BBVA | RESEARCH

Economic Outlook

United States

Fourth Quarter 2012
Economic Analysis

- Although coordinated actions of central banks help to reduce global economic uncertainty, political gridlock heightens the likelihood of a slowdown in 2013
- Housing finally makes a comeback, although asymmetrically across states
- Midstream companies are well-positioned to profit from the swelling supply and demand of natural gas
- Philanthropy is essential for the art sector's success and expansion in thriving urban areas

BBVA Compass

Index

1. Editorial 1

2. Global Outlook 2

3. US Outlook 6

4. Regional Outlook: Sunbelt Housing Recovery 10

5. Industry Analysis: Opportunities in Midstream Natural Gas 14

6. The Contribution of the Arts in the BBVA Compass Sunbelt 21

7. Factsheet 25

8. Forecasts 26

Closing Date: November 30, 2012

See page 27 for the Disclaimer

1. Editorial

During the current economic recovery, GDP has grown at an average of 2.2% per quarter on an annualized basis. This rate is 50% lower than the average during the preceding nine post-recession expansion cycles and 30% below the average during the most recent two recoveries. Turning to job creation, the differences are even more striking. The rate of employment growth has been nearly 80% and 60% below the averages during the aforementioned periods, respectively. These weak results are amplified when we take the unprecedented monetary and fiscal stimulus into account. There are several possible reasons that help to explain this outcome. From one standpoint, the severe financial crisis that triggered the Great Recession may have inflicted deeper and longer-lasting effects compared to the shocks that caused previous recessions. In this environment, the short-term pressures that hold back economic growth include the feeble construction sector recovery, negative shocks in the global economy, elevated policy uncertainty, and household deleveraging. Thus, one view argues that once these cyclical imbalances are corrected, GDP growth and job creation would speed up.

An alternative perspective suggests that lackluster economic growth not only reflects short-term pressures but also the accumulation of structural deficiencies. The asset bubbles during the pre-crisis years obscured these weaknesses, and allowed the political environment to ignore them. In this scenario, the fragile recovery reflects a lower rate of potential GDP growth and major reforms would be needed to boost productivity, investment and hiring.

Although it is tempting to focus on the short-term issues to revive economic growth, the costs of not pursuing structural reforms may grow exponentially and dampen any benefits from mitigating cyclical fluctuations. Furthermore, structural reforms that boost productivity growth will increase potential GDP and the economy will expand at a stronger pace.

Therefore, it is imperative that in 2013, the new Administration and Congress cooperate to achieve far-reaching agreements to improve economic fundamentals. In many cases, solving these long-term concerns will imply dealing with short-term pressures. For example, restoring the long-term objective of fiscal sustainability by redefining the role of the government, modifying the tax code, reforming entitlement programs and improving the efficiency of the public sector, would be far more beneficial than simply focusing on short-term objectives to avoid a fiscal cliff by kicking the can down the road once again.

Temporary patches to the economy that increase policy uncertainty are extremely harmful for the private sector. This uncertainty can hold-back long-term capital investment, because it clouds the expected returns of large investments today. Entire industries may also be affected by heightened policy uncertainty: regulations in vital, capital-intensive industries such as energy and healthcare need a comprehensive overhaul to enhance competitiveness.

Immigration policy is an essential structural reform to maximize the economic benefits of attracting the brightest minds and nurturing entrepreneurship. Additionally, policymakers must confront a widening infrastructure gap, a declining quality of basic public education, and excessive regulatory costs for businesses.

History teaches us that in democracies, the solution to big problems hardly ever comes in one single fix but rather, through multiple steps that are often unpopular when implemented. By not taking swift action, however, the problems can multiply and become even more difficult and costly to solve in the future. Therefore, as we enter 2013, elected officials must adhere to their role as a public servants, embrace the ideals of working for the public good, and seek compromise to deliver results that will stimulate growth.

Nathaniel Karp

Chief U.S. Economist

BBVA Research

2. Global Outlook: bold actions by central banks make tail-risk scenarios less likely

Bold actions by central banks have clarified the global economic outlook but challenges remain for policy-makers to avoid setbacks

The world economy is expected to continue its soft recovery with a GDP growth rate of 3.5% in 2013 (3.2% in 2012, 4.1% on average in 2010-12). It is supported by lower risk aversion, following the influential decisions taken by central banks, especially the ECB. However, three factors stand out among those that could make this outlook deteriorate significantly: first and most worrying, troubles in Europe, if euro break-up fears that loomed during the first half of the year resurface; second, in the US, the still-hanging threat of the so-called fiscal cliff, i.e., a spending-cut and tax-hike package worth 4% of GDP due to come into effect at the beginning of 2013 that would push the US economy back into recession; third, a severe slowdown in the emerging economies, in particular in China and some commodity-oriented economies, if Chinese appetite for raw materials decreased.

Central bankers to the rescue; other policy makers should follow suit

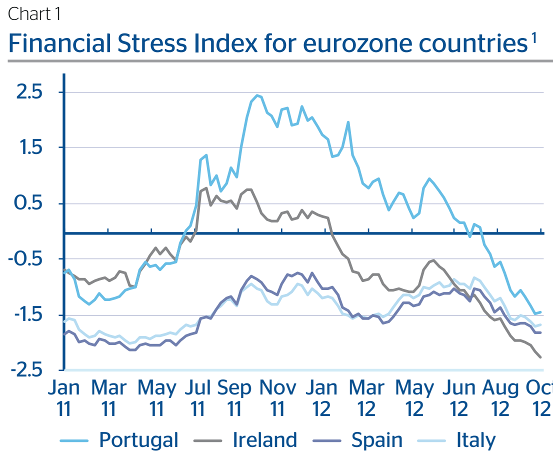
Against a backdrop of high uncertainty and threats to the world economic recovery, over the past months authorities across the world – in particular central bankers in the eurozone and the US – have taken significant steps forward. Those bold measures have spared the world economy from a systemic event that would have been comparable with the financial developments of late 2008. Both central banks have built a bridge to a new institutional environment in the case of Europe, and to a new fiscal pact in the US; these actions have paved the way for other policy makers to use their room for manoeuvre. However, the FED's actions are more open-ended than the ECB's due to different conditionality: strict fiscal fulfilment is compulsory in Europe, whereas labour market improvement is the objective in the US.

"… whatever it takes…"

In our view, when the European Central Bank (ECB) President Mario Draghi announced the implementation of a new bond-purchase program (Outright Monetary Transactions, or OMT) in late July, the institution took a decisive step to put an end to the debt crisis in Europe. Under certain conditions (see our September ECB Watch for further details), the ECB could intervene in the secondary sovereign-debt markets. The ECB's move came after a eurozone summit in June where leaders reached some agreements to reinforce the currency union: a broad roadmap towards a single banking supervision, far-reaching plans covering fiscal issues and growth-supporting measures. The rationale behind the Draghi announcement is clear. Yields on some peripheral bonds are elevated because markets are partly pricing in eurozone break-up fears, compromising the ECB's mandate amid a severe financial fragmentation. Since that is "unacceptable," the ECB has committed itself to buy unlimited quantities of sovereign bonds of those countries that seek financial aid from Europe's funds (European Financial Stability Fund & European Stability Mechanism) with "strict and effective conditionality." The existence of a lender of last resort under fiscal conditionality dispels fears of the reversibility of the euro in its current configuration.

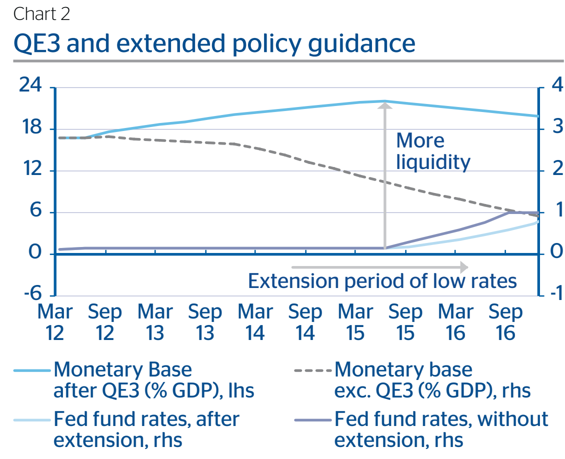
Under extreme market pressure and looming euro break-up fears, some action from European leaders and the ECB had long been expected. However, the ECB move was more decisive than anticipated. The OMT program makes the ECB a credible backstop. We consider that break-up fears are not justified now as long as this process continues. Tensions in financial markets have eased significantly since June (see Chart 1) and, in our view, the maintenance of this situation in spite of recent adverse market events is proof of its capacity to dispel doubts.

Chart 1
Financial Stress Index for eurozone countries[1]



Source: BBVA Research

Chart 2
QE3 and extended policy guidance



Source: BBVA Research

Other elements have recently reinforced the currency union in Europe. First, the permanent fund that will deal with any new bailout in the eurozone (the ESM) has been put in place, after the German Constitutional Court backed Germany's involvement. Second, the process for achieving a banking union in Europe (as set last June at a Eurogroup meeting) continues moving forward, although grinding slowly. The implementation of a full banking union consists of four different elements: joint supervision, common regulation, a common body for banking resolution and a pan-European deposit-guarantee scheme. Given the scale of the task ahead, the full implementation is likely to be a long-lasting process. Yet European leaders agreed to set a calendar for banking supervision by January and more details are due to be agreed on at the Eurogroup meeting in December. In June they had agreed on direct banking recapitalization from the ESM, something that we deemed key in order to eliminate the risk emerging from the sovereign-banking feedback loop. However, there are other ways to reach the overriding goal of preventing regulatory ring-fencing and the goal of breaking the sovereign and bank risk that can be also explored. Certainly, the banking-union project needs to move forward fast.

At the end of the process, we think the eurozone may eventually come up with a full package that will reinforce its governance. As we have long argued, it should comprise a banking union, a fiscal union and a lender of last resort to prevent fragmentation. Progress has been made on all of these fronts. Probably that progress has not been ambitious enough to revert the current dynamic quickly. Yet, policy makers seem committed enough to the process and we think the worst of the crisis may, at last, be over. In the short term, the ECB's program and the ESM support under fiscal conditionality creates a benchmark to deal with difficult funding situations that countries such as Italy and Spain could face. At the same time, the proper implementation of the banking-union plans and further definition of the fiscal-union design will be a key factor to the long-term sustainability of the eurozone.

"... as long as needed..."

With the US economy growing at low rates, the unemployment rate remaining persistently high and amid huge uncertainty in Europe, a pre-electoral gridlock over how to bring the whopping US deficit down was the last thing the US economy was in need of. Against this backdrop, the Fed did not hesitate. First, and in accordance with its "forward-guidance policy," the Fed announced that it intends to keep rates at its current low levels at least until mid-2015. Second, the Fed announced a new round of quantitative easing (QE) to support growth and employment recovery.

[1] The BBVA Research Financial Stress Index (FSI) is a synthetic indicator that summarizes movements of: risk measures (5-year CDS, CDS of non-financial corporations and financial debt), volatility (stocks, interest rates and exchange rates) and liquidity stress (spread between interbank rate and free-risk asset at 3-months term).

This further monetary loosening will be different from previous rounds. First, the Fed will purchase mortgage-backed securities (MBS) rather than Treasuries in an attempt to improve financial conditions for households. Second, the Fed will continue with this policy for a considerable period of time, even after the recovery strengthens and the labour market improves substantially; i.e., it will not give up buying MBS when growth starts picking up (see our US Fed Watch for further details).

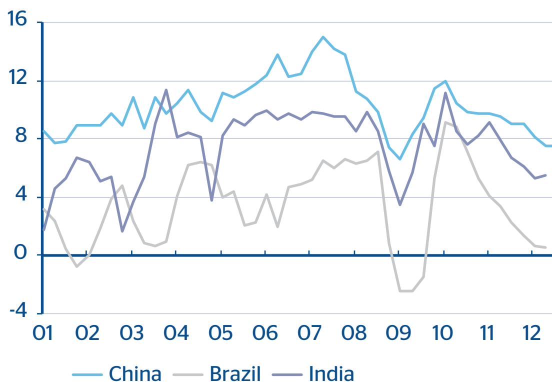
In our view, by embarking on QE3 and extending policy guidance, the Fed is buying insurance against the "fiscal cliff," but it is not a silver bullet if not accompanied by fiscal actions. In our baseline scenario, an agreement will be reached to avoid the complete package of automatic spending cuts and tax hikes from taking place. Yet we also expect some form of fiscal consolidation that will drag the economy down. With QE3 and policy guidance, the Fed does its part to give the economy the boost it needs to avoid slipping back into recession in 2013. In fact, according to our estimates, monetary loosening could contribute just a few tenths of a percentage point (pp) to GDP growth in 2013, but from 2014 onwards the effect will be more substantial. Regarding inflation, the impact will be small and delayed. However, it seems to us that the Fed's tolerance to higher inflation will depend on growth and labour market improvement.

The potential effects of QE3 are not restricted to the US economy. As previous programmes showed, they prompt inflows to emerging economies, decreasing risk premia, and lowering funding costs in those countries, boosting the availability of credit, their growth rates and also their inflation. Our estimates show that QE3 (plus the Draghi effect) could have a lower impact than QE1 due to comparative evolution of risk premium and capital inflows in the emerging economies. In any case, that will depend on domestic-policy response to capital inflows.

Central bankers' responses are not enough to bring the global economy back to a firm expansion

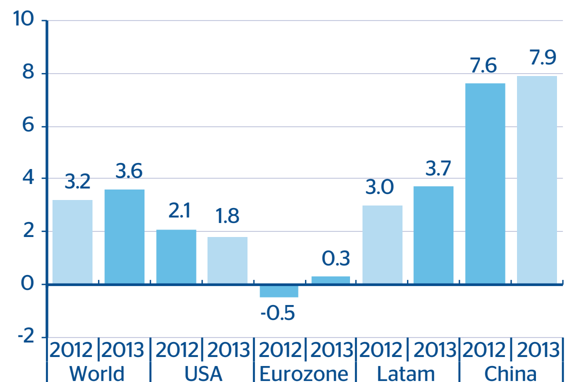
The world economy may have avoided decelerating to the slowest growth in the last 30 years (apart from the 2009 great recession) but the low growth environment continues. The advanced economies have been losing momentum since 2011 as one should expect given the current deleveraging environment. More recently the emerging economies have been hit too. In this regard, the trade channel has been intense in bringing exports and GDP growth down. Certainly that is the case in the three largest emerging economies. Brazil's economy almost stalled in the first half of the year; India's GDP grew by 5.3 and 5.5% y/y in the first and second quarter, respectively, the slowest pace since the beginning of 2009; and in the third quarter of the year the Chinese economy slowed to a rate of 7.4%, the lowest growth rate since 2009 although the most recent data points to a bottoming-out.

Chart 3
Emerging economies: GDP growth rate (% y-o-y)



Source: BBVA Research and Haver

Chart 4
GDP growth rate



Source: BBVA Research and Haver

However, the actions that have been taken by central banks in the US and in the eurozone are partly dispelling some doubts and improving the outlook. Under our baseline scenario, growth in the eurozone is likely to gain momentum entering 2013. Although the eurozone's GDP will decrease in 2012 (-0.5%), it will rebound slightly in 2013 (+0.3%). In the US, we have maintained our forecasts: growth will remain at around 2% in 2012 and 2013. The main downward revision in our October scenario corresponds to China (by -0.2 pp in 2012 and -0.4 pp in 2013), although its growth rate will remain close to 8% both years due to expected policy stimulus to compensate partially the slowdown it is experiencing. Other emerging economies will make up for this slack: the outlook for growth in Latin America is revised slightly upwards in 2013, when the region will grow by 3.7%, up from a 3% growth rate in 2012.

All in all, the world economy is expected to continue undergoing a soft recovery with a GDP growth between 3% and 3.5%. Yet this scenario relies on several key assumptions, in particular on whether European policy makers will deliver on their commitments. First, this scenario assumes that the recent wrangling over financial supervision does not substantially affect June's agreements, so the vicious link between sovereign and bank risk is broken and the monetary policy transmission, which in the eurozone is conducted mainly by banks, works again. Second, we assume that the mechanism in place to eliminate the "convertibility risks" is activated in full if needed. This will keep yields in peripheral economies contained, but substantial reductions will happen at the same time as Europe progresses in its new institutional arrangement and the commitments are fulfilled. The ESM/ECB's intervention could be enough to bring Spanish and Italian yields back to levels consistent with the mid-term sustainability of the public debt, and to levels that will make reforms have a long-lasting impact. This implies that both countries retain investment-grade ratings and deliver on their fiscal commitments or are granted extensions to meet them (ideally in terms of their structural fiscal balances). On this issue, it should be considered the risk from negative feedback loops between fiscal adjustment and economic growth and also the possibility that negative fiscal multipliers may be higher than previously expected, at least in the short-term. Finally, in this scenario, Greece will continue being part of the euro, which will, in turn, require further support from Europe by additional funding and/or a longer period to fulfil fiscal conditionality. Based on past experience, too many things could still go wrong, but policy makers tend to find solutions to Europe's problems when crunch time approaches.

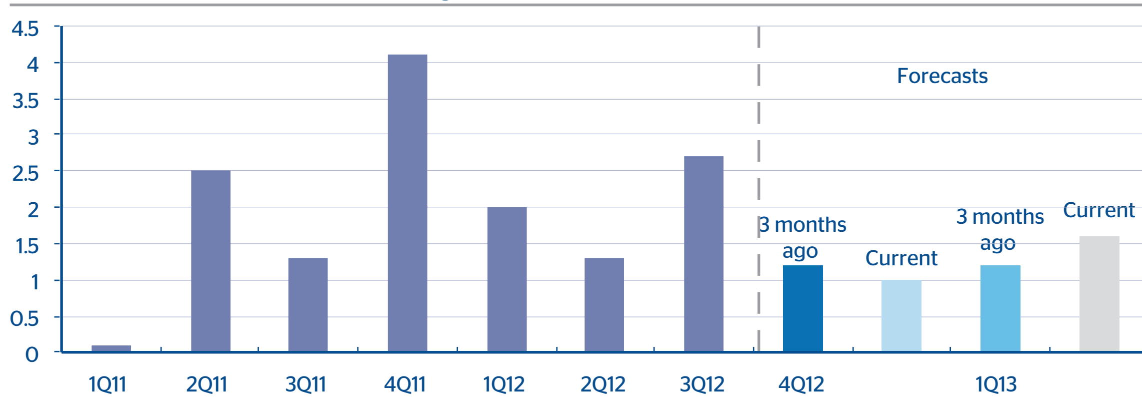
3. US Outlook

Political Outcome and Fiscal Cliff the Focus for 2013

The end of 2012 is quickly approaching and initial fourth quarter data have promoted mixed emotions for the coming months. Housing indicators are showing significant strength moving into 4Q12, while manufacturing activity appears to be on the rebound from the summer's slump. Employment growth has accelerated in the past few months, with the unemployment rate dropping below 8% in September and October. Political uncertainties were heightened leading up to the election, but even with Obama still in office, a divided Congress leaves little room for a fiscal resolution. In late October, Hurricane Sandy threw the U.S. economy for a loop, shutting down major financial centers on the East Coast for several days. While this could have an impact on 4Q12 and early 2013 growth, the magnitude of the storm's aftermath is still uncertain. Ultimately, growth in 4Q12 is expected to be much slower compared to the upwardly revised 2.7% rate seen in 3Q12. Drivers of the third quarter revision included stronger exports, weaker imports, and increased private business inventories. The latter two support our expectations for slower fourth quarter growth: businesses are preparing for lower consumer demand in the coming months and are unlikely to build up inventories again given the significant rise in 3Q12.

Chart 5

Real GDP Growth (SAAR QoQ % Change)



Source: Bureau of Economic Analysis & BBVA Research

Given the latest economic news, we have revised our annual forecasts only slightly. While we have not changed our GDP forecasts, we have made a slight upward revision to inflation in 2013 – with pressures at both the headline and core levels. Our revised scenario assumes headline inflation at 2.1% (up from 1.9%) while core has edged up from 1.8% to 1.9%. We have also adjusted our interest rate forecasts given the Fed's latest extension of the policy guidance, with expectations for the first target rate hike shifting from the end of 2014 to mid-2015. Our forecasts for the unemployment rate were slightly high given the better-than-expected decline in September to 7.8%. However, the extremely low participation rate suggests that people could eventually come back into the labor force and drive up the unemployment rate if hiring does not accelerate fast enough. This was made clear with the October employment report – although payrolls increased at a healthy 171K, the unemployment rate jumped back up to 7.9% on account of a growing labor force. If the unemployment rate holds steady at 7.9% for November and December, we will hit an average annual rate of 8.1% for 2012. Conditions in 2013 rely heavily on the outcome of fiscal cliff negotiations in Congress, and there could be upside odds to our forecasts under more political cooperation.

Table 1
Baseline Scenario (Old vs. New)

		2011	2012	2013	2014
GDP (% change)	new	1.8	2.1	1.8	2.3
	old	1.8	2.1	1.8	2.3
CPI (% change)	new	3.1	2.0	2.1	2.4
	old	3.1	2.0	1.9	2.3
Core (% change)	new	1.7	2.1	1.9	2.0
	old	1.7	2.1	1.8	1.9
Unemployment Rate (eop, %)	new	9.0	8.2	7.9	7.5
	old	9.0	8.2	8.1	7.6
Fed (eop, %)	new	0.25	0.25	0.25	0.25
	old	0.25	0.25	0.25	0.50
10-Year Treasury (eop, %)	new	2.0	1.7	2.4	2.7
	old	2.0	2.1	2.6	3.0

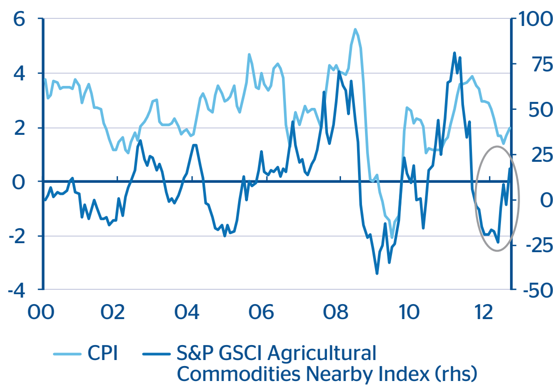
Source: BBVA Research

Inflationary concerns have diminished considerably since the oil price spikes earlier in 2012. Throughout the second quarter, headline inflation was mostly flat or declining, rebounding only in August and September as energy prices jumped back up again. On the other hand, the heavily watched food sector has shown very little movement on a month-over-month basis, with inflation averaging only 0.1% throughout the third quarter. Furthermore, on a YoY basis food inflation has decelerated since December of last year, from 4.6% to 1.6%. Concerns are rising that the Midwest drought will eventually have its impact on food prices, but the question is when we should expect to see such effects.

Analysts have been monitoring weather patterns and drought conditions throughout the past few months with the hopes that trends will reverse for the better. However, the damage has already been done. The National Oceanic and Atmospheric Administration has reported that approximately 37% of the United States was suffering from “severe to extreme” drought conditions in September alone, a slight decrease from the previous months but still a significant portion of the important crop-producing states. As of October 2nd, “moderate to exceptional” drought was affecting more than 60% of the U.S. Farmers have acknowledged this as one of the worst droughts in nearly 50 years, resulting in significant production losses compared to pre-drought estimates (28% and 18% of U.S. corn and soybean production, respectively). Falling supply of the core farming products filters through the food chain and impacts other goods where production relies on grains, including meat, dairy, poultry, and others. The lagged transmission mechanism allows for a more gradual pass-through of higher prices to consumers, but producers are already feeling the pressure. Prices of food-related crude goods have jumped significantly in the past few months, accelerating to 5.2% growth on a YoY basis.

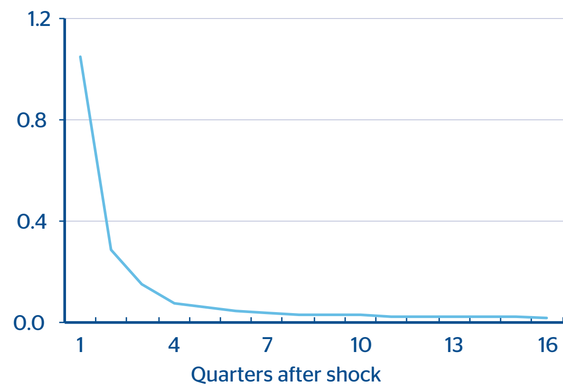
Outside of the food component of CPI, various spot and future price indices are already showing signs of higher inflation to come. The S&P GSCI Agricultural Commodities Nearby Index, for example, tends to lead CPI by a quarter or so and has shown a significant spike in prices throughout the past few months. According to the index, agricultural prices have increased nearly 30% since May, reaching some of the highest levels seen on record. YoY growth has also returned to an upward trend. Given the leading movement of the S&P Agricultural Index and CPI, we used the indicator in a simple impulse response function to show the impact of a 10% increase in agricultural prices. The results show that the largest impact on CPI is likely to occur within the first two quarters after the shock and then subsiding relatively quickly after another few quarters. We expect that this shock could hit consumers by the end of the year, boosting headline inflation by about 1.1%, with upward pressures carrying over into 2013. Our estimates are also consistent with research conducted by the U.S. Department of Agriculture, which expects annual inflation to rest between 3.0% and 4.0% for 2013, similar to the rate seen in 2011. While food prices are not having an immediate impact on inflation due to its lagged transmission mechanism, we expect to see added pressure from this component later in the year and in 2013 as the drought continues to spoil harvests.

Chart 6
Headline CPI and Agricultural Prices (YoY % Change)



Source: Bureau of Labor Statistics & BBVA Research

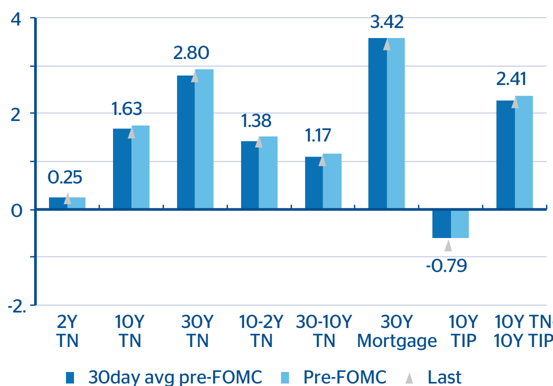
Chart 7
Impact on CPI of a 10% Rise in Agricultural Prices (%)



Source: BBVA Research

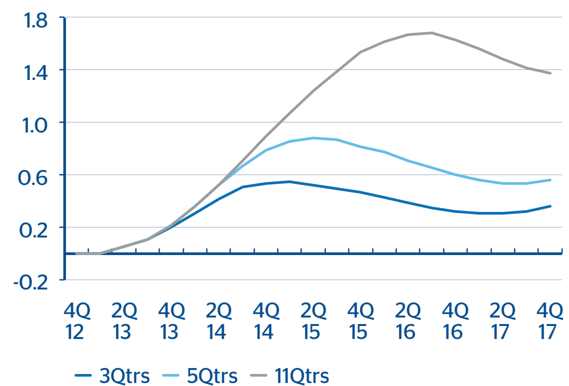
With long-run inflation expectations stable, the Federal Reserve has shifted its primary focus to maximum employment via additional quantitative easing. No significant announcements were expected to come from October's FOMC meeting, with the committee somewhat in limbo after September's QE3 announcement and the need for Congress to do their part in addressing the fiscal cliff. After the Fed decided to move forward with additional quantitative easing and an extension of the policy guidance, markets had no need to fret over whether monetary policy would be adjusted. In October's statement, FOMC members reaffirmed their commitment to purchase $40bn per month worth of additional mortgage-backed securities on an open-ended basis, while also maintaining Operation Twist as scheduled through the end of the year. The committee also decided to maintain its current policy guidance, anticipating "that exceptionally low levels for the federal funds rate are likely to be warranted at least through mid-2015." Ultimately, the main purpose of QE3 is to reduce tail-risk, pushing long-term yields and inflation expectations higher while lowering short-term yields and mortgage rates. The overall effectiveness of QE3 is conditional on the size and duration of the open-ended accommodation, which are inversely dependent on the self-sustainability of the recovery.

Chart 8
QE3 Impact on Selected Interest Rates (%)



Source: Federal Reserve & BBVA Research

Chart 9
Impact of QE3 on Real GDP Growth (%)



Source: BBVA Research

In regards to the economic outlook, committee members maintained their view on economic activity expanding at a "moderate pace" along with stable inflation expectations. Despite the significant drop in the unemployment rate in September, there was no mention of improving labor market conditions in the statement. In addition, the committee most likely discussed how to improve the effectiveness of such accommodation under the different political scenarios and the likelihood of a fiscal cliff compromise in Congress. With Operation Twist set to end in December, we expect that the last FOMC meeting of the year will provide more details on the Fed's planned course of action for monetary policy accommodation in 2013 and beyond.

With the presidential election behind us and only a few months left of 2012, the fiscal cliff remains the primary focus. The political situation has remained relatively unchanged, with Obama still in office and a divided Congress, so uncertainties are still high regarding a possible fiscal solution. In general, the magnitude of the fiscal cliff depends on the fiscal multipliers and the capacity to strike a deal by both parties. If policymakers come to a compromise on cuts in the Budget Control Act, the alternative minimum tax (AMT) patch, and income tax cuts, the impact of the fiscal cliff will be significantly reduced. Among the possible fiscal deal scenarios, the two most likely outcomes are a Democratic deal and a "kick the can" compromise in which policymakers push these issues further into 2013. With the Democrats holding control over the White House and the Senate, the probability of a Republican-biased deal has dropped significantly. Based on our estimates, the probability that the lame-duck Congress fails to reach an agreement has declined to 25% because of increasing pressures to prevent another economic downturn in 2013. Still, the fiscal cliff presents a significant downside risk to growth for the coming year and our forecasts for economic activity could be subject to downward revision under the worst possible scenario.

Table 2
Impact of Fiscal Cliff Components on Economic Activity in 2013

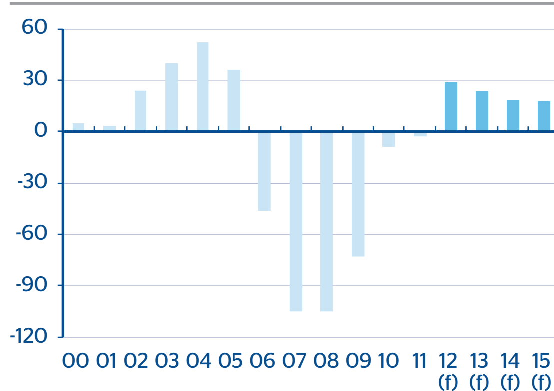
Policy	Budgetary Effect US$bn	Budgetary Effect (% GDP)	Economic Effect (% of GDP)	Likelihood of taking effect L=low, M=Medium,H=High	Size of the Cliff Expected Value (pp of GDP)
End of temporary tax cuts	168	1.1	0.4	L	0.20
AMT Patch: indexing of the alternative minimum tax to the inflation rate	150	0.9	0.6	H	0.35
Reduction in employee social insurance contributions	98	0.6	0.3	H	0.17
Extension of the maximum period of entitlement for unemployment benefit	26	0.2	0.1	M	0.05
Cuts in payment of doctors' fees by Medicare ("Doc Fix")	15	0.1	0.1	L	0.04
Automatic cuts in the Budget Control Act 2011	89	0.6	0.7	M	0.38
Routine extension of short-term tax relief	38	0.2	0.1	M	0.04
New taxes relating to the reform of health insurance	31	0.2	0.1	H	0.04
Total	**614**	**3.9**	**2.2**		**1.3**

Source: BBVA Research

4. Regional Outlook: Sunbelt Housing Recovery

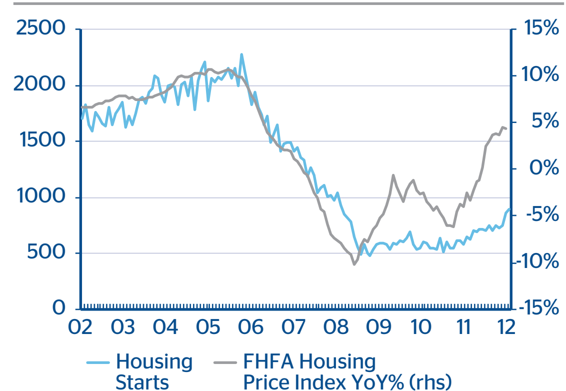
The residential real estate market continues to improve, albeit at a slow pace. In our baseline scenario, residential investment will continue to follow an upward trend and to contribute positively to real GDP growth over the next years. Housing indicators continue to improve nationwide, and the sector that once propelled the U.S. into a severe recession is showing stronger signs of recovery. However, despite the positive signals, the pace of housing activity is still far from what it was even twenty years before the bubble, and thus it contributes to a sluggish revival across the economy. As we shift our focus to the BBVA Compass Sunbelt region, the housing recovery is stronger on average due to fervent expansion in Texas, California and Arizona. Home prices are on the rise and more homes are being built and sold. However, although the region's trend is positive, there are significant differences across states. In this article, we seek to explain the heterogeneous housing recovery across the Sunbelt.

Chart 10
U.S. Residential Investment Contribution to GDP growth (basis points)



Source: Bureau of Economic Analysis and BBVA Research

Chart 11
Housing Starts and Purchase-Only Housing Price Index (thousands of units, SAAR and YoY % Change)



Source: BBVA Research and FHFA, Census / Haver

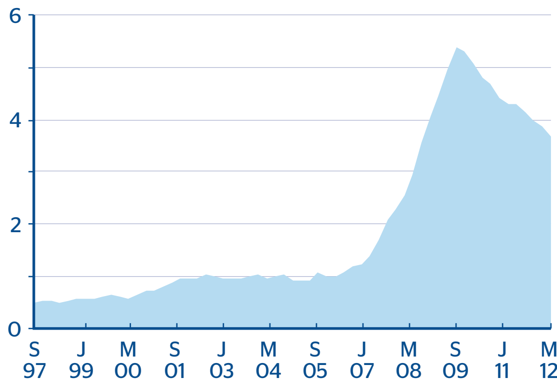
National Trends

A closer look to national trends reveals that home sales have experienced sustained growth since the end of 2011. Historically low interest rates, federal government assistance, and the improvement in the labor market have contributed to this rebound. Expansionary monetary policy has brought down long-term interest rates significantly; in October, the 30-year conventional mortgage rate reached a new historical low of 3.62%. The Federal Government has also given a boost to the housing market through the Making Homes Affordable Program (created by the Financial Stability Act of 2009), which has helped distressed borrowers to avoid losing their homes though a series of refinancing options. Moreover, banks have also contributed to reduce foreclosures by writing down some of the debt owned by distressed borrowers. As a result, delinquent mortgages continue to decline, and in 3Q12 the number new foreclosures dropped to its lowest level since 3Q07. The quarterly pace, however, remains nearly quadruple the historical norm.

Slowing foreclosures have tightened supply and prevented prices from falling further. Furthermore, supply and demand dynamics are yielding higher prices. The national Federal Housing Finance Authority (FHFA) Home Price Purchase-Only Index has risen 5.3% during 18 months since it bottomed in March 2011. Rising prices are a signal for builders and buyers to re-enter the market. Consequently, more new homes are being built as construction companies awaken to higher demand. This rise in construction activity is creating jobs. The unemployment rate for the construction industry reached 11.4% in October, and although it is still high, it is substantially lower than the industry's 2010 peak of 27.1%. Improvements in the housing market have also been favored by overall economic recovery. Although

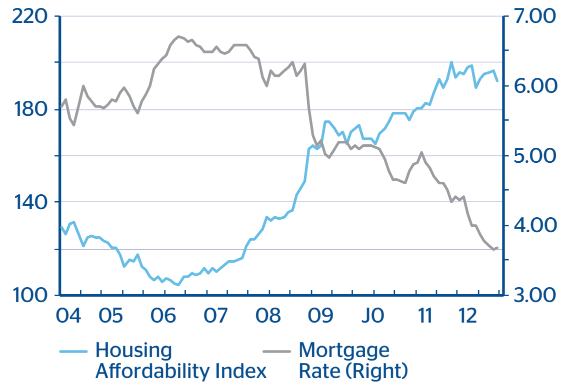
moderate, sustained job creation supports income growth and reduces uncertainty among potential homebuyers. In addition, as financial volatility eases and delinquencies decline, banks are resuming lending. According to FDIC data, on a year-over-year basis, residential real estate loans increased 2.75% in 2Q12, the second positive growth rate since 4Q10 and the highest rate since 4Q09.

Chart 12
Shadow Inventory (millions of housing units)



Source: Bloomberg

Chart 13
Housing Affordability and 30-Year Mortgage Rate (Index=100 average affordability, %)



Source: National Association of Realtors and Federal Home Finance Board / Haver

Sunbelt Perspective

In the BBVA Compass Sunbelt Region the picture looks much the same: house prices are improving, more homes are being built, and home sales are on the rise. However, there are varying degrees of recovery across the region, which are influenced by the interaction of three different factors: the magnitude of the bubble-burst adjustment, the quality of the overall state economic recovery and local housing-inherent fundamentals.

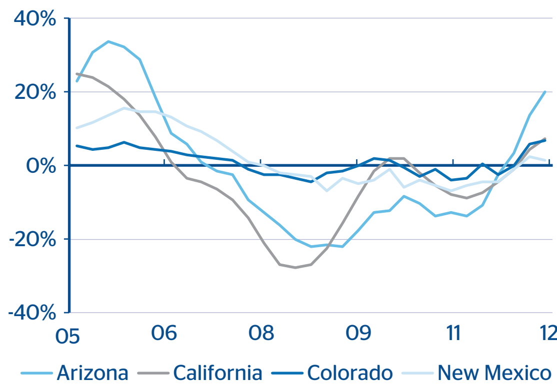
Table 3
Snapshot of Housing Indicators by State (yoy % change)

State	Purchase Only House Price Index	Construction Employment	Housing Starts	Homeownership Rate
AL	2.7%	-6.1%	12.5%	Stabilizing
AZ	20.1%	5.5%	24.5%	Stable
CA	7.2%	5.1%	42.1%	Stabilizing
CO	6.6%	5.2%	27.5%	Stabilizing
FL	7.9%	-3.2%	55.2%	Declining
NM	1.5%	-4.5%	7.0%	Declining
TX	5.6%	5.5%	24.6%	Declining

Source: BBVA Research and FHFA, BLS, Census / Haver

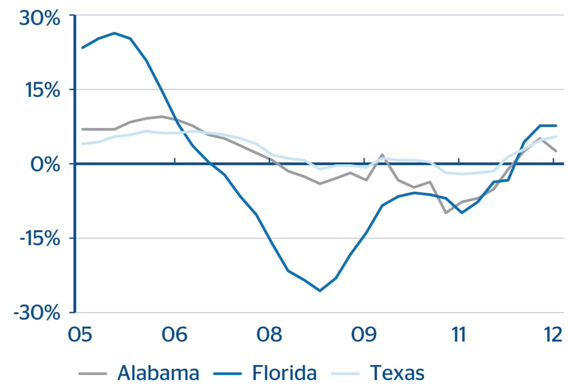
Across the region, home prices, measured by the FHFA Home Price Purchase Only Index, have been increasing on a year-to year basis since the beginning of 2012. However, the magnitude of the previous burst creates an "arithmetic" advantage in terms of growth rates. Intuitively, this means that the current situation, despite being far from normal, is significantly better than what it was during the worst of the crisis. Two of the states with the most severe bubbles, Arizona and Florida, have seen strong price appreciation during the past year (20% and 7.9%, respectively). Nevertheless, we cannot attribute robust price appreciation solely to the size of the previous downfall, as some states with mild price declines are experiencing above-average price gains. On a year-over-year basis, home prices have risen faster than the national average of 4% for all of our footprint states except New Mexico and Alabama. Texas, which experienced a mild slowdown, has seen a higher-than-average rise in its home price index as new residents flock to the state and oil and gas exploration remains strong.

Chart 14
FHFA Home Price Index: AZ, CA, CO, NM (yoy % change)



Source: FHFA / Haver

Chart 15
FHFA Home Price Index: AL, FL, TX (yoy % change)



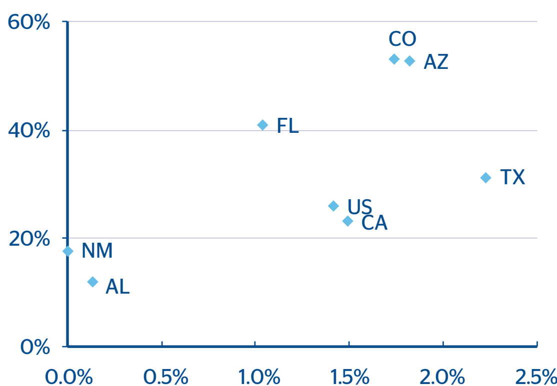
Source: FHFA / Haver

Indeed, price appreciation reflects burgeoning demand as the economy recovers. The BBVA Compass Sunbelt states have experienced double digit growth in housing starts since 4Q11, and during the past four quarters, the highest rates have been in Arizona and Colorado. Notably, these states along with California have registered the sharpest reduction in delinquent loans across the region, reinforcing the idea that shrinking delinquencies and foreclosures are playing a crucial in role the housing market's recovery.

The housing recovery is contributing to overall economic expansion, as states with greater construction activity are seeing higher rates of overall job creation. For instance, above-average employment growth in Arizona, Colorado and Texas is consistent with a strong pace of housing starts, more than twice the national average in the case of Arizona and Colorado. In California, housing starts and job creation are expanding at rates that are close to the national average. Meanwhile, Alabama and New Mexico, which have experienced the slowest pace of job creation across the footprint, have also registered the lowest growth in housing starts. The exception to this relationship is Florida, which has shown slow employment creation, but a strong pace of housing starts.

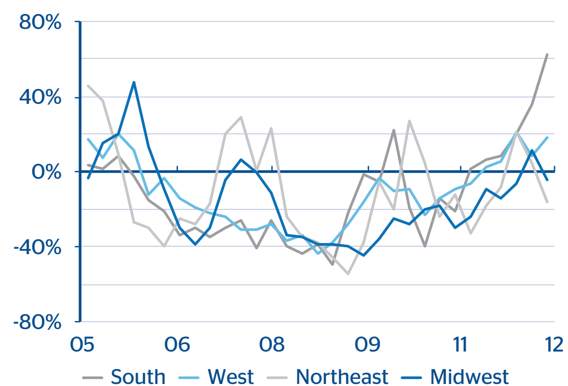
Clearly, short term factors such as employment growth or lower delinquencies are not the only sources of improvement for the housing market. State-specific factors such as judicial review foreclosure processes, the average time and cost to obtain a building permit, and foreign demand for housing are also tied to the housing market's rebound.

Chart 16
Housing Starts vs. Employment (yoy % change, annual average growth rate (3Q11-3Q12))



Source: BBVA Research and Census / Haver

Chart 17
New Home Sales by Region (yoy % change)



Source: Census / Haver

Housing sales have also increased sharply. The sales patterns are consistent with employment and construction indicators at the state level. For instance, data for new home sales reveals that the pace of sales in the West, which includes Arizona, California and Colorado (three states with strong recoveries), is up 62.4% in 3Q12 relative to the previous year. Meanwhile, new home sales in the South, which includes Alabama, Florida and Texas, rose by a more modest 18% during the same period. Existing home sales present the opposite pattern: the pace grew more rapidly in the South (10.8%) compared to the West (2.1%). This result is partially explained by the higher percentage of distressed properties in the West, as some homeowners are choosing not to list their properties for sale at this time.

Differences in sales patterns across states can also be partially explained by the interaction of median family incomes and the selling prices of new versus existing homes. In states with lower median family incomes, potential homebuyers may prefer lower-priced existing homes versus new construction. This takes us to a final discussion about the influence of state-wide economic fundamentals and the heterogeneous housing recovery.

A housing recovery should have a higher chance to be self-sustaining in the most productive states. In the BBVA Compass Sunbelt region, Arizona, Colorado, California and Texas are all showing a more consistent recovery. These states also rank among our top states in terms of high potential GDP growth. High potential GDP growth arises from favorable demographics and industry dynamics. States with greater concentrations of profitable industries such as energy, high-tech and healthcare, or international trade or a high-skill workforce tend to grow more rapidly over time and generate conditions that are favorable to the growth of local housing markets.

Differences in demographics across states may also explain differences in the recovery. For example, Florida, which has a larger share of 50+ year-old residents relative to the nation, is taking longer to rebound. As young people are more likely to become first-time home buyers, states with a relatively larger share of young residents are poised to recover faster. Furthermore, population growth is an essential ingredient to sustain housing demand, and young couples who form families and both domestic migration and foreign immigration all boost local housing markets.

Texas and Florida continue to attract a vast number of foreign immigrants, mainly from Latin America, who support housing demand in metropolitan areas like Miami, San Antonio and Houston. By the same token, Texas has been a magnet for domestic migration due to its strong job creation in sectors such as energy and healthcare. Certainly, higher migration has increased the demand for housing in major metropolitan areas and is putting upward pressure on rents and home prices. Finally, a healthy fiscal balance aids statewide housing markets. Spending cuts to education and public service budgets can have negative impacts on local jobs and home prices, and thus they can further discourage potential homebuyers.

Bottom line

We expect the housing market to continue to improve during the coming years, as residential construction is now making a positive contribution to GDP growth. As banks work through their inventories of foreclosed homes and real-estate owned properties, the supply of distressed properties will continue to shrink, thus tightening supply and preventing prices from falling dramatically. The reduction in the number of distressed sales and slowing foreclosures will continue as economic conditions improve and current homeowners are able to refinance or sell their homes as prices rise. Furthermore, homebuyers will be able to take advantage of low borrowing costs that should last at least through 2015.

The final result of strengthening demand and supply will be more construction, more sales and higher prices. However, differences in expected employment and income growth throughout the BBVA Compass Sunbelt states suggest varying degrees of housing market expansion. In this respect, Arizona, Colorado, California, and Texas are projected to see more robust housing market activity compared to Alabama, Florida and New Mexico. Over the long-run, the housing markets in these states will improve along with their fundamentals and ability to attract new businesses and residents.

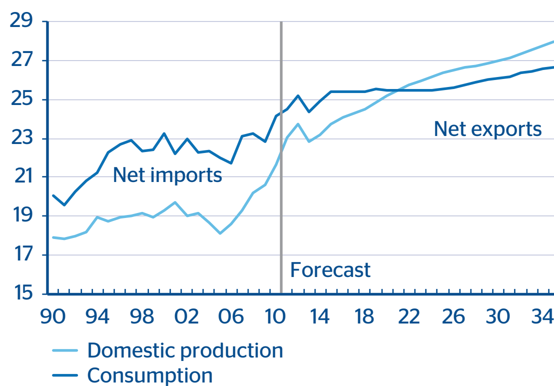
5. Industry Analysis: Opportunities in Midstream Natural Gas

Introduction

In the article *Natural Gas: Fueling the Future* (U.S. Economic Outlook 2Q11), we discussed how technological advances and abundant reserves have produced a dramatic change in the supply and demand of natural gas that is transforming the energy industry while creating thousands of jobs. The "gas revolution" is turning the U.S. energy industry into a supply-driven business with the potential of displacing coal and petroleum as the primary sources of energy for businesses and individuals. Increasing price differentials between natural gas and coal have accelerated the transition from coal-driven to gas-driven power generation. In the following decades, natural gas could become a substitute for gasoline and potentially for nuclear energy. Going forward, demand for natural gas is expected to be driven by the use of natural gas passenger vehicles, demand for electricity, industrial production and exports. Natural gas is so abundant in the U.S. that it could be exported in vast quantities and yield high margins. Global demand for natural gas is projected to increase around 3% per year with Asia, Africa and the Middle East experiencing the highest demand. And last but not least, switching to natural gas as America's primary source of energy has positive environmental and geopolitical spillovers such as lower carbon dioxide (CO_2) emissions and energy independence. Energy-related CO_2 emissions in 2011 reached the second lowest level since 1990, largely due to the transition from coal to natural gas in the production of electricity.

Chart 18

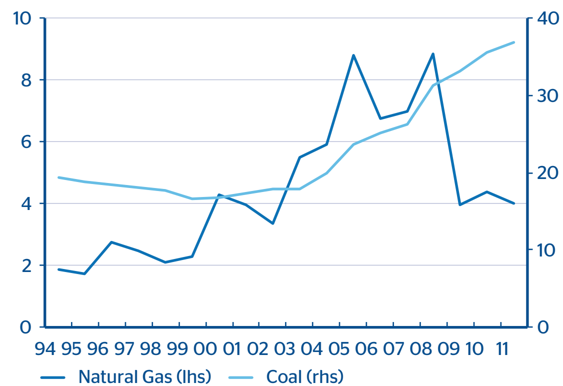
Total U.S. Natural Gas Production, Consumption, and Net Imports, 1990-2035 (trillion cubic feet)



Source: Energy Information Administration

Chart 19

Natural Gas and Coal Prices ($/mmbtu & $/short ton)



Source: Energy Information Administration / Haver

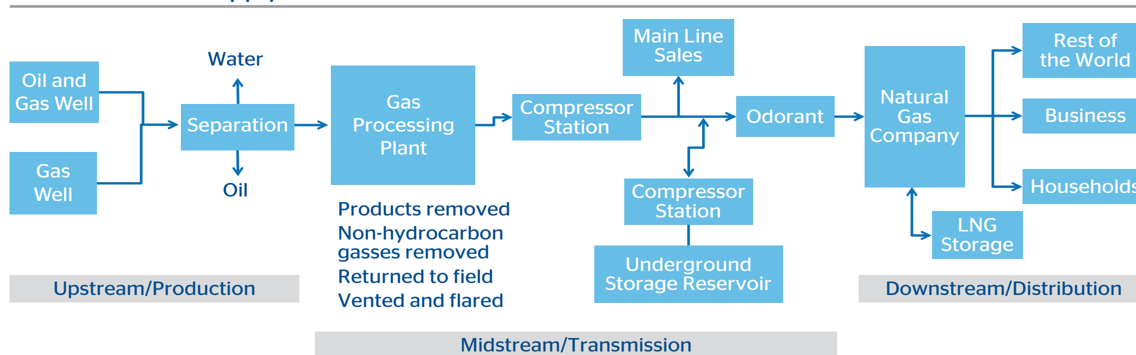
Midstream in a nutshell

The natural gas supply chain is complex. In this article we focus on midstream companies, which are the second stage in the natural gas supply chain. Midstream activities include gathering, processing, transporting and storing natural gas. Value added is generated by processing and moving natural gas from the production centers to the distributor (such as LNG export facility) or directly to the final consumer (an electricity plant).

Midstream operations start with the separation of methane (the main component of natural gas) from other gasses such as butane and propane. This can be done at the well site or at processing plants. Then, natural gas has to be cleaned to remove liquid hydrocarbon and non-hydrocarbon gasses. These byproducts can be commercialized for different purposes. Once byproducts are removed, natural gas is moved through pipelines to storage reservoirs, power plants and distribution facilities that deliver the final product to consumers. When cooled to -260 °F, natural gas liquefies and can be put into special tanks to be shipped overseas or received at U.S. terminals, where it is turned back to its original state and sent to the distribution companies. According to the Energy Information Administration, the U.S. host 210 natural gas pipeline systems, 1400 compressor stations, 400 underground natural storage facilities,

49 export/import facilities via pipelines, 8 LNG import facilities and 100 peak-shaving LNG plants. From the well to the final consumer, natural gas is moved through a complex system of pipelines. Pipelines constitute the most important element of midstream natural gas, and are the most cost-efficient and safest way to transport gas. This is especially relevant in cases when demand is not efficiently connected to the production centers. According to the American Gas Association (AGA), there are approximately 2.4 million miles of pipelines in the U.S. (ten times the distance to the moon!), including 2.1 million miles of local utility distribution pipes and 300,000 miles of transmission lines.

Chart 20
The Natural Gas Supply Chain



Source: Energy Information Administration

Current infrastructure can move natural gas from and to anywhere in the country; however, the expectation of higher demand renders it insufficient. Natural gas consumption is expected to increase from 25.2 trillion cubic feet (Tcf) to 26.6 Tcf in 2035, a 5.7% increase; while production is expected to move from 23.7 to 28.0Tcf, an 18% increase.[1] The Interstate Natural Gas Association of America (INGAA) projects that 43Bcf/d of incremental mainline capacity will be needed from 2010 to 2035, all this in addition to new storage facilities, pipeline laterals and processing plants. The INGAA projects that nearly 13,900 miles of lateral pipelines and 36,000 miles of transmission mainline will be added to the current system by 2035. The INGAA calculates that new transmission infrastructure would cost approximately $5.7 billion per year over the next 25 years. In addition, gathering and processing infrastructure would cost an additional $2.6 billion per year. At the regional level, the INGAA projects that the largest share of pipeline investments is required in the Southwest (21%), followed by Central and Southeast with 19% each. The Northeast, which concentrates the largest demand and hosts the Marcellus shale basin, is expected to consume 15% of future investments.[2] The INGAA expects that upcoming investments in infrastructure, maintenance and operations will support an average of 125,339 direct jobs per year from 2012 to 2035.[3]

Table 4
Summary of Incremental Gas Infrastructure (cumulative)

Type of project	2011 to 2020	2011 to 2035	Average Annual
Inter-regional Pipeline Capacity (Bcfd)	29	43	1.7
Miles of Transmission Mainline (1000s)	16.4	35.6	1.4
Miles of Laterals to/from Power Plants, Storage Fields and Processing Plants (1000s)	6.6	13.9	0.6
Miles of Gathering Line (1000s)	165	414	16.5
Inch-Miles of Transmission Mainline (1000s)	491	1043	42
Inch-Miles of Laterals to/from Power Plants, Storage Fields and Processiong Plants (1000s)	142	304	12
Inch-Miles of Gathering Line (1000s)	592	1518	61
Compression for Pipelines (1000 HP)	3039	4946	197
Gas Storage (Bcf Working Gas)	NA	589	24
Processing Capacity (Bcfd)	18.1	32.5	1.3

Source: INGAA

[1] Source: Energy Information Administration
[2] INGAA (2011) "North American Natural Gas Midstream Infrastructure Through 2035: A Secure Energy Future." Available at www.ingaa.org
[3] INGAA (2011) "Jobs & Economic Benefits of Midstream Infrastructure Development: US Economic Impacts through 2035." Available at www.ingaa.org

Table 5

Natural Gas Infrastructure Capital Requirements (Billions of 2010$)

Type of project	2011 to 2020	2011 to 2035	Average Annual Expenditures
Gas Transmission Mainline	46.2	97.7	3.9
Laterals to/from Power Plants, Gas Storage and Processing Plants	14.0	29.8	1.2
Gathering Line	16.3	41.7	1.7
Gas Pipeline Compression	5.6	9.1	0.3
Gas Storage Fields	3.6	4.8	0.2
Gas Processing Capacity	12.4	22.1	0.9
Total Gas Capital Requirements	**98.1**	**205.2**	**8.2**

Source: INGAA

How midstream projects are developed

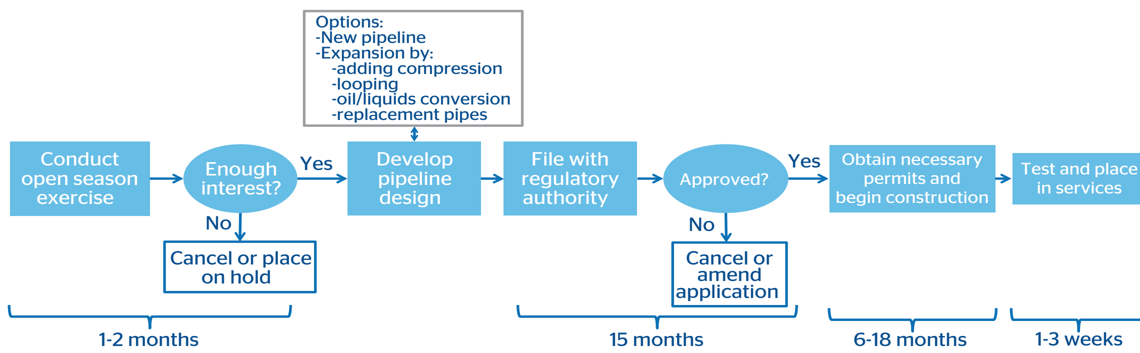
A typical midstream project could take an average of three years from the time it is conceived to the time it is built and tested.

In order to authorize construction and operation, the Federal Energy Regulatory Commission (FERC) requires sponsors to prove that there is enough market interest in the project. In a first step that lasts 1 to 2 months, potential customers (i.e. distributors, electricity plants, etc.) are invited to sign non-binding contracts for natural gas transportation. If sponsors can prove that there is enough interest in the project, the next step is to develop a plan and move forward in complying with safety, financial, security and environmental supervision in order to obtain the construction approval. If the project involves the exporting of LNG, additional authorization might be required from the Department of Energy. Getting FERC approvals could take an average of 15 months. Sponsors may accept or reject FERC conditions. If the latter happens, sponsors have to re-apply for authorization. Certain small projects are eligible to obtain blanket certification or optional expedited certificates as long as they comply with a minimum of environmental and safety standards. The work of the FERC typically requires collaboration with other regulatory agencies. According to the EIA, there are 13 regulatory entities at the federal level supervising midstream natural gas projects included but not limited to the IRS, the Department of Transportation, the Environmental Protection Agency and Homeland Security; all this without counting the role of State Utility Commissions and local authorities.

Once the authorization is obtained, the construction could take between 6 to 18 months. Finding the right construction company is crucial for the sponsor's ability to attract capital. Indeed, one of the main risks for the completion of a pipeline has to do with delays in construction, sometimes caused by human errors or natural disasters, especially in areas that are vulnerable to hurricanes. Sponsors try to minimize this risk by looking for highly specialized construction companies with a proven record of experience in the field. Once the construction finishes, the project is commissioned and tested before it starts operating on a regular basis. This process takes an average of one to three weeks.

Chart 21

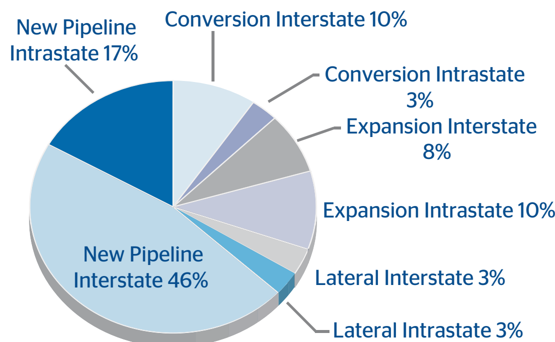
Development and Expansion Process



Source: Energy Information Administration

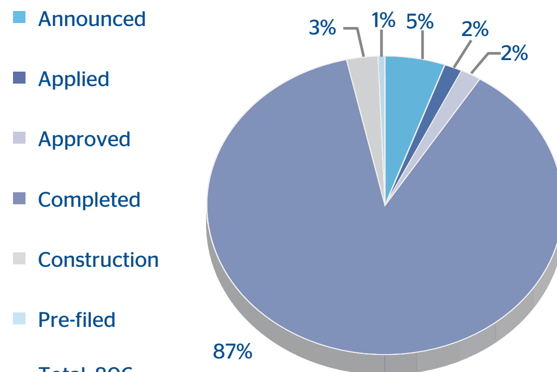
Current legislation has mixed effects on the capacity of midstream projects to generate revenue and achieve efficiency. On the one hand, the FERC base rate is flexible enough to allow sponsors to recover their initial investments in a relatively short period of time. But on the other hand, current legislation forbids pipeline transportation companies from engaging in merchant gas sales or bundling services, limiting the options for revenue diversification. These dispositions, included in the FERC order 636 of 1992, were aimed at unbundling the industry (transportation, storage and marketing) and allowing sellers to choose the best alternatives for each kind of service. This means that midstream companies cannot pursue vertical integration as a way to reduce costs and improve efficiency. Therefore, productivity gains are achieved for the most part through capacity expansion. Expanding pipeline capacity involves different kinds of projects like building a new system, turning an oil pipeline into a natural gas pipeline, adding a parallel pipeline to an existing section, installing lateral extensions, and upgrading or expanding existing infrastructure. This is incentivized by the existing regulation as the FERC fixes the service rates that companies can charge, and rate increases are granted on the basis of capacity expansion. The EIA, registered 806 pipeline projects in North America between June 2009 and August 2012, and almost half of them dealt with new interstate pipelines. The cost of these projects range between $30 million to $3.0 billion. As of August 2012, the total cost of ongoing pipeline projects (applied, announced, approved, pre-filed or in construction) is reported at $11.8 billion. Projects involving new interstate pipelines tend to be the most expensive.

Chart 22
Pipeline Projects by Type (June 2009 to August 2012)



Source: Energy Information Administration

Chart 23
Pipeline Projects by Status (June 2009 to August 2012)



Source: Energy Information Administration

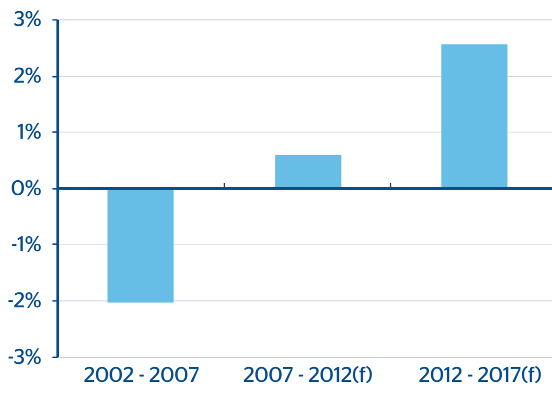
Midstream from an NAICS perspective

The North America Industry Classification System (NAICS), classifies midstream operations under the label Pipeline Transportation of Natural Gas (486210). The category also includes transmission (i.e. processing plants and distribution systems) and storage. Using information from the Economic Census and the Covered Employment and Wages survey, we have calculated the existence of approximately 128 firms engaged in midstream natural gas activities classified under the 486210 code. In 2012, these companies are expected to generate $19.1 billion in revenues, employ nearly 30,000 workers in 1600 establishments, and pay $3.1 billion in wages. In a baseline scenario, we expect industry revenue to increase by an average of 2.6% CAGR (vs. 0.6% between 2007 and 2012) over the next five years. Our forecast assumes higher natural gas prices and moderate economic recovery.

Companies in this industry compete by volume as service rates are determined by the FERC. As we pointed out in the previous section, the FERC approves rate increases on the basis of new investments and capacity expansion. This pricing model reduces revenue volatility as companies are paid the same rates regardless of price fluctuations. However, this model tends to squeeze margins because companies have to increase capital spending in order to get higher rates approved. The large amount of capital investments required to obtain approval for higher rates puts small firms in disadvantage relative to large firms. This could explain why consolidation has become a trend in the industry. An example

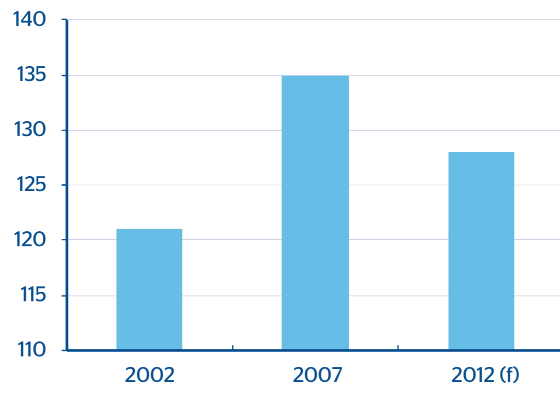
of consolidation is the acquisition that Kinder Morgan, Inc. made of El Paso Corporation in October 2011. With this operation, Kinder Morgan became the largest owner of gas pipeline with approximately 67,000 miles. Another example is the acquisition of Big Sandy Pipeline LLC by Spectra Energy (owner of more than 19,000 miles of transmission pipelines) in May 2011. Our calculations suggest that the number of firms under the 486210 code went down from 135 in 2007 to 128 in 2012. This number is likely to shrink further as firms continue to integrate in order to attract investors, achieve economies of scale and gain market share.

Chart 24
Pipeline Transportation of Natural Gas (revenue growth, %, f=forecast)



Source: BBVA Research with Census data

Chart 25
Pipeline Transportation of Natural Gas (firms with paid employees, f=forecast)



Source: BBVA Research with Census data

Midstream from a financial perspective

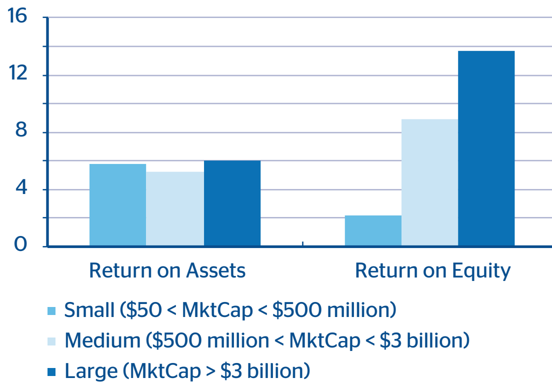
Most of the midstream natural gas projects are sponsored by Master Limited Partnerships (MLPs). MLPs are limited partnerships with interest in projects related with natural resources, commodities or real estate. The MLP are pass-through income entities, meaning that they distribute proceeds among owners according to their share of "units", typically on a quarterly basis. They are publicly traded in the stock market -which allows them to raise equity for project financing- and enjoy fiscal privileges as they are not subject to corporate income tax, meaning that owners only pay taxes on their portions of the MLP's income. This special treatment avoids the typical problem of double taxation that affects corporations in America (i.e. paying corporate income taxes while taxing individuals on dividend payments). Given this characteristic, it is not surprising that shares of an MLP tend to be worth more relative to the shares of included corporations. MLPs are valued on their capacity to meet current and future distribution obligations and on the perspective to increase the size of their distributions.

Most of the pipeline, storage or export terminal projects are sponsored by MLPs. Among the biggest ones are Enterprise Product Partners (with a market capitalization of $47.5bn), Kinder Morgan Energy Partners ($30.5bn), Plains All American Pipeline ($15.3bn) and Energy Transfer Partners ($10.2bn). The MLP itself owns other companies in charge of execution and operation of their different projects. The financial statement analysis (FSA) of a sample of 50 publicly traded MLPs shows that mid-cap MLPs are more profitable than small and large-cap companies. However, large-caps have the highest median return on equity suggesting that the larger the MLP, the more efficient its use of investor's money.

Depending on their goals, MLP projects are financed either through equity or debt. Most of the time, projects are financed through a combination of both, even though issuing bonds or getting a bank loan could be less costly. There is an important difference between midstream natural gas projects and other industries when it comes to financing. Take for example the case of the high-tech industry, in which successful startups are almost entirely financed by private equity. This is not by chance; as high-tech startups struggle to get a stable stream of cash flow for some time, the credit risk tends to be too high for traditional banking debt, where interest rates must be paid on a regular basis. On the contrary, a pipeline project sees the money flowing almost immediately after completion. Therefore, it makes

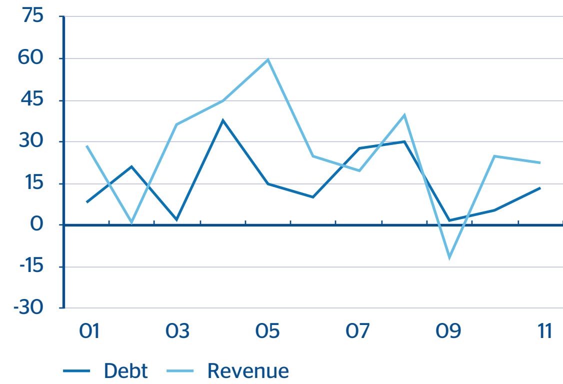
sense for the high-tech startup to be engaged in an equity-funding structure as shareholders can retain the stock in the expectation of better outcomes or the company could decide to withhold dividend payments. In contrast, an MLP has the ability to protect its stock from dilution by obtaining a bank loan.

Chart 26
MLPs: Selected Efficiency Ratios (%)



Source: BBVA Research with Bloomberg data

Chart 27
MLPs: Median Revenue and Debt Growth (%)

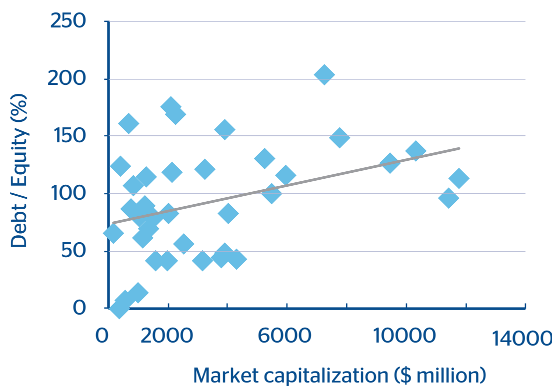


Source: BBVA Research with Bloomberg Data

Debt and Midstream Natural Gas

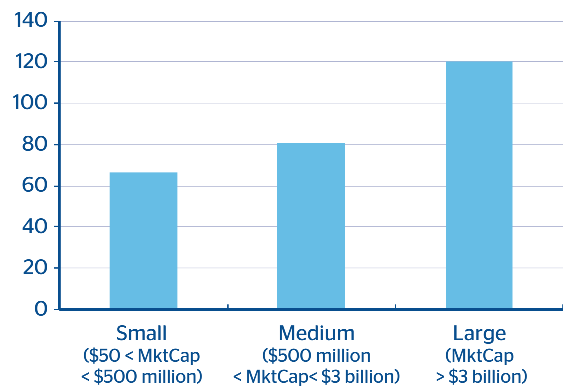
Midstream projects have special characteristics that make them particularly attractive for commercial banks. First, they have the lowest credit risk in the supply chain. Even before the construction takes place, long-term contracts for the transportation of natural gas are already signed. Second, cash flow volatility is minimal. This is especially the case for domestic pipelines, which charge a fee for service, thus reducing exposure to price fluctuations. Moreover, risks to cash flow generation are tilted to the upside since there is a huge infrastructure deficit that needs to be narrowed and demand for natural gas is expected to increase. For MLPs, commercial bank debt represents a cost-effective alternative to project financing. The Fed's policies have created an environment of very low and stable interest rates reducing the cost of commercial bank debt relative to equity. Moreover, debt issuance can be costly, especially for firms that are below investment grade. In addition, there are tax advantages from taking debt as the interest is treated as an expense.

Chart 28
MLPs:
Debt to Equity vs. Market Cap



Source: BBVA Research with Bloomberg data

Chart 29
MLPs: Median Debt to Equity Ratio
(by market capitalization, %)



Source: BBVA Research with Bloomberg Data

According to our analysis, the median debt to equity ratio accelerated in 2001 and moved between 100 and 120% until 2011 when it went down to 93%. Moreover, data suggests that debt financing relative to equity is correlated with size. In other words, the biggest firms have the highest debt-to-equity ratios. In 2011, the median debt to equity ratio was nearly 120% for large-cap MLPs and 66% for small caps. Arguably, small MLPs find it more difficult to obtain debt since, as the ROE table shows, they tend to be less efficient in the use of capital. MLP debt growth is positively correlated with revenue. It is noteworthy that although revenue declined during the worst years of the recession, debt continued to grow, suggesting positive expectations on the side of both creditors and debtors. Going forward, debt growth is expected to accelerate consistent with the economic recovery, creating ample opportunities for commercial banks.

Risks

Midstream natural gas is not exempt from risks. The industry is vulnerable to the business cycle as slow economic growth reduces the demand for natural gas. Exchange rate volatility is also a risk for LNG export terminals; however, it can be mitigated with the appropriate hedging strategies. LNG exports are exposed to global economic growth fluctuations and the competition from abroad. Abundant natural gas in the U.S. is not the only privilege of North America. In many countries, resources are managed by government-owned companies that have greater bargaining power and can put the U.S. exports at a disadvantage. Natural disasters can also cause delays in construction and severe disruptions in the supply chain, threatening the ability of MLPs to generate revenue for shareholders and repay debt.

But perhaps the most important risk that the natural gas industry faces has to do with overregulation. Effective regulation should aim at promoting growth and fostering competition without compromising the overall well being of society. Tensions between natural gas companies and regulators are likely to intensify as production expands and touches many issues of public concern such as endangered species, protected natural areas, noise, pollution and water scarcity. In this context, tougher regulation at all levels of the supply chain seems unavoidable and natural gas companies will continue to look for ways to minimize its impact. More and more, energy companies have to deal with more organized and informed communities as relevant information is no longer exclusive to firms and governments. In the social media era, even the smallest accident has the potential to unleash strong criticism, legal action, protests, and, depending on the magnitude of the damage, more regulation. A successful communication strategy is a must for natural gas companies and the industry as a whole. Finally, although midstream technologies are increasingly safer, accidents are possible and midstream companies should be prepared for them.

Bottom Line

Midstream natural gas has several characteristics that make it attractive. Pipelines, storage facilities and LNG terminals benefit from abundant supply, increasing demand and a fee-for-service scheme that allows them to assure a stable stream of cash flow relative to upstream or downstream businesses. Substantial capital investments in capacity expansion and new infrastructure will be needed in the following decades and financial institutions must be ready to provide capital and financial services needed for this expansion.

6. The Contribution of the Arts in the BBVA Compass Sunbelt

A complex but successful enterprise

Arts have a positive contribution on the economic development of countries and regions. According to the Americans for the Arts organization, the U.S. arts industry supported 2.2 million jobs within 113,000 non-for-profit organizations and 800,000 for-profit businesses, and generated $150 billion in consumer spending in 2010.[1] Arts contribute positively to productivity growth through education initiatives and social service while playing a crucial role in the revitalization of urban areas. The presence of art venues and artists in a city is correlated with positive perceptions of quality of life. Arts create significant spillovers in local economies across businesses such as retail shops, hotels, bars and restaurants, parking lots, graphic design and printing services, and transportation.

The economics of art are uniquely challenging because, unlike many goods and services, a symphony performance or a painting has very small marginal costs and the value of many arts products is subjective and experiences wide fluctuations as the market swings. In addition, unlike a car manufacturer that harnesses advances in materials science to produce cars at a lower cost, the arts industry cannot increase output with fewer resources. An orchestra cannot play Beethoven's Symphony No. 9 in half the time or with fewer musicians and produce a more enjoyable result.

Given the economic structure of the industry, arts are considered a public good throughout the world and governments often play a key role in directing and supporting the arts through entities such as a ministry of arts and culture. For example, throughout much of Latin America, the arts are managed and entirely funded by the public sector. Orchestras and performers are essentially government employees: Their production costs and salaries are funded by the treasury.

In contrast, although U.S. federal, state and local governments play a vital role in supporting the arts industry, they have a very limited role in its administration. There is no "national arts policy" that determines the industry's exposure or growth path. The federal government's direct support for arts is mostly limited to the National Endowment for the Arts, and state governments promote the arts through agencies or commissions. The NEA's role is limited to grants and initiatives that support exhibitions and education, and the agency expects their support to be more than matched by support from the private sector.[2]

The government indirectly allows the private industry to flourish because it provides incentives for corporations and individuals to support the arts through tax-deductible donations. The U.S. arts industry is dominated by nonprofit organizations that enjoy this special tax advantage. These organizations, however, share the same managerial challenges of private businesses. Like any for-profit company, nonprofits must seek to maximize revenue and minimize costs, develop marketing strategies, and strive to provide the best patron experience. The flow of private dollars into the U.S. arts industry enables these organizations to compete for resources and uniquely compensate talented artists.

Several characteristics of the U.S. economy increase the art industry's competitiveness. Labor market flexibility allows artists to move throughout the country and pursue their dreams, the possibility of foreign immigration attracts international talent, population growth and urbanization sustain the industry's expansion, and income growth results in more revenue for the arts.

[1] Source: Americans for the Arts (2012), National Arts Index 2012: An Annual Measure of the Vitality of Arts and Culture in the United States. Available at http://www.americansforthearts.org

[2] "In FY 2010, the NEA invested nearly $139 million through more than 2,700 grants across the country; in turn, these organizations had direct expenditures in their communities of $2.1 billion. NEA grants have a powerful multiplying effect, with each grant dollar typically matched by nine dollars of additional investments in this country's nonprofit arts organizations." Source: NEA Facts at a Glance. Available at http://www.nea.gov/about/Facts/AtAGlance.html

Consequently, the art industry is very competitive and the chances for success are limited. The combination of strong competition among private organizations and the absence of government intervention in arts administration has resulted in outstanding contributions to human culture in a relatively short period of U.S history.

Arts in the Sunbelt

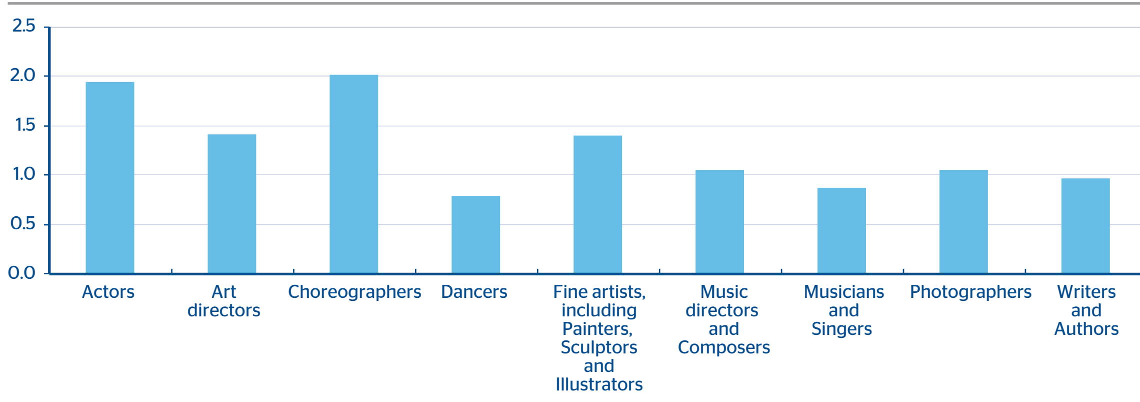
To assess the economic structure of the arts in our region, we analyzed the shares of arts occupation employment by metropolitan areas. The Bureau of Labor Statistics' measure of occupation concentration, the location quotient, compares the local employment share to the national share. A value larger than 1 indicates a greater concentration of a particular occupation relative to the rest of the nation in that area.

The BBVA Compass Sunbelt region has a varied concentration of arts occupations that is highly skewed toward California. The average location quotient for the Sunbelt's major metropolitan areas is higher than 1 for actors and art directors, reflecting the presence of Hollywood in the Los Angeles metropolitan area. The concentration of choreographers and dancers is also high as the region hosts some of the largest and most respectable ballet companies, such as the Houston Ballet and the San Francisco Ballet. For music professionals, such as singers and conductors, the region's concentration is below the U.S. average. The region's concentration of writers and authors, photographers and fine artists is similar to the national average.

Another way to assess the relative importance of the arts industry in the Sunbelt is the analysis of industry employment and establishments per 100,000 habitants. Using data from the BLS Covered Employment and Wage survey, we analyzed three subsectors: (1) independent artists, writers and performers; (2) performing arts companies; and (3) museums. Our analysis comes with a few caveats. First, it does not include the indirect jobs created by arts. Second, the BLS does not have a separate category for art museums and they could be under- or over-represented in our calculations. Despite these issues, the data provides us with a good insight of our region's relative position of the arts.

Chart 30

BBVA Compass Sunbelt Region: Location Quotients by Selected Occupations



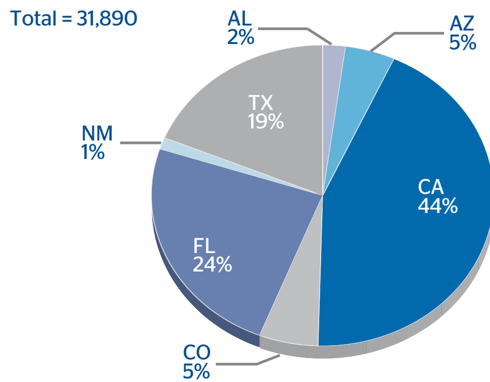
Source: BLS

On a per capita basis, Alabama, Arizona, Texas, Colorado and New Mexico have fewer performing arts company establishments per capita than the national average, and California and Florida are above average. For independent artists and museums, only Alabama and Texas fall below the national average of establishments per capita. Employment-per-capita in these three categories outperforms the national average in California, Colorado and Florida. In absolute terms, nearly 44% of persons employed in performing arts companies across the Sunbelt region are located in California, followed by Florida and Texas with 24% and 19%, respectively. Meanwhile, nearly 72% of all the independent artists, writers and performers in the Sunbelt live in California, followed by Texas and Florida with 10% each.

Employment dynamics provide a different picture. In the U.S., job creation in performing arts companies has declined by an average rate of 1.2% per year between 2001 and 2011, whereas employment growth for independent artists, writers and performers increased 2.3% in the same period. However, relatively higher population and income growth in Arizona, Florida and Texas during this time resulted in an expansion of employment in performing arts companies. Meanwhile, employment for independent

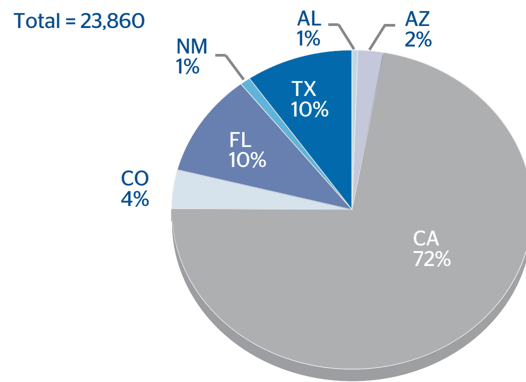
artists, writers and performers has increased in virtually every state during the same period, with Texas and Florida accounting for the fastest growth. A plausible explanation for the declining growth in performing arts companies' employment nationwide could be the result of a downward trend in public funding. Contrary to independent artists who necessarily have a more entrepreneurial approach to the arts, the performing arts rely heavily on public funds and private donations. Research conducted by Grantmakers in the Arts found that total public funding for the arts has declined 28% in real terms between 1992 and 2011. In the same period, appropriations for the National Endowment for the Arts went down 44% while state and local funding declined by 18% and 27%, respectively.[3]

Chart 31
Employment in Performing Arts Companies (2011, share of total, %)



Source: BLS

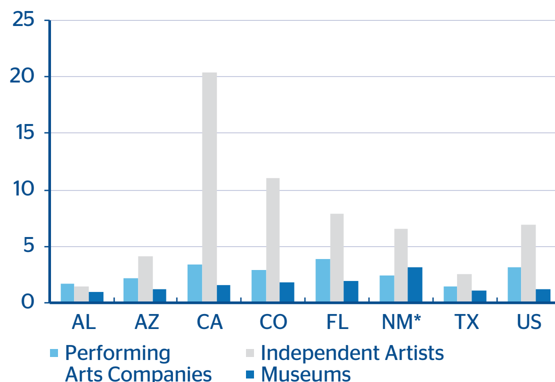
Chart 32
Independent Artist, Writers & Performers Employment (2011, share of total, %)



Source: BLS

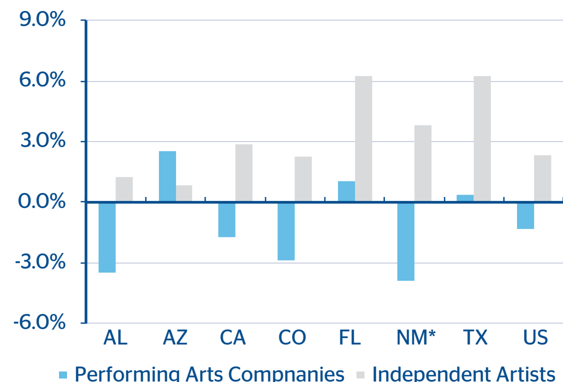
The Great Recession has certainly had a negative impact on public funding. Fiscal stress at the federal and state levels has resulted in drastic spending cuts and in some cases the elimination of state art agencies, whose functions were integrated in other departments such as tourism or commerce. Moreover, many private donations dried up during the recession. According to the Giving USA foundation,[4] total charitable giving declined 4% in real terms in 2008; it stayed flat in 2009 and jumped by nearly 2.9% and 0.8% in 2010 and 2011, respectively. Between 2009 and 2011 the average giving to arts by high-net-worth households went down to $3,952 from $5,798 – a 31.8% reduction.

Chart 33
Establishments Per-Capita in 2011



BBVA Research and BLS

Chart 34
Employment in the Arts (average annual growth 2001-2011, %)



BBVA Research and BLS

[3] Source: Barsdate, Kelly (2011), Public Funding for the Arts: 2011 Update, "Arts Funding Snapshot: GIA's Annual Research on Support of Arts and Culture", GIA Reader Vol.22, No.3, Fall2011. Available at http://www.giarts.org
[4] Giving USA (2012). Giving USA 2012: The Annual Report on Philanthropy for the Year 2011. Executive summary available at http://www.givingusa-reports.org

A brief discussion on wealth and the funding of arts

Throughout history, there has always been a strong relationship between arts and wealth. For instance, the Renaissance was ignited in large part by the patronage of the Medici family (engaged in the banking business) and the economic success of Italian cities that were actively engaged in international trade. Today, the links between wealth and the success of arts remains relevant. In 2011, U.S. private contributions to the arts, culture and humanities sectors totaled $13 billion (approximately 4% of total charitable contributions) or $42 per capita.[5]

As the table shows, donors with incomes below $200,000 allocate 1% to 2% of their charitable contributions to arts, while donors with gross adjustable income of at least $200,000 tend to devote 15% of their charitable contributions to arts. Consequently, the outlook for arts is positive in areas where the number of wealthy individuals is expanding and metropolitan areas are thriving. In this sense, the Sunbelt is relatively well-positioned, as new residents continue to move into the region and its major metropolitan areas are wealthier than average.[6]

Table 6

Percent of Individual Charitable Contributions by Adjusted Gross Income, 2005

Recipient	Under $100,000	$100,000 to $200,000	$200,000 to $1 million	Over $1 million
Arts and cultural organizations	1%	2%	15%	15%
Religious organizations	67%	57%	23%	17%
Combined purpose funds*	9%	11%	11%	4%
Organizations devoted to helping meet basic needs	10%	12%	6%	4%
Health organizations	3%	6%	5%	25%
Eduaction organizations	3%	6%	32%	25%
Other	7%	6%	8%	10%

*Organizations that pool funding to support a coalition of charities
Source: National Endowment for the Arts with Congressional Budget Office data

Bottom Line

The arts industry in the U.S. is a complex system of professionals and organizations that operate in a very competitive environment. Arts are funded to a large extent by charitable contributions and public money. The U.S. tax code incentivizes individuals and corporations to donate money to the arts, and this motivates competition in the industry and has yielded outstanding results in virtually every discipline. There is an important link between arts funding and wealthier households, which tend to devote more of their charitable contributions to arts. Arts in the BBVA Compass Sunbelt region have good prospects as economic opportunities are creating jobs and wealth at a faster pace than the rest of the nation.

[5] Source: National Endowment for the Arts (2012), How the United States Funds the Arts, Third edition. Available at www.nea.gov
[6] Congressional Budget Office (2011). Options for Changing the Tax Treatment of Charitable Giving. Available at www.cbo.gov

7. Factsheet: Education Statistics

Table 7

Annual expenditure per student (in equivalent USD, using PPPs)

	United States	OECD average	Ranking
Pre-primary education	8396	6670	6/34
Primary education	11109	7719	4/35
Secondary education	12550	9312	5/37
Tertiary education	29201	13728	1/37
Public and private expenditure on education (% of GDP)	7%	6%	5/37
Public expenditure on education (% of total)	13%	13%	15/32
Percentage of today's young people expected to complete upper secondary education in their lifetime	77%	84%	22/27
Percentage of today's young people expected to complete university education (tertiary-type A) in their lifetime	38%	39%	14/28
Average earnings premium for 25-64 year-olds with tertiary education (compared to people with upper secondary education; upper secondary = 100)			
Men and Women	177	155	6/32
Men	184	160	7/32
Women	175	157	6/32
Percentage of population that has attained tertiary education			
25-64 year-olds	42%	31%	4/41
Percentage of population that has attained at least upper secondary education			
25-64 year-olds	89%	74%	4/40
55-64 year-olds	90%	62%	1/36

Source: OECD Education at Glance 2012

Table 8

Total Expenditure Per K-12 Students by State ($)

	2005-2006	2006-2007	2007-2008	2008-2009	National Ranking (2008-2009)
New Mexico	9,707	9,871	10,809	11,849	24
California	10,230	10,937	11,645	11,397	32
Texas	9,315	9,825	10,662	11,149	34
Florida	10,029	11,270	11,819	11,097	35
Colorado	9,978	10,160	11,133	10,669	37
Alabama	8,908	9,698	10,645	10,642	38
Arizona	7,794	8,930	9,691	9,607	45
United States	10,754	11,477	12,239	12,768	

Source: National Center for Education Statistics

Table 9

8th Grade Average Scale Score in Math and Reading

	Reading				
	2005	2007	2009	2011	National Ranking (2011)
Colorado	265	266	266	271	8
Florida	256	260	264	262	34
Texas	258	261	260	261	35
Arizona	255	255	258	260	38
Alabama	252	252	255	258	42
New Mexico	251	251	254	256	46
California	250	251	253	255	47
United States	260	261	262	264	-
	Math				
	2005	2007	2009	2011	National Ranking (2011)
Colorado	281	286	287	292	8
Texas	281	286	287	290	10
Arizona	274	276	277	279	39
Florida	274	277	279	278	42
New Mexico	263	268	270	274	44
California	230	230	232	234	48
Alabama	262	266	269	269	50
United States	237	239	239	240	-

Source: National Center for Education Statistics

8. Economic Forecasts (YoY % Change)

Table 10

	2011	1Q12	2Q12	3Q12	4Q12	2012	2013
U.S.							
Real GDP	1.8	2.4	2.1	2.3	**1.6**	**2.1**	**1.8**
Nonfarm Employment	1.2	1.5	1.3	1.4	**1.4**	**1.4**	**1.1**
Nom. Personal Income	5.1	2.9	3.2	3.6	**3.9**	**3.4**	**3.6**
Home Price Index (Case Shiller)	-3.9	-1.2	1.5	3.7	**5.9**	**2.5**	**3.7**
Home Sales	1.9	6.2	9.3	7.7	**5.9**	**7.2**	**4.1**
Arizona							
Real GDP	1.5	**1.2**	**1.8**	**2.2**	**2.4**	**1.9**	**2.1**
Employment	1.0	1.7	2.0	2.3	**2.0**	**2.0**	**1.6**
Real Personal Income	2.8	2.6	2.5	**2.3**	**2.7**	**2.5**	**2.5**
Home Price Index	-9.8	3.1	13.7	20.1	**22.0**	**14.7**	**15.5**
Colorado							
Real GDP	1.9	**1.8**	**2.5**	**3.0**	**3.3**	**2.6**	**2.8**
Employment	1.5	2.0	1.7	1.6	**1.9**	**1.8**	**1.4**
Real Personal Income	3.9	2.5	2.0	**2.0**	**1.8**	**1.7**	**2.6**
Home Price Index	-2.5	-0.1	5.7	6.6	**7.5**	**4.9**	**4.1**
New Mexico							
Real GDP	0.2	**0.5**	**0.9**	**1.3**	**1.5**	**1.0**	**1.5**
Employment	0.1	0.7	0.0	-1.1	**-0.7**	**-0.3**	**0.4**
Real Personal Income	2.3	2.0	2.1	**1.6**	**1.6**	**0.7**	**2.3**
Home Price Index	-5.3	-1.8	2.5	1.5	**4.0**	**1.6**	**2.8**

	2011	1Q12	2Q12	3Q12	4Q12	2012	2013
Alabama							
Real GDP	-0.8	**-0.2**	**0.6**	**1.3**	**1.7**	**0.8**	**1.7**
Employment	-0.2	0.0	0.3	0.5	**0.7**	**0.4**	**0.5**
Real Personal Income	1.7	1.0	1.0	**0.9**	**0.8**	**0.9**	**1.4**
Home Price Index	-5.1	2.5	5.0	2.7	**2.0**	**3.1**	**2.9**
California							
Real GDP	2.0	**1.7**	**2.3**	**2.7**	**2.8**	**2.4**	**2.0**
Employment	1.0	1.1	1.6	2.1	**1.9**	**1.7**	**1.3**
Real Personal Income	3.0	2.8	2.6	**2.4**	**2.3**	**1.9**	**2.3**
Home Price Index	-7.0	-0.9	4.5	7.2	**8.0**	**4.7**	**6.2**
Florida							
Real GDP	0.5	**0.8**	**1.4**	**1.9**	**2.1**	**1.5**	**1.6**
Employment	1.1	1.1	0.8	1.0	**0.7**	**0.9**	**0.9**
Real Personal Income	2.4	1.9	1.5	**1.2**	**1.1**	**1.4**	**2.7**
Home Price Index	-6.2	4.7	7.8	7.9	**10.0**	**7.6**	**6.0**
Texas							
Real GDP	3.3	**2.6**	**3.4**	**3.9**	**4.1**	**3.5**	**3.1**
Employment	2.1	2.5	2.2	2.3	**2.5**	**2.4**	**1.8**
Real Personal Income	4.6	3.1	3.2	**3.2**	**3.3**	**3.2**	**4.0**
Home Price Index	-1.0	3.3	4.6	5.6	**5.2**	**4.7**	**4.4**

Source: BBVA Research, BEA, BLS, NAR, Census Bureau and FHFA

Table 11

Economic Structure

	U.S.	AL	AZ	CA	CO	FL	NM	TX
GDP (2011 $ Billions)	15,076	173	258	1,959	264	754	79	1,308
Population (2011 Thousands)	311,592	4,803	6,483	37,692	5,117	19,058	2,082	25,675
Labor Force (Oct '12 Thousands)	155,641	2,161	3,011	18,360	2,726	9,342	926	12,644
NonFarm Payroll (Oct '12 Thousands)	133,523	1,882	2,464	14,417	2,310	7,372	799	10,883
Unemployment Rate (Oct '12)	7.9	8.1	8.1	10.1	7.9	8.5	6.3	6.6
Total Building Permits, (YTD Sep '12)	404,736	6,459	12,969	21,200	10,246	32,408	3,099	62,693
Change in Building Permits (YTD YoY (%))	21.8	5.3	58.5	20.1	34.4	25.7	8.3	22.9
Home Ownership Rate (3Q12)	65.5	71.2	65.7	54.9	66.6	66.5	65.4	63.6
Housing Prices (3Q12 YoY Change (%))	4.0	2.7	20.1	7.2	6.6	7.9	1.5	5.6
Exports of Goods (3Q12 $ Billions)	378.2	4.8	4.6	39.2	2.1	16.7	0.8	65.7
Change in Exports (3Q12 YoY Change (%))	1.2	6.4	8.5	-3.0	12.5	-1.6	34.3	3.8

Source: BEA, BLS, Census, WiserTrade and FHFA

DISCLAIMER

This document and the information, opinions, estimates and recommendations expressed herein, have been prepared by Banco Bilbao Vizcaya Argentaria, S.A. (hereinafter called "BBVA") to provide its customers with general information regarding the date of issue of the report and are subject to changes without prior notice. BBVA is not liable for giving notice of such changes or for updating the contents hereof

This document and its contents do not constitute an offer, invitation or solicitation to purchase or subscribe to any securities or other instruments, or to undertake or divest investments. Neither shall this document nor its contents form the basis of any contract, commitment or decision of any kind.

Investors who have access to this document should be aware that the securities, instruments or investments to which it refers may not be appropriate for them due to their specific investment goals, financial positions or risk profiles, as these have not been taken into account to prepare this report. Therefore, investors should make their own investment decisions considering the said circumstances and obtaining such specialized advice as may be necessary. The contents of this document is based upon information available to the public that has been obtained from sources considered to be reliable. However, such information has not been independently verified by BBVA and therefore no warranty, either express or implicit, is given regarding its accuracy, integrity or correctness. BBVA accepts no liability of any type for any direct or indirect losses arising from the use of the document or its contents. Investors should note that the past performance of securities or instruments or the historical results of investments do not guarantee future performance.

The market prices of securities or instruments or the results of investments could fluctuate against the interests of investors. Investors should be aware that they could even face a loss of their investment. Transactions in futures, options and securities or high-yield securities can involve high risks and are not appropriate for every investor. Indeed, in the case of some investments, the potential losses may exceed the amount of initial investment and, in such circumstances, investors may be required to pay more money to support those losses. Thus, before undertaking any transaction with these instruments, investors should be aware of their operation, as well as the rights, liabilities and risks implied by the same and the underlying stocks. Investors should also be aware that secondary markets for the said instruments may be limited or even not exist.

BBVA or any of its affiliates, as well as their respective executives and employees, may have a position in any of the securities or instruments referred to, directly or indirectly, in this document, or in any other related thereto; they may trade for their own account or for third-party account in those securities, provide consulting or other services to the issuer of the aforementioned securities or instruments or to companies related thereto or to their shareholders, executives or employees, or may have interests or perform transactions in those securities or instruments or related investments before or after the publication of this report, to the extent permitted by the applicable law.

BBVA or any of its affiliates´ salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to its clients that reflect opinions that are contrary to the opinions expressed herein. Furthermore, BBVA or any of its affiliates' proprietary trading and investing businesses may make investment decisions that are inconsistent with the recommendations expressed herein. No part of this document may be (i) copied, photocopied or duplicated by any other form or means (ii) redistributed or (iii) quoted, without the prior written consent of BBVA. No part of this report may be copied, conveyed, distributed or furnished to any person or entity in any country (or persons or entities in the same) in which its distribution is prohibited by law. Failure to comply with these restrictions may breach the laws of the relevant jurisdiction.

In the United Kingdom, this document is directed only at persons who (i) have professional experience in matters relating to investments falling within article 19(5) of the financial services and markets act 2000 (financial promotion) order 2005 (as amended, the "financial promotion order"), (ii) are persons falling within article 49(2) (a) to (d) ("high net worth companies, unincorporated associations, etc.") Of the financial promotion order, or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the financial services and markets act 2000) may otherwise lawfully be communicated (all such persons together being referred to as "relevant persons"). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons. The remuneration system concerning the analyst/s author/s of this report is based on multiple criteria, including the revenues obtained by BBVA and, indirectly, the results of BBVA Group in the fiscal year, which, in turn, include the results generated by the investment banking business; nevertheless, they do not receive any remuneration based on revenues from any specific transaction in investment banking.

BBVA is not a member of the FINRA and is not subject to the rules of disclosure affecting such members.

"BBVA is subject to the BBVA Group Code of Conduct for Security Market Operations which, among other regulations, includes rules to prevent and avoid conflicts of interests with the ratings given, including information barriers. The BBVA Group Code of Conduct for Security Market Operations is available for reference at the following web site: www.bbva.com / Corporate Governance".

BBVA, S.A. is a bank supervised by the Bank of Spain and by Spain's Stock Exchange Commission (CNMV), registered with the Bank of Spain with number 0182.

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

Chief Economist
Nathaniel Karp
+1 713 881 0663
nathaniel.karp@bbvacompass.com

Kim Fraser
kim.fraser@bbvacompass.com

Jason Frederick
jason.frederick@bbvacompass.com

Marcial Nava
marcial.nava@bbvacompass.com

Boyd Stacey
boyd.stacey@bbvacompass.com

Alejandro Vargas
alejandro.vargas@bbvacompass.com

Art & Lay out:
Fernando Tamayo

Juan Pablo Arreola

BBVA Research

Group Chief Economist
Jorge Sicilia

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

Cross-Country Emerging Markets Analysis
Álvaro Ortiz Vidal-Abarca
alvaro.ortiza@bbva.com

Mexico
Adolfo Albo
a.albo@bbva.com

Macro Analysis Mexico

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

Latam Coordination
Juan Ruiz
juan.ruiz@bbva.com

Argentina
Gloria Sorensen
gsorensen@bbva.com

Chile
Alejandro Puente
apuente@bbva.com

Colombia
Juana Téllez
juana.tellez@bbva.com

Peru
Hugo Perea
hperea@bbva.com

Venezuela
Oswaldo López
oswaldo_lopez@bbva.com

Developed Economies:
Rafael Doménech
r.domenech@bbva.com

United States
Nathaniel Karp
nathaniel.karp@bbvacompass.com

Spain
Miguel Cardoso
miguel.cardoso@bbva.com

Europe
Miguel Jiménez
mjimenezg@bbva.com

Financial Systems & Regulation:
Santiago Fernández de Lis
sfernandezdelis@grupobbva.com

Financial Systems
Ana Rubio
arubiog@bbva.com

Pensions
David Tuesta
david.tuesta@bbva.com

Regulation and Public Policy
María Abascal
maria.abascal@bbva.com

Global Areas:

Financial Scenarios
Julián Cubero
juan.cubero@bbva.com

Economic Scenarios
Sonsoles Castillo
s.castillo@bbva.com

Innovation and Process
Clara Barrabés
clara.barrabes@bbva.com

Contact details:

BBVA RESEARCH USA
2001 Kirby Drive, Suite 310
Houston, TX 77019
United States.
Email: researchusa@bbvacompass.com
www.bbvaresearch.com