BBVA | RESEARCH

Economic Outlook

United States

First Quarter 2013
Economic Analysis

- The uncertainty surrounding the global economic outlook remains high, but downside risks have diminished
- In the U.S., 2013 is off to a slow start, but activity will pick up later in the year
- U.S. GDP is expected to reach its full potential level by the end of 2016, although potential growth remains below historic average
- Uncovering the TARP in 2013: positive return for taxpayers with more to come as programs wind down
- Industrial diversity pushes BBVA Compass Sunbelt labor markets to the brink of a virtuous growth cycle
- High-tech industries thrive in Austin

BBVA Compass

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Closing Date: March 4, 2013

1. Editorial

Although there is a widespread agreement that human activity is warming the earth's temperature, climate models show significant variation in their projections. The disparities reflect uncertainty about the future path of greenhouse emissions and their exact impact on climatology changes, as well as the effects of natural climate change events. Nonetheless, most researchers would agree that taking bold steps significantly reduce potentially harmful effects on the economy. That is because the cost of inaction could be devastating if climate change turns out similar to the pessimistic projections.

More than 80% of businesses believe that climate change imposes risks to their products and services prompting firms to implement strategies in response to climate variability. However, evidence shows that most of these strategies are aimed at dealing with the short-term effects of frequent and violent natural catastrophes rather than long-term strategies to contain systemic risks. In fact, most strategic plans extend for periods no longer than five years, and even when some companies do make long-term plans, these usually do not extend more than ten years. Designing a long-term strategy is not easy since the uncertainty surrounding cost-benefit analysis increases over time as other variables such as technological change, competition and business conditions come into play.

In any case, dealing with climate change generates new opportunities for business and individuals. A commonly cited example is the clean energy industry, but there are also ample possibilities across other industries such as construction, where companies are developing products that are heat resistant, moisture retaining and made from permeable material. Opportunities also arise from changing consumer preferences in food consumption, recycling, leisure and recreation, as well as outdoor living. Furthermore, climate change is prompting large investments to improve crop productivity and sustainability to satisfy a 30% expected increase in food demand caused by global population growth. Increasing concerns about the negative implications of climate change could also force businesses to adjust their strategies to deal with political, reputational and brand risks.

For the financial industry, some of the biggest challenges have to do with extreme weather events. For example, insurers would not only have to deal with new risk management tools but they could also prove crucial in generating adequate incentives to foster adaptation and changing behavior. In addition, new technologies and innovation require private investment. Over the past decade, early-stage angel and venture capital investment, and financing from private equity and public capital markets have increased more than eight times. Large-scale financing is also required for long-term projects, energy efficiency, renewable energy deployment, transportation and smart grid technology.

From a policy perspective, governments need to respond efficiently through a mixed set of instruments, preferably using market mechanisms. Given that the objective is to resolve long-term challenges, the government should minimize uncertainty and foster private investments. This can be done by setting aside politics and implementing a multi-disciplinary approach to align energy, regulation and tax policies with long-term investment incentives and public funding for research and development. Ultimately this will lead to higher economic growth and environmental sustainability.

Nathaniel Karp

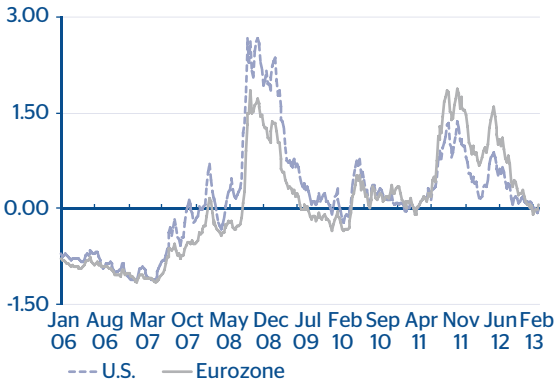
Chief U.S. Economist

BBVA Research

2. Global Economic Scenario: Better Mood and Lower Tail Risks

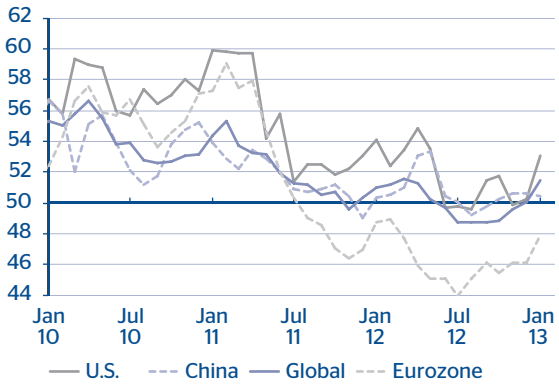
Over the past three months, some threats to the global economic recovery have partly faded, sparking a tide of renewed optimism. Financial markets have seen tensions decrease to two-year lows, particularly in Europe, and almost all assets have benefited from this change in perception. Fading threats to the stability of the global economy have also boosted confidence among consumers and firms. Surging confidence has spread among regions with a few rare exceptions. However, these market and confidence rebounds have not prompted any significant change in activity yet. According to our estimates, global GDP in 2012 grew by 3.2%, down from 3.9% in 2011. The slowdown that the global economy underwent throughout 2012 came to an end in the fourth quarter, according to our global activity indicator. The most recent data have reinforced the perception that global GDP growth is accelerating from a below average rate.

Chart 1
BBVA Financial Stress Index



Source: BBVA Research

Chart 2
Confidence Indicator (PMI)



Source: Markit and BBVA Research

Economic resilience to uncertainties and advances in the implementation of policies underlie improved confidence

Data show that China is not heading for a hard landing. Since the third quarter of 2012, GDP growth has accelerated – as we had been expecting – and the slowdown has come to an end. Investment has accounted for much of the rebound in GDP, backed by stimulus policies that were implemented more deftly in 2012 than in 2009. Furthermore, some tentative signs of stronger exports have also emerged, on demand from Asian countries and the US, whereas exports to Europe and Japan have remained a drag. In addition, the transfer of political power has been proceeding smoothly.[1] However, there are still some concerns about the sustainability of China's growth. Local government debt and the shadow bank lending are probably the biggest financial threats to growth. Even in the short term those threats could be a constraint for the implementation of new stimulus measures if needed.

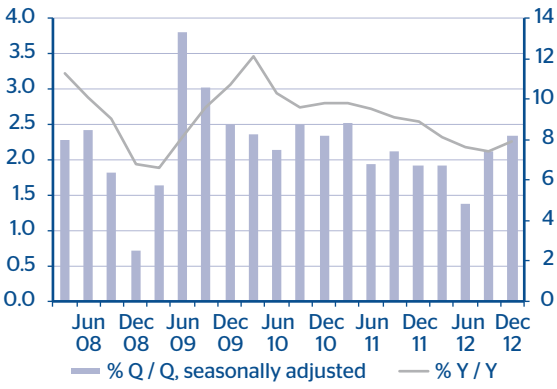
The rebound of the Chinese economy has been hailed in markets as a factor in the global economic resilience, particularly in other export-oriented economies, and in commodity prices, particularly in Latin America. Although the outlook for China's growth is not as upbeat as in the past, markets seem relieved to see the risk of a severe slowdown fade.

[1] The new leadership team has signaled that it intends to maintain policy continuity with respect to growth-supportive policies and economic reforms. Policy targets as to GDP growth are likely to be 7.5%, the same as in 2012

The US did not fall off the cliff and the economy is withstanding uncertainty remarkably well. In spite of a decline in GDP of -0.1% (annualized) in 4Q12, the underlying picture is brighter.[2] It had long been argued that consumers and firms withheld their spending to buffer the impact that automatic spending cuts and tax hikes (worth some 4% of GDP) could have on their finances. However, consumption growth has remained quite stable, averaging slightly below pre-crisis rates. At the same time, the housing sector has undoubtedly gained momentum. However, it is difficult to measure the impact of fiscal uncertainty on economic indicators, especially when other policies, such as the monetary policy through the quantitative-easing program, may have succeeded in offsetting (partially) the negative impact of fiscal uncertainty.

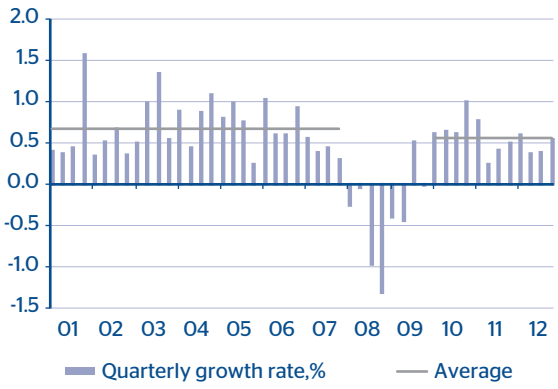
Markets welcomed the fiscal deal at the turn of the year that extended most of the 2001/2003/2010 tax cuts. The deal avoided a larger drag on the economy and helped to improve the sustainability of US public-debt. However, the expenditure sequester could be an additional drag on the economy of 0.8% of GDP. On the other hand, there was no permanent agreement on the debt ceiling, although a later deal suspended this ceiling until mid-May. Hence, in coming weeks, more negotiations will take place to avoid a sharp economic contraction in 2013 and contribute to fiscal sustainability. However, a grand bargain is unlikely as long as policymakers continue to kick the can and fail to make hard choices to reach a bipartisan compromise.

Chart 3
China: GDP Growth, (%)



Source: BBVA Research, Haver

Chart 4
U.S.: Consumer Expenditure Growth, (%)



Source: BBVA Research, Haver

Europe did its part: advances in the banking-union process reinforce the commitment to preserve the euro. The deal on Greece has shown that Europe is committed to keep Greece in the eurozone. European policy makers struck a deal with the Greek authorities on some details of the bail-out program that allowed the disbursement of its second tranche.[3] The second factor supporting the positive perception from Europe refers to the banking-union process due to advances made at the December EU summit. The process seems critical to breaking the vicious circle between government and banking finances, and also to stemming the tide of capital outflows besetting some countries in Europe's periphery. Agreements reached at the December EU summit were not as ambitious as had first been hinted, but are still quite positive since they include a clear calendar for implementing a single supervision mechanism and initial steps towards a single resolution mechanism.

[2] The aggregate figure was dragged down by volatile components (private stock building and federal defense spending) along with exports.
[3] The agreement does not dispel all doubts on Greece's debt sustainability. In fact, that issue will probably be reopened after German elections in September 2013, when an eventual official sector involvement (which has been supported by the IMF but not accepted by Europe) could be considered.

Finally, the ECB's OMT program seems to be having long-lasting effects as a real backstop to prevent financial tensions from escalating, even if neither Spain nor Italy (the natural candidates) have asked for its activation. That situation may continue because governments of core and peripheral countries lack incentives to undergo such a process. With Spain's bonds yielding 5 – 5.5% and Italy's at 4 – 4.5%, the financial situation of the sovereign can hardly be seen as unbearable, in particular considering the political costs of a bail out from the point of view of the politicians in charge. It is likely that those governments would only seek a bailout if their funding costs went well above those levels. Second, the OMT may well continue being seen as a real backstop if the ECB commitment to step in in case Spain or Italy asked for the bailout (which would surely result in yields dropping) is credible. Yet, it would also be necessary for the authorities' commitments in asking for a bail out (if funding costs soared) to prove credible.

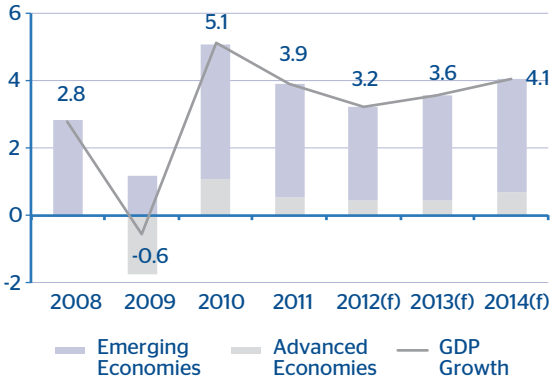
The baseline scenario does not change in spite of better mood

The rebound in China's economy, the partial deal on how to tackle the fiscal cliff in the US, and the effects from the ECB's OMT announcement are all good reasons to think that the world economy may have avoided the tail-risk event some market participants were partially pricing in. However, changes in fundamentals are less conclusive. As a consequence, a soft recovery continues being the most likely outcome, as hard data pointing to a stronger rebound is elusive.

On the one hand, US politicians will still have to agree on some key issues, such as the sequester and the debt ceiling. Either of them could derail the process. Even if agreements are reached, in 2013 the fiscal policy will turn tighter, squeezing household incomes. The real estate sector may be recovering, but the deleveraging process is still a factor at play, and the external sector is far from buoyant. Therefore, we maintain the outlook for the US economy, although we reckon there is scope for potential positive surprises. In 2013 we expect the US economy to grow by 1.8% (down from 2.2% in 2012) and by 2.3% in 2014.

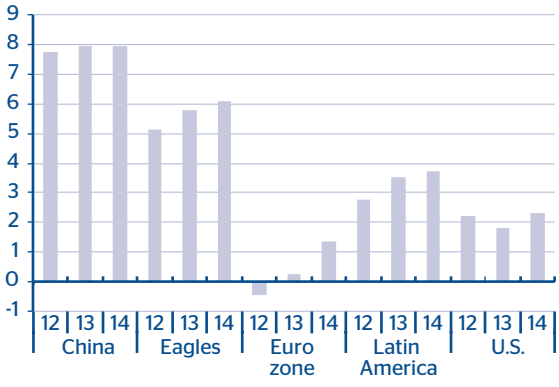
In the eurozone, the improvement of financial markets was not followed by activity data in the last quarter of the year, although there are clear signs of recovery in soft data. Tail risks may well have disappeared. The periphery remains mired in recession, dragged down by fiscal consolidation and funding conditions. Even if the external sector improves and exports drive GDP up, some economies still have a path ahead beset with deleveraging and fiscal austerity. However, some leading indicators in Germany and other core countries are pointing to better prospects at the beginning of 2013. As a consequence, we roughly maintain our forecast for the eurozone: a rebound of a mere 0.3% in 2013 (after a contraction of 0.5% in 2012), leading to a 1.3% increase in 2014. The decoupling between the core countries and the periphery will persist throughout the forecast period.

Chart 5
World GDP growth rate, (%)



Source: BBVA Research

Chart 6
GDP, (YoY % change)



Source: BBVA Research

China is arguably the economy where the outlook has become clearer in the short term. The new authorities are committed to sustained growth and that must be interpreted as a clear intention to use loose economic policy. We have revised our projections slightly upwards and now China is likely to grow by 8% in 2013 and 2014. The robustness of China's economy and the resilience of the US economy will play a role in supporting demand in most emerging countries. In Latin America as a whole, we revised our forecasts slightly downwards, due to weaker situations in Brazil and Argentina. In 2013, the Latin American economies will grow by 3.5%, whereas in 2014 they will by 3.7%, approaching to their growth potential. In turn, emerging Asia will show a more robust growth, accelerating its pace to 6.6% in 2013, up from 6.1% in 2012.

The uncertainty surrounding the global economic outlook looks set to remain high and tilted to the downside, but open to potential upside surprises for the first time in the past three years. The eurozone poses the biggest risk. Although the new institutional benchmark limits the probability and the potential impact, financial tensions may return for different reasons. First, the periphery of Europe could miss its current fiscal targets. If governments react with more austerity, the downturn may intensify. However, this risk has low probability because the European Commission has made it clear that no further adjustment will be forced on these countries if targets are not met as a consequence of cyclical considerations. At the same time, that is likely to roil markets and make it necessary for those countries to ask for a bailout. In this regard, although the ECB seems ready to intervene, any potential wrangling between core and peripheral countries as to the conditionality attached is a possible source of instability. Other factors may also play a role, like the details of the bank bailout for Cyprus, yet to be fixed, or political events such as the Italian elections. If financial tensions increased as a consequence of one or several of those triggers, the eurozone would continue in recession in 2013 too.

The other significant source of risk stems from the US political disagreement on how to deal with the fiscal deficit. Part of the original fiscal cliff has been avoided, but the remaining two issues – the sequester and the debt ceiling – still lie ahead. On one hand, the wrangling over these issues may be a source of uncertainty that could hold back consumer spending and investment. On the other, if agreements are not reached, the tightening in fiscal policy could be enough to return the US economy back to feeble growth rates.

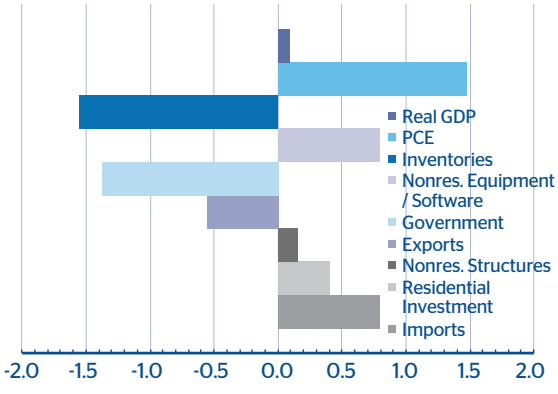
According to our own estimations, if both risks materialized the world economy would grow nearly a percentage point less than in the baseline scenario, well below its historical average. The adequate implementation of eurozone-governance agreements and further pacts on fiscal issues in the US are necessary conditions for a sustained global recovery.

3. U.S. Outlook

Upbeat Economic News Despite Failing Sequester Talks

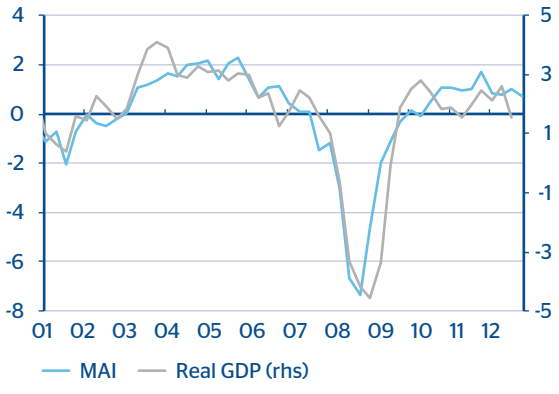
The New Year is shaping up to be slightly stronger than many expected, at least throughout the first few months thus far. There were plenty of fiscal and economic concerns heading into 2013, but the most recent data have shown signs of underlying strength. The fiscal cliff debacle feels like ages ago now that the dust has settled, and Washington's decision to delay deadlines had opened up some room for market relief throughout January and February. March 1st has come and gone without a political compromise on the sequester, and the next few months will be filled with questions about how, where, and when the spending cuts will begin to hit the real economy. On the bright side, most of the economic data leading up to the deadline has been mostly upbeat. In terms of GDP growth, the second estimate for 4Q12 showed a reversal to 0.1% following a slightly worrying negative figure in the advanced report. Government spending and private inventories had pushed down the advance figure and were revised down even further in the second release. This is not surprisingly given the uncertainty in anticipation of the fiscal cliff, and businesses have already started to rebuild inventories in 1Q13. In general, we expect to see only modest growth in 1H13 but then a pickup in activity later in the year once businesses and consumers adjust to new fiscal measures. If Congress does not find some way to reverse the automatic spending cuts, then we could a reduction in 2013 annual GDP growth by 0.5%-0.8%, with the biggest impact hitting in the second quarter. Considering our current forecast for 1.8% annual growth, the full sequester would not push us into recession. Our in-house indicators assessing the most recent economic data suggest that we will see relatively soft growth in the first half of 2013 as consumers adjust to the expiring payroll tax cut and uncertainty lingers as Washington deals again with budget issues.

Chart 7
Contributions to Real GDP Growth (4Q12 Preliminary, SAAR Percentage Points)



Source: Bureau of Economic Analysis & BBVA Research

Chart 8
BBVA USA Monthly Activity Index (4Q % Change)



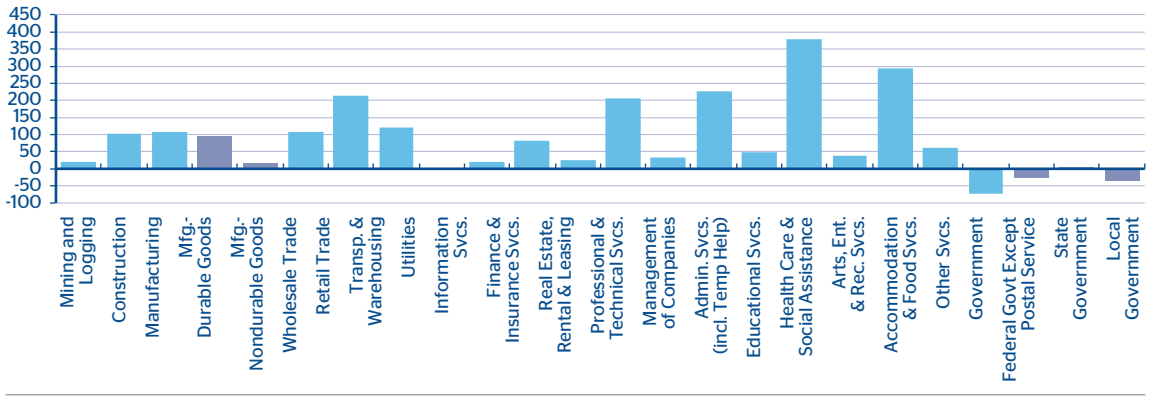
Source: Bureau of Economic Analysis & BBVA Research

The latest economic indicators point to relatively healthy activity in 2013 thus far, though there are still glaring weaknesses. Consumer activity has faltered somewhat following the holiday shopping season, with retail sales up a modest 0.1% in January and personal consumption up only 0.2%. It is unclear how long consumers will need to adjust to the disposable income hit, and we may see somewhat of a lagged response as the rest of 1Q13 consumption data are released. The housing recovery has also been a bit choppy in recent months, but the continuous rise in home prices and the recent jump in new home sales suggest strength moving forward. Manufacturing conditions appear to have avoided a major impact from fiscal uncertainty, with the ISM hinting at a more optimistic outlook for the sector despite some declines in regional surveys. Inflationary pressures continue to be minimal and support

the Federal Reserve's decision to maintain low target rates for a prolonged period. However, energy prices have rebounded to start the New Year and will likely put upward pressure on headline inflation in the near term, though long-term inflation expectations remain stable. As we move forward into 2013, we expect core prices to remain relatively soft but with underlying pressure stemming from shelter prices.

The employment report for January was enough to offset the disappointing GDP release and downplay the fiscal cliff's impact on job growth, even with the uptick in the unemployment rate to 7.9%. Nonfarm payrolls increased 157K to start the year off on a strong foot, with 166K in private sector hiring. Consistent sub-200K gains are just enough to keep pace with a growing labor force and are therefore not likely to lead to genuine declines in the unemployment rate without some help from other factors. However, upward revisions to 2012 data helped bolster labor market sentiments: November's gains were revised from 161K to 247K while December increased from 155K to 196K, in turn adding 127K to the two months leading up to 2013. Furthermore, according to new BLS calculations adjusted by tax records, the economy added an additional 424K jobs between April 2011 and March 2012. The BLS also adjusted the number of those counted in the labor force, which increased 136K and put upward pressure on the unemployment rate for the month. Looking back at the past 12 months, we see the strongest gains in health care and accommodation and food services, while retail trade, professional and technical, and administrative services also saw significant gains. Not surprisingly, government was the weakest sector by far, shedding more than 70K jobs throughout the past year, while the mining and utilities sectors were also lagging in employment growth.

Chart 9
12-Month Nonfarm Payroll Growth (SA, Thousands)

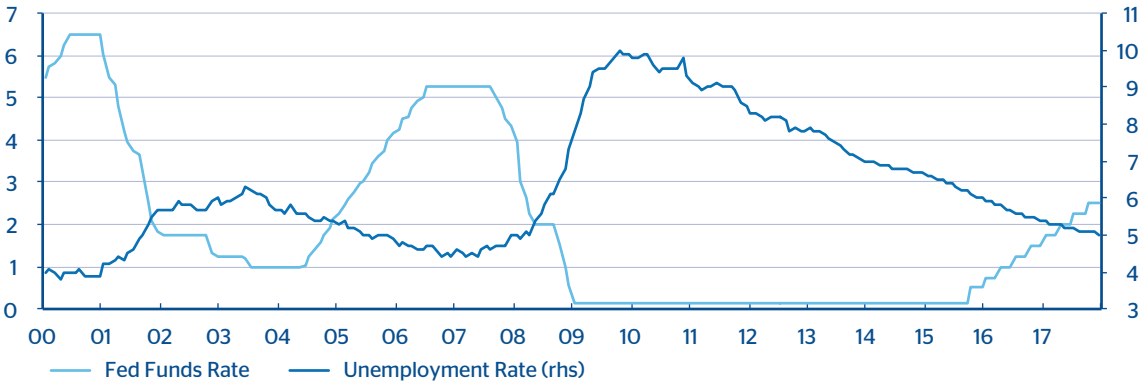


Source: Bureau of Labor Statistics & BBVA Research

With inflation under control and employment growth seemingly moving in the right direction, attention is even more focused on the Federal Reserve for hints of backing down from its current monetary policy strategy. Clearly, the Fed remains worried about the sustainability of this improved economic activity. The latest FOMC meeting minutes confirmed the intense debate on how and when to end QE3. Most participants commented that the Committee's asset purchases had been effective in easing financial conditions and helping stimulate economic activity, though many are concerned about rising potential costs and risks. The main concerns expressed by the participants were related to the possible complications during eventual withdrawal of policy accommodation, potential negative effects on financial markets, as well as a chance that a very large portfolio of long-duration assets would, under certain circumstances, expose the Federal Reserve to significant capital losses when these holdings were unwound. Ultimately, the staff was asked to prepare additional analysis ahead of future meetings to support the FOMC's ongoing assessment of the asset purchase program. While the minutes revealed less clarity on the near-term future of monetary policy accommodation, our expectations remain unchanged. We continue to expect that the current pace of purchases will proceed until at least mid-2013, with a slower pace ongoing until the end of the year as the economy slowly improves and the risks

from the increasing balance sheet and aggressive asset purchases elevate. FOMC meeting conversation will continue to focus on how to provide highly accommodative monetary policy while at the same time reducing the possibility of an adverse impact when the time comes to decrease the balance sheet. A solid and well-established recovery is needed before the exit strategy can be fully implemented.

Chart 10
Fed Funds and Unemployment Rate (%)



Source: FRB, BLS, & BBVA Research

Overall, we have a slightly more optimistic outlook compared to the end of 2012, mostly related to movements in the unemployment rate (Table 1). Our GDP forecasts are unchanged and we have slightly softened our headline inflation expectations for 2014-2016. Given the latest revisions to employment data, we have adjusted our unemployment rate forecasts but we still expect to see very gradual declines as the year progresses. The main risks to our outlook remain the same, with domestic concerns still the most relevant. The next few months could be a hurdle to jump through as the economy adjusts to new fiscal measures. Aside from the most pressing domestic issues, we are beginning to see some volatility coming from Europe once again, particularly related to political developments in Spain and Italy. In addition, uncertainty regarding exchange rate policies weighs on a still vulnerable global outlook. The risk of a credit ratings downgrade is still on our radar given that the debt ceiling limit will again be reached in May. All in all, if global conditions remain stable and we only have the full sequester on our hands, economic activity should be mostly back on track by the end of 2013, barring further political disruptions of course.

Table 1
Baseline Scenario, New vs. Previous

		2011	2012	2013	2014	2015	2016	2017
GDP	new	1.8	2.2	1.8	2.3	2.5	2.7	2.6
	old	**1.8**	**2.1**	**1.8**	**2.3**	**2.5**	**2.7**	**--**
CPI	new	3.1	2.1	2.1	2.2	2.3	2.4	2.5
	old	**3.1**	**2.0**	**2.1**	**2.4**	**2.5**	**2.6**	**--**
Core	new	1.7	2.1	1.9	2.0	2.1	2.3	2.4
	old	**1.7**	**2.1**	**1.9**	**2.0**	**2.1**	**2.3**	**--**
UR	new	8.9	8.1	7.5	6.8	6.3	5.7	5.2
	old	**8.9**	**8.1**	**7.9**	**7.5**	**7.0**	**6.3**	**--**
Fed (eop)	new	0.25	0.25	0.25	0.25	0.50	1.50	2.50
	old	**0.25**	**0.25**	**0.25**	**0.25**	**0.50**	**1.50**	**2.50**
10-Yr (eop)	new	2.0	1.7	2.3	2.7	3.4	3.7	3.7
	old	**2.0**	**1.7**	**2.4**	**2.7**	**3.4**	**3.7**	**--**

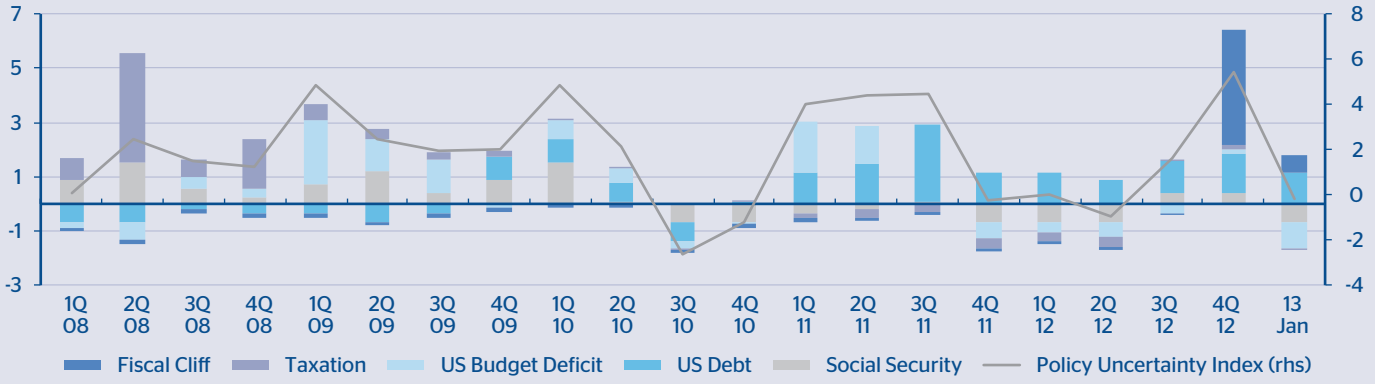
Source: BBVA Research

Box 1: Budget Control Act of 2011 Comes Back to Haunt Congress

The 2011 debt ceiling debacle seems like such a distance memory, yet the "kick-the-can" solution from those negotiations has crept up on all of us. The Budget Control Act (BCA) of 2011 allowed for an immediate increase in the debt limit while stipulating a deficit reduction plan through 2021. Most importantly, the BCA outlined a series of $1.2tr in automatic spending cuts, known as the "sequestration", to take effect on January 1, 2013 if not otherwise addressed by Congress. After months of uncertainty and struggle to reach a compromise, lawmakers passed the American Taxpayer Relief Act (ATRA) on New Year's Day, avoiding a significant impact on economic activity, at least in the short-term (see our Fiscal Cliff brief). Unfortunately, the sequester was merely delayed until March, allowing time for further negotiations.

If Congress had not passed the ATRA and the BCA had gone into effect on January 1st, the fiscal deficit would have declined from above 6% currently to around 1% of GDP within the next decade. However, by extending various tax cuts and avoiding other measures, even a full implementation of the BCA would not help to reduce the deficit as much in the long term (hovering instead near 4% of GDP). For 2013, we could potentially see $91.2bn (0.7% of GDP) worth of spending cuts come into play, resulting in an economic impact of slightly less than 1% of GDP. There are various spending caps and exemptions across different components of the sequester, with the largest related to social security and Medicaid. For the fiscal year 2013, cuts to Medicare are capped at 2% while defense spending cuts are capped at around 10%. At the same time, the political struggle is not getting any easier, and the continuing ideological divide between Democrats and Republicans will surely limit the probability of discretionary defense and non-defense spending cuts being implemented. Given this, we expect to see an impact of near 0.4% of GDP in 2013, which is already factored in to our baseline forecast for 1.8% annual growth. Ultimately, we have come full circle in terms of addressing long-term fiscal sustainability, and the hope is that this game of kicking the can will end soon.

Chart 11
BBVA USA Policy Uncertainty Index and Decomposition



Source: BBVA Research

4. Evaluating the U.S. GDP Growth Path: How Far is the Economy from Realizing Its Full Potential?

The Matter of Significance

It is hard to overlook not one but two elephants in the United States economy: the Federal Reserve's highly accommodative monetary policy stance (near zero interest rates for the last four years with limited expectations for a rate hike within the next two years), and the ongoing fiscal policy negotiations that could have significant implications for both short-term and long-term activity.

The future path of the very important but unobservable variable, potential GDP, is at the core of both the effectiveness of and the future commitment to the current highly accommodative monetary policy, as well as the long term effect of possible fiscal austerity on the US economic growth, measured by the government multiplier.

The costs and benefits of the Fed's quantitative easing strategy, as well as the size of the government multiplier, are tied to the assessment of how far actual output is from its potential level. The size and the speed of convergence of the output gap are relative to potential GDP and depend on the permanent changes in long-run potential growth. Nevertheless, due to the unobservable characteristics of potential GDP, the measurement of potential growth and the subsequent output gap can differ depending on the economic model employed.

This article describes a series of methodologies that result in a range of future paths for potential GDP. Although the resulting potential growth rates and the varying sizes of the output gap are mostly attributable to modeling differences, our analysis confirms a decline in the potential growth in the aftermath of the Great Recession, with the average growth rate for 2013 – 2017 ranging between 1.02% and 1.91%. The models suggest that the current negative output gap will close towards the end of 2016.

Possible factors contributing to the current low potential growth are the uncertainty around the future fiscal policy path and the residuals from the Great Recession in business attitude and credit environment. Nevertheless, changes in work force demographics, globalization, lack of progress in education attainment, as well as the overhang of consumer and government debt are potential headwinds causing the downward shift in longer-term growth (Gordon, 2012). Evidently, pro-growth policies of investment in human capital and R&D are necessary to boost the future path of potential growth. Preceding the Great Recession GDP growth averaged at 3.4% and comprised of 3 periods: high growth corresponding to the post WWII period ending in early 70s (our estimates average at 3.8%); 70s and 80s known as productivity slowdown (our estimates average at 3.0%); and a switch to a higher growth rate in late 90s (our estimates average at 3.2%).

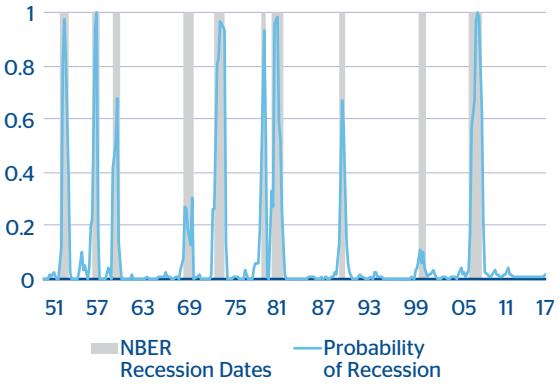
Empirical Evidence

In order to assess the change in potential GDP growth rates and the output gap, real GDP is modeled as the sum of two components: trend (potential GDP) and cycle (output gap). We estimated four models. The first one assumes that all shocks to the economy are absorbed by potential GDP, in which case the output gap would be irrelevant, while changes in the potential growth rate are frequent. The next two models allow for the type of shocks that also affect the cycle and that therefore capture qualitatively larger estimates of the output gap. Each of these modeling techniques assumes that the potential growth rate differs depending on the state of the economy, i.e. whether the economy is in recession or in expansion. The state of the economy and the shifts from one state to another are inferred from real GDP and are estimated within the corresponding models. The estimated probabilities of recession for models

1-3 below correspond closely to NBER recession dates. Finally, we compare the outcome from these three models to the potential GDP estimate from a larger scale model that takes into consideration the relationships between the output gap and fluctuations in other variables, such as the unemployment rate, inflation rate, and gross investment. Each of the four models described above is an unobserved components model estimated in state-space representation applying the Kalman filter.

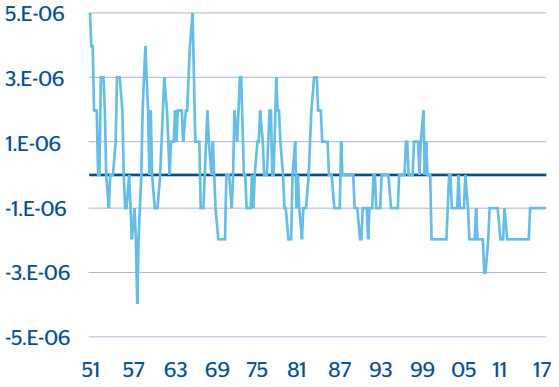
Model 1 assumes that all the shocks to the economy are absorbed by potential GDP. As a result, potential GDP switches between two states: a low growth-state associated with recession and a high growth-state associated with expansion (Hamilton, 1989). The model outcome reflects a large decline in potential output but a negligible output gap, resulting in potential GDP that follows closely to the fluctuations in actual GDP. According to the Model 1 outcome, the quarterly potential growth rate is 0.94% during expansionary periods and -0.62% during recessions.

Chart 12
Probability of Recession, (Model 1, probability between 0 and 1)



Source: BBVA Research

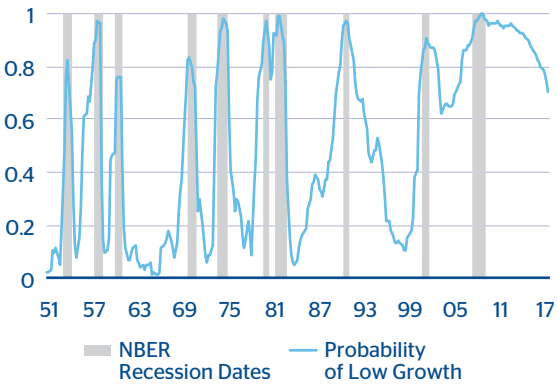
Chart 13
Output Gap (Model 1, %)



Source: BBVA Research

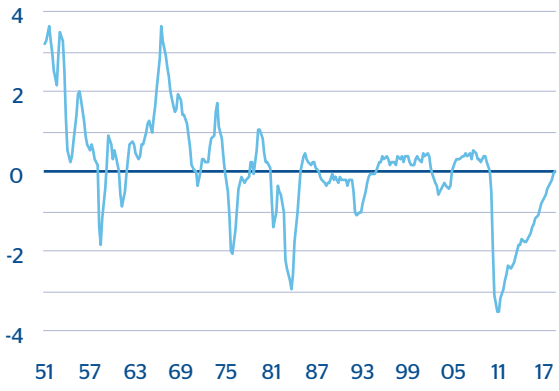
Model 2 is a generalized version of Model 1 that results in a larger variation in the output gap (Lam, 1990). The model outcome implies a softer decline in potential output and a notable output gap. The current output gap for 1Q13 is estimated at -1.77%, while the quarterly potential growth rate is 1.17% in expansionary periods and declines to 0.39% in recession. According to this model, the economy has not yet emerged from a low growth-rate period. Overall, the probabilities match well with the NBER recession dates and the last turning point of the output gap from its trough occurs exactly at 3Q09, which is the NBER date for the end of the Great Recession.

Chart 14
Probability of Low Growth (Model 2, probability between 0 and 1)



Source: BBVA Research

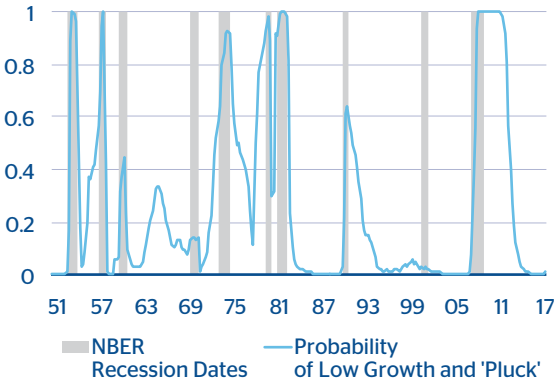
Chart 15
Output Gap (Model 2, %)



Source: BBVA Research

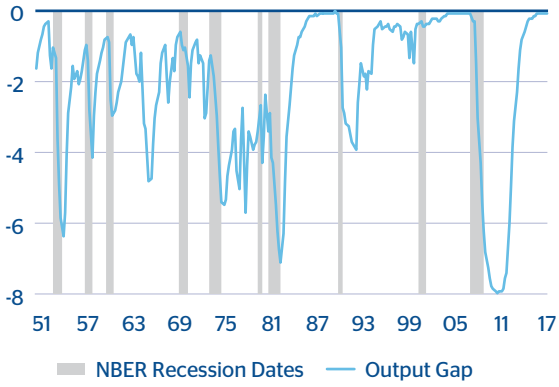
Model 3 forces the output gap down from the potential level of GDP and is therefore negative during recessionary periods (Kim and Nelson, 1999). This phenomenon is known as 'Friedman's pluck' [1] and yields the largest estimates for the negative output gap. The expected outcome of the estimated 'pluck' is a fast recovery of the cyclical component back to the constrained level at the end of the recessionary period. However, this is not consistent with the sluggish post-recession recovery that we have seen recently. While the probabilities of recession match well with those of previous recessions in the U.S., the model signals a much later exit from the downturn. The estimated output gap for 1Q13 is -4.99%, which is a 1 percentage point improvement from 4Q12's -6.0%. Consequently, the model estimates a higher quarterly potential growth rate during the recessionary period (0.64%) compared to Model 1.

Chart 16
Probability of Low Growth (Model 3)



Source: BBVA Research

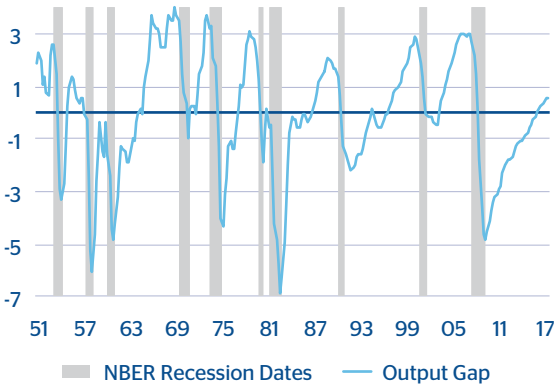
Chart 17
Output Gap (Model 3, %)



Source: BBVA Research

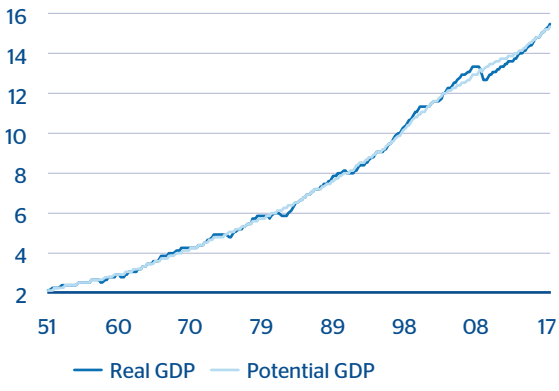
Model 4 accounts for three fundamental facts in macroeconomic theory (Doménech and Gómez, 2006). First, the model highlights that potential GDP, also referred to as the natural rate of GDP, is equivalent to the output level produced at the natural rate of unemployment. While both the potential level of output and the natural rate of unemployment are unobservable, the output gap is inversely related to cyclical unemployment (Okun's Law). Second, the cyclical unemployment rate (measured as the deviation of the unemployment rate from the natural rate of unemployment) is inversely related to changes in the inflation rate (Philips Curve). Lastly, Model 4 accounts for the co-movement between

Chart 18
Output Gap (Model 4, %)



Source: BBVA Research

Chart 19
Potential GDP (Model 4, $ trillions)



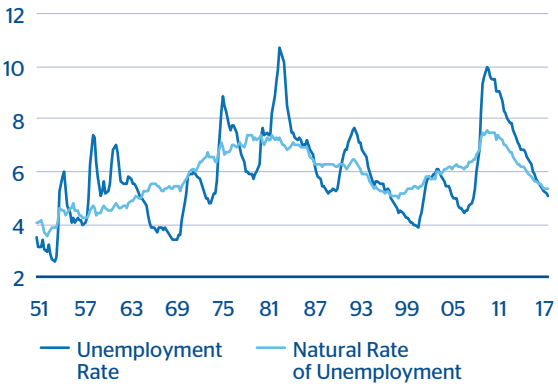
Source: BBVA Research

[1] Milton Friedman (1964) describes the 'plucking' behavior of business cycles as follows: "Consider an elastic string stretched taut between two points on the underside of a rigid horizontal board and glued lightly to the board. Let the string be plucked at a number of points chosen more or less at random with a force that varies at random, and then held down at the lowest point reached. The result will be to produce a succession of apparent cycle in the sting whose amplitudes depend on the force used in plucking the string."

the output gap and private gross investment. Consequently, in addition to the primary economic variables of interests – potential GDP and the output gap – the model simultaneously estimates cyclical unemployment, the natural rate of unemployment, also known as the NAIRU (Non-Accelerating Inflation Rate of Unemployment), and the core inflation rate defined as the long-run trend of inflation.

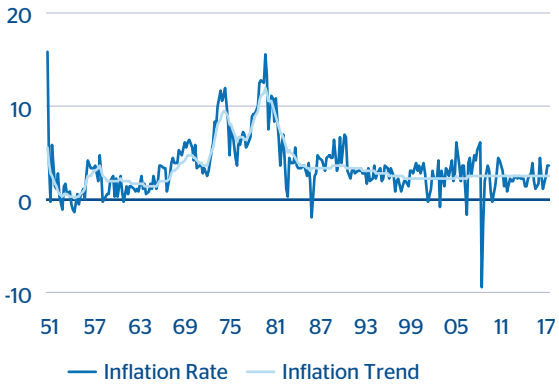
The estimated output gap for 1Q13 is -1.72% from Model 4. Cyclical unemployment is at 1.07% for 1Q13 with the natural rate of unemployment at 6.51% for 2013 - identical to the unemployment rate target announced by FOMC. The fluctuations of the estimated output gap coincide well with the referenced recession dates by NBER. In contrast to the univariate Models 1-3 that use real GDP only, the extension of Model 4 to include unemployment, inflation, and investment results in a better fit to the specifics of the Great Recession. Accordingly, the latest negative increase in the output gap matches closely to the start and end of the last recession – 4Q07 to 3Q09 (NBER reference dates 4Q07 to 2Q09). Model 4 estimates cyclical unemployment at 1.07% for 1Q13 with the natural rate of unemployment at 6.76%, while the inflation trend stable at 2.6% for 2013 – 2017.

Chart 20
Unemployment Rate and Natural Rate of Unemployment (Model 4, %)



Source: BLS, Haver Analytics & BBVA Research

Chart 21
Inflation Rate, CPI (Model 4, %)



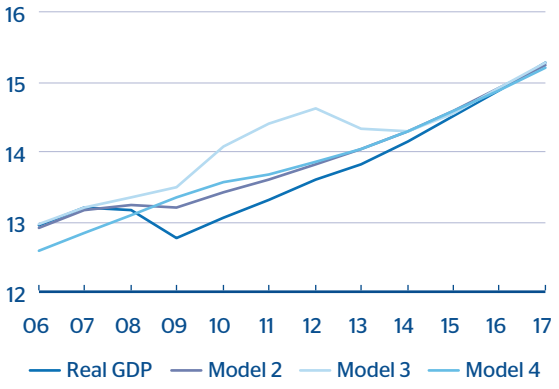
Source: BLS, Haver Analytics & BBVA Research

Closing Output Gap and Natural Rate of Unemployment at 5.6% by the end of 2016

The comparison of the estimated potential GDP and output gaps from Models 2-4 suggest that the specifics of the recent slow-paced recovery do not fit the 'plucking' business cycle characteristics of output described by Friedman and employed in Model 3. At the same time, both the univariate measures of Model 2 and the multivariate measures of Model 4 present a robust picture of the potential growth path in the U.S. The average annual growth rate from Models 2 and 4 for 2013 through 2017 is 1.85%, and the negative output gap is expected to fade away by 3Q16. This corresponds to a natural rate of unemployment of 5.6% (as suggested by Model 4). The averages from Models 2 and 4 for the current 1Q13 output gap is at -1.74% and will decline to -1.3% by the end of 2013, while the potential growth rate for 2013 is estimated at 1.46%.

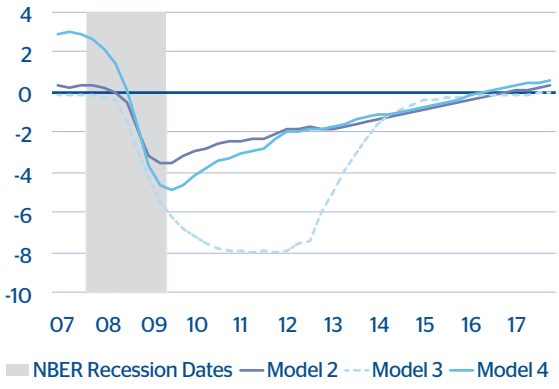
Model 4 lingering cyclical unemployment (1.07% for 1Q13), natural rate of unemployment (6.51% average for 2013) and the stable inflation trend (2.6% for 2013 – 2017) are in line with the Fed's current policy thresholds of what would constitute a healthy economic activity and suggest that highly accommodative monetary policy is the right course of action. CBO projections of potential GDP for 2013 – 2017 are on average 0.24% higher compare to the Model 4, while their estimates of the output gap are significantly larger (difference of around -4.5% for 2013 and -4.3% for 2014). Since CBO measures of the government multipliers are sensitive to the size of the output gap, Model 4 suggests softer reaction of GDP to the possible fiscal tightening.

Chart 22
Real GDP and Potential
(Models 2-4, $trillions)



Source: BBVA Research

Chart 23
Output Gap,
(Models 2-4, %)



Source: BBVA Research

Table 2
Summary of Potential Growth Rates and Output Gaps

	Annual Growth Rate of Potential GDP					Output Gap				
	CBO	Model 1	Model 2	Model 3	Model 4	CBO	Model 1	Model 2	Model 3	Model 4
2013	1.77	1.76	1.58	-1.88	1.34	-5.96	0.00	-0.67	-1.01	-1.44
2014	1.89	2.31	1.83	-0.25	1.87	-5.30	0.00	-0.44	-0.37	-1.00
2015	2.08	2.47	1.97	1.72	2.00	-3.39	0.00	-0.20	-0.16	-0.54
2016	2.26	2.70	2.19	2.52	2.09	-1.38	0.00	0.02	-0.09	0.06
2017	2.44	2.61	2.25	2.55	2.19	-0.10	0.00	0.20	-0.06	0.47
				Output Gap Closes		2017	N.A.	4Q16	4Q17	2Q16

Source: CBO, Haver Analytics & BBVA Research

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5. The Troubled Asset Relief Program

How the Troubled Asset Relief Program Came About:

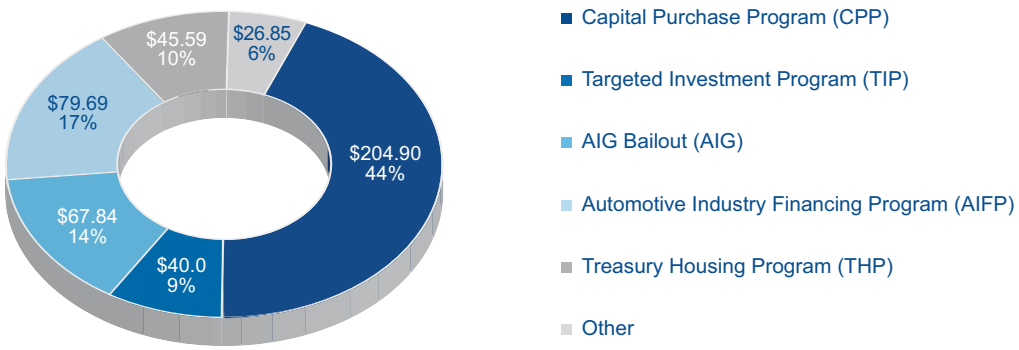
The 2007 financial collapse set new standards for economic with concern to economic downturns and the methodology behind dealing with such a crisis. As 2007 came to a close, the global economy was poised to face an economic crisis unseen in a generation and the U.S. government was prepared to inject an unheard of amount of capital into the market in an attempt to fend off the deleterious catalysts of the impending recession. These catalysts included financial products whose makeup and performance were as elusive as the reasoning behind their soaring prices, combined with a housing market on the brink of default due to lax lending standards. Ultimately, borrowers began to default on loans they could not afford, the financial derivatives connected to their mortgages began to fail, and the economy became an unabridged tidal wave of defaults and failing securities. As the financial crisis unfurled, the U.S. government stepped in, passing legislation that created large funds capable of injecting prolific amounts of capital into the economy in order to thwart a fiscal panic. The Troubled Asset Relief Program (TARP), part of the Emergency Economic Stabilization Act of 2008, was established as a means of addressing the subprime mortgage crisis and pursuant financial crisis with a coffer of $700bn at its disposal. Although this was later reduced to $475bn through the Dodd Frank Act, almost $420bn has been used to date to purchase assets that were both difficult to value and extremely toxic to banks and corporate balance sheets. In doing so, banks were encouraged to lend, something they had been weary of doing given the declining probability of repayment based on growing default rates. The rest of the TARP fund was doled out to a multiplicity of sectors, including housing and the auto industry, as the government tried to avoid the contagion that seemed imminent given the far reaching losses of the credit default swap and toxic securities.

For Whom the Bell Tolled

At its inception, TARP was meant to spend its funds purchasing toxic assets – primarily mortgage backed securities (MBS) and credit default swaps (CDS) – as a means of removing them from bank balance sheets, freeing capital to use for new loans and rebalancing of asset requirements. The U.S. Treasury created the Capital Purchase Program (CPP) which used TARP funds to purchase toxic MBS that had infected banks of varying asset sizes. Unfortunately, as the proverbial sayings goes, you can lead a horse to water, but you can't make it drink; even though banks were cleansing their balance sheets, they were still apprehensive about lending. Additionally, it became apparent that banks were not the only ones holding these toxic assets, nor were they the only entities feeling the strain of the freezing credit market. Some companies could not escape the weight of their involvement in toxic asset purchases and the slow credit market, forcing action by the government to "bailout" those it deemed too imperative to fail. Two of the largest bailouts were aimed at the auto industry and the insurance giant AIG. General Motors, Chrysler, and AIG became the Treasury's target for solvency aid and by early 2009, funding from the Systemically Significant Failing Institution program and the Automotive Industry Financing Program had bought majority holdings in two of the three targets and extended a line of credit to Chrysler who required less financial aid.

Chart 25

Largest TARP Programs (percent of total funds disbursed and amounts in billions)



Source: US Treasury Report to Congress & BBVA Research

Who Got Each Piece of the Pie?

Over 200 banks and more than a handful of public companies were lent funds through the repurchasing of toxic assets and stock, so a deeper look at who received the funds will help clarify both where the money went and how much the taxpayer can expect to recover. Going down TARP's balance sheet, the CPP's toxic asset repurchasing effort used almost $205bn to prop up banks across the asset-size scale. The Targeted Investment Program (TIP), meant to inject capital into institutions the Treasury deemed systemically significant, bought a $20bn portion of preferred stock in Bank of America and Citigroup Inc. in late 2008 to shore up their balance sheet and ensure solvency. A smaller portion of the TARP funding, close to $20.8bn, went to the Public-Private Investment Program (PIPP) to restart the residential and commercial MBS market so that credit could be made available for households and businesses. Among the "other programs" sit two of the more debated liquidity injections: AIG and the auto industry. The bailout of AIG was necessary, according to the Treasury department and the Federal Reserve Bank of New York (FRBNY), to prevent a collapse of a massive player in the financial industry, both in the domestic and global market. According to data released by the Treasury, $67.84bn was spent purchasing preferred and common stock in AIG in addition to the $112.5bn from the FRBNY. The next large bout of spending went to the U.S. auto industry, specifically to GM, Chrysler, and Ally. The Treasury feared that they would soon collapse due to a distraught economy and lack of credit available to fund their short-term cash needs. The Treasury, therefore, came to the aid of the two giants providing a cushion for the industry while the economy recovered and credit became available. Originally established as loans and lines of credit, later converted into preferred stock, the Treasury invested a total of $51bn in GM, $12.37bn in Chrysler, and $16.2bn in Ally. This was the second largest program in the TARP family and constituted the first time the government had taken a majority position a public company like GM. Finally, a portion of the remaining funds was directed at a key instigator of the financial collapse of 2008: the housing market. In early 2009, the new administration announced a handful of programs intended to alleviate some of the pressure of homes at risk for foreclosure through refinancing and mortgage relief via the Making Homes Affordable Program, spending $29.8bn on housing affordability efforts.

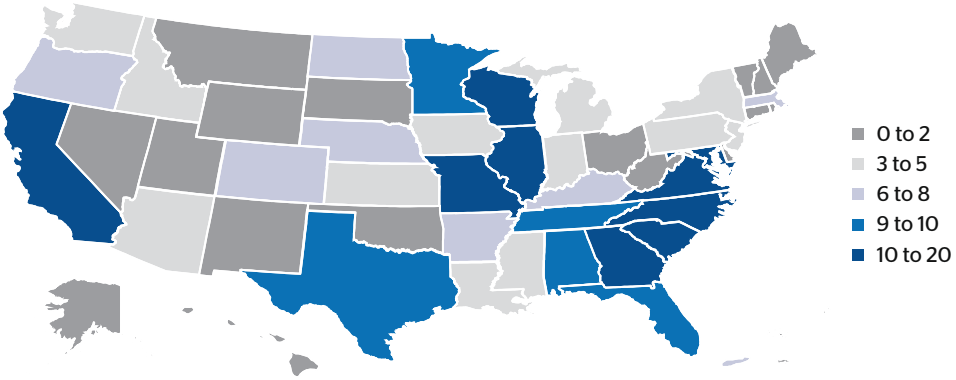
Four Years Later: Does TARP Get an A on its Report Card?

According to the Treasury department, TARP has been a successful program. While the game theory behind not having implemented TARP is intrinsically speculative, those companies are alive and almost autonomous, functioning presently with little or no government intervention or funding, four years after the avoided collapse of a multitude of different entities within key industries. TARP, and indeed most of the capital injections, were difficult things to sell to the American public, primarily because they feared the notion of government-controlled companies or a nationalization of certain industries from which they would receive no repayment. However, this belief rests upon the notion that repayment of TARP funds has not occurred and that the government continues to own the companies it bailed out. That is simply not the case however, and while pundits tout the cry of nationalization, recent reports show that the government plans to exit its holdings in the remaining stakes of companies. In fact, the government currently has no majority holdings in any of the companies it had originally aided. The Treasury's most recent report on the progress of the TARP fund and its affiliated programs suggests that 93% of the $418bn dispersed throughout the economy has been recovered.

Repayment of TARP Funds

As a running tally on the repayment of TARP funds, the Treasury puts out a monthly statement on the programs balance sheet, to the chagrin of those who said that TARP was a failed endeavor. The banking support programs spent approximately $250.4bn on repurchasing toxic assets and injecting liquidity into the credit market, and as of January 2013, the assets recovered from the programs totaled over $268bn. The surplus portion from dividend and stock repayment amounts to roughly $18bn in positive taxpayer return in addition to having fulfilled its goal of evading a banking system collapse. After announcing in May 2012 that it was winding down all portions of its investments in the banking sector, the Treasury halted any additional funds and continues to sell its remaining assets. As of January 2013, there were 210 remaining institutions that still held taxpayer funds on their balance sheet and the expected exit strategy is intended to recuperate those funds throughout this year. The top 25 banks holding the largest portions total $4.88bn, nearly half of the $10.5bn remaining on the CPP balance sheet.

Chart 26
Number of Institutions, by State with Outstanding Balances



Source: US Treasury Report on TARP to Congress & BBVA Research

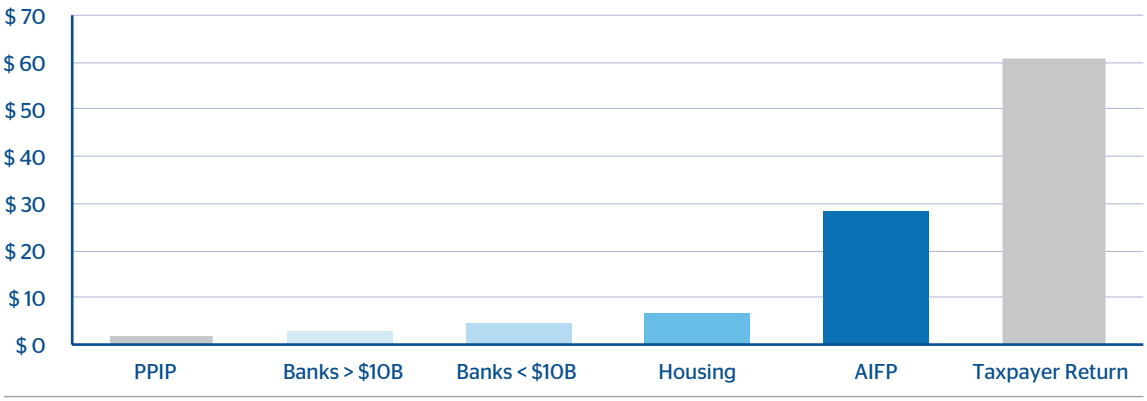
As of December 14th 2012, the Treasury and FRBNY have completely exited their position in AIG, selling the remaining shares in an underwritten public offering. Having closed this portion of the TARP program, the results are again in favor of the taxpayers. Of the $182.3bn total invested in AIG, 100% of the funds have been recovered with an additional $22.7bn positive return to the public through dividend payouts and stock repurchasing.

A majority of the TARP funds yet to be repaid lie in the automotive financing program that leant about $80bn to GM, Chrysler and Ally. By May 2011, Chrysler had already returned $11.2bn of the $12.3bn it received in 2009, allowing the Treasury to fully exit its investment in under TARP regulation and await the repayment of the remaining balance from additional sources. From Ally, the Treasury has recovered almost one-third of its $5.5bn investment and continues to monitor their financial performance and evaluate possible exit strategies as the auto sector recovers. Lastly, the Treasury has recovered $29.6bn of the total amount invested in GM. As of the latest report on this investment, a sale of GM common stock raised $156.4mn in January and will continue as long as market conditions remain accommodative.

Exit Strategy: Out of Positions and into a Profit

According to the Treasury's report published in February, most of the TARP positions have been closed and funds have been halted as the program continues to recover its investments. Effort is going towards assessing viable exit strategies for the 210 remaining institutions which comprise the remaining outstanding funds in the CPP program, although the program itself has already been repaid through additional revenue streams. The Treasury estimates it will recover a majority of the $10.5bn still to be repaid while also continuing to accrue interest payments and dividend returns during the process. The disposition of GM stock is also underway and is expected to be repaid within 15 months under the pretense that markets remain favorable. The latest report also announced that the Term Asset-Backed Securities Lending Facility (TALF), meant to prop up the loan industry through liquidity injections, has been fully repaid through fees collected on the loans, and there are no plans for more funds to be disbursed. Each additional dollar that comes from the remaining credit will represent a positive return for the taxpayer, a common result of the many programs that will see their end in 2013. The Public-Private Investment Fund program has also completed its third and final year, with five of the nine funds having been effectively wound down. To date, the Treasury has fully collected its investment of $18.6bn, with a positive return of $331mn and any additional payments from debt or equity. In terms of TARP's aid to the housing market, over 90% of the homeowners that applied for modifications to their mortgages have remained solvent and continue to make the required payments, a significantly higher portion than was originally forecasted. These housing programs will continue for the foreseeable future with no winding down effort explicitly stated in the report due to its minimal impact on the overall fund, accounting for less than 2% of the total amount dispersed.

Chart 27
Outstanding Balance of TARP Disbursements and Taxpayer Return, by Category (Billions)



Source: US Treasury Report on TARP to Congress & BBVA Research

In Hindsight, TARP May Have Been Good for the Economy After All

The TARP program has been a success in terms of its goals and the efforts made to guarantee that the taxpayer is responsibly repaid after an injection of capital into a system that inherently fueled its own downfall. With a majority of all programs' funds repaid by their borrowers, TARP boasts a recovery rate of over 85% with 107% recovered from the largest injection to the banking support programs. The second largest injection, to AIG and the auto industry, is now being wound down and the AIG portion, according to the latest report, has been fully recovered. What remains of the TARP fund lies primarily in the banking program and the auto industry, both of which are scheduled to be repaid within 12-15 months. Out of the limelight and into textbooks and articles, the TARP fund represented a new-age attempt to solve a financial downturn. While the overall economy only sputtered in terms of growth, it is safe to say that it might have been drawing its last breaths had the capital injection programs not been introduced.

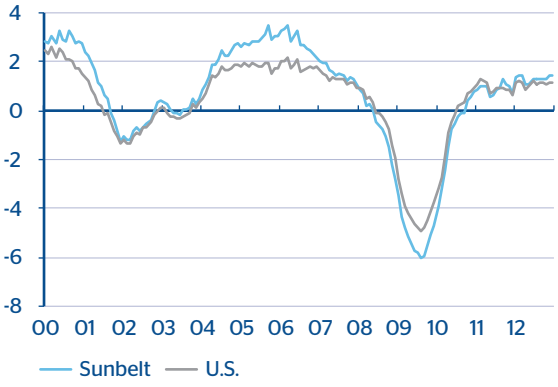
6. 2012 Employment Review: Is the Sunbelt Poised for Breakout Growth?

The BBVA Compass Sunbelt [1] has differentiated itself as a growth leader. Strong underlying industry trends, population growth and wealth creation have led to above average employment growth before the recession and a stronger rebound after. During the recovery, the Sunbelt relied on comparative advantages in mining and high-tech industries to buttress labor markets. In 2012, however, the Sunbelt experienced more diversified growth

The U.S. employment picture also brightened in 2012 with the addition of 2.2M jobs. Compared to 2011 661,000 additional jobs were created last year. This higher growth is a function of a broader based employment recovery. Extending beyond isolated gains in select industries, such as oil and gas and professional services, employment grew in sectors such as construction and real estate for the first time since 2006.

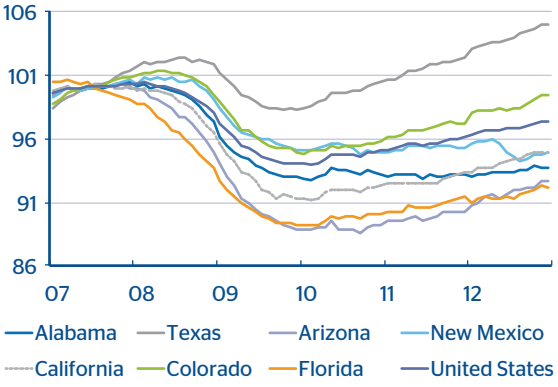
Nevertheless, federal, state and local governments have started to unwind the fiscal imbalances built up during the recession. Spending reductions resulted in a decline in public employment in 2012, as government payrolls dropped by 169k. The temporary respite from austerity during the presidential election, and the delay of austerity measures in the Budget Control Act, however, did moderate the impact in 2012. Current attempts to reduce federal and state deficits are insufficient, if the desired outcome is a non-accelerating debt-to-GDP ratio. Thus, the risk of a contraction in government employment remains.

Chart 28
U.S. vs. Sunbelt Employment Growth (YoY % Change)



BLS, Haver Analytics & BBVA Research

Chart 29
Sunbelt Employment Index (2007=100)



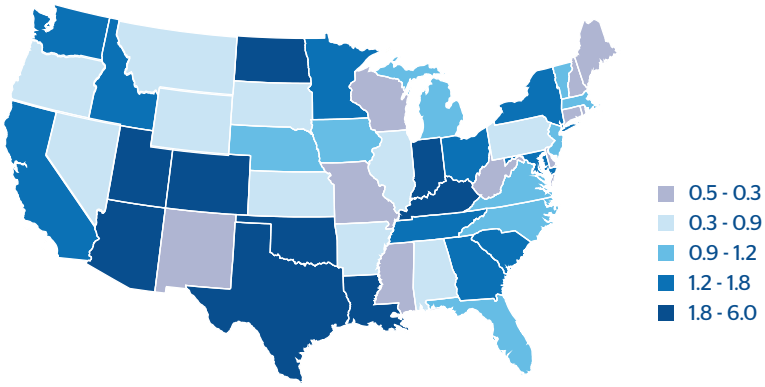
Source: BBVA Research and FHFA, Census / Haver

U.S. labor market improvements, such as decline in the unemployment rate below 8.0% –and an average monthly job creation rate of 168k are positive signs of growth. However, all of the 2011 and 2012 gains occurred under regimes of highly accommodative monetary policy and ad hoc federal stimulus. It is hard to disentangle the effects of either program on the U.S. labor market. Yet, without such measures, it is highly probable that private employment would have been lower in 2012.

As long as the fiscal situation remains manageable, and the Fed continues targeted actions to improve the labor market, we expect that private sector employment will strengthen.

[1] BBVA Compass Sunbelt: Alabama, Arizona, California, Colorado, Florida, New Mexico and Texas

Chart 30
State Employment Growth Map, Dec. 2012 (YoY % Change)



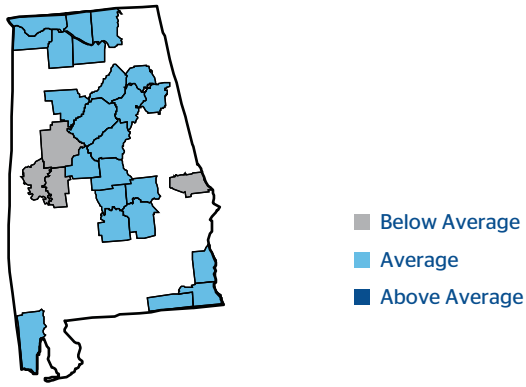
BLS, Haver Analytics & BBVA Research

Across the Sunbelt

Alabama

Alabama employment remains well below pre-recession levels due to weak overall private sector job creation and severe reductions in government payrolls. In 2012, Alabama's nonfarm payroll increased by 7,200 or 0.4% YoY. The 1.2% increase in private payrolls buoyed overall growth, and ultimately offset the 7.2k and 2.2k declines to respective state and local government employment. Concentrated strengths in automotive manufacturing and recovery in real estate and leasing employment positively contributed to growth. On industry weakness, the construction industry in Alabama remains a detractor from payroll growth, losing over 5.3K jobs in 2012.

Chart 31
Alabama MSA Employment Growth, 2012 (YoY%)[2]



Source: BLS, Haver Analytics & BBVA Research

Going forward, we expect the Alabama labor market to improve, albeit at a slower pace than the rest of the Sunbelt. High dependence on federal expenditures and a high proportion of the labor force employed by the government suggests downside risks remain. Delayed or reduced federal sequestration and housing market improvements would boost Alabama's labor market prospects. Moreover, in the manufacturing sector, strong demand for automobiles could boost state-level employment. As such, our baseline scenario is for 0.6% YoY employment growth in 2013 and 2014.

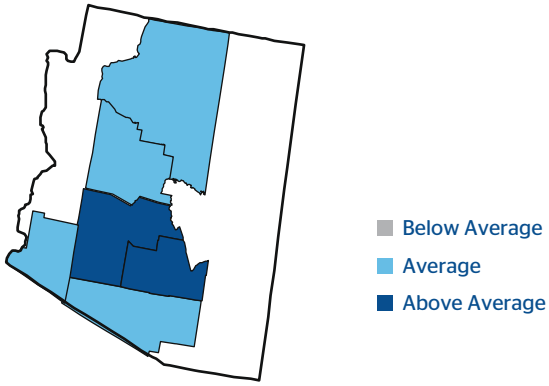
[2] MSA Maps compared to US averages (2012 YoY% change)

Arizona

Arizona experienced a diverse employment growth environment in 2012. Growing 2.4% YoY and 0.5% YoY in the public and private sectors respectively, overall Arizona employment accelerated to annual growth rate of 2.1% YoY. Specialty trade construction activity was extremely strong and comprised 1/5th of the state's employment growth in 2012. Likely due to strong housing price appreciation and improved household balance sheets retail employment grew ubiquitously across sectors also. In contrast, manufacturing employment remained tepid. A strong push to expand educational employment at the state and local levels offset reductions to federal employment.

Chart 32

Arizona MSA Employment Growth, 2012 (YoY%)



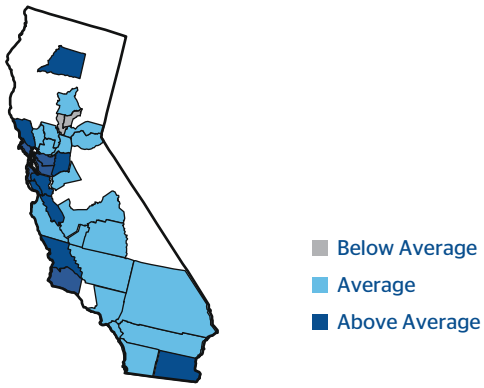
Source: BLS, Haver Analytics & BBVA Research

The employment outlook for Arizona is similar to Alabama's outlook; employment scenarios will depend on the how the federal government deals with budget reform and how the cuts are distributed between defense and non-defense spending. Delaying sequestration or softening the impact would necessarily boost our expectations for the state's employment growth in 2013 and 2014. However, undoing the ad hoc stimulus or skewing more of the cuts to the defense sector could cause economic hardship over the aforementioned period. Assuming the current legislative status quo of no sequestration, wealthier households, and normalization and the residential and commercial real estate employment growth could exceed our baseline of 2.0% and 1.9% in 2013 and 2014, respectively.

California

California rebounded in 2012, after experiencing dramatic job losses during the recession. While aggregate job losses were distributed between public and private during the recession and recovery, employment growth has recently tilted to the private sector. Within the private sector, high technology industries remain the main driver of employment growth. Within that space, professional services added 37k new jobs in 2012, as opposed to manufacturing, which lost 4.5K jobs. The concentrated employment growth in high-tech professional services has generated high levels of wealth. Such wealth creation is driving the real estate professional employment and retail sector which recovered to positive growth for the first time since 2006.

Chart 33
California MSA Employment Growth, 2012 (YoY%)



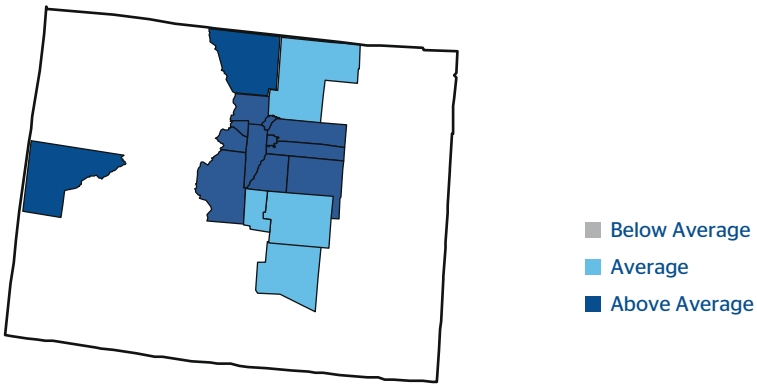
Source: BLS, Haver Analytics & BBVA Research

California's high-tech clusters in the north, entertainment clusters in the south, large population and high median income should support positive long-run employment trends. The pass-through, from high value added positions, to real estate and retail will surely strengthen as home prices recover and demand for housing improves. Such upside potential suggests a stronger growth outlook than other Sunbelt states. To the downside, however, high-tax burdens and federal and state fiscal austerity could cause resident businesses and citizens to emigrate as job opportunities flourish in other high-growth regions. Nevertheless, we believe the aforementioned strengths outweigh the downside and thus employment growth will be 1.3% YoY in 2013 and 2014, respectively.

Colorado

Colorado, like Arizona, experienced public and private employment growth in 2012. State and local educational services contributed positively to the public employment narrative, growing 2.4% and 1.7% respectively. Private sector employment growth was equally positive. Excluding information services, all major employment categories increased. Industry strengths included high-tech professional services, leisure and hospitality, construction and manufacturing which remained at 2011 highs.

Chart 34
Colorado MSA Employment Growth, 2012 (YoY%)



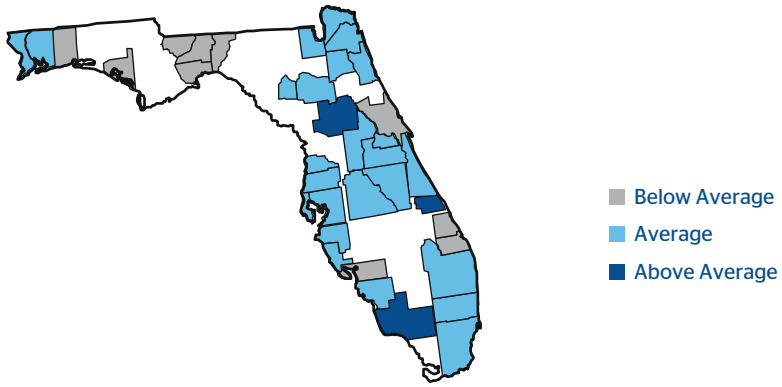
Source: BLS, Haver Analytics & BBVA Research

The employment outlook for Colorado is bright given its diverse and strong industry trends. Similar to California, high-tech professional services have led underlying wealth generation. In turn, industries reliant on consumption and investment have improved. Although, Colorado is partially exposed to the sequestrations cuts, the overall impact should be small relative to the size of the economy. Thus, we expect employment 2013 and 2014 employment growth of 1.7%.

Florida

Florida's employment growth decelerated in 2012. Although, year-over-year employment growth was only 7bp lower than 2011, the deceleration occurred under more auspicious economic conditions. Specifically, despite stronger national housing and construction trends, Florida's construction industry continued to shed jobs. To the upside, real estate rental and leasing positively contributed to employment growth whereas manufacturing employment growth remained positive but tepid relative to the rest of the Sunbelt.

Chart 35
Florida MSA Employment Growth, 2012 (YoY%)



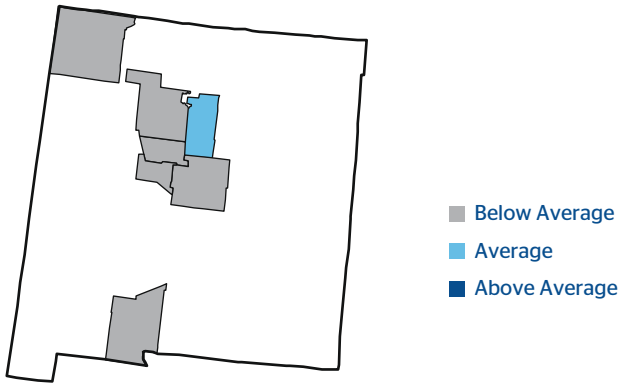
Source: BLS, Haver Analytics & BBVA Research

Although the overall outlook for Florida has improved, it is clear that residual effects from the housing crisis remain. Underperforming construction, less robust wealth creation and slower recovery of household balance sheets will ultimately lead a lagging employment recovery. Moreover, the clear risk of federal spending reductions suggests risk may be skewed to the downside. Assuming the aforementioned trends we expect growth to be 1.4% and 1.5% in 2013 and 2014, respectively.

New Mexico

The nonfarm payroll contraction, in New Mexico, was unique among the Sunbelt. Neither public nor private employment was superlative but the heavy reliance on government employment was particularly harsh on 2012 employment growth. Moreover, the lack of industrial diversity and a struggling construction sector contributed to the deceleration of private payrolls within the state. In addition, government employment contracted quite significantly, 1.9% YoY. Other areas such as professional and financial also declined, ultimately leading to a contraction in total nonfarm payroll (-0.3%YoY).

Chart 36
New Mexico MSA Employment Growth, 2012 (YoY%)



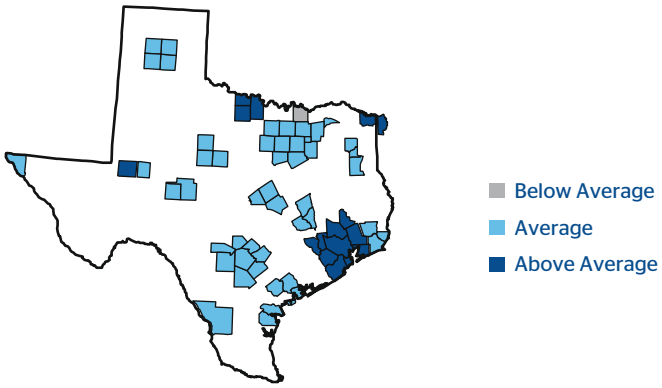
Source: BLS, Haver Analytics & BBVA Research

Assuming no, or limited, sequestration, the inauspicious private labor market trends are prolific. Assuming full sequestration, New Mexico employment growth will assuredly be negative in the medium-run, with risks skewed to the downside in long-run. Absent a new high spending regime at the federal level, we expect employment growth to lag the rest of the Sunbelt, growing 0.1% and 0.2% in 2013 and 2014.

Texas

Despite large reductions in government jobs, Texas employment grew by 2.4%YoY in 2012. The only state in the Sunbelt to exceed pre-recession employment levels, Texas continues to rely on a technological boom in the oil and gas extraction industries. However, the employment growth scenario now encompasses a more diverse employment mix. For example, high-tech professional services such as consulting and computer systems designs have added 27K jobs since 2010. Moreover, waste management and recycling services, which we identified as an industries poised for growth in our 3Q12 US Outlook, added 31K jobs in 2012. Construction also trended positively for the first time since 2006, and real estate, rental and leasing services grew in 2011 and 2012, suggesting fundamental industries related to housing and commercial development are recovering.

Chart 37
Texas MSA Employment Growth, 2012 (YoY%)



Source: BLS, Haver Analytics & BBVA Research

Texas' economic diversity reduces concerns regarding overexposure to oil and natural gas price volatility. While the ties between Texas' economic success and, oil and natural gas, remain inexorable, the all-pervading employment growth could insulate Texas labor markets from external oil shocks. Given such economic diversity the downside risk to employment is more muted than the upside potential. Assuming housing and construction continue to recover our expectation is for strong sustained employment growth of 2.2% in 2013 and 2014.

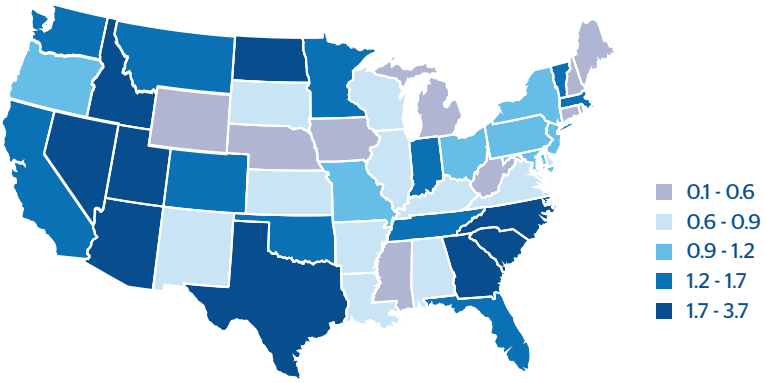
Employment Outlook: Labor Market Diversification Underlies Sunbelt Potential

The San Francisco Fed recently proposed that economic uncertainty and household leveraged could be the causes of the tepid jobs recovery, following the great recession. While both showed varying degrees of correlation at the state-level, neither showed a strong to causal influence on employment creation. Other theories purport that structural labor market inefficiencies are reducing the overall job creation rates. Ultimately, the explanation of the slow recovery lies within all of the aforementioned factors.

As such, the fed has committed to historical measures to stimulate the economy and more specifically, reduce the unemployment rate. The fact that Fed has established quantitative targets of 6.5% for the unemployment rate, assuming inflation remains with 50bp above 2% long-run inflation, supports some degree of monetary policy accommodation through 2015. Moreover, the Fed has shifted its purchases,

and reinvestment of maturing assets, into long-term U.S. treasuries, which aims to jump start the real-estate and construction sectors. Overall, the Fed's commitment to lasting labor market improvements suggests upsides to private labor market trends. However, the impact that sequestration will have on public employment could overshadow the majority of private labor market improvements.

Chart 38
Projected State Employment Growth, 2013-2014, Total % Change



Source: BBVA Research, BLS & Haver Analytics

Regardless of risks to public employment, we expect the BBVA Compass Sunbelt will continue to be a leader in employment growth even as states such as Alabama and New Mexico struggle amidst fiscal austerity. First, the region is home to clusters of high value-added industries with growth potential including high-tech professional services and oil and gas mining, exploration and transportation. Second, population growth is faster than the national average.. Third, the income growth potential of the Sunbelt should exceed that of the rest of the country given the aforementioned industry concentrations. Assuming the virtuous cycle of high value-added job creation jump starts the construction and services sectors, median Sunbelt employment growth, between 2013-2014, should exceed that of the U.S.—1.4% and 1.0% respectively.

7. Austin and the High-Tech Sector

Although Texas is famous for hosting the largest concentration of energy companies and hospitals in the world, the high-tech industry also has a strong presence. In addition, the state has numerous companies engaged in semiconductor manufacturing, aerospace, software development, biotechnology and clean energy that have prospered across its major metropolitan areas. In particular, the Austin-Round Rock-San Marcos MSA (Austin) has managed to become one of the most important high-tech clusters in the world.

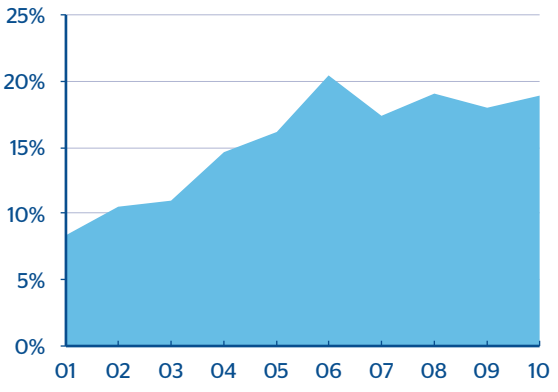
High-tech has a preeminent role in Austin's metropolitan statistical area. According to the Bureau of Economic Analysis, activities related with information, communication and technology accounted for 19% of the MSAs real GDP in 2010, and contributed with 2.3 percentage points to the 6.7% real GDP growth rate in the same period.

According to the Census Bureau, the five counties that constitute the Great Austin area (Bastrop, Caldwell, Hays, Travis and Williamson) had 74,186 residents engaged in computer, engineering and science occupations in 2011, 13% of Texas' employment in these occupations. In addition, these occupations comprise 9% of Austin's civilian employed population, 1.6 times more than both the national and state average.

The impact of high-tech jobs spills over to the rest of the economy. Moretti(2012) calculates that for every innovation-job created, two professional positions (accountants, lawyers, doctors, etc.) and three non-professional positions (waiters, janitors, store clerks, etc.) are created over time.[1]

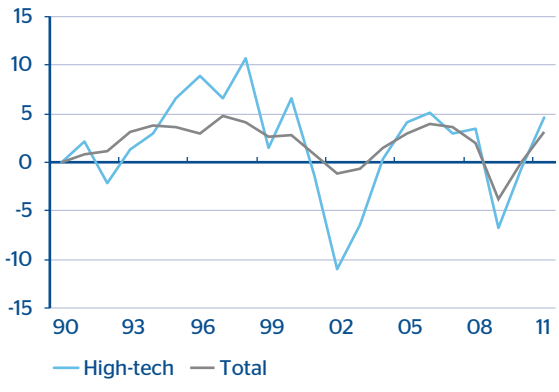
Nevertheless, the high-tech sector was not immune to the recession. According to the CEW survey, between 2008 and 2010, Texas high-tech employment shrank by an average of 1.3%, while non-high-tech employment in Texas declined 0.5%. However, the recovery has also been faster, with an average employment growth of 4.5% between in 2011 vs. 3.2% in total non-high-tech employment.

Chart 39
Austin MSA: Information, Communication and Technology (Share of GDP)



Source: BBVA Research with BEA data

Chart 40
Texas Non-farm Payroll (YoY % change)



BBVA Research with BLS data

[1] Source: Moretti, Enrico. 2012. "The New Geography of Jobs", Houghton Mifflin Harcourt.

The Recipe for Success

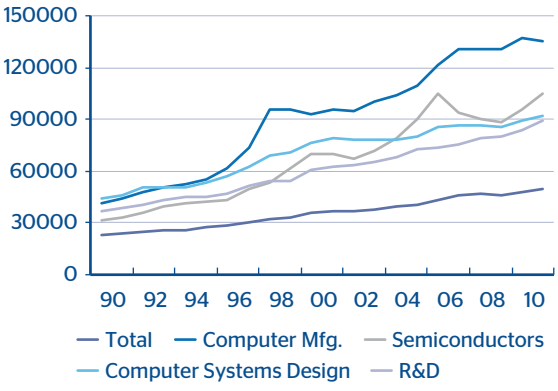
A key aspect in Austin's emergence as high-tech hub is the presence of a robust technology ecosystem. It started with the decision of Texas Instruments, IBM and Tracor to locate in Austin back in the 1950s and 1960s, followed by the tremendous success of Dell starting in the 1980s. These are just a few examples of the numerous companies that have established their headquarters in Austin. The University of Texas (the third largest patent generator in the United States) supply human capital and research to companies that innovate, develop and commercialize new products. At the same time, companies and universities also produce entrepreneurs in fields such as software development, healthcare technologies, clean energy and biotech. The fuel that makes high-tech entrepreneurship works is provided by government initiatives like the Texas Emerging Technology Fund, venture capitalists and angel investors, from whom direct investment flows into the most promising research and startups, guaranteeing the survival of the ecosystem.

Four elements: big companies, universities, entrepreneurs and capital underlie Austin's strength as a high-tech hub. According to data from the Austin Chamber of Commerce, between 2003 and 2012, there were 651 announcements of new companies or expansion of existing ones in the city, most of them related with high-tech industries (semiconductors, software, IT, medical devices and biotech).

Chart 41
Expansions and Relocations by Type of Operation

Source: Austin Chamber of Commerce

Chart 42
Annual Average Wage by Industry ($)



Source: Bureau of Labor Statistics

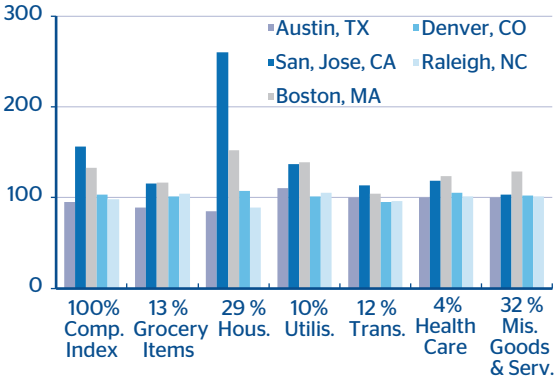
A Good Place to Work and Live

The increasing reputation of Austin as a magnet for the creation, relocation or expansion of high-tech firms has also been boosted by a business friendly environment and a low cost of living. For example, Austin has a lower cost of living than urban areas with a strong presence of high-tech businesses such as Boston, San Jose (home of Silicon Valley) or Denver. In 2010, Austin ranked 159 out of 325 urban areas based on the C2E Cost of Living Index.[2] The index incorporates the cost of groceries, utilities, transportation, healthcare, housing, and, other goods and services. The major differences in the cost of living index between Austin and other high-tech cities have to do with housing. In 2012, the median sales price of existing homes in Austin ($206,000) was 68% lower than in San Jose ($645,000), 41% lower than Boston ($351,200) and 18% lower than Denver ($252,400).

Austin's attractiveness is also linked to Texas' reputation as one of the best places to do business in the nation. The CNBC Cost of Doing Business has ranked Texas consistently in the top two positions since it was first calculated in 2007. In 2012, the Cost of Doing Business highlighted three major sources of strength: infrastructure, technology and innovation, cost of living and access to capital. Moreover, the tax climate is very positive as there is no individual and corporate income tax. According to the Tax Foundation, Texas offers one of the best tax climates in the nation.

[2] Source: Census Bureau with C2ER data.

Chart 43
Cost of Living Index-Selected Urban Areas: Annual Average 2010



Source: Census Bureau with data from C2ER

Table 3
2013 State Business Tax Climate Index Ranks and Component Tax Ranks (selected states)

State	Overall Rank	Corp. Tax Rank	Ind. Income Tax Rank	Sales Tax Rank	Unemploy. Insurance Tax Rank	Prop. Tax Rank
California	48	45	49	40	16	17
Colorado	18	20	16	44	39	9
Massachusetts	22	33	15	17	49	47
North Carolina	44	29	43	47	5	36
Texas	9	38	7	36	14	32

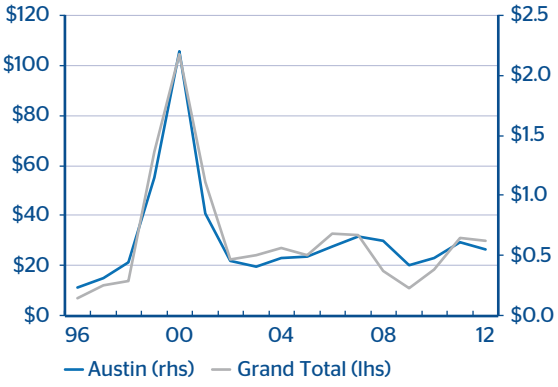
*Note: A rank of 1 is more favorable for business than a rank of 50. Rankings do not average to total. States without a tax rank equally as 1. D.C. score and rank do not affect other states. Report shows tax systems as of July 1, 2012 (the beginning of Fiscal Year 2013).
Source: Tax Foundation

National Challenges That Affect the Local Outlook

Although the outlook for Austin and Silicon Hills is bright, there are some challenges that need to be addressed. Some of them have a national scope and some others are local.

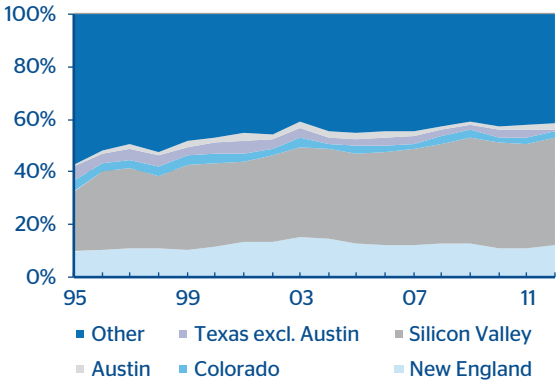
Talent Shortage. The U.S. high-tech industry experiences a chronic shortage of skilled workers that puts pressure on labor costs and reduces the competitiveness of firms. Shortages of high-skilled workers can be explained by two structural factors: 1) poor outcomes in math and science at the K-12 level, and 2) a limited amount of H1B visas, and the inability of the immigration system to retain foreign nationals with science and engineering degrees from U.S. universities. As returns to human capital accumulation grow in emerging economies (i.e. China, India, Brazil, etc.), it will be more difficult for the U.S. to retain talent with the current immigration rules. This is important because approximately 25% of high-tech startups are founded or co-founded by an immigrant.[3] In places like Silicon Valley, this proportion reaches up to 50%.[4]

Chart 44
Venture Capital Flows 1995-2012 (billions)



Source: National Venture Capital Association

Chart 45
Venture Capital Flows by Region in 2012 (share of total)



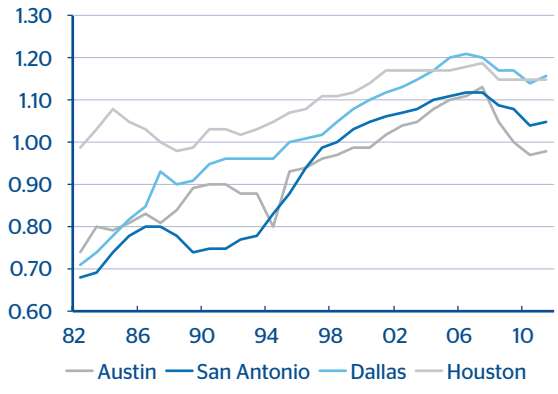
Source: National Venture Capital Association

[3] National Association of Venture Capital, "American Made, The Impact of Immigrant Entrepreneurs and Professionals on U.S. Competitiveness." Available at: http://www.nvca.org/index.php?option=com_content&view=article&id=254&Itemid=103
[4] Source: The WSJ with data from Kauffman Foundation. "A New Push for Entrepreneur Visas", February 12, 2013. Available at: www.wsj.com

Venture Capital. Over the past ten years, venture capital has been recovering from the dot-com burst. However, this recovery has been weak and interrupted by the Great Recession. Since 2002, the average amount of venture capital in the U.S. was $25bn per year, lower than the $36bn average between 1995 and 2001. Today, high-tech entrepreneurs have to compete for a smaller piece of the venture capital pie, which has reduced its size from what it was in the 1990s. Getting funding is even more difficult in times of economic distress, when paradoxically, more startups are created. The amount of venture capital flowing to Texas is still low compared to traditional destinations like Silicon Valley or New England. In 2012, Texas' share of total venture capital flows was 3.58% in 2012 from which Austin got 2.3%, a significantly lower share than that of Silicon Valley (40.9%) or New England (12.1%).[5] These figures suggest that from a startup perspective it could be easier to get funding in California or New England than in Austin.

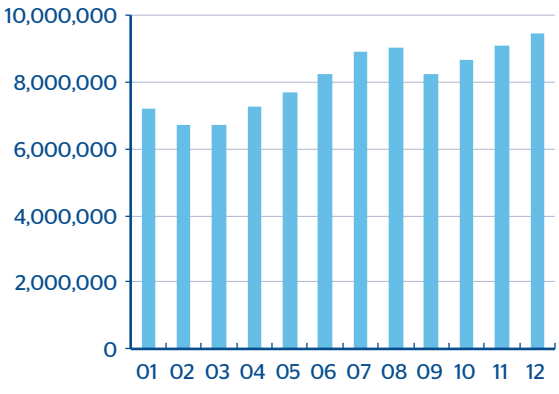
Infrastructure. Recruiting and retaining companies require a constant effort to improve infrastructure and public services. This is crucial to keep the cost of living low and improve the attractiveness of the city. For example, a good transportation system can reduce congestion that emerges from more people working in the area. In a globalized economy, it's important that the local airport increase its capacity as well as the number of international non-stop flights available to its users. Infrastructure investments in water and electricity are also needed to maintain the cost of utilities low while population is growing at a fast pace. Austinites have been very pro-active in facing these challenges, and economic development initiatives such as Opportunity Austin or The Greater Austin Technology Partnership are good examples of the region's progressivity.[6]

Chart 46
Roadway Congestion Index



Source: Texas A&M Transportation Institute

Chart 47
Austin-Bergstrom International Airport: Number of Passengers



Source: Austin Chamber with ABIA data

Bottom Line:

Austin has emerged as one of the most important technology clusters in the world. This was possible because of competitive advantages such as a low cost of living, access to talent, research institutions, a positive tax climate and state and local initiatives that promote economic growth. However, there are important challenges down the road. Although Austin has become a magnet for companies seeking relocation and expansion, it stills receives a small portion of total venture capital flows. In other words, the region looks like the right place for medium and big-size companies, but not necessarily for small and risky startups. Given the positive effects that high-tech clusters create in their communities, several other cities around the world have developed their own strategies to transform themselves into the next Silicon Valley. This increases the competition in the recruitment and retention of firms. In addition, the city has to cope with national challenges related to inefficiencies in the immigration and education system that produces a chronic shortage of scientists and engineers as well as a growing need for infrastructure. Facing these challenges won't be easy, but Austin has showed a tremendous capacity for anticipating new trends, taking advantage of its strengths and developing new ones.

[5] Source: National Venture Capital Association.
[6] For a more detailed information about these initiatives and their achievements, the reader can consult: http://www.austinchamber.com/the-chamber/opportunity-austin/files/Annual%20Meeting%20Presentation.pdf

8. Factsheet

Table 4

List of top international airports by passengers traffic, 2011

Rank	City (Airport)	Total Passengers
1	**ATLANTA GA, US (ATL)**	**89 331 622**
2	BEIJING, CN (PEK)	73 948 113
3	**CHICAGO IL, US (ORD)**	**66 774 738**
4	LONDON, GB (LHR)	65 884 143
5	TOKYO, JP (HND)	64 211 074
6	**LOS ANGELES CA, US (LAX)**	**59 070 127**
7	PARIS, FR (CDG)	58 167 062
8	**DALLAS/FORT WORTH TX, US (DFW)**	**56 906 610**
9	FRANKFURT, DE (FRA)	53 009 221
10	**DENVER CO, US (DEN)**	**52 209 377**
11	HONG KONG, HK (HKG)	50 348 960
12	MADRID, ES (MAD)	49 844 596
13	DUBAI, AE (DXB)	47 180 628
14	**NEW YORK NY, US (JFK)**	**46 514 154**
15	AMSTERDAM, NL (AMS)	45 211 749
16	JAKARTA, ID (CGK)	44 355 998
17	BANGKOK, TH (BKK)	42 784 967
18	SINGAPORE, SG (SIN)	42 038 777
19	GUANGZHOU, CN (CAN)	40 975 673
20	SHANGHAI, CN (PVG)	40 578 621
21	HOUSTON TX, US (IAH)	40 479 569
22	LAS VEGAS NV, US (LAS)	39 757 359
23	**SAN FRANCISCO CA, US (SFO)**	**39 253 999**
24	**PHOENIX AZ, US (PHX)**	**38 554 215**
25	CHARLOTTE NC, US (CLT)	38 254 207
26	ROME, IT (FCO)	36 227 778
27	SYDNEY, AU (SYD)	35 991 917
28	**MIAMI FL, US (MIA)**	**35 698 025**
29	**ORLANDO FL, US (MCO)**	**34 877 899**
30	MUNICH, DE (MUC)	34 721 605

Airports participating in the ACI annual traffic statistics collection.
Source: Airport Council International.

Table 5

List of top international airports by cargo traffic, 2011

Rank	City (Airport)	Total Cargo
1	HONG KONG, HK (HKG)	4 165 852
2	**MEMPHIS TN, US (MEM)**	**3 916 811**
3	SHANGHAI, CN (PVG)	3 228 081
4	INCHEON, KR (ICN)	2 684 499
5	**ANCHORAGE AK, US* (ANC)**	**2 646 695**
6	PARIS, FR (CDG)	2 399 067
7	FRANKFURT, DE (FRA)	2 275 000
8	DUBAI, AE (DXB)	2 270 498
9	TOKYO, JP (NRT)	2 167 853
10	**LOUISVILLE KY, US (SDF)**	**2 166 656**
11	SINGAPORE, SG (SIN)	1 841 004
12	**MIAMI FL, US (MIA)**	**1 835 797**
13	TAIPEI, TW (TPE)	1 767 075
14	**LOS ANGELES CA, U (LAX)**	**1 747 629**
15	BEIJING, CN (PEK)	1 551 471
16	LONDON, GB (LHR)	1 551 404
17	AMSTERDAM, NL (AMS)	1 538 134
18	**CHICAGO IL, US (ORD)**	**1 376 552**
19	**NEW YORK NY, US (JFK)**	**1 344 126**
20	BANGKOK, TH (BKK)	1 310 146
21	GUANGZHOU, CN (CAN)	1 144 456
22	**INDIANAPOLIS IN, US (IND)**	**1 012 589**
23	**NEWARK NJ, U S(EWR)**	**855 594**
24	TOKYO, JP (HND)	818 806
25	SHENZHEN, CN (SZX)	809 125
26	OSAKA, JP (KIX)	759 278
27	DOHA, QA (DOH)	707 831
28	LUXEMBOURG, LU (LUX)	705 371
29	KUALA LUMPUR, MY (KUL)	694 296
30	MUMBAI, IN (BOM)	671 237

Airports participating in the ACI Annual Traffic Statistics Collection.
Total Cargo: loaded and unloaded freight and mail in metric tonnes.
*ANC data includes transit freight.
Source: Airport Council International.

9. Economic Forecasts (YoY % Change)

Table 6

	2011	2012	1Q13	2Q13	3Q13	4Q13	2013
U.S.							
Real GDP	1.8	2.2	1.5	1.7	1.6	2.2	1.8
Nonfarm Employment	1.2	1.7	1.4	1.4	1.5	1.4	1.4
Nom. Personal Income	5.1	3.5	4.1	4.5	5.4	4.3	4.6
Home Price Index (Case Shiller)	-3.9	2.8	7.4	7.3	7.4	7.1	7.3
Home Sales	2.3	10.5	9.1	9.1	11.1	12.5	8.7
Arizona							
Real GDP	1.5	2.8	3.0	2.1	1.5	1.4	2.0
Employment	1.0	2.1	1.9	1.5	1.3	1.3	1.5
Real Personal Income	2.8	2.0	2.6	2.5	2.3	2.7	2.5
Home Price Index	-9.8	14.7	19.5	18.5	14.0	10.0	15.5
Colorado							
Real GDP	1.9	2.6	2.7	2.3	2.2	2.0	2.3
Employment	1.5	1.9	1.4	1.5	1.6	1.1	1.4
Real Personal Income	3.9	1.9	2.5	2.0	2.0	1.8	2.6
Home Price Index	-2.6	5.7	12.0	9.5	9.4	7.8	9.7
New Mexico							
Real GDP	0.2	1.0	1.6	1.4	1.5	1.4	1.5
Employment	0.1	-0.2	-0.5	-0.1	1.1	0.8	0.3
Real Personal Income	2.3	1.1	2.0	2.1	1.6	1.6	1.7
Home Price Index	-5.3	0.7	0.5	-0.3	0.8	1.0	0.5

	2011	2012	1Q13	2Q13	3Q13	4Q13	2013
Alabama							
Real GDP	-0.8	0.9	1.5	1.3	1.4	1.3	1.4
Employment	-0.2	0.4	0.6	0.4	0.3	0.1	0.3
Real Personal Income	1.7	0.9	1.0	1.0	0.9	0.8	1.1
Home Price Index	-5.1	3.7	4.0	3.9	6.0	5.0	4.7
California							
Real GDP	2.0	2.4	2.6	2.2	1.7	1.5	2.0
Employment	1.0	1.7	1.5	1.2	0.8	0.5	1.0
Real Personal Income	3.0	1.7	2.8	2.6	2.4	2.3	2.2
Home Price Index	-6.9	5.7	12.0	10.0	10.0	7.5	9.9
Florida							
Real GDP	0.5	1.5	1.9	1.6	1.6	1.4	1.6
Employment	1.1	0.9	1.1	1.2	1.3	1.0	1.2
Real Personal Income	2.4	0.8	1.9	1.5	1.2	1.1	2.7
Home Price Index	-6.2	7.6	8.5	7.0	6.0	5.5	6.8
Texas							
Real GDP	3.3	3.5	3.3	3.1	3.1	2.9	3.1
Employment	2.1	2.4	1.9	1.9	1.8	1.7	1.8
Real Personal Income	4.6	2.4	3.1	3.2	3.2	3.3	3.7
Home Price Index	-1.0	5.2	6.3	6.5	6.0	5.9	6.2

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

Table 7

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 (2012 Thousands)	313,914	4,822	6,553	38,041	5,188	19,318	2,086	26,059
Labor Force (Dec '12 Thousands)	155,511	2,157	3,020	18,468	2,726	9,347	934	12,638
NonFarm Payroll (Dec '12 Thousands)	133,750	1,878	2,479	14,399	2,317	7,388	801	10,904
Unemployment Rate (Dec '12)	7.8	7.1	7.9	9.8	7.6	8.0	6.4	6.1
Total Building Permits, (YTD Dec '12)	535,696	8,241	16,603	29,261	13,569	44,072	3,984	81,493
Change in Building Permits (YTD YoY (%))	24.5	1.6	58.1	25.6	39.5	31.0	13.7	24.2
Home Ownership Rate (4Q12)	65.4	72.6	64.8	54.1	64.9	66.2	66.0	63.3
Housing Prices (4Q12 YoY Change (%))	5.5	4.3	21.6	12.0	10.7	9.8	0.6	6.6
Exports of Goods (4Q12 $ Billions)	394.4	4.7	4.5	40.6	2.1	16.6	0.7	68.8
Change in Exports (4Q12 YoY Change (%))	2.8	0.1	-0.3	-1.9	9.4	-1.3	16.5	4.2

Source: BEA, BLS, Census, WiserTrade and FHFA

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