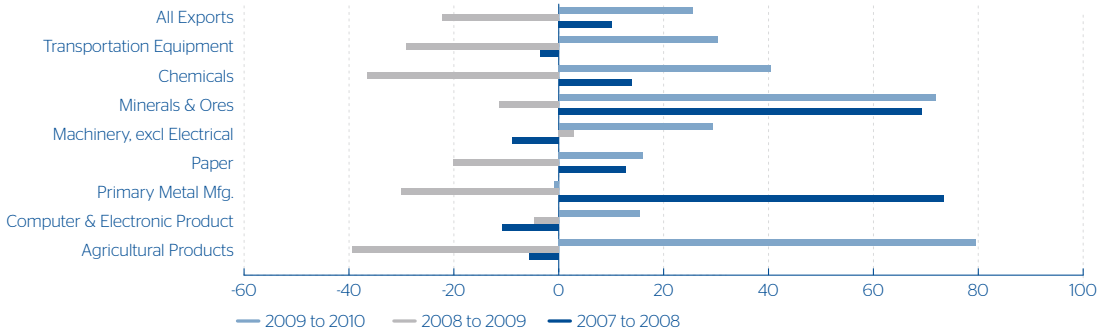
						% change	
	2005	2006	2007	2008	2009	2005-2008	2008-2009
U.S.	3,047	3,436	3,807	4,230	3,440	38.8	-18.7
AL	2,394	3,023	3,106	3,395	2,624	41.8	-22.7
FL	1,881	2,132	2,454	2,944	2,529	56.5	-14.1
GA	2,271	2,156	2,451	2,837	2,416	24.9	-14.9
KY	3,577	4,089	4,617	4,459	4,091	24.7	-8.3
MS	1,386	1,548	1,774	2,491	2,140	79.7	-14.1
NC	2,250	2,401	2,577	2,713	2,323	20.6	-14.4
SC	3,280	3,139	3,747	4,408	3,615	34.4	-18.0
TN	3,198	3,555	3,542	3,724	3,253	16.4	-12.6

Source: U.S. Census Bureau, Foreign Trade Division

Alabama's economy and exports are tied to motor vehicle production

From the commencement of Mercedes production in 1997 through Honda's first production in 2000 and Hyundai's start-up in 2005, Alabama's automotive manufacturing industry has been a key factor in the state's economic fortunes, contributing 9,700 OEM and about 4,000 parts manufacturing jobs from 2000 to prerecession peaks in 2006 and 2007, respectively. However, motor vehicle sales are highly correlated with consumer well-being, and both production and employment in the industry fell early and sharply during the Great Recession. The global nature of the recession was hard on Alabama transportation equipment exports which, after surging 140% between 2002 and 2007, fell a modest 3.5% in 2008 and then a steep 29.0% in 2009. Transportation equipment exports rebounded with a 30.3% increase in 2010, but were still more than 10% below their 2007 peak.

Chart 49
Annual Change in Value of Alabama Exports by Industry, %



Source: USA Trade Online

Most of the major export categories are recovering

Several of the state's large manufacturing industries took an even harder fall in terms of exports during the recession, but are now experiencing relatively stronger rebounds. Producers of chemicals saw exports more than recoup a decline of 36.6% in 2009 with an increase of 40.5% for 2010. The value of agricultural products sent overseas dropped 39.3% in 2009, but increased 79.6% last year, while primary metal manufactured exports, which were down 30.0% in 2009, slipped another 0.8% in 2010. Tonnage of minerals and ores shipped from Alabama held up fairly well during the downturn, rising 69.3% in 2008 and, after an 11.3% dip in 2008, climbing almost 72% during 2010.

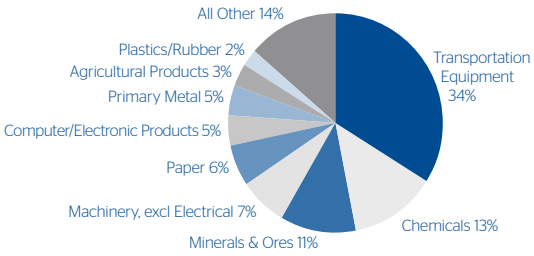
Transportation equipment dominates state exports

Three broad industry sectors accounted for more than 58% of Alabama exports in 2010. Transportation equipment was the largest export at $5.27 billion, claiming a 34% share of the total. In the Southeast, transportation equipment is also the lead category for Georgia, Kentucky, South Carolina and Tennessee, with Kentucky having the heaviest dependency at 34.4% of the 2010 total. Motor vehicles comprise most of Alabama's transportation equipment exports, with 2010 shipments valued at $4.1 billion amounting to almost 78% of exports in this category. Motor vehicle parts exports totaling $624.5 million accounted for another 11.8%, while $424.9 million in shipments of aerospace products and parts was 8.1% of the state's 2010 transportation equipment exports.

Chemicals are Alabama's second largest export commodity at 13.1% of the total. Shipments were valued at $2.03 billion in 2010. Among southeastern states, chemicals are the largest export category in North Carolina and also rank second in Georgia, Kentucky, Mississippi and Tennessee. Alabama's natural resources are reflected in the value of exports of minerals and ores (largely coal) originating in the state—with a 2010 total of $1.75 billion, minerals and ores are the third highest export.

Chart 50

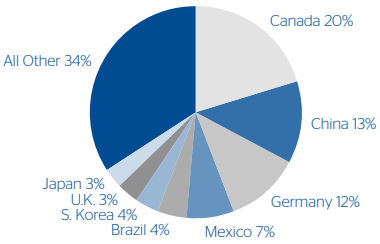
Alabama Merchandise Exports by Category, 2010



Source: USA Trade Online

Chart 51

Alabama Merchandise Exports by Destination, 2010



Source: USA Trade Online

Canada, Germany and China are top destinations

Alabama shipped $15.5 billion in manufactured and non-manufactured goods to around 180 countries during 2010. Canada, our largest trade partner in 2009 and 2010, received 20.4% of all 2010 exports, or $3.16 billion in goods. Germany slipped from the first place ranking it held in 2007 and 2008 to second in 2009 and third in 2010, as motor vehicle shipments declined. Exports to China more than doubled between 2009 and 2010, vaulting China past Germany and into second place as a destination for Alabama's 2010 exports. Transportation equipment accounted for 61.4% of our 2010 exports to Canada, 71.4% to Germany and 30.0% to China. While transportation equipment shipments to Germany were still at less than half of their 2008 level in 2010, the value of transportation equipment exports to China rose from $7.2 million to $580.0 million during this time. Exports of chemicals to China almost doubled from 2009 to 2010, while agricultural products shipments more than tripled.

Above-average GDP growth in an increasing number of developing nations is rapidly expanding the global marketplace. Alabama is boosting exports with a focus on these emerging markets; in particular, the large converging economies of China, Brazil and India. China was the state's second largest export destination in 2010, while Brazil was in fifth place and India ranked 19th. Shipments to these three countries totaled $2.76 billion in 2010, 17.8% of the state's total exports. From 2005 to 2010 the total value of commodities exported to China, Brazil and India more than tripled. However, exports to Russia, also a sizeable converging economy, fell from $332.7 million in 2009 to just $58.9 million in 2010, as shipments of food products plummeted. Initiatives in 2010, including trade missions to India and Russia, a visit from a Chinese trade delegation and a series of seminars on Doing Business in Brazil should boost future trade prospects with these nations.

Services are an important export sector

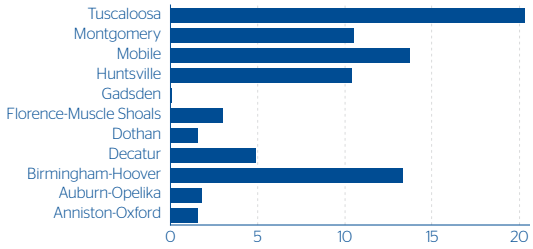
Although most trade data at the state level reports imports and exports of goods only, services are an important part of the trade equation and a potential source of export growth. A study for the Coalition of Service industries identified $4.1 billion in Alabama services exports in 2005. In the Southeast, this was on par with South Carolina and above Kentucky and Mississippi. The state exports business, professional and technical services, financial services and receives royalties and license fees. Services exports also count income from foreign tourism and from foreign students studying at our colleges and universities.

Metro areas produce the majority of exports

Alabama's 11 metros generated 81.2% of total goods exported in 2009; close to the nationwide average 84% share reported in a recent study by the Brookings Institute for 2008. Tuscaloosa, home to Mercedes-Benz US International, led all metros with more than 20% of the state's 2009 exports; the area ranks among the top 10 U.S. metros for exports to Germany. Mobile had the second highest share of Alabama's exports at 13.7%, while Birmingham-Hoover claimed 13.3% of the total. With a concentration in primary metals, Birmingham-Hoover placed in the middle of the 100 largest U.S. metros in export strength, according to the Brookings study.

Chart 52

Metro Area Share of Alabama Goods Exports, 2009 (%)



Note: Tuscaloosa export share is for first half of 2009
Source: U.S. Census Bureau

Readying the state's infrastructure for future export growth

Infrastructure development is helping grow the state's global presence. According to the U.S. Army Corps of Engineers, in 2009 the Port of Mobile was the 13th largest U.S. port in terms of cargo tonnage. Recent investment totaling more than $500 million in the Mobile Container Terminal, Pinto Island Terminal and a new rail ferry terminal, as well as expansion of the McDuffie coal terminal, provide the facilities needed for continued cargo growth. The Port is positioning itself to take advantage of growing markets in Central and South America and the widening of the Panama Canal, slated for completion in 2014. International cargo services at the Huntsville International Airport also continue to expand.

Foreign direct investment drives exports

The state's successful recruitment of Mercedes-Benz first U.S. manufacturing plant in 1993 began a new era of job and economic growth resulting from foreign direct investment. Foreign direct investment and exports are closely linked; Alabama's largest industries in terms of FDI are also the largest exporters of manufactured goods. To date automotive manufacturers Mercedes, Honda and Hyundai, as well as Toyota (with an engine factory in Huntsville) have invested significantly more than $4 billion in plants and equipment. ThyssenKrupp Steel and Stainless USA's $4.65 billion plant near Mobile that began operation in 2010 represents the largest investment in the state this past decade. Other large exporters, including the state's chemicals and paper industries, have a significant international presence. Across all industries, Alabama was home to more than 360 foreign-based businesses from more than 30 nations in 2010. Japan, Germany, Canada, South Korea, the United Kingdom and France have the largest number of plants or operations in the state.

Factsheet

Venture Capital Investments

Investment by Region	($ millions)					Share of total, %	
	2007	2008	2009	2010	1Q2011	Average 2007-10	1Q2011
Silicon Valley	$11,044	$11,144	$7,848	$9,065	$2,491	38.7%	42.4%
New England	$3,790	$3,348	$2,308	$2,631	$639	11.8%	10.9%
NY Metro	$1,765	$2,066	$1,654	$1,953	$580	7.5%	9.9%
LA/Orange County	$1,813	$2,042	$1,007	$1,636	$393	6.3%	6.7%
Midwest	$1,109	$1,262	$890	$1,435	$323	4.7%	5.5%
Southeast	$1,723	$1,245	$972	$1,174	$293	5.0%	5.0%
Texas	$1,424	$1,278	$726	$981	$259	4.3%	4.4%
DC/Metroplex	$1,247	$1,088	$615	$911	$195	3.7%	3.3%
San Diego	$1,839	$1,168	$940	$882	$100	4.7%	1.7%
Northwest	$1,653	$1,044	$722	$853	$159	4.1%	2.7%
Colorado	$598	$852	$522	$483	$63	2.4%	1.1%
Philadelphia Metro	$823	$750	$448	$445	$150	2.4%	2.5%
North Central	$594	$632	$379	$382	$65	1.9%	1.1%
Southwest	$565	$498	$288	$274	$101	1.6%	1.7%
South Central	$98	$79	$23	$78	$29	0.3%	0.5%
Upstate NY	$135	$70	$15	$46	$5	0.2%	0.1%
AK/HI/PR	$21	$18	$7	$16	$1	0.1%	0.0%
Sacramento/N.Cal	$105	$73	$15	$16	$27	0.2%	0.5%
Unknown	$-	$-	$2	$2	$1	0.0%	0.0%
Grand Total	**$30,346**	**$28,657**	**$19,383**	**$23,263**	**$5,873**	**100.0%**	**100.0%**

Investment by Industry	($ millions)					Share of total, %	
	2007	2008	2009	2010	1Q2011	Average 2007-10	1Q2011
Software	$5,504	$5,370	$3,439.0	$4,309	$1,114	18.3%	19.0%
Biotechnology	$5,305	$4,491	$3,682.3	$3,765	$784	17.1%	13.4%
Industrial/Energy	$2,962	$4,549	$2,494.3	$3,502	$1,034	13.4%	17.6%
Medical Devices and Equipment	$3,679	$3,555	$2,634.1	$2,394	$602	12.1%	10.3%
IT Services	$1,840	$2,113	$1,397.3	$1,891	$517	7.2%	8.8%
Media and Entertainment	$2,110	$1,847	$1,610.5	$1,681	$555	7.2%	9.4%
Semiconductors	$1,967	$1,516	$719.8	$1,044	$274	5.0%	4.7%
Telecommunications	$1,919	$1,469	$525.8	$984	$142	4.6%	2.4%
Networking and Equipment	$1,563	$701	$815.7	$656	$111	3.7%	1.9%
Consumer Products and Services	$379	$433	$378.1	$596	$97	1.8%	1.6%
Financial Services	$643	$491	$380.5	$564	$152	2.1%	2.6%
Electronics/Instrumentation	$646	$800	$330.4	$438	$283	2.1%	4.8%
Computers and Peripherals	$533	$458	$371.4	$436	$72	1.8%	1.2%
Business Products and Services	$611	$443	$276.6	$426	$40	1.7%	0.7%
Healthcare Services	$305	$144	$146.1	$312	$68	0.9%	1.2%
Retailing/Distribution	$377	$273	$155.1	$236	$23	1.0%	0.4%
Other	$2	$5	$26.1	$28	$5	0.1%	0.1%
Grand Total	**$30,346**	**$28,657**	**$19,382.98**	**$23,263**	**$5,873**	**100.0%**	**100.0%**

Source: PricewaterhouseCoopers/National Venture Capital Association. MoneyTree™ Report, Data: Thomson Reuters

Economic Forecasts (YoY % Change)

	2009	2010	1Q11	2Q11	3Q11	4Q11	2011	2012
U.S.								
Real GDP	-2.6	2.9	2.3	**2.9**	**3.3**	**3.3**	**3.0**	**2.7**
Nonfarm Employment	-4.4	-0.7	1.0	**1.0**	**1.5**	**1.8**	**1.3**	**2.1**
Nom. Personal Income	-1.7	3.1	**5.1**	**4.4**	**5.7**	**5.9**	**5.3**	**4.8**
Home Price Index	-4.7	-3.1	**-0.4**	**-0.5**	**1.8**	**3.2**	**1.0**	**2.2**
Home Sales	2.7	-5.1	**-2.0**	**-2.8**	**28.9**	**11.7**	**7.7**	**8.2**
Arizona								
Real GDP	-3.9	**2.9**	**4.0**	**3.2**	**3.2**	**2.8**	**3.3**	**3.2**
Nonfarm Employment	-7.2	-2.1	-0.3	**-0.3**	**0.8**	**0.8**	**0.3**	**1.1**
Real Personal Income	-3.1	1.2	**2.3**	**1.7**	**2.0**	**2.0**	**2.0**	**1.7**
Home Price Index	-18.1	-11.3	**-9.5**	**-7.6**	**-3.2**	**2.0**	**-4.8**	**2.5**
Existing Home Sales	31.8	-1.4	**13.3**	**4.0**	**23.5**	**13.4**	**13.2**	**7.9**
Colorado								
Real GDP	-0.9	**2.5**	**3.6**	**3.1**	**2.8**	**2.8**	**3.1**	**3.5**
Nonfarm Employment	-4.5	-1.1	0.4	**0.3**	**0.7**	**1.0**	**0.6**	**1.7**
Real Personal Income	-3.0	1.3	**2.9**	**2.8**	**3.0**	**3.0**	**2.9**	**3.0**
Home Price Index	-0.1	-0.7	**-0.8**	**0.9**	**3.7**	**2.2**	**1.5**	**2.5**
Existing Home Sales	-10.4	-5.9	**-8.1**	**-3.1**	**38.0**	**22.1**	**9.9**	**3.1**
New Mexico								
Real GDP	-2.2	**2.4**	**3.2**	**2.7**	**2.6**	**2.6**	**2.8**	**2.4**
Nonfarm Employment	-4.0	-1.3	-0.2	**-0.4**	**0.6**	**1.1**	**0.3**	**1.5**
Real Personal Income	-0.9	**3.2**	**2.2**	**2.3**	**2.5**	**2.6**	**2.4**	**1.9**
Home Price Index	-4.8	-3.4	**-4.3**	**-1.4**	**-0.3**	**1.9**	**-1.1**	**2.2**
Existing Home Sales	-3.6	-4.4	**-4.7**	**-12.1**	**42.1**	**51.5**	**15.2**	**4.8**

	2009	2010	1Q11	2Q11	3Q11	4Q11	2011	2012
Alabama								
Real GDP	-2.1	**2.4**	**3.1**	**2.6**	**2.2**	**2.1**	**2.5**	**2.2**
Nonfarm Employment	-5.3	-0.9	0.6	**0.1**	**0.5**	**0.9**	**0.5**	**0.9**
Real Personal Income	-1.9	2.2	**2.3**	**2.0**	**2.1**	**2.3**	**2.2**	**1.9**
Home Price Index	-1.2	-5.4	**-5.3**	**-4.3**	**-2.6**	**1.7**	**-2.7**	**2.7**
Existing Home Sales	-11.0	-6.0	**-7.2**	**-6.1**	**24.2**	**24.3**	**7.3**	**4.0**
California								
Real GDP	-2.2	**3.1**	**4.0**	**3.2**	**3.0**	**2.7**	**3.2**	**2.9**
Nonfarm Employment	-6.0	-1.3	0.6	**0.5**	**1.1**	**1.1**	**0.8**	**0.9**
Real Personal Income	-3.3	1.5	**1.7**	**1.8**	**1.6**	**1.7**	**1.7**	**1.6**
Home Price Index	-12.4	-0.6	**-3.7**	**-3.0**	**-0.9**	**1.2**	**-1.6**	**2.8**
Existing Home Sales	15.5	-8.0	**-1.8**	**4.3**	**12.9**	**13.6**	**6.9**	**1.6**
Florida								
Real GDP	-3.4	**2.6**	**3.5**	**2.7**	**2.3**	**2.3**	**2.7**	**2.5**
Nonfarm Employment	-6.2	-1.0	0.5	**0.1**	**0.6**	**1.0**	**0.6**	**1.5**
Real Personal Income	-3.2	1.3	**2.2**	**2.3**	**2.5**	**2.3**	**2.3**	**2.3**
Home Price Index	-16.0	-6.4	**-3.2**	**-1.6**	**1.4**	**1.7**	**-0.4**	**2.4**
Existing Home Sales	35.8	11.0	**17.0**	**20.6**	**46.4**	**38.7**	**29.9**	**15.1**
Texas								
Real GDP	-1.5	**3.4**	**4.6**	**3.8**	**3.3**	**3.0**	**3.7**	**3.5**
Nonfarm Employment	-2.8	0.3	2.0	**1.4**	**1.6**	**1.6**	**1.7**	**1.9**
Real Personal Income	-2.2	**2.8**	**3.9**	**3.9**	**4.0**	**3.7**	**3.9**	**3.8**
Home Price Index	0.0	0.1	**-1.8**	**-1.2**	**0.0**	**2.1**	**-0.2**	**2.0**
Existing Home Sales	-5.8	-6.2	**-4.8**	**-10.2**	**25.0**	**26.2**	**7.3**	**3.6**

Note: Forecasts in bold
Source: BBVA Research, BEA, BLS, NAR, Census Bureau and FHFA

Economic Structure

	U.S.	AL	AZ	CA	CO	FL	NM	TX
GDP (2009 $ Billions)	14,119	1,699	2,564	18,914	2,527	7,370	748	11,447
Population (2010 Thousands)	309,051	4,730	6,677	37,267	5,095	18,678	2,034	25,213
Labor Force (1Q11 Thousands)	153,279	2,125	3,174	18,115	2,678	9,265	954	12,220
Nonfarm Payroll (1Q11 Thousands)	130,520	1,868	2,382	14,012	2,227	7,183	802	10,495
Unemployment Rate (1Q11)	8.9	9.3	9.6	12.2	9.2	11.5	8.5	8.2
Total Building Permits, (YTD Jan-Mar 2011)	93,546	1,966	2,413	5,079	1,785	7,245	722	15,529
Change in Building Permits (YTD Jan-Mar YoY (%))	-21.4	-20.0	-32.1	-24.7	-27.7	-22.2	-32.4	-19.1
Home Ownership Rate (2009)	67.4	66.8	68.5	68.4	70.5	70.9	69.1	65.4
Housing Prices (4Q10 YoY Change (%))	-4.0	-10.0	-13.4	-4.7	-1.0	-5.8	-4.6	-1.8
Exports of Goods (4Q10 $ Billions)	347.5	4.3	4.1	38.7	1.8	15.0	0.4	57.4
Change in Exports (2009-2010 YoY Change (%))	21.0	25.5	11.6	19.3	13.7	17.8	23.0	26.8

Source: BEA, BLS, Census, WiserTrade and FHFA

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This report has been produced by the BBVA Research U.S. unit

Chief Economist
Nathaniel Karp
+1 713 881 0604
nathaniel.karp@bbvacompass.com

Hakan Danis
+1 713 843 5382
hakan.danis@bbvacompass.com

Jason Frederick
+1 713 843 5369
jason.frederick@bbvacompass.com

Jeff Herzog
+1 713 843 5348
jeff.herzog@bbvacompass.com

Ignacio San Martin
+1 713 881 0620
ignacio.sanmartin@bbvacompass.com

Marcial Nava
+1 713 881 0604
marcial.nava@bbvacompass.com

BBVA Research

Group Chief Economist
Jorge Sicilia

Chief Economists & Chief Strategists:

United States and Mexico:

United States
Nathaniel Karp
nathaniel.karp@bbvacompass.com

Mexico
Adolfo Albo
a.albo@bbva.bancomer.com

Macro Analysis Mexico
Julián Cubero
juan.cubero@bbva.bancomer.com

Spain and Europe:
Rafael Doménech
r.domenech@grupobbva.com

Spain
Miguel Cardoso
miguel.cardoso@grupobbva.com

Europe
Miguel Jiménez
mjimenezg@grupobbva.com

Emerging Markets:
Alicia García-Herrero
alicia.garcia-herrero@bbva.com.hk

Pensions
David Tuesta
david.tuesta@grupobbva.com

Asia
Stephen Schwartz
stephen.schwartz@bbva.com.hk

South America
Joaquín Vial
jvial@bbva.cl

Argentina
Gloria Sorensen
gsorensen@bancofrances.com.ar

Chile
Alejandro Puente
apuente@grupobbva.cl

Colombia
Juana Téllez
juana.tellez@bbva.com.co

Peru
Hugo Perea
hperea@grupobbva.com.pe

Venezuela
Oswaldo López
oswaldo_lopez@provincial.com

Regulatory Affairs, Financial and Economic Scenarios:

Financial Scenarios
Sonsoles Castillo
s.castillo@grupobbva.com

Economic Scenarios
Juan Ruiz
juan.ruiz@grupobbva.com

Financial Systems
Ana Rubio
arubiog@grupobbva.com

Regulatory Affairs
Maria Abascal
maria.abascal@grupobbva.com

Market & Client Strategy:
Antonio Pulido
ant.pulido@grupobbva.com

Equity and Credit
Ana Munera
ana.munera@grupobbva.com

Interest Rates, Currencies and Commodities
Luis Enrique Rodríguez
luisen.rodriguez@grupobbva.com

Asset Management
Henrik Lumholdt
henrik.lumholdt@grupobbva.com

Contact details

BBVA RESEARCH USA
5 Riverway, Suite 320
Houston, TX 77056
U.S.
Telephone: +1 713 341 8200
Email: researchusa@bbvacompass.com
www.bbvaresearch.com