BBVA | RESEARCH

Economic Outlook

United States

Second Quarter 2013
Economic Analysis

- Growing divergences in the global economy
- U.S. economic growth will pick up in 2H13
- Monetary policy normalization and solid growth put upward pressures on long term yields
- State fiscal outlook improves but imbalances remain
- Mobile banking on the verge of widespread adoption
- Crowdfunding: A sustainable alternative to traditional banking?

BBVA Compass

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Closing Date: June 10, 2013

1. Editorial

Over the past three years, US commercial banks' profitability experienced a remarkable recovery. However, standard performance metrics like the price to earnings ratio, return to equity and return to assets are still lower than the pre-crisis period. This raises the question of whether a full recovery is just a matter of time or if there has been a structural shift toward permanently lower bank profitability in a new post-crisis environment.

Foremost, bank revenues depend on credit growth and overall economic activity. In this regard, the outlook is somewhat somber as loan demand will expand at a slower pace – at least in the short-term - than during the boom years due to lower potential output and the deleverage process that has forced households to realign their balance sheets.

To counteract these forces and remain competitive, banks are adjusting their business model. This redesign will be the financial industry's most dramatic transformation in modern history, as it implies an amalgamation of changes; in particular, the adoption of new technologies and the implementation of consumer-centric strategies, in a more regulated environment.

On the technological side, one fundamental change will be increased Internet and mobile device usage, which continue to facilitate a shift from cash and traditional payment instruments like checks and credit cards, to more sophisticated and cost-effective options such as mobile wallets and contactless systems. In addition, some core activities will become noncore, branch layouts and occupations will adjust or disappear, some peripheral businesses could become key revenue sources and new businesses will emerge. Moreover, technological change increases the productivity of banks, but it also boosts competition from nonbanks. These new players present a challenge to the industry as they often have a comparative advantage when it comes to technological readiness.

To succeed in this new hyperconected and competitive environment, banks will have to follow a customer-centric approach and offer simple, user-friendly and effective products, with a high level of transparency and security. Other decisions related to changing the internal organization, attracting talent and adopting new technologies will prove crucial.

These transformations will reduce transaction costs, increase value-added, improve customer satisfaction, and boost revenues. Without a doubt, the biggest winner will be the customer, including people and businesses that currently have limited or no access to financial services. Moreover, this transformation will result in a more efficient financial system that will be in a stronger position to support economic growth and wealth creation.

However, banks face new capital adequacy standards as proposed by the Basel Committee on Banking Supervision, which will require new equity or rising retained earnings. In addition, the Dodd–Frank Wall Street Reform and Consumer Protection Act, which was signed into law in July 2010, increases the costs of day-to-day operations, limits noninterest income, and establishes new rules for investments made with bank capital. Moreover, the Credit Card Accountability Responsibility and Disclosure Act of 2009 and Regulation E further increase operating costs and reduce earnings. Hopefully, policymakers are making a careful attempt to achieve the right balance when implementing new regulations, as overregulation could cause banks to perceive disincentives to innovate and delay technological change instead of building better and safer financial institutions.

Nathaniel Karp

Chief U.S. Economist

BBVA Research

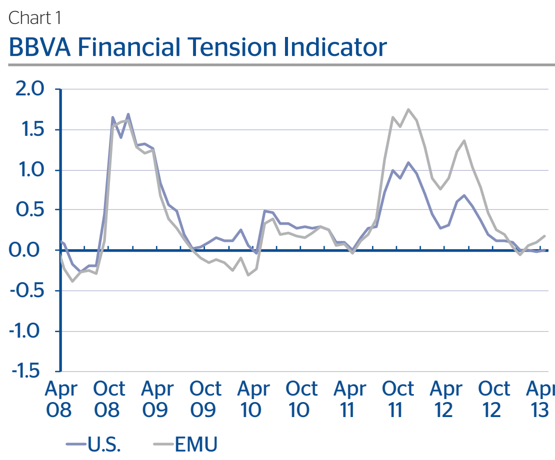
2. Growing Divergences in the Global Economy

Over the last three months, some of the threats to the global economic recovery have receded, but there is now growing divergence between the different areas. There is a widening disparity between the economic performance of the U.S. and the eurozone, where weakness has reached the core economies. In addition, despite doubts about the long-term sustainability of growth in China, the country does not appear to be headed towards a sharp adjustment in the short term. There is some disappointment in the rest of the emerging Asian economies when compared with earlier growth expectations, though initial projections were probably too high. Japan is on the crest of a wave of economic optimism, although so far this has only manifested itself in the valuations of some financial assets and indicators of confidence, rather than the real economy.

There has only been a limited response in the financial markets to events such as the continued uncertainty regarding the definition of long-term fiscal policy in the U.S., the internal political paralysis in Italy and the events in Cyprus and Portugal. Thus risk premiums have fallen in the eurozone, largely due to the implicit support from the ECB's OMT program and the abundant global liquidity, which is benefiting the dash for return and the ensuing financial risk-on mood at the global level. Nearly all assets are benefiting from this change in perception, with practically only one exception: the upturn in the credit risk indicators of the eurozone's banking sector.

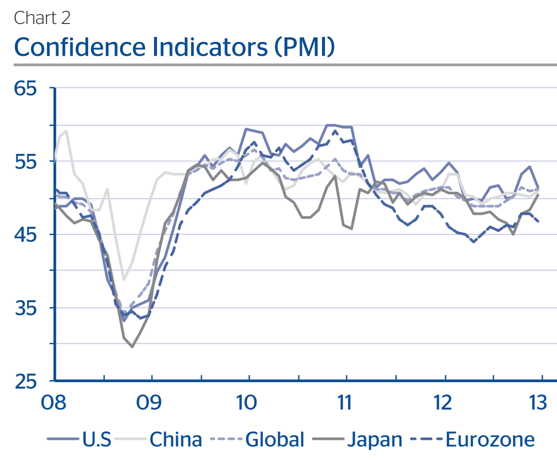
The most recent economic indicators reflect the divergence between areas. The trend towards stability in global manufacturing confidence has been maintained, although with growing divergence between regions. In any event, the positive tone in the financial markets and divergence in cyclical prospects have not yet led to any significant change in activity or trade at a global level. According to our global BBVA-GAIN[1] activity indicator, even the most recent data confirm our expectations of continuing global GDP growth at a quarterly rate of 0.7%. However, more varying prospects between the main economies, in particular due to the downward revision in GDP growth in the eurozone and also in some economies in emerging Asia, have put a brake on the strength of the recovery expected in 2013 and 2014. As a result, we have revised down our growth forecasts for the world economy to 3.3% in 2013 and 3.9% in 2014, from 3.6% and 4.1% respectively.

Chart 1
BBVA Financial Tension Indicator



Source: BBVA Research

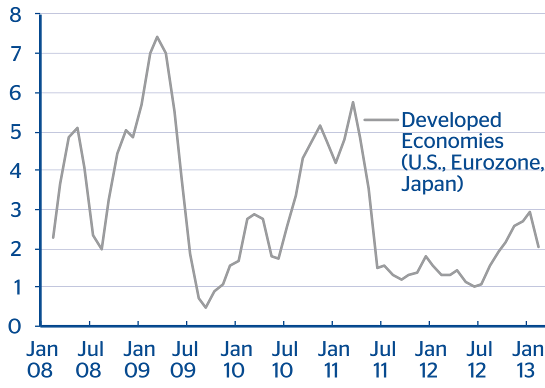
Chart 2
Confidence Indicators (PMI)



Source: Markit & BBVA Research

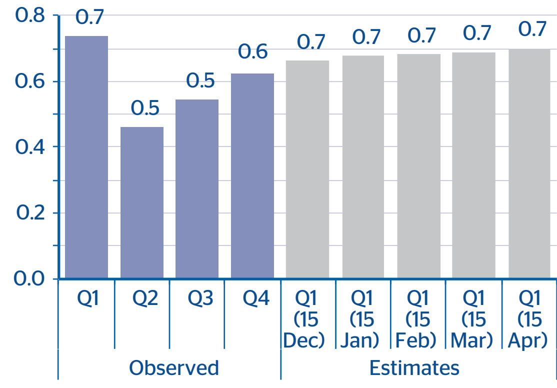
[1] For more details see BBVA Research Economic Outlook 1Q13, available at: http://www.bbvaresearch.com/KETD/fbin/mult/130306_EcWatch_BBVAGAIN_tcm348-379375.pdf?ts=2942013

Chart 3
Developed economies: standard deviation PMI (U.S., euro zone and Japan)



Source: Markit & BBVA Research

Chart 4
Global growth based on BBVA-GAIN (% q/q)



Source: BBVA Research

U.S.: Strong private consumption and continued monetary expansion.

Although U.S. GDP growth figures in the first quarter of 2013 were below market expectations, they confirmed the continued healthy tone shown so far by private consumption. This is due to an improvement in job creation, and a stronger financial situation of households (wealth effect). Furthermore, U.S. financial markets have not been affected by external contagion from risk events in the euro area. However, the most recent indicators of cyclical prospects, have fallen in March and April to levels compatible with a slump of activity, so we expect a slowdown of GDP in the second quarter.

For two reasons, we maintain our forecasts for the U.S. economy in 2013 and 2014 with growth rates of 1.8% and 2.3%, respectively. First, despite the uncertainty regarding the fiscal cliff and the implementation of the sequester (automatic cuts and caps to public spending), private spending has given clear signs of resilience. Second, since inflation expectations are well anchored, quantitative easing (QE) may continue without problems until there is significant improvement in labor market prospects. Although some of the data at the start of the year could have prompted an early withdrawal of stimuli, the most recent information shows that the U.S. economy is still far from sufficiently robust growth rates, thus monetary policy will continue to be supportive of growth.

The euro zone stagnates and the ECB springs into action

The newest element in the eurozone is the way weak economic activity is extending from peripheral economies to the centre of the area, particularly to France but also Germany and Holland. In France, uncertainty regarding tax policy and fiscal consolidation, together with the lack of reforms, is undermining confidence. Similarly, Germany's confidence indicators renewed their downward trend in April. The country's exports are suffering, despite the resilience of demand from emerging countries. Holland has also been heading for recession as a result of falling investment and household consumption, despite the positive performance of its exports. Finally, on the periphery of the eurozone there has been strong appetite for risk, in particular for peripheral sovereign debt, thanks to the ECB's OMT program and abundant global liquidity after Japan implemented a new round of monetary easing. The yield should be on 10-year Italian bonds hit their lowest level since November 2011, despite the political uncertainty. Showing a similar drop in risk premiums, Spain's 10-year bond yields have remained below 4.5% during recent weeks.

Although the most recent data for retail sales and industrial output suggest activity in the eurozone stabilized to some extent early in the year, the deterioration in the confidence surveys confirms activity is losing momentum and a sustained recovery is far away. Meanwhile, the authorities in the eurozone continue with the process of constructing an economic architecture for the area (the move towards a single banking union). At the same time, there is growing debate about the appropriate level of fiscal consolidation needed to create a credible path for reducing the public deficit and ensuring debt sustainability without deteriorating economic activity to such an extent that the adjustment efforts become futile.

In terms of progress towards a banking union, the agreement reached during the Cyprus crisis has meant the practical application of a bailout model that is being negotiated for the sector as a whole in the area. Before bailout funds are injected, banking creditors (including, if necessary, uninsured depositors) will have to take losses. With respect to fiscal consolidation, recent statements by the European Commission supporting Spain's postponement of its 3% public deficit target until 2016 are in line with giving greater importance to the quality and composition of the adjustment than to the fast achievement of targets at the expense of possible negative effects on growth.

Overall, our scenario involves a downward revision to growth forecasts for the eurozone. We estimate a fall of 0.1% in GDP in 2013 and a rise of 1% in 2014. These forecasts are 0.4 and 0.3 percentage points lower than those in our January publication, respectively. In any event, the risks continue to be tilted to the downside, and further downward revisions are likely. The key point is that Germany should not remain as the only source of growth in the area because of its easy access to finance, high level of competitiveness and greater exposure to the best performing sources of global demand.

The reduction in financial tensions is a support for growth. It has been achieved through the ECB program, ensuring the transmission of monetary policy to the whole of the economy. But falling funding costs and improved market access for sovereign borrowers are not enough. Financial markets fragmentation is reflected in the heterogeneous availability and cost of credit for households and companies across the euro zone.

Against a backdrop of lingering and spreading weak activity and inflation below the target, the ECB cut its refi rate by 25 basis points to 0.50%. It also narrowed the corridor between the main rate and the deposit rate to +/-50 bp. The ECB also announced the extension of its liquidity auctions at a fixed rate with no restriction for as long as necessary and at least until July 2014. Additionally, the ECB started consultations with other European institutions (European Investment Bank and European Commission) to bolster the market of financial instruments backed by corporate loans, aimed at tackling the mounting problem of scarce credit to firms in the periphery. However, the impact of rate cuts on the real economy may be limited. Since risks remain tilted to the downside, the ECB has said that it is ready to take additional measures, should the economic outlook deteriorate further. Among the measures that the ECB could implement is the use of negative interest rates on the deposit facility, other non-conventional measures, and support for European institutions to provide credit to SMEs.

In Asia, doubts linger about the strength of Chinese growth, optimism in Japan on the back of its massive quantitative expansion.

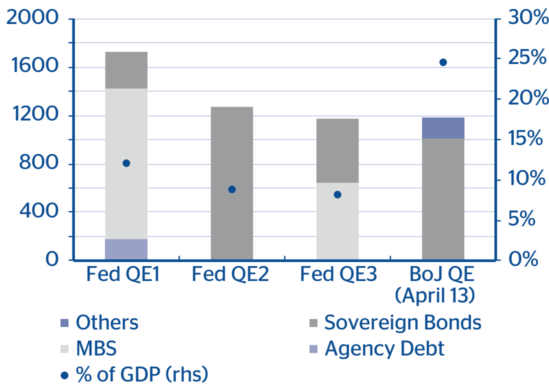
The Chinese economy has lost some of its strength in the first quarter of 2013, when investment was weak, despite increased external demand. However, growth remains in line with the government target of 7.5% for 2013. The measures implemented to tackle the financial fragility appear to have contributed to the slowdown. However, the change in the growth model towards a more consumption-oriented economy continues. With inflation also lower than expected, pressure for tighter monetary conditions has eased. As a result, the authorities have ample space for further policy actions. Our forecast for growth in China remains unaltered at 8% for 2013 and 2014.

In contrast, the Japanese economy will benefit from a package of more aggressive than expected policies. Among them is the massive quantitative easing, whose size amounts to around 25% of Japan's GDP (each of the QE implemented by the Fed represented an average of 10% of U.S. GDP), aimed at changes in inflation expectations and boosting growth (see Chart 5). This monetary boost will be more effective if it is accompanied by effective fiscal measures and, in particular, structural reforms. Thus our growth forecast for the Japanese economy for 2013 and 2014 remains at 1.7%, above the 1.3% consensus.

In any event, it is difficult to quantify the impact of this new move and assess how investors will react, given that many uncertainties still exist. For example, if this policy is successful in promoting growth and confidence at a national level, it could generate greater net capital inflows globally (instead of outflows). In addition, its impact at the domestic level in Japan is also uncertain, as the Bank of Japan's policy involves some risks: strong volatility in sovereign bonds (JGB), risks for bank's balance sheets and the costs of debt for the government when nominal yields grow, provided the Bank of Japan is successful in complying with its inflation target of 2%.

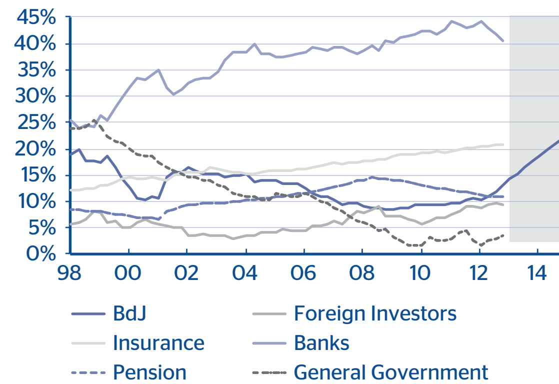
However, the new monetary facility provides arguments in favor of Japanese investors purchasing foreign assets. The Bank of Japan's demand will push private Japanese investors away from domestic assets, as the central bank plans to buy around 70% of all the new issuance of sovereign bonds. As a result, the Japanese government's share of bonds in 2014 will be over 20%. The movement of funds will therefore also be uncertain. The appetite of Japanese investors for U.S. bonds has increased since the start of the eurozone crisis, but they also returned to the European stock market. In particular, they invested in countries at the core of the eurozone, such as France, the Netherlands and Germany, while limiting sales in peripheral securities. This trend with respect to peripherals has recently shifted. In this context, we expect demand for assets in euros to increase, provided that the euro-convertibility risk does not emerge again.

Chart 5
Successive rounds of QE (USD bn), Fed and BOJ



Source: Haver & BBVA Research

Chart 6
JGB holders since 1998 (%)



Source: Haver & BBVA Research

Monetary easing in developed economies favors risk taking, pushes long-term rates down and the appreciation of emerging market currencies

Financial markets are still dominated by flows from central banks, inflation below targets in the eurozone, the U.S. and Japan, a neutral balance of risks to growth in the U.S., a downward bias in the eurozone and pending improvements in real indicators mirroring improvements in confidence indicators.

Against that backdrop, long-term rates of German bonds have declined in recent months. The ensuing dash for yields in a less risk adverse environment (partly because of ECB actions) has also prompted a sharp fall in yields on government bonds in the periphery of Europe to levels not seen since 2010. In this context, there have been capital inflows to emerging fixed-income markets, especially the most liquid (Turkey, Brazil, Mexico), anticipating capital outflows from Japan after its QE program was announced, which includes purchases of public debt by the central bank of Japan.

As a result, the euro has shown great resilience to cyclical weakness in the area. The lower probability of high-risk scenarios and a monetary policy less accommodative vis-à-vis other central banks have helped the euro strengthen. In the absence of major risk events in Europe and with no surprises in the QE exit strategy by the Fed, the euro could continue trading between 1.30 to 1.32 dollars per euro until the end of this year. This does not rule out episodes of dollar appreciation as a result of changes in the cyclical-risk balance and additional actions from central-banks.

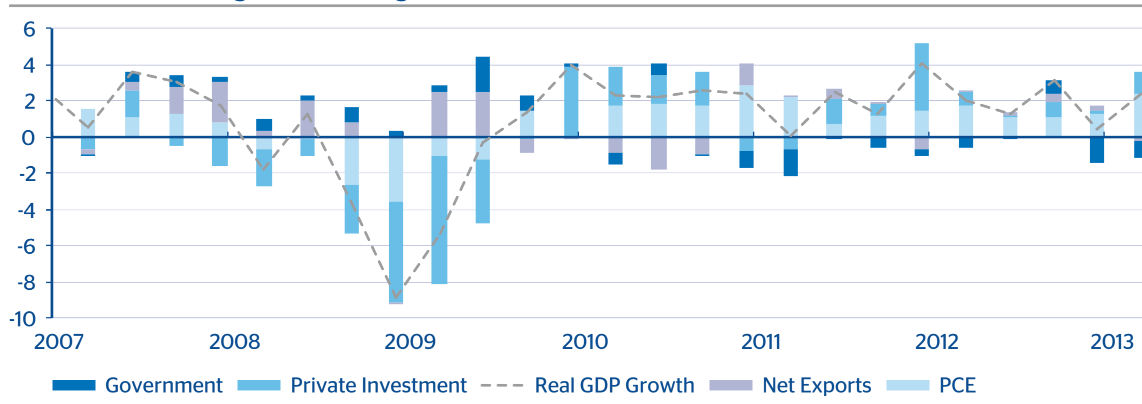
3. U.S. Outlook

Temporary Slowdown Paves the Way for a Stronger Recovery

The second quarter started out just as we expected, with slow but steady activity pushing toward an acceleration in the latter half of 2013. Businesses and consumers alike are seeing a lagged impact from January's fiscal changes, but we expect that both will emerge from this 2Q13 lull as the year progresses. First quarter growth was relatively strong compared to the end of 2012 but the underlying details foreshadow slowing trends for the short-term. Real GDP growth in 1Q13 stands at 2.4% QoQ SAAR, led mostly by personal consumption expenditures (PCE) and private inventory investment. While strong residential investment continues to reflect the ongoing housing recovery, nonresidential fixed investment slowed significantly in 1Q13, suggesting that businesses were anticipating quiet activity in 2Q13. Similarly, the rather modest import growth seen in the first quarter is indicative of the private sector's uncertainty when it comes to consumer demand throughout the next few months. Export growth was also extremely slow, surely not enough to recoup from 4Q12's decline, and supports our expectations for slowing activity on a global scale. Finally, it comes as no surprise that the government sector weighed on 1Q13 growth for the second consecutive quarter. We expect the sequester and other fiscal related issues to have the biggest impact on 2Q13 growth as the cuts to both federal and state/local spending continue to unfurl.

Chart 7

Real GDP Growth & Contributions (QoQ SAAR % Change & Percentage Points)



Source: BEA & BBVA Research

Personal consumption remains the bright spot in this consumer-driven recovery. Consumption growth accelerated to 3.4% QoQ SAAR in 1Q13, the fastest pace since 4Q10, on strong goods and services expenditures. Services expenditures made up the majority of total PCE growth for the first quarter as spending on housing and utilities spiked. Durable goods spending continues to be dominated by recreational goods, with the motor vehicles component often very volatile from quarter to quarter. Overall, PCE has remained the largest contributor to GDP throughout the past year as both private investment and net exports shrank. Aside from the projected slowdown in 2Q13, we expect that PCE will average close to 2.0% growth throughout the latter half of 2013 and into 2014 as we move toward more self-sustaining economic activity.

Other economic indicators for 2Q13 are supportive of a temporary slowdown. While real personal spending and retail sales remain mostly stable on an annual basis, monthly figures are a bit more disappointing. In particular, auto sales have dropped significantly in the past few months as consumers shied away from big ticket items (though a rebound is likely to come in the summer months).. Similarly, both new and existing home sales have seen only modest improvements throughout 2013 thus far, though much of this is a consequence of constrained supply in the market. The demand is mostly

there, especially with the threat of higher mortgage rates encouraging more immediate action from homebuyers. Rising home prices are likely to continue and should help alleviate some of the supply issues as current homeowners feel more comfortable putting their homes back on the market. Furthermore, continued improvements in the employment situation, as gradual as they may be, will surely boost consumer confidence when it comes to consumption.

Chart 8

Trends in Short-Term Economic Indicators

Indicator	Assessment	Indicator	Assessment
ISM		Unemployment Rate (%)	
ISM Non-Manufacturing		Nonfarm Payrolls (MoM Change in K)	
Capacity Utilization		Auto Sales (Millions)	
Industrial Production (YoY % Change)		Real Disposable Income (YoY % Change)	
Capital Goods New Orders (YoY % Change)		Real Personal Spending (YoY % Change)	
Housing Starts (YoY % Change)		Retail Sales Ex Auto & Gas (YoY % Change)	
Home Prices: S&P Case-Shiller (YoY % Change)		Consumer Confidence Index	

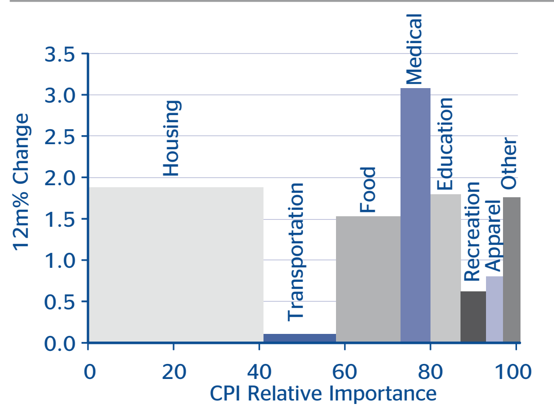
Source: Haver Analytics & BBVA Research

Inflation has also been supportive of a slow-growth environment in the short term. The latest CPI reports have noted declines in the headline figure for the past few months as energy pressures remain subdued. Core inflation has also moderated somewhat but we continue to see upward pressures from shelter and medical care services. The distribution of prices in the CPI suggests more of an increasing tendency as of late, yet inflation expectations have dropped. Wage pressures, which are more of a confirmation of inflation expectations rather than a direct predictor of inflation itself, have remained very low. Currently, with long-term inflation expectations stable and significant resource slack in the labor market, there has been little pressure for businesses to increase wages. While these underlying details point to very modest inflation throughout the coming months, we expect deflationary concerns to be temporary. On the other hand though, upward pressures are not expected to intensify even as the Fed's QE3 rolls on. As we move into 2H13 and growth picks up again, the Fed will start to pull back its asset purchases and help offset any significant price gains.

Of the domestic and global risks on our radar, fiscal policy remains one of the most uncertain factors. Despite the past few years of intense political brinkmanship leaving a sour mark on the public view, we are still not seeing any major efforts from either party to compromise. The CBO recently released updated budget projections for fiscal years 2013-2023, highlighting a brighter outlook for the government's budget balance, but mostly in the near term as the longer-run remained relatively unchanged. For 2013, revenues are expected to be nearly 4% more than previously estimated in February, while outlays are projected to be 2.8% lower. Ultimately, the CBO estimates that the fiscal deficit will approach 4.0% of GDP this year, compared to February's estimate of 5.3%. Our projections are mostly aligned with the CBO's for 2013-2015. Congress officially approved the $85bn worth of automatic spending cuts to be implemented for FY2013, but the rest of the sequester outlined for the next decade will likely be determined on a year-to-year basis. Budget negotiations are currently in the works, with a September

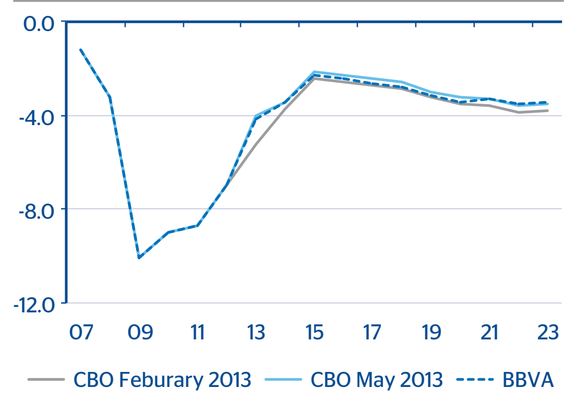
30th deadline for approval. The debt ceiling suspension has expired yet again, but the Treasury can manage to pay off its debts until September. Unfortunately, the situation is eerily shaping up to be similar to the past few summers, when political uncertainty was heightened. On par with the past few years, we can most likely expect the coming months to incite reoccurring political fissures that result in another "kick the can down the road" outcome.

Chart 9
Contributions to CPI (Relative Importance & 12m % Change)



Source: BLS & BBVA Research

Chart 10
CBO Budget Projections (% of GDP)



Source: CBO & BBVA Research

Box 1: A Closer Look at Deleveraging and Household Wealth

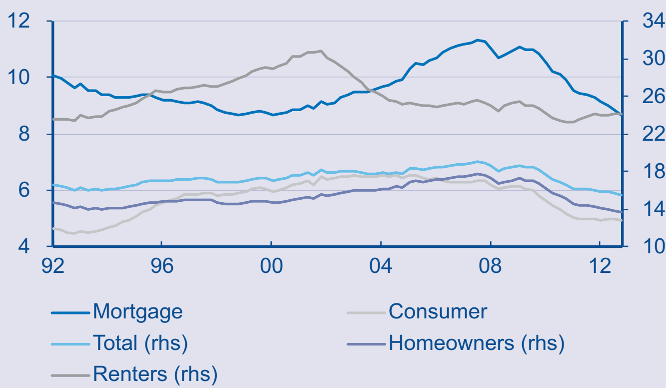
Household finances have come a long way since the depths of the crisis in 2008 and 2009. A massive buildup of credit allowed for consumer activity to surge throughout the years leading up to the downfall, culminating with a bursting bubble and extreme levels of debt to repay. With this deleveraging process came an incredibly slow recovery in consumer-related activity, but we are finally starting to see the light at the end of the tunnel. Total household net wealth has approached its pre-recession peak near $70tr after falling approximately 25% between 3Q07 and 1Q09. Deleveraging, as measured by the household debt service ratio, has also fully recovered from the historical high point reached in late 2007. However, the financial obligations ratio suggests that the consumer-related component is still somewhat of an issue compared to the mortgage-related ratio, which has matched its lowest level since before the market started to overheat leading up to 2008. Deleveraging would have been much sharper from the get-go if it weren't for student loans resulting in high growth rates of government-sourced consumer credit.

While overall deleveraging might have reached it break-even point, we still have relatively modest expectations for consumption. Personal spending is expected to increase very gradually throughout the forecast horizon, holding well below $11tr through at least 2017. This suggests that consumers will remain overly cautious of taking on too much additional debt as they take care of older, lingering obligations. Additional fiscal reforms could also put downward pressure on consumption if future tax increases are in the cards.

It is important to take note of changes in personal finances as we adjust our expectations for what the future holds. Looking more in depth at the composition of household finances, we can see that there have been some shifting trends throughout the past few decades. Stock market wealth (i.e. equity shares, mutual funds, security credit, life insurance and pension reserves) has made up the largest share of household wealth since a shift in the early 1990s. Not surprisingly, real estate wealth dropped significantly as property values plummeted with the 2008 crisis but has returned to similar proportions seen back in the 1960s and also in the late 1990s. Given the slow but steady improvements in real estate conditions, as well as the lessons learned by both lenders and borrowers since the housing market collapse, we do not expect that the share of real estate wealth will increase much in the near future. Stock market wealth will continue to be a main contributor to total household net wealth, especially while Federal Reserve policy remains accommodative and supportive of market activity.

Chart 11

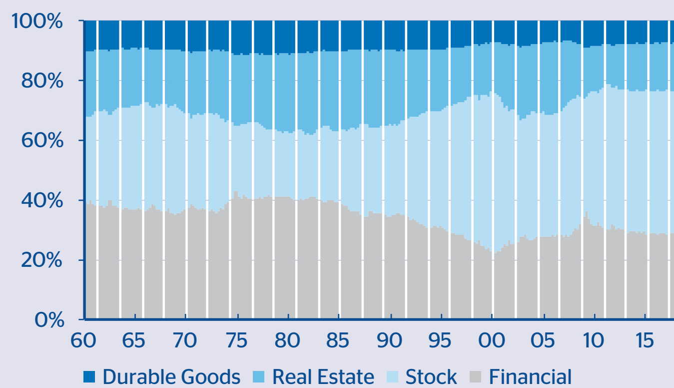
Financial Obligation Ratio (%)



Source: FRB & BBVA Research

Chart 12

Composition of Total Household Wealth (%)

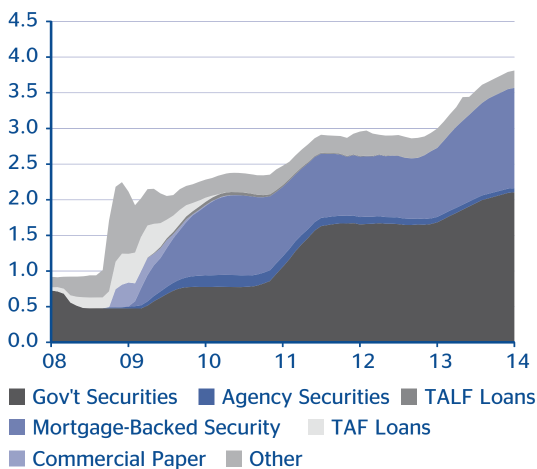


Source: BEA & BBVA Research

4. The Federal Reserve and the Future Path of Long-Term Interest Rates

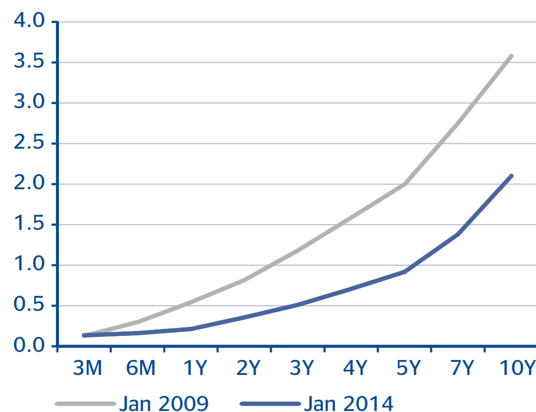
2014 will mark five years of the near-zero policy rate pursued by the Federal Reserve Bank. Leading up to 2014, the Federal Reserve balance sheet will likely exceed $3.8tn, and long term asset purchases are projected to total $880bn. Having the Federal Funds rate restricted by a zero lower bound, the Federal Reserve has reached beyond just regulating the expected path of short-term rates. The present-day monetary intervention explicitly aims to impact the term premiums and the shape of the yield curve. The Maturity Extension Program (MEP) together with the Large Scale Asset Purchases (LSAP) have changed radically the composition of the Federal Reserve's Balance Sheet. Compared to January 2008, when 81% of holdings had a maturity of 5 years or lower and 54% of those were 1 year and below, currently 51% of holdings have a maturity of 10 years or more and only 4% have a maturity of 1 year or less. The composition of the balance sheet should remain the same as asset purchases continue to the end of 2013.

Chart 13
Factors Supplying Reserve Funds ($tr)



Source: Federal Reserve & BBVA Research

Chart 14
Quantitative Easing and the Yield Curve (%)



Source: Federal Reserve & BBVA Research

Once the economic thresholds of a 6.5% unemployment rate coupled with a stable inflation expectation of 2 to 2.5% outlined by the FOMC are reached, the Fed will prepare to act on their policy normalization, the first step of which is to leave the zero lower bound and gradually raise the federal funds target rate. While short term rates closely follow the policy rate path, the more complex and essential question is what will the effect of the policy normalization be on the long end of the yield curve?

The path of the long term interest rate is a composite reflection of several economic dynamics: expected path of short term rates, inflation expectations, expectation of economic growth, and the risk premium. Under normal circumstances, the short term rates would be considered the key monetary policy tool controlled by the Federal Reserve, while long run rates are dependent on short-run rate expectations. However, the Fed's current involvement in both long-term Treasuries and Mortgage-Back Securities markets has flattened the yield curve by putting direct downward pressure on the longer end of the curve.

The changes in long yields are also linked to the macroeconomic fundamentals of economic activity and inflation. Both interactions from macroeconomic factors to yields and from yields to the economic activity are important, however the causality from the macro variables to yields is significantly stronger than in the opposite direction (Diebold et al, 2006). It is essential not to dismiss that bidirectional linkage between macro factors and yields. In fact, allowing for the following bidirectional interaction shows that macro variables explain over half of the long yield variance (Ang et al, 2007).

The future path of long rates

To find the possible path for the long-term rate we examine three scenarios contingent on three different paths of economic growth as well as the Federal Reserve policy linked to each of the macroeconomic states.

The BBVA Baseline scenario reflects our forecast of continued moderate economic growth coupled with inflationary expectations that are well anchored by the Fed. Under the BBVA baseline scenario, the economy will attain its potential output level in 2Q16. This scenario is in line with our expectations of Federal Reserve starting the wind down of QE3 towards the end of 3Q13 and ending QE3 in 1Q14. Accordingly, the first federal funds rate increase is projected for 3Q15 while the Federal Reserve is expected to start reducing the balance sheet in 2Q16. The 'Strong Growth' or 'HI' scenario assumes higher real GDP growth compared to the Baseline and a consequently, faster decline of the unemployment rate and inflationary pressure on the economy. Therefore, it prompts sooner actions by the Federal Reserve, tapering QE3 early in 3Q13 and ending by the end of 4Q13. Under the 'HI' scenario the first policy rate change will occur in 2Q14, with the start of the balance sheet reduction in 4Q14. The last, 'Weak Growth' or 'LO' scenario assumes positive but very low real GDP growth rate. Under the 'LO' assumption, the low level of GDP growth is unable to further lower the unemployment rate and continues to put deflationary pressure on the economy. Under those circumstances we project prolonged QE3 purchases by the Federal Reserve and no policy rate change on the horizon.

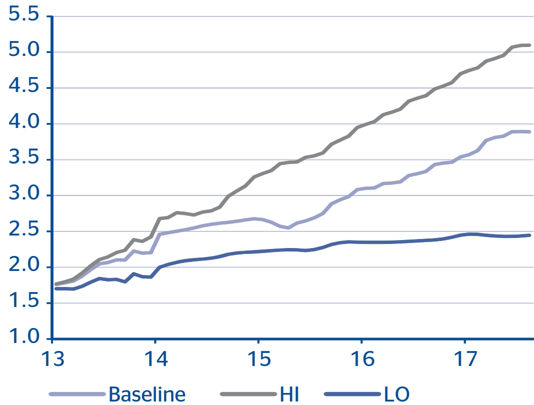
Table 1
Three Paths of Economic Growth and Federal Reserve Policy

	Strong Growth HI	BBVA Baseline	Weak Growth LO
RGDP Growth	High	Moderate	Low
Unemployment	Fast ↓	Moderate ↓	No Change
Inflation	Moderate ↑	No Change	No Change
QE3 1st ↓	3Q13	3Q13	1Q15
QE3 end	4Q13	1Q14	NA
FFR 1st ↑	2Q14	3Q15	No Change
Start sales	4Q14	2Q16	NA
By 4Q17			
FFR ↑	375bp	225bp	0bp
10Y ↑	333bp	213bp	75bp

Source: BBVA Research

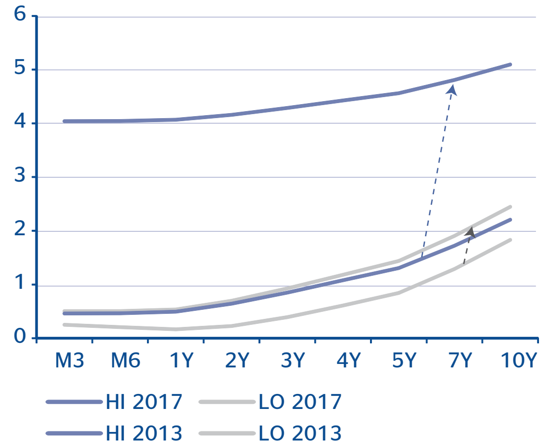
To capture the effect of the three scenarios outlined on the yield curve dynamics and subsequently on long-run rates, we employ a latent factor model. The three-factor term structure model employed is an empirical approximation of the shape of the yield curve. Thus, it incorporates risk premiums and responds to changes in the level, slope, and curvature of the yield curve. The model also incorporates macro variables of real economic activity (real GDP), inflation (YoY change in CPI) and Federal Reserve policy rate (Federal Funds rate) to weigh in the bi-directional linkages between the yields and the macro factors (Diebold et al, 2006, Diebold and Rudebusch, 2013). Accordingly, we find that the level factor is highly correlated with the inflation rate and the slope factor is highly correlated with changes in real economic activity (Ang and Piazzesi, 2003, Diebold et al, 2006, Diebold and Rudebusch, 2013). The table above illustrates the expected change of the 10Y U.S. Treasury Zero-Coupon Yield rates for the forecast horizon with respect to each of the macroeconomic states.

Chart 15
10Y U.S. Treasury Zero-Coupon Yield Forecast (%)



Source: BBVA Research

Chart 16
Yield Curves Change from 2013 to 2017 (%)



Source: BBVA Research

The charts above show the forecasted path of the 10Y U.S. Treasury Zero-Coupon Yields for the scenarios outlined. The strong GDP growth of the 'HI' scenario together with the Federal Reserve's earlier than expected tightening of the policy results in a faster rise of 10Y yields when compared to the Baseline. The 'HI' scenario also pushed further up and flattened the yield curve with the 10y-3M spread decline by 60 basis points between January 2014 and January 2017. On the other hand, the weak growth and the prolonged highly accommodative monetary policy kept the 'LO' scenario 10Y yield forecast rate below the baseline forecast. The 'LO' scenario also resulted in very modest upward movement and a slight steepening of the yield curve (36 basis points increase in 10y-3M spread from January 2014 to January 2017).

Bottom line

The bidirectional linkage between macro fundamentals and the yield curve plays an essential role in determining the future path of the long term interest rate. The 10Y Treasury Yield forecast is sensitive to the complex economic interrelations of the expected path of the Federal Reserve's policy rate, expectation of economic growth, inflation expectations, and the risk premium. The three-factor term structure model employed illustrates that the forecasts of both the level and the slope of the yield curves change depending on the varying macroeconomic states and subsequent monetary policy responses. Thus, the Federal Reserve policy normalization effect on long term rates and on yield curve dynamics is complex and multidimensional.

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Ang, Andrew, Geert Bekaert, and Min Wei. 2007. "Do Macro Variables, Asset Markets or Surveys Forecast Inflation Better?" Journal of Monetary Economics, 54(4), pages 1163-1212.

Ang, Andrew, and Monika Piazzesi. 2003. "A No-Arbitrage Vector Autoregression of Term Structure Dynamics with Macroeconomic and Latent Variables," Journal of Monetary Economics, 50(4), pages 745-787.

Diebold, Francis X., Glenn D. Rudebusch, and Borağan S. Aruoba. 2006. "The Macroeconomy and the Yield Curve: A Dynamic Latent Factor Approach," Journal of Econometrics, 131(1-2), pages 309 – 338.

Diebold, Francis X., and Glenn D. Rudebusch. 2013. Yield Curve Modeling and Forecasting: The Dynamic Nelson-Siegel Approach, Princeton University Press: Princeton and Oxford.

Box 2: Fed's Policy of Large Scale Asset Purchases When is the Right Time to Stop?

The September 2012 FOMC statement release marked the start of the third round of quantitative easing (QE3) by the Federal Reserve Bank. This was followed with the usual press conference where Chairman Bernanke stated that the vital rationale behind QE3 is to decrease the upper end of the yield curve, thereby facilitating improvement in the housing market, and to achieve a 'substantial improvement' in the labor outlook. There were also three headwinds referred to by Bernanke: domestic fiscal policy, Europe, and global slowdown. On the seventh month of QE3 and the fifth month of continued $85bln per month injection into the U.S. economy, a crucial question remains: Is QE3 still necessary and, if so, when is the right time to stop? Our analysis suggests that the scale is tipping away from the efficacy of the purchases – potential costs and risks that can arise are about to outweigh the benefits for QE3 in 2013.

Headwinds

The BBVA Research U.S. policy uncertainty index indicates that the headwind arising from domestic fiscal policy is fading. Meanwhile, risks from fiscal policy –fiscal cliff, government shutdown, sequestration and the debt ceiling deadline – have also receded. In fact, the CBO recently revised its 2013 fiscal deficit projection from 5.3% to 4% of GDP. Moreover, the cumulative deficit for the 2014-2023 period declined by $618bn compared to February's forecast, as a result of both higher revenues and lower expenditures. Similarly, the BBVA Research financial stress index shows that financial tensions arising from Europe remain subdued. The European sovereign debt crisis is not yet resolved but appears manageable, while the financial tensions elevated due to Cyprus´s crisis and Italian elections have also faded.

In sum, the lack of economic growth in Europe and the overall slowdown in global economic activity remain recognizable headwinds and will continue to put negative pressure on the U.S. current account. However, the main headwinds that could impose risks to domestic financial stability are behind us.

Labor market outlook

The highly accommodative monetary policy of 2013 continues, meanwhile the Federal Reserve Presidents and Governors continue to elaborate on the diverse set of indicators they watch as pointing to a 'substantial improvement' in the labor outlook. Encouraged by the last several months of positive reports on Nonfarm Payroll and the decline of unemployment rate to 7.5% from 8.1% in August 2012, several of the dovish Federal Reserve Presidents are ready to consider tapering the monthly asset purchases. At the same time, it is essential to note that monetary policy effects can lag by as much as three years. Thus, these improvements in the labor market might not be attributable to the current high level of monetary accommodation. Nevertheless, the strengthening of labor market conditions does reflect the positive transmission effect from the FOMC board room to the general economy.

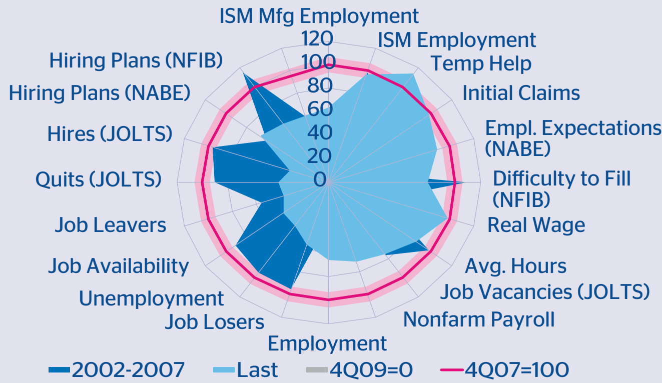
Chart 17
U.S. Policy Uncertainty Index

Source: BBVA Research

Chart 18
EMU Financial Stress Index

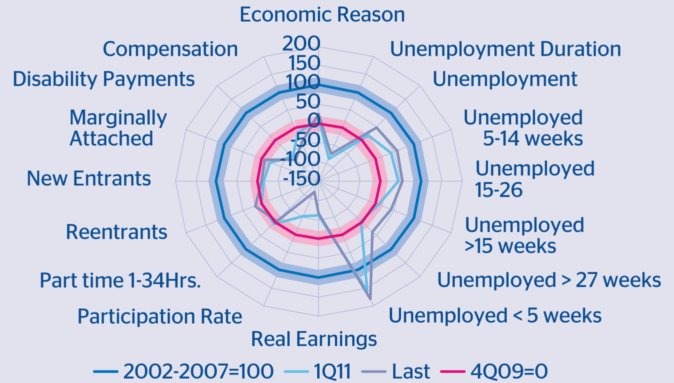
Source: BBVA Research

Chart 19
Labor Market Improvement



Source: BLS, Department of Labor, NABE, NFIB, ISM, TCB & BBVA Research

Chart 20
Labor Utilization

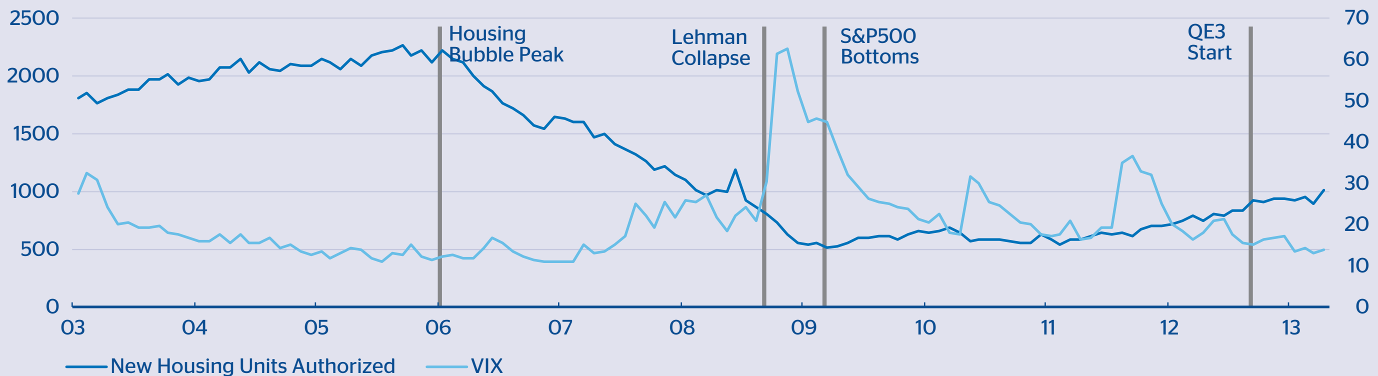


Source: BLS & BBVA Research

A look at the labor market indicators points towards increasing relativeness of the structural factors of the unemployment rate in contrast to the cyclical ones. Accordingly, the Labor Market Spider Charts indicate the deepening of the structural factors of the unemployment rate (participation rate, unemployment duration, and disability payments), and strong improvement of the indicators that would be attributed to cyclical unemployment, such as short term unemployed. The relative level of the leading indicators (ISM Employment, Temporary Help Needed, Initial Claims, Employment Expectations), as well as general market condition indicators (Real Wage, Payroll, Employment) improved above their average levels for 2002-2007. The leading indicators surpassed the pre-recession peak. The labor market confidence indicators improved compared to the labor market trough but are still below 50% of the peak level. Several labor utilization indicators have not improved since 4Q09 levels, stressing the need to address the structural problems existent in the labor market. Quoting James Bullard (President, Federal Reserve Bank of St Louis) - "monetary policy alone cannot effectively address multiple labor market inefficiencies."

FOMC members always stress that the unemployment rate is a key determinant but not the sole indicator to assess. The current snapshot of labor market characteristics implies that further effectiveness from continuing the Large Scale Asset Purchases (LSAP) program is disputable. While it will take some time for current asset purchases to reach the labor market, there are obvious structural changes. Bernanke recently stated that "monetary policy cannot be a panacea." Will FOMC actions stay in line with that statement?

Chart 21
Housing and Financial Market Sentiment



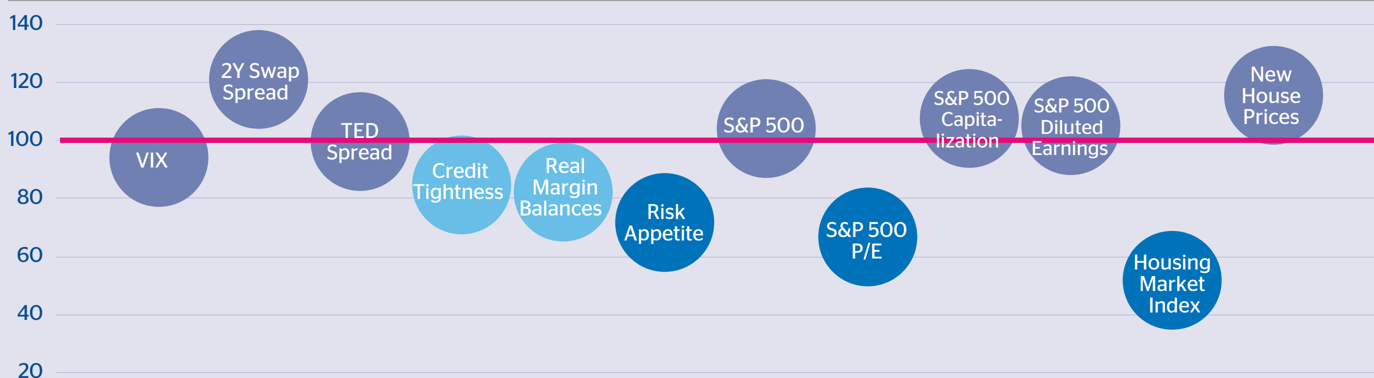
Source: Census Bureau, WSJ & BBVA Research

Financial Market Outlook

The positive impact of QE3 on the housing market and on the rest of the interest rate sensitive sectors of economic activity is hard to dispute. The chart below shows the effect of QE3 on the New Housing Units Authorized together with the VIX Index. The outcome of QE3 is as desired - it pushed up the number of houses getting authorized while the VIX index, the fear gauge, declined to pre-crisis levels. Nevertheless, prolonged periods of low interest rates carry potential risk to the markets and moreover it is difficult to predict whether the trend of improvement will continue once the monetary accommodation is withdrawn.

The last chart illustrates the current state of the financial and housing indicators relative to their peak levels achieved during the overheated bubble state (for each of the indicators). Several of the indicators, namely the 2-Year USD Swap Spread, the TED Spread, the S&P 500 Composite Index, Market Capitalization, Diluted Earnings, and the New 1-Family Houses Median Sales Price, are above their pre-crisis levels. However the inflation adjusted measures, such as the S&P 500 Price to Earnings Ratio, the Home Builders Housing Market Index, and Real Debit Balances in Margin Accounts, as well as the risk appetite Bull-Bear Market Spread and Banks Tightening C&I Loans are below the heat mark. There is no doubt that the improvements in the equity and credit markets are dependent on the current LSAP program, but the level of dependence will not be realized until the Fed exits. Still, it might be hard for the Fed to accept that sometimes there are no outright victories and that the right policy is to exit.

Chart 22
The Current Heat Level of the Financial Indicators



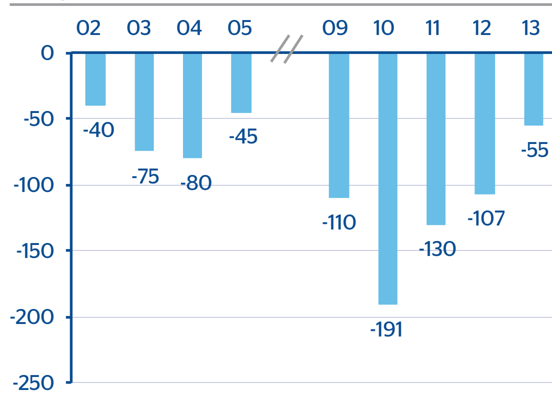
Source: TCB, S&P, Robert Shiller, NAHB, WSJ, Haver Analytics & BBVA Research

Based on the assessed metrics of economic activity and risk aversion, we can conclude that QE3 has had the desired effect and its impact on the equity and housing markets has been more efficient than the former measures implemented by the FOMC. Nevertheless, it is equally important to take into account the rising costs of QE3. At present, the net effect appears to be positive, but we expect it to edge down in the next few months. As a result, we would expect the FOMC to start tapering the asset purchase program sometime in the second half of 2013, barring any negative shocks to the economy.

5. State Budgets Improve, Far From Resilient

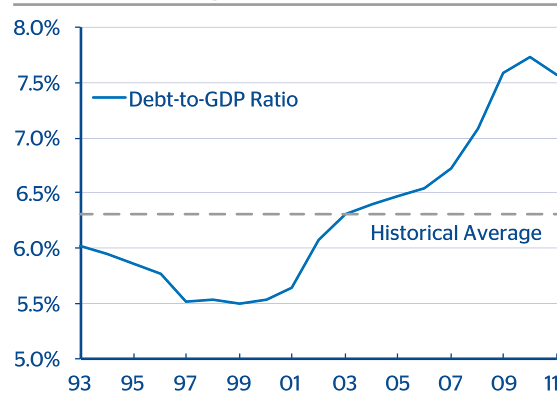
The outlook for states budgets is beginning to brighten after struggling against systemic over-leveraging prior to the crisis and prolonged revenue declines during the recession and recovery. Generally during recession, states experience a slowdown in revenues due to reduced capital investment and lower levels of employment. Thus, corporate and personal income tax revenue decline. In addition, expenditures increase rapidly due to the implementation of pre-provisioned economic stabilizers. The result is a widening of the fiscal gap. The current recession produced both of the anticipated recessionary effects; however, five years of negative revenue growth and over leverage and excessive risk taking, made it more difficult for states to recover.

Chart 23
Budgetary Shortfall in Previous Recession



Source: Center for Budget and Policy Priorities

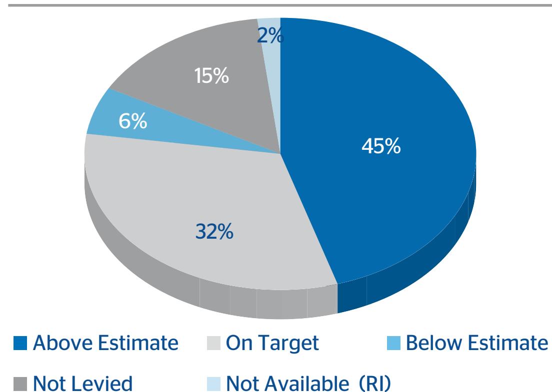
Chart 24
State Outstanding Debt- to- GDP



Source: BBVA Research & Haver Analytics

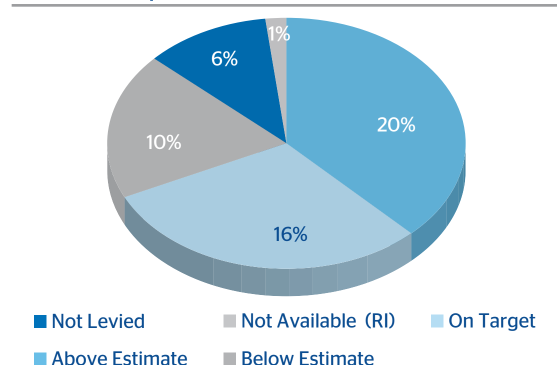
Simply put, high revenue losses, increased fiscal expenditures and poor planning resulted in unprecedented fiscal imbalances. In total, the 50 U.S. states lost approximately $420bn in revenue between 2008 and 2010, assuming a historical growth rate of 8%. In other words, if revenues continued at their pre-recession rates, current revenue levels would be $420bn higher. Key revenue losses were also met with higher levels of spending brought on by economic initiatives designed to offset severe drops in economic activity (economic stabilizers). Chart 1 suggests total accumulated budget shortfalls of $593bn since 2009.

Chart 25
FY 2013 Personal Income Tax Performance



Source National Conference of State Legislatures

Chart 26
FY 2013 Corporate Tax Performance



Source: National Conference of State Legislatures

Box 3: Should state legislatures get credit for the rebound in revenues?

Back and forth between Republicans and Democrats over the correct course of fiscal policy has been the core debate in U.S. politics since 2011. Pundits from both parties have suggested ways to stimulate growth through austere fiscal policy on the one hand and expenditure based fiscal policy on the other. Thus, spending is the cure for the economic malaise under the conservative scenario, and the cause in the other.

We estimate the effects of hawkish versus dovish state fiscal policy by estimating the effect that decelerating revenues or accelerating spending has on growth. In essence, we are assuming that real economic growth depends upon changes in fiscal policy and not the revenue cycle. Thus, acceleration in policies can be assumed to be a change in policy rather than a normal cyclical fluctuation. In order to estimate the average effect across states and time, we exploit the efficiencies of a panel regression. In a panel setting we can control for unobserved heterogeneity across states. In other words, there should be little or no unobserved bias, assuming we control for the major determinants of growth.

The regression is as follows: contemporaneous real growth depends upon the acceleration of the real revenues and expenditures changes in the four previous periods. Controls for state ideology and employment were added. The results in Table 1 suggest that, in the short-to-medium run (1-2years), increases in employment have a greater absolute impact on growth relative to policy changes. In the longer-run, tax and expenditure policy shifts do have a positive impact but lag other variables and do not have as significant an impact on growth. Moreover, in the context of tax breaks vs. expenditures increases, our results suggest that expenditure based policies have a higher relative impact on growth. Specifically, a one-unit increase in the acceleration rate of expenditures—a de facto stimulus— has almost twice the impact that a revenue policy changes produces. Thus, while both positively affect growth, in our estimation the impact of expenditure based stimulus is larger than tax or revenue-based stimulus.

The results from a third set of panel regressions also suggest one more element within the feedback loop: budgetary outcomes rely more on economic growth rather than retroactive policy making. In a large panel setting, when controlling for state ideology[1] and fiscal policy, employment and the personal income are the most statistically significant determinants of revenue growth. With respect to revenue growth, employment is the key driver. For instance, our results suggest that a one percent increase in employment increases total, income, corporate and consumption tax revenue by 4.4%, 1.1%, 5.6% and 0.4% whereas income gains only increase the aforementioned categories by 0.0%, 0.7%, 0.0% and 0.3%, respectively.

Table 2

The Impact of Fiscal Policy on Revenues and Expenditures

	(1) Total Revenue	(2) Personal Income Tax	(3) Corporate Income Tax	(4) Sales Tax	(5) Expenditures
t-1	-0.34*	-1.06*	-0.21**	-1.34**	-1.14*
	(-4.35)	(-3.24)	(-2.09)	(-2.48)	(-3.77)
t-2	-1.47*	-1.48*	-0.49*	-1.75**	1.35**
	(-5.81)	(-3.24)	(-3.90)	(-2.25)	(2.09)
t-3	-1.95*	-1.45*	-0.52*	-1.21	2.44*
	(-5.66)	(-3.52)	(-6.17)	(-1.27)	(3.65)
t-4	-1.30*	-0.92**	-0.30*	-0.92	1.95*
	(-5.81)	(-2.08)	(-4.93)	(-1.81)	(3.05)
Employ-ment	0.91*	0.98*	0.98*	0.76*	0.75*
	(8.28)	(8.32)	(8.31)	(5.55)	(6.62)
gov_partyc	0.016*	0.018*	0.036*	0.037*	0.018*
	(3.25)	(4.98)	(5.62)	(7.24)	(6.63)
_cons	10.2*	9.57*	6.11*	11.5*	1.77
	(10.66)	(11.14)	(8.88)	(6.17)	(0.80)
N	250	215	230	250	250
adj. R-sq	0.508	0.548	0.556	0.384	0.420

Note: t statistics in parentheses; * p<0.1; ** p<0.5
Source: BBVA Research

Table 3

The Effects of Economic Growth on Revenues and Expenditures

	(1) Total Revenues	(2) Personal Income Revenue	(3) Corporate Income Revenue	(4) Sales Tax Revenue	(5) Expendi-tures
Employment	2.40*	1.77*	6.64*	0.89*	-1.71*
	(4.32)	(6.58)	(6.31)	(3.59)	(-8.64)
Real GDP	-0.31	-0.46	-0.96	0.13	0.53**
	(-0.58)	(-2.00)	(-1.01)	(0.59)	(2.10)
Real Personal Income	1.42*	1.24*	1.47	0.26**	0.87*
	(4.11)	(4.30)	(1.29)	(2.23)	(5.28)
State Ideology	0.0026	-0.049*	-0.12	0.076*	0.0031
	(0.11)	(-3.17)	(-1.84)	(6.84)	(0.41)
t-2	-0.56*	0.013	0.096	0.23*	0.42*
	(-16.75)	(0.26)	(0.98)	(4.46)	(9.80)
_cons	-4.71	-7.73*	-43.3*	0.32	5.81*
	(-1.62)	(-4.62)	(-6.36)	(0.23)	(7.38)
N	450	387	414	450	450
adj. R-sq	0.442	0.513	0.415	0.548	0.802

Note: t statistics in parentheses; * p<0.1; ** p<0.5
Source: BBVA Research

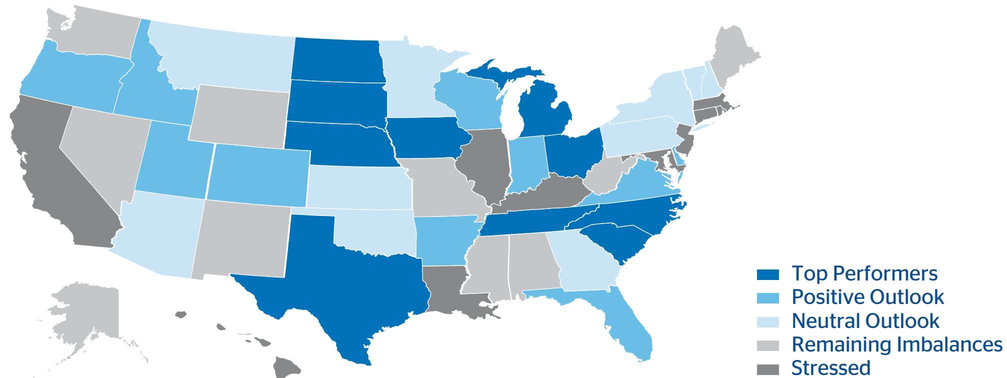
1 We proxy for state ideology using a given states gubernatorial ideology

The combination of protracted periods of negative and then low revenue growth, expenditure increases, high levels of economic policy uncertainty and weak labor market prospects forced state legislatures to reassess state fiscal policy after the recession (2010-2011). For the most part, states focused on cost-cutting measures to reduce the fiscal deficits. On net, the efforts were successful at bringing down the growth in expenditures, slowing 3.1pp to 3.0% year-over-year in 2011. However, post-recessionary measures failed to offset increasing state outstanding debt as a share of state GDP—7.7% in 2010. The accumulation of debt and imbedded balanced budget amendments in many states forced legislatures to further adjusts fiscal policy.

Recently, however, there have been indications of a more auspicious budgetary trend for a majority of the states. California, who suffered catastrophic budget gaps and unprecedented municipal bankruptcy filings, is reporting better than anticipated tax receipt. Other states such as Montana and Texas, Connecticut and Wisconsin are reporting budget surpluses. Due in large part to stronger employment and economic growth, the rebound in revenues also appears to be on a more sustainable path with a greater share of states reporting improved optimism or stable budget outlooks. Moreover, we anticipate more broad-based gains in personal income and employment in 2013, 2014 and 2015 under our baseline scenario, which suggests further upside to revenues, assuming no change to existing tax policy.

BBVA State Fiscal Stress Index: More Winners than Losers

Chart 27
State Fiscal Stress Index Map



Source: BBVA Research, Haver Analytics & Bloomberg

Tennessee, which ranked second in terms of fiscal resiliency in 2012, was the least fiscally stressed state according to our fiscal stress Index in 2013. The fiscal stress index measures both cyclical and structural risk factors as they relate to a given states fiscal situation. In the case of Tennessee lower structural weaknesses such as declining or low levels of budgetary imbalances, improves the fiscal outlook. In addition, lower cyclical risk factors such as comparatively lower revenue cyclicality and unemployment initial insurance claims further suggests the state is one of the fiscal standouts. To the downside, Tennessee ranked 21st in terms of recent revenue growth, suggesting possible downside risk to revenue growth in the near future.

Other states appear to be in a more auspicious budgetary position include a group of states with strong natural resource reserves. Texas, North Dakota and Ohio exited the recession with lower levels of structural imbalances and higher revenue potential. Thus, these states avoided accumulating large budget gaps during the recession. Higher concentrations of Oil and Gas industries also led to stronger employment gains in higher wage occupations. As a result, the revenue side of the ledger was less impacted than other states. Texas and North Dakota saw consumption tax revenue grow by 10.8 and 36.3% YoY, respectively during the recovery whereas states such California experienced weak income and consumption taxes of 2.9% and 6.0% YoY, respectively, in 2010.

Table 4

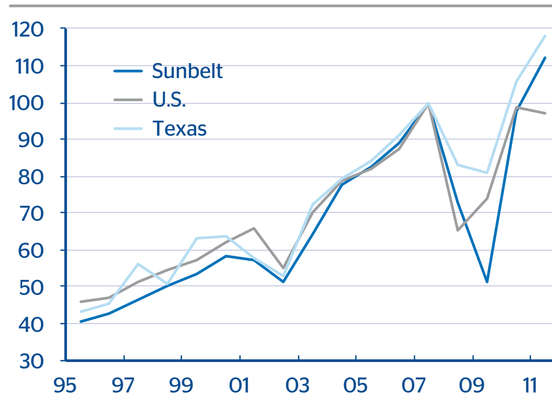
Fiscal Stress Rankings

		Structural	Cycle Components		
			Difference from Trend		3-Month
state	Overall Rank	Structural Rank	Initial Claims	Revenue Cycle	Growth
	Best = 1		Best = 1		
TN	1	2	1	3	21
NE	2	4	43	5	34
TX	3	7	41	7	9
NC	4	3	4	39	12
MI	5	6	3	24	38
SD	6	5	8	35	16
IA	7	10	31	17	11
SC	8	13	2	14	27
OH	9	9	10	20	49
ND	10	20	26	9	8
CO	11	22	44	4	4
FL	12	16	50	8	18
ID	13	17	17	33	2
OR	14	23	14	23	1
IN	15	19	23	19	25
WI	16	11	28	31	31
UT	17	18	47	22	6
VA	18	15	20	30	20
AR	19	12	15	40	44
DE	20	26	11	15	17
OK	21	24	9	18	41
MN	22	29	27	11	5
MT	23	8	39	45	26
GA	24	27	40	21	14
NH	25	28	42	12	28
KS	26	32	45	6	22
AZ	27	21	48	38	19
PA	28	25	29	29	48
NY	29	30	37	26	32
VT	30	35	33	28	15
AK	31	1	18	50	39
NV	32	33	49	43	3
AL	33	31	5	44	45
ME	34	34	24	36	50
MS	35	38	7	32	43
WV	36	37	16	34	46
NM	37	36	30	46	36
WY	38	14	36	49	37
WA	39	39	13	37	10
MO	40	40	19	13	40
HI	41	42	38	2	33
RI	42	43	25	10	23
CT	43	45	34	16	35
MA	44	47	22	27	13
KY	45	46	12	25	47
IL	46	48	21	1	42
NJ	47	41	35	47	24
MD	48	44	46	48	30
LA	49	49	6	42	29
CA	50	50	32	41	7

Source: BBVA Research, Haver Analytics & Bloomberg

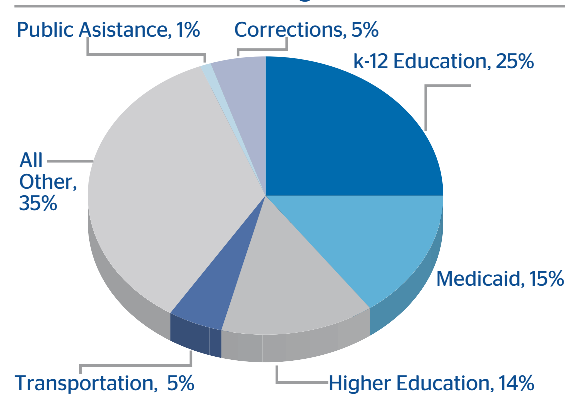
In terms of the fiscally stressed, Hawaii, California and Maryland continue to have significant budget gaps in addition to higher cyclical risk factors, and thus ranked in the top quintile in terms of fiscal stress. Other factors dragging down fiscal outlook for these states are already high tax burdens and limited flexibility given current tax rates. California, for example, has a top marginal tax rate of 13% on income over $1Mn. Hawaii also has a top marginal income tax rates above 10%. The comparatively high taxes relative to other states will make additional tax increases politically difficult and economically inefficient. Such negative impetus and limited room for revenue improvements will complicate the state's fiscal situation. Further complicating matters is a dependency on federal transfers which could decline over the decade, as the Federal government begins to cutback spending.

Chart 28
Sunbelt, Texas and U.S. Revenue Index, 2007=100



Source BBVA RESEARCH & Haver Analytics

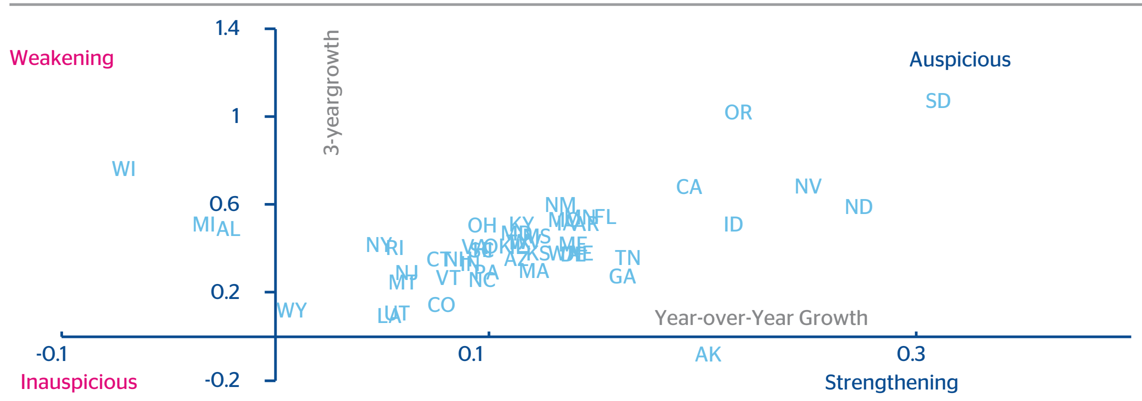
Chart 29
Where do Tax Revenues go?



Source: Center for Budget and Policy Priorities

On the Sunbelt, the fiscal outlook remains bifurcated. On the one hand, states such as Texas, Colorado and Florida rank in the top quintiles in terms of fiscal soundness. High revenue growth potential and stronger structural soundness are key strength of the aforementioned states. However, Arizona, California and New Mexico, rank in the bottom half of states according to our fiscal stress index. Continued to struggles with structural deficits and cyclical risk factors weigh on the states' fiscal outlook. The revenue dynamics for California, New Mexico and Arizona are similar; losses were concentrated in consumption and income taxes. Specifically, income tax revenue growth declined 24.4%, 20.4% and 20.0% in Arizona, California and New Mexico, respectively.

Chart 30
Revenue Outlook: Three-Year-Growth vs. Year-Over-Year Growth



Source: BBVA Research & Haver Analytics

No time to let off the Gas…

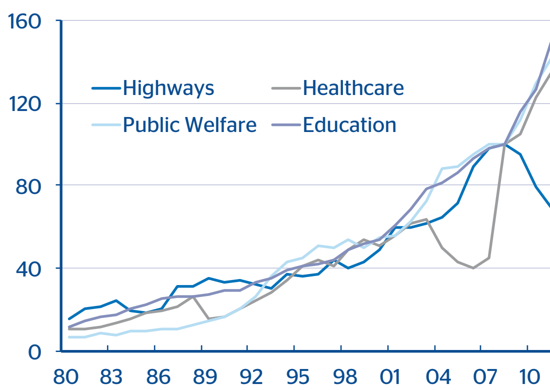
While the revenue outlooks are tilting to the upside, fiscal imbalances such as depleted drain rain-day funds, unfunded or underfunded pension liabilities, and unsustainable levels of spending remain. There appears to be a growing consensus among legislatures that the strong revenue growth of 2013 suggests that the budgetary challenges are abating. However, underlying such strong revenue generation was a yearend push to shift financial gains into 2012 and 2013, in anticipation of higher taxes. Thus, declaring victory over budget challenges may be premature. In addition, states need to make tough longer-term decisions about how states will manage crisis and also how to balance fiscal prudency with structural initiatives such as infrastructure and education.

On expenditures, during the recession many programs designed to offset cyclical downturns grew as unemployment rose and poverty rates increased. For example, aggregate public welfare grew by $89bn between 2007 and 2010. In part due to the aforementioned economic stabilizers, and part due to lax pre-recessionary provisioning for a crisis, public welfare spending ballooned to 3.2% of GDP by 2010. While the rate of growth has slowed to pre-recessionary rates, new federal legislation, such as the Affordable Care Act and Sequestration, could again put upward pressure on state spending. The cumulative pressures suggest that regardless of the recent trend states still have many obstacles to address.

Transportation, a key sector, was underfunded in a large share of states during the recession. Specifically, investment in highways declined, slowing to ratio of 1.1% of GDP. The shift from infrastructure improvements to welfare related spending is economically beneficial in a cyclical downturn. In the long-run, however, failure to maintain and expand existing roads and highways could slowly erode a given state's potential growth (link to infrastructure brief).

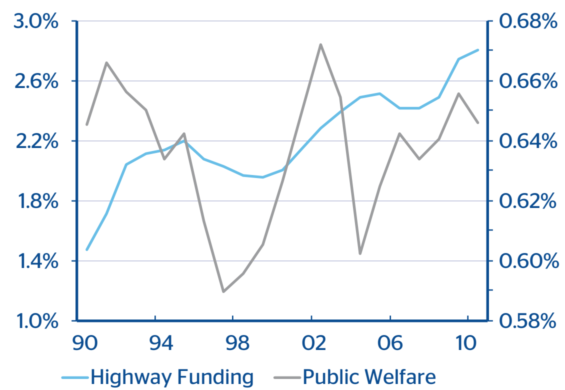
In Texas, five years of declining highway funding is likely to drag on the state's economic potential. In addition, failure to upgrade existing infrastructure could detract from the economic viability of NAFTA given that as of 2012 $114.5bn worth of surface goods travel across the Texas-Mexico border. Given that this accounts for nearly 1/10th of the state's economic output and 1% of U.S. growth, the consequences would not be insignificant. Moreover, high concentrations of oil and gas extraction and refining will require improved transportation infrastructure. Failure to address such concerns would reduce the industrial attractiveness of these areas in the long-run.

Chart 31
Texas Expenditure Index, 2007=100



Source BBVA Research & Haver Analytics

Chart 32
Education and Transportation spending as a share of GDP



Source BBVA Research & Haver Analytics

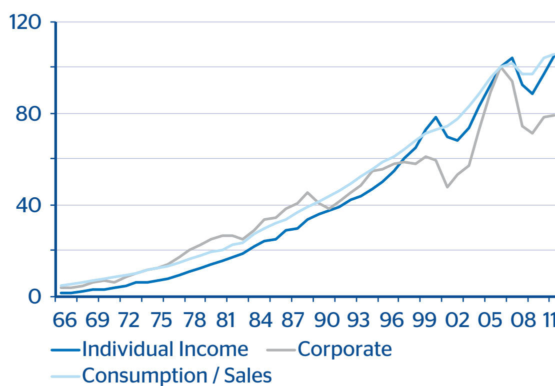
Educational spending also declined to 6.0% of GDP during the recovery. Failure to increase educational investments can effect growth. Boustan, Hoxby and Vandenbussche[1] estimate that for every $1000 of educational investment, growth increases by 0.04pp for research-type spending and 0.07pp for increased spending on four-year colleges assuming the state is has high potential. For states far from the technological frontier, the effect is quite different. For research type spending, the relationship is actually negative between spending and growth and only 0.03pp for investment in four-year colleges. In essence, the decisions to invest is education is heterogeneous across states. Nevertheless, states will need to divert resources to education to maintain long-run competitiveness.

There are economically efficient revenue options that would offset the need to choose between structural initiatives. One option, involves focusing taxation on goods and services with low elasticity. Focusing on inelastically demanded goods should improve efficiency while also reducing the susceptibility of revenues to the business cycle. For example, if states focused more on pigouvian like taxation of goods such as tobacco and alcohol, which generally are consumed without respect to income or price, there should be positive effects in growth phases and moderating effects in the downturn. Thus, even if job losses mount and incomes decline, there should not be a strong downward correction in tax receipts.

Another option is to focus the tax structure on consumption rather than income based taxes. Corporate tax revenue is, on average, more volatile than consumption taxes over the business cycle. In addition, income taxes tend to be more volatile than consumption based taxes and are also more susceptible to business cycle. Thus, skewing the tax distribution to consumption based taxes should lower state revenue volatility.

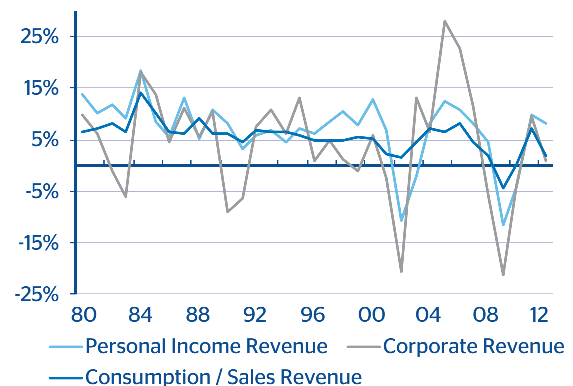
Three main results could evolve from the shift. First, lower volatility would allow for better fiscal management and preparedness. Second, it would generate a more immediate and robust recovery of revenues during severe downturns. Third, taxing consumption rather than income should be welfare improving. In general, similar to the pigouvian tax, the government should seek to tax activities that are the least economically beneficial. Particularly with high levels of household leverage, it would be more prudent to try to reduce consumption rather than labor or investment in the current environment.

Chart 33
State Revenue Cycle



Source BBVA Research & Haver Analytics

Chart 34
State Revenue Volatility



Source BBVA Research & Haver Analytics

1 Aghion, P.; Boustan, C. et. al. "The Causal Impact of Education on Economic Growth: Evidence from the U.S." Brookings Papers on Economic Activity. Spring 2009

Bottom line:

In total, the fiscal situation in the U.S has improved greatly from 2012. States such as California are reporting large budget surpluses for the first time since the recession. In addition, the CBO upwardly revised their US budget outlook, supporting the revisions with better than expected revenues and lower spending associated with sequestration. State budgets are also more resilient according to our state fiscal stress index. However, as we have reported in our regional briefs, the outlook for states remain largely bifurcated, with heterogeneous growth potential and budget realities.

In order to return the pre-recessionary fiscal norm, states need to redouble their efforts to boost long-run economic potential under more prudent fiscal provisioning. To close the remaining gaps there are some economically beneficial options such as taxing inelastically demanded goods and services. Doing so, should reduce revenue volatility and buoy revenues in crisis. An additional option involves shifting to a more consumption based tax system which rebounds quicker, following recession, and is less volatile over time. Moderating revenue volatility is only half of the fiscal narrative moving forward. Balancing taxation and spending within a more careful fiscal environment will also be a key determinant of how effective states are at attracting individuals and corporations. Ultimately, more prudent states that focus on rebuilding budgets and fiscal resiliency, rather than reverting to old norms, will be in the most economically viable position more, able to compete in a highly competitive global economy.

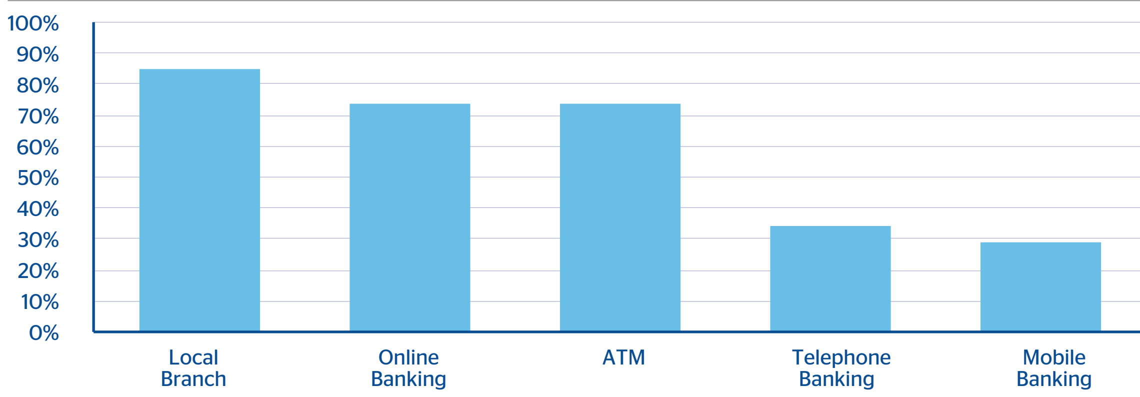
6. A Discussion on the Consumers and Mobile Financial Services Survey of 2013

Smart phones and tablets have become as ubiquitous as their ancestor, the desktop computer. The financial services industry has taken note and employed mobile technology to enter into a new form of customer interaction: mobile banking. With a wider range of mobile phones more available at any income level, consumers have greater access to personal financial information at the tip of their fingers. Based on a Federal Reserve Board survey conducted in 2012 and published in 2013, the generation of mobile users is far more prolific than anticipated. Based on the data, 87% of adults and 90% of 18-44 year olds had regular access to a mobile phone, an astounding percent given how young the technology is. Now that consumers can use mobile banking to monitor accounts and initiate transactions on their device, it was only a matter of time before their device became a portable vendor and payment system. Mobile payments have even spawned some alternatives to brick and mortar stores as ease of use and better security fuel online and mobile-based vendors. Mobile banking has therefore bequeathed unto the consumer the ability to make reasoned financial decisions based on their pecuniary condition, creating a modern day rational consumer.

Mobile banking: what is it and why use it

The Fed's mobile banking survey functions as an evaluation of this new wave of technological progress and highlights the effects it has had over its short but profound lifetime. The Fed defines mobile banking as a "service that allows consumers to obtain financial account information and conduct transactions with their financial institution." Services include functions that were once limited to bank websites and local branches such as acquiring account information, transferring funds, and even financial advising. However, with the use of smartphones and subsequently, smart data, banks have been able to offer even more enticing features such as mobile check deposits and customer appreciation discounts at specific vendors. These services have become more common as banks create mobile banking platforms, spurring consumer demand for mobile products from many different financial services firms. Although regulation tends to hamstring the banking industry in terms of adopting technology, the recent push from banks to engage the mobile user attests to how imperative of a paradigm shift the mobile sphere has become.

Chart 35
Top 5 Banking Platforms



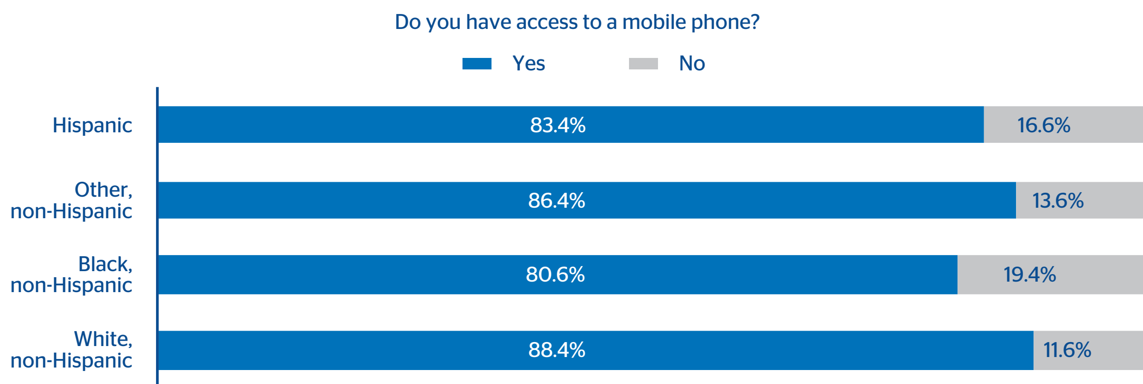
Source: Federal Reserve Board & BBVA Research

While the shift toward mobile banking is growing, the vast majority of consumers chose not to use the new platform. In fact, over 85% of respondents had visited their local branch within the last year despite the fact that an overwhelming majority had access to a mobile phone and almost half to a smartphone. As a matter of fact, mobile banking ranked as the least common form of interaction with 29% of respondents saying they had used mobile banking within the past 12 months. However, since the last survey in 2011, the percent of those who claimed to have used mobile banking increased by 7%, a swift pickup given the headwinds from the regulatory and security standpoint. At its current pace, the web-based mobile platform will overtake conventional telephone banking as the fourth most popular option for users by the next Fed report release in 2014 and will be in contention to outpace online banking soon after. Given the accelerated pace of smartphone adoption, mobile banking could outpace conventional banking means, such as the branch model, within the decade. The usage stands to gain ever more popularity as smartphones become cheaper and easier to produce: mobile banking usage is substantially higher for smart phone users (48%) compared to those with simpler mobile phones (29%).

When it comes to technology, the target sample is changing

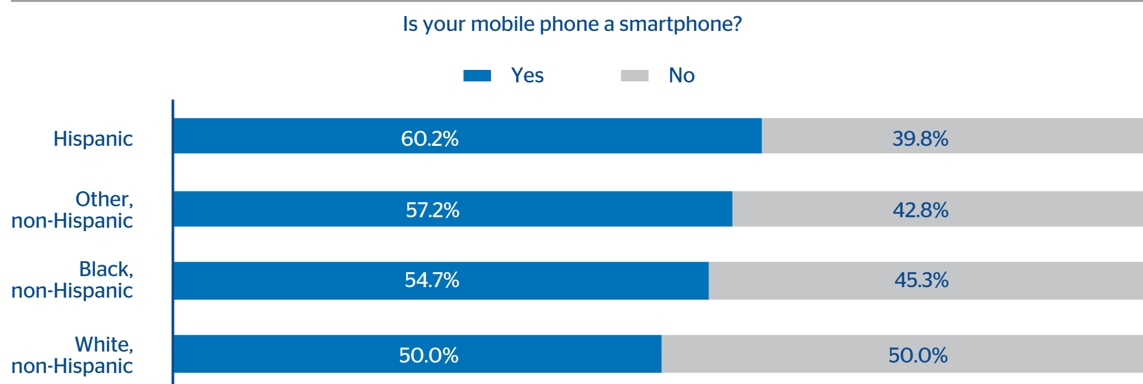
As an aside to the technical use of mobile banking, there is a sociological trend that has emerged from the Fed's research that may also dictate where the future of mobile banking may be heading. According to the data, while non-Hispanic whites remain the largest cohort to use mobile banking, they fall far behind their minority peers in terms of adoption of smart phones or the mobile services provided. African Americans and Hispanics are the top two fastest growing cohorts with respect to mobile banking adoption which includes some of its more recent offshoots like mobile payments and purchases.

Chart 36
Mobile Phone Penetration by Demographics



Source: Federal Reserve Board & BBVA Research

Chart 37
Mobile Phone Penetration by Demographics



Source: Federal Reserve Board & BBVA Research

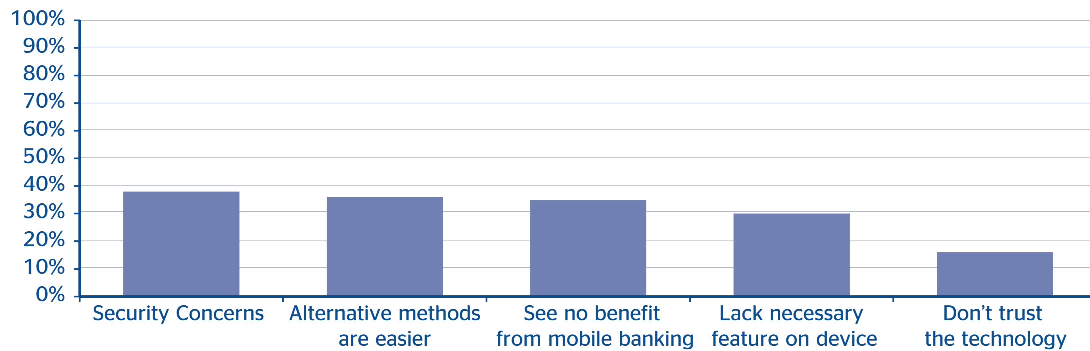
The growing proportion of individuals who are adopting smart phones are young minorities with a growing demand for data and up to date information, including their financial wellbeing. Visible in the right hand side of the corresponding charts, minority respondents are more likely to have smart phones than any other group while having marginally less access to mobile phones. This bucks the trend in terms of how technology is usually adopted given that new products and technology tend to price out youth and lower income groups. However, as smart phones become cheaper and less dependent on expensive bundled services, it appears the young lower income minority individual has become far more likely to purchase a smart phone and use mobile banking and payments than their parents or non-minority equivalents.

To use or not to use, that is the question.

Although over 85% of mobile phone users reported having checked their account balances using mobile banking platforms in the last 12 months, the majority of banking services offered were underutilized. Transferring funds, for instance, was the second most popular form of mobile banking but it was used 34% less than checking account balances, which emphasizes the lack of traction mobile banking has managed to obtain so far. Other reported services include text alerts (29%), online bill pay via website or mobile (24%), and depositing a check via mobile application (21%). Although most of the services offered were similar to those offered on bank webpages, the notion that these services are now mobile is a more tantalizing prospect, although it is not without its critics.

Chart 38

Top Reported Reasons for Not Using Mobile Banking



Source: Federal Reserve Board & BBVA Research

Security and usefulness are the root causes of lower adoption for mobile banking services. Those who said they had not used mobile banking in the last 12 months most frequently cited that their banking needs were already met (54%). Those who crave up to date financial information but avoid using mobile banking do so based on their perception of security. In fact, when asked why they were not using mobile banking, 49% cited security while 14% noted that they did not trust the technology altogether. These concerns, however, are being continually addressed by banks and are becoming less warranted given the increased effort to assure that information is secure. When asked what services they would be ready to try if security concerns were addressed, the results were strikingly close to what mobile banking already offers. Most users, with security threats minimized, would be willing to have account balances or transaction notifications forwarded to their mobile device. Consequentially, given the rapid efforts by most mobile banking platform to meet these security concerns, growth in mobile banking is set to transcend as hesitant adopters embrace the technology.

The mobile device is rewriting the instruction manual for the banking model

Just as the internet brought about a wave of innovation which led to online banking, so too has the mobile device opened the door to an infinite array of user data and applications. Mike Maples Jr. and Roger McNamee, two high tech entrepreneurs, describe the concept of innovation as a "wave" and compartmentalize it into

three distinct phases: infrastructure, enabling platforms and applications. According to the survey, banks have been able to transcend the first two stages rapidly given the availability of platforms and innovation that were already in place. Therefore banks are currently shifting into the applications phase where bank's platforms are penetrating the market and achieving consumer adoption.

The question to pose, in light of the increasing penetration of mobile banking, is what the future holds for traditional channels like the branch. The answer is not straightforward. Although branches may lose relevance in the future, banks cannot simply shift all efforts toward creating an online, mobile bank and consequently cease to operate at the physical level. If there is one thing that justifies the existence of the branch in the mobile banking era it is the fact that people still desire a physical location where they can store and claim their money anytime they want.

This is why some banks have opted to transform the branch, rather than eliminate it. They have done this by reworking the local branch to become a quick and easy port for financial needs by implementing technology. For example, opening an account with a bank tends to require a visit to a branch but little else, save the effort from the customer. But with new technology and more efficient processes, the act of opening an account, which used to take half an hour, now takes less than one third the time. With ever more powerful software, making the processes more efficient will reward the bank with greater customer generation and the customer with ease of access.

The innovation in mobile technology that spawned mobile banking has also opened the door for other companies to take on certain traits of a banking portal. This indirect competition from firms stands to encroach upon the platform that banks are attempting to perfect. Already services are being demanded that firms other than banks are providing. How then will banks remain competitive given possible competition from non-banks? The notion of relevance is integral to answering the question and the solution can be distilled from the current model. To concrete themselves in the new paradigm, banks must shift their focus towards providing a comprehensive yet simple mobile platform that leaves little to be desired and therefore little to be perfected by third party applications. If the Fed's report is any indication, banks are already on the right track.

No question, the future of banking is in the hands of consumers

The Fed's survey on mobile financial services confirms the increasing importance of mobile banking adoption, particularly among the young and the unbanked. It also confirms that banks are ahead of the curve in mobile technologies. In fact, as the report reveals, mobile banking applications have achieved a higher level of sophistication than what mainstream customers are willing to embrace. It inexorably sheds light upon the branch dilemma: should banks continue to fund and expand in a similar fashion, opening and staffing local branches to meet the current 85% of those who reported using the facilities? Or, do they take heed of the recent trend in mobile computing and begin to perfect their presence in a completely different space and to a vastly different consumer under the belief that the local branch is becoming archaic?

The response from consumers points to a shift toward the mobile experience despite the fear that financial information may be at risk from hackers and thieves. If banks can provide a measurably safer means of accessing financial information, mobile banking has the chance to enter into the top two most used methods of banking in a few years. Mobile banking will increase the productivity of the industry as banks will have more information and ways to efficiently target users; however, these technologies are also bringing more competitors: highly sophisticated platforms with innovative business models and very low operating costs. Ultimately, the biggest winner will be the consumer. Through mobile banking, consumers can make a more effective use of their financial means, benefit from user-defined offers, and remove the stress of checks and pay-by dates. Mobile technologies have empowered consumers to a level that has no precedent in history, prompting banks to adopt consumer-centric strategies in order to succeed. If executed correctly, without regulatory impediment or security threats, mobile banking and payments have the ability to extend the current age of smart data to one of the world's oldest businesses.

7. Crowdfunding: A Disruptive Technology for Commercial Banks?

Introduction

In May 2013, Google announced an investment of $125 million in the peer-to-peer crowdfunding firm Lending Club. In the same month, Google Ventures (the venture capital arm of Google), together with Union Square Ventures and other VCs, invested $7.5 million in Series A funding for CircleUp, a crowdfunding platform that allows small businesses to sell equity to accredited investors. Does Google's investments in crowdfunding mark the beginning of an era in which tech giants provide financial services? Is crowdfunding a serious threat to commercial banks? Does it have the capacity to displace banks in filling the financial needs of business and individuals? These are some of the questions that motivate this essay.

In the first part, we provide a definition of crowdfunding as well as examples of some of the most popular platforms. This is followed by a description of current trends in crowdfunding including the analysis of the JOBS Act of 2012- a legislation that encourage small business financing through crowdfunding sites. In the second part, we argue that lending- and equity-based crowdfunding are disruptive innovations for commercial banks using the definition of disruptive innovation developed by Clayton Christensen back in the nineties. In the third section, we explore a series of alternatives to cope with disruptive innovation and finish with a list of topics for further discussion.

The wisdom of the crowd

Technological change is transforming the interaction between banks and their clients. Banks have been very successful at integrating on-line and mobile technologies with their regular business. Today, mobile banking is rapidly displacing the bank branch as the main channel for interaction between banks and increasingly empowered consumers. According to the Fed's Consumers and Mobile Financial Service Survey, at the end of 2012, almost two thirds of banked consumers used online banking in a 12-month period, while one third of banked consumers declared having used mobile baking (see *A Discussion on the Consumers and Mobile Financial Services Survey of 2013*, U.S. Outlook 2Q13). Online and mobile banking are examples of sustaining technologies (Christensen, 1997), meaning those that improve a company's processes and products. However, the internet has also brought a new set of disruptive technologies and business models that challenge the common way of doing things: this is the case of crowdfunding.

Crowdfunding is the practice of funding a project by raising money from a large pool of people (commonly known as "the crowd"). Financing can take the form of donations, loans, or money in exchange for equity. Crowdfunding is typically done through internet-based platforms.

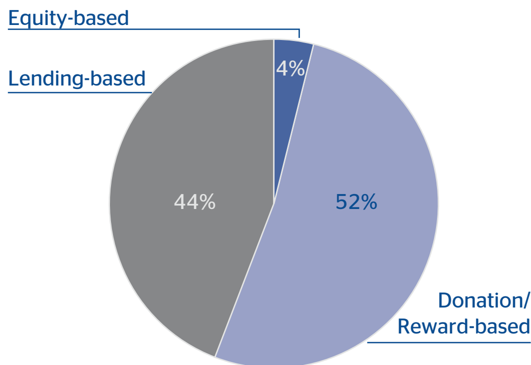
There are four main categories of crowdfunding: rewards, charity, lending and equity-based. In rewards-based crowdfunding, funds are contributed in exchange for future goods or services. In charity-based crowdfunding, individuals and organizations accept donations from the general public. Reward- and charity-based are the most common forms of crowdfunding and are a good option for non-profit organizations, social causes, artistic projects, and product development. Companies like Kickstarter and Indegogo are prominent examples of rewards-based crowdfunding. Since their creation, these companies have helped thousands of creative projects to be funded by millions of people through their platforms.

Lending-based crowdfunding allows individuals and businesses to lend money from the "crowd" and repay it with an interest. Peer-to-peer lending sites like Lending Club or Prosper are used to finance small businesses, home improvements, medical treatment, vacations, and purchases of durable goods. Loans are approved based on the borrower's credit score and no collateral is required. On the other hand, equity-based crowdfunding allows companies to get capital from the crowd by selling equity to

accredited investors. In general, companies who want to be listed in equity-based platforms have to meet certain requirements like generating certain amount of revenue and passing a series of background checks.

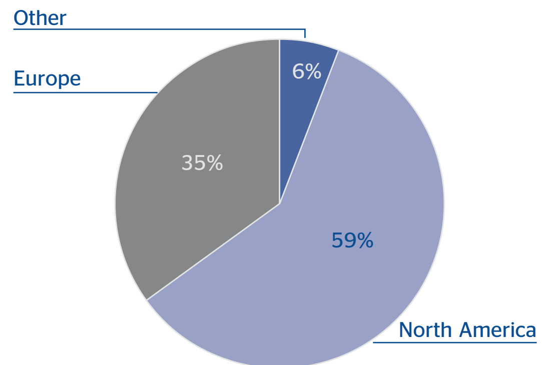
Data produced by the consulting firm Massolution shows that in 2012, the amount of funds raised through crowdfunding platforms worldwide was $2.7bn. From this, 52% or approximately $1.4bn has been raised through donation/rewards-based platforms, another 44% was raised through lending-based platforms and the remaining 4% came from equity-based platforms. In terms of growth, from 2011 to 2012, funds raised through rewards/donation-based platforms increased 85%, lending-based crowdfunding rose by 111%, while equity-based increased 30%. Massolution expects crowdfunding volumes to increase 81% in 2013 to $5 bn. Today, most crowdfunding is done in North America and Europe.

Chart 39
Funds Raised Through Crowdfunding Platforms in 2012 by Type



Source: Massolution. 2013CF The Crowdfunding Industry Report

Chart 40
Funds Raised Through Crowdfunding Platforms in 2012 by Region



Source: Massolution. 2013CF The Crowdfunding Industry Report

Currently, equity-based crowdfunding is restricted to accredited investors, meaning high net worth individuals. It is also constrained by prohibitions on general solicitation and general advertising. This partially explains why equity-based crowdfunding has grown at a lower rate than other kinds of crowdfunding. However, the situation could change.

On April 5 2012, President Obama signed into law, the Jumpstart Our Business Startups Act that encourages small business funding through crowdfunding. The JOBS Act is aimed at facilitating small business access to capital markets. First, it creates a new definition of "small business" called emerging growth companies, firms with annual revenues no higher than $1 bn. Second, it eases some of the rules that govern initial public offerings and allows companies to increase the number of shareholders permitted before they must be registered with the SEC. The JOBS Act also creates a new exception of the Securities Act of 1933 that encourages the use of equity-based crowdfunding platforms. In addition, the law allows individual non-accredited investors to buy equity in small amounts in proportion to their annual income or net worth. As exciting as it looks for small business and individual non-accredited investors, the implementation of the JOBS Act is still on hold because the SEC is still writing the rules needed to make the provisions operable. This is a factor of uncertainty surrounding the future of equity-based crowdfunding.

Government intervention in small business lending is not new. For instance, the Small Business Administration's financial assistance programs are a testimony on government's interest in supporting small businesses. In addition, five years of loose monetary policy have lowered interest rates and eased credit conditions for entrepreneurs. Nevertheless, despite fiscal and monetary stimulus, lending remains subdued. The JOBS Act is a different kind of response to this problem in the sense that it explicitly recognizes the potential of an emerging and innovative business model in meeting the capital needs of a sector that supports 3 out of every 4 jobs in the country.

Table 5
Summary of Key Provisions in the JOBS Act of 2012

Public advertising or solicitation in the Securities Act of 1933	• Instructs the SEC to revise Rule 506 of Regulation D in order to allow general solicitation and advertising for offerings that are exempt from registration under Rule 506. General solicitation and advertising is permitted as long as buyers of these offerings are accredited investors.
Crowdfunding	• A new exception to the Securities Act of 1933, section 4(6), allows securities to be sold in small quantities to large pools of non-accredited investors using crowdfunding platforms. • Securities must be sold through a broker or funding portal that complies with the requirements of the new section of the Securities Act. • Companies can raise up to $1 million per year. • Individual non-accredited investors are permitted to invest according to their annual income or net worth. o The greater of $2,000 or 5% of net income or net worth if these are lower than $100,000. o Up to 10% of net income or net worth if these are greater or equal than $100,000, Investors are subject to a cap of $100,000
IPOs for Emerging Growth Companies	• Creates a new category of issuer called "emerging growth company", an entity with less than $1 bn in annual revenue during its most recent fiscal year. • Emerging growth companies are allowed to file for an initial public offering under softer rules than non-emerging growth firms: o File the registration statement with the SEC until 21 days prior to the start of a road show with only two years of audited financial statements. o Omit certain disclosures required by Sarbanes-Oxley and Dodd-Frank. • Emerging growth companies will not be subject to comply entirely with SEC reporting rules until: o Achieving $1 bn or more in annual revenue. o Raising in excess of $1 bn in non-convertible debt over a three-year period o Being considered a large accelerated filer by having at least $700 million of outstanding shares in the hands of the public o Reaching the last day of the fiscal year in which the fifth anniversary of the pricing date of the IPO falls.
Number of Shareholders	• Under current legislation, companies with at least 500 shareholders and total assets in excess of 10 million are required to register with the SEC. The JOBS Act allows a company to have 2000 total shareholders or 500 who are not accredited investors before being required to registered with the SEC

Source: BBVA Research & Haynes and Boone, LLP

Should banks be concerned about crowdfunding?

After considering how crowdfunding works and how important has become for individuals, investors and the government, the next step is to discuss some of the implications of crowfunding on the banking industry. In the following paragraphs we argue that lending and equity-based crowdfunding are disruptive technologies for the banking industry with the potential to displace banks as the primary source of funding for personal and small business loans.

The term disruptive technology or disruptive innovation was coined by Harvard Business School's Professor Clayton Christensen. It is defined as "a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors."[1] Every certain period of time big companies have to decide what to

[1] www.claytonchristensen.com/key -concepts/

do with disruptive innovations at the bottom of the market. Should they embrace them and make them part of their core business? Or, should they ignore them and keep doing what they do best? Generally speaking, this is the "innovator's dilemma" stated by Professor Christensen back in 1997.

A different value proposition

Disruptive innovations tend to offer different value propositions than the industries they disrupt. Very often, these value propositions are focused on simplicity. Contrary to banks, crowdfunding firms don't offer elaborated financial products such as credit cards, mortgages, insurance or mutual funds. Instead, they limit their offer to a simple product offering either a basic personal loan that can be used for different purposes or brokerage services for companies seeking capital through equity selling. For example, LendingClub offers peer-to-peer loans of up to $35,000 and borrowers may use these loans for a variety of purposes: medical expenses, home renovation, vacations, debt consolidation, pay off credit cards, business expansion, etc. The simplicity of crowdfunding's value proposition rests on two pillars: regulation and technology.

Like banks, lending and equity-based crowdfunding provide financial intermediation services to business and individuals; however, they do it in a different way. Crowdfunding relies on the internet to connect potentially large pools of business and individuals with capital/investment needs. This is different from the traditional banking model that relies on a combination of internet based services, such as on-line and mobile services and traditional services such as branches and ATMs.

Another important difference between crowdfunding and banks has to do with regulation. Crowdfunding platforms do not raise deposits and thus, they are not regulated by the FDIC or the Federal Reserve. Although the SEC is expected to regulate equity-based crowdfunding, it is still unclear who will regulate the entire industry. This sort of regulatory vacuum significantly reduces the cost of compliance and allows platforms to speed up processing times. The combination of no physical location and limited regulatory costs allows crowdfunding firms to keep operating costs low and offer better terms to their clients.

Reaching the bottom of the market

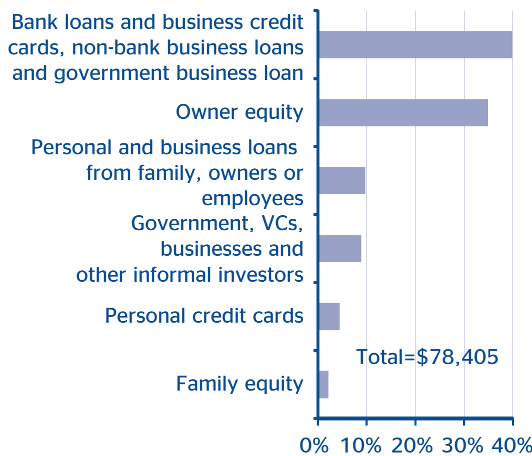
An important characteristic of disruptive innovations is that they start by serving the "bottom of the market", meaning segments that big companies may consider unprofitable. The needs of these segments differ significantly from those of mainstream customers. In the banking industry that bottom includes the de-banked and small businesses, segments that crowdfunding seems to be serving with relative success. Companies like Kiva, for example, make use of crowdfunding to produce micro loans that benefit communities in need across the world. With this kind of platforms, an American lawyer could fund a Zimbabwean peasant to buy seeds. Companies like Kiva are an example of social enterprises with the goal of helping communities to access credit and overcome poverty.

Small businesses tend to be at the "bottom of the market" too. Because it may take a couple of years before new small businesses generate a stable stream of cash flow, they need several capital injections at their early stages in order to expand and operate in a highly competitive environment. This would make them a perfect target for the banking industry except for the fact that failure rates are elevated and it is difficult to assess the ability of small businesses to repay their loans, a situation known as the "informational opacity" problem.[2] This creates a paradox. On the one hand, small businesses still rely on banks as their primary providers of funding (either directly through small business loans or indirectly through personal credit cards), but on the other hand, small business loans represent only a small fraction of depository institutions' assets, especially for large banks.

Not surprisingly, the majority of small businesses lending falls on small community banks that solve the informational opacity problem by establishing a close relationship with local borrowers. In the United States, approximately half of small businesses get none or some of credit they apply for, and almost a third of them don't even apply for fear of rejection.

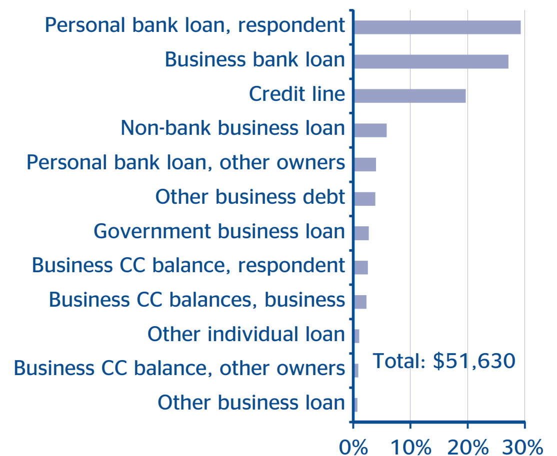
[2] Federal Reserve

Chart 41
Sources of Financing for Startups (2008): All Firms Mean



Source: The Kauffman Firm Survey, Kauffman Foundation

Chart 42
Sources of Financing for Startups (2008): Mean Outsider Debt Decomposition, All Firms Mean



Source: The Kauffman Firm Survey, Kauffman Foundation

Lending- and equity-based crowdfunding platforms have become attractive alternatives for small businesses who would find very difficult to get a bank loan. How crowdfunding firms have been able to serve this market has to do with a different approach to risk management. In lending-based crowdfunding the risk of financing a project is not assumed by a single depository institution (and its clients), but by investors who willingly decide which projects to finance based on their tolerance to risk and other considerations such as community involvement, geography, industries or environmental concerns. The informational opacity problem is not solved, but crowdfunding firms bypass it by breaking down the risk into small pieces and sell them to a potentially large group of investors. In other words, risk is passed from the financial institution to the "crowd", where it is diluted.

Table 6
Overall Credit Application Experience 2009-11

	Applied for any credit	Got none or some of credit applied for	Didn't apply for fear of rejection
All firms	56.5	46.9	29.4
Number of employees			
0-1	48.3	26.2	19.5
2-4	53.3	61.4	36.4
5-9	61.3	49.4	35.6
10-19	63.4	38.7	17.7
20-49	67.2	42.7	25.9
50-250	77.2	32.0	20.3

Note: Data are representative of small employer firms with 1 to 250 employees in addition to the owner(s) in the year of the survey.
Source: Federal Reserve with data from the National Federation of Independent Business, annual finance surveys of 2009, 2010 and 2011.

Table 7
Average Small Business Loan and Microloan Holdings as a Share of Assets for U.S. Commercial Banking Organizations of Different Sizes, 2011 (% except as noted)

Asset class	Number of banking organizations*	Small business loans to assets	Microloan holdings to assets
All organizations	5,670	16.0	3.6
$250 million or less	3,785	16.9	4.5
$250 million to $1 bn**	1,418	15.1	2.1
$1 bn to $10 bn**	399	11.5	1.4
More than $10 bn	68	5.5	0.9

Note: Small business loans are business loans of $1 million or less; microloans, a subset of small business loans, are for $100,000 or less. U.S. commercial banking organizations are insured U.S. domestically chartered banks excluding credit card institutions and U.S. branches and agencies of foreign banks.
*Banking organizations include bank holding companies and independent banks.
**Banks with assets of $1 bn are included in the $250 million to $1 bn size class, and banks with assets of $10 bn are included in the $1 bn to $10 bn size class.
Source: Federal Reserve with data from Call Reports (June 30); National Information Center database

In equity-based crowdfunding, entrepreneurs are allowed to sell a portion of their business in the form of equity to accredited investors. This is a strong innovation in small business financing. As startups struggle to become profitable, the credit risk tends to be too high for traditional banking debt, where interest rates must be paid on a regular basis. A higher credit risk is reflected in higher interest rates ad thus, a higher cost of funding. Therefore, it makes sense for small business to engage in an equity-funding structure or a combination of both. Equity-based crowdfunding is particularly attractive for small companies with strong potential.

The future

It is hard to predict if crowdfunding will evolve to a point that it will become an alternative for the mainstream customers of banks. As we mentioned before, these customers may continue to go for banks to satisfy their demand for a more complex array of financial products: credit cards, auto loans, mortgages, HELOCs, Treasury management or merchant services; products that crowdfunding platforms do not offer yet. However, things could change five or ten years in the future. Crowdfunding platforms could naturally evolve to become the primary source of financial services for young generations. Would these hyper connected individuals buy a mutual fund or join the crowd to invest in businesses that go in line with their preferences and concerns? Would future entrepreneurs continue to use their personal credit cards or would they rather go to platforms like Kickstarter or Indegogo to raise funds? It is reasonable to expect that over time, crowdfunding platforms will increase the complexity of their product offering. This would depend on the pace of technological progress and regulation. Although still tiny, crowdfunding markets could turn big enough to create systemic risk. This would open the door for the kind of intricate and dense regulation that currently afflicts the banking system. However, overregulating this market at an early stage could end up destroying a new and efficient way to connect savers and borrowers.

What can commercial banks do about crowdfinding?

Crowdfunding platforms are not banks, and yet they offer loans and brokerage services to individuals and small businesses like any other bank would do. They currently serve the “bottom of the market”, but that doesn’t mean they cannot reach upper segments. In fact, by the time crowdfunding platforms appeal to mainstream costumers it will be too late for banks to catch up with the new trend. And there is a real risk that banks stop being the primary source for personal and small businesses loans. Therefore, it is important that commercial banks devote resources to understand and potentially benefit from this kind of disruptive technologies.

The dual transformation model, developed by Gilbert, Eyring and Foster (2012) provides a guideline for businesses seeking to cope with disruptive innovation. In the first part of the model (transformation A), banks should seek to strengthen their core business. This makes sense, since it is hard to think that the disrupted firm will suddenly stop doing what it does best. Transformation A requires banks to be introspective, assessing what are the things that they do better than the disruptor and what are the things they cannot.

In the second stage (transformation B), banks should actually invest resources in the disruptive model and keep the new project isolated from the main business. In the crowdfunding space, banks could develop their own platform that would allow them to understand how the crowdfunding environment works and what are the needs of this market that they haven’t been able to fulfill. Both transformations should allow for a capabilities exchange that is aimed at sharing leadership, human capital, and best practices between the two businesses without interfering with each other’s operations. The dual transformation model allows disrupted firms to save as much as the core business as they can while nurturing the new venture and prepare it to become the next source of growth.

Ultimately, implementing this model is not an easy task. First, managers should be convinced that crowdfunding is disruptive and that it represents a real threat to the core business. Second, the company

should decide if investing in the disruptive model is worth doing. This is challenging because banks, as is the case with many large firms in different industries, work with investors' money. Thus, convincing investors to put money into ventures with low profitability in the short-run but with strong potential in the future is something that only few companies are able to do.

Conclusion

Crowdfunding is a disruptive innovation that commercial banks cannot ignore. Perhaps, for the first time in history, business and individuals have access to an unprecedented source of capital created from the small contributions of millions of individuals around the world. This is good news for individuals and entrepreneurs, who may never have to worry about not being able to access traditional lending sources or using more expensive funding solutions to finance their projects. It is also good news for small investors seeking a higher return than conventional investment products. For banks, crowdfunding poses a challenge. From here on, they will face a new competitor with lower operating costs, a different approach to risk management and a simpler product offering. To what extent crowdfunding platforms will displace commercial banks in the retail and small business segments remains to be seen. However, banks should be prepared for this trend and make it work to their advantage.

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8. Factsheet

Table 8

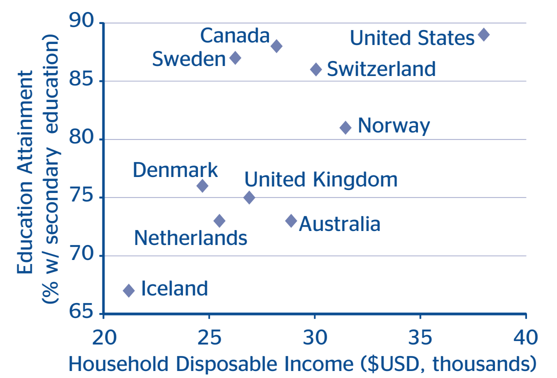
Global Manufacturing PMI (Top 10 U.S. trading partners 1Q13) Census data

Top U.S. Trading Partners		Last (May)	3 months ago (Feb)	6 months ago (Nov)
1	Canada	53.2	51.7	47.5
2	China	49.2	50.4	50.5
3	Mexico	51.7	53.4	55.6
4	Japan	51.5	48.5	46.5
5	Germany	49.4	50.2	46.8
6	South Korea	51.1	49.9	48.2
7	UK	51.3	47.9	49.3
8	France	46.4	43.6	44.7
9	Brazil	50.4	52.5	52.2
10	Saudi Arabia	57.3	58.5	57.0
	Top 10 Avg	51.2	50.7	49.8

Note: 50+ = expansion
MoM decline; MoM Increase; MoM no change
Source: BBVA Research

Chart 43

Education Attainment and Household Disposable Income



Source: The Kauffman Firm Survey, Kauffman Foundation

Table 9

OCED Better Life Index 2013 (OECD Data)

Overall Ranking	Indicator	Income			Community	Education	
		Household net adjusted disposable income	Long-term unemployment rate	Personal earnings	Quality of support network	Educational attainment	Years in education
1	Australia	28,884	1	43,908	94	73	18.5
2	Sweden	26,242	1	37,094	92	87	19.2
3	Canada	28,194	1	42,253	94	88	17.0
4	Norway	31,459	0	43,990	93	81	17.9
5	Switzerland	30,060	2	50,323	94	86	17.2
6	United States	38,001	3	54,450	90	89	17.1
7	Denmark	24,682	2	45,802	94	76	18.8
8	Netherlands	25,493	1	44,321	94	73	17.8
9	Iceland	21,201	2	37,290	98	67	19.4
10	United Kingdom	26,904	3	44,743	95	75	16.6

Overall Ranking	Indicator	Environment		Health	Life Satisfaction	Safety		Work-life balance
		Air pollution	Water quality	Life expectancy	Life satisfaction	Assault rate	Homicide rate	Time devoted to leisure and personal care
1	Australia	14	91	82.0	7.2	2.1	1.0	14.41
2	Sweden	10	95	81.9	7.6	5.1	1.0	15.11
3	Canada	16	89	81.0	7.4	1.3	1.6	14.25
4	Norway	15	96	81.4	7.7	3.3	0.6	15.56
5	Switzerland	22	95	82.8	7.8	4.2	0.7	14.78
6	United States	18	87	78.7	7	1.5	4.8	14.27
7	Denmark	16	94	79.9	7.5	3.9	0.9	16.06
8	Netherlands	30	90	81.3	7.5	4.9	1.1	15.66
9	Iceland	16	97	82.4	7.6	2.7	0.3	14.06
10	United Kingdom	13	97	81.1	6.8	1.9	1.2	14.83

Best; Worst
Source: BBVA Research

9. Economic Forecasts (YoY % Change)

Table 10

	2012	1Q13	2Q13	3Q13	4Q13	2013	2014
U.S.							
Real GDP	2.2	1.8	**1.8**	**1.6**	**2.0**	**1.8**	**2.3**
Nonfarm Employment	1.7	1.5	**1.6**	**1.6**	**1.5**	**1.6**	**1.5**
Nom. Personal Income	3.7	2.8	**2.9**	**3.9**	**2.0**	**2.9**	**4.6**
Home Price Index (Case Shiller)	2.8	7.4	**7.3**	**7.4**	**7.1**	**7.3**	**8.7**
Home Sales	9.7	6.0	**9.1**	**11.1**	**12.3**	**9.6**	**6.1**
Arizona							
Real GDP	2.6	**2.7**	**2.6**	**3.0**	**3.3**	**2.9**	**3.8**
Employment	2.1	1.8	**1.8**	**2.1**	**1.7**	**1.9**	**2.2**
Real Personal Income	1.9	**2.9**	**2.4**	**3.7**	**2.8**	**2.9**	**2.9**
Home Price Index	14.5	19.8	**18.4**	**19.7**	**18.6**	**19.1**	**15.0**
Colorado							
Real GDP	2.1	**2.8**	**2.9**	**3.2**	**3.0**	**3.0**	**2.8**
Employment	2.3	2.6	**2.8**	**2.9**	**2.7**	**2.7**	**2.3**
Real Personal Income	2.1	**3.7**	**3.4**	**4.0**	**2.8**	**3.5**	**2.4**
Home Price Index	5.6	11.9	**8.8**	**11.9**	**10.4**	**10.7**	**7.9**
New Mexico							
Real GDP	0.2	**1.0**	**1.2**	**1.5**	**1.5**	**1.3**	**1.7**
Employment	0.1	0.4	**0.7**	**1.2**	**0.9**	**0.8**	**1.0**
Real Personal Income	1.2	**2.4**	**2.1**	**3.5**	**2.6**	**2.7**	**2.8**
Home Price Index	0.7	2.4	**1.8**	**2.1**	**2.3**	**2.2**	**3.8**

	2012	1Q13	2Q13	3Q13	4Q13	2013	2014
Alabama							
Real GDP	1.2	**1.0**	**1.5**	**2.2**	**2.4**	**1.8**	**2.1**
Employment	0.7	0.3	**0.5**	**0.9**	**0.9**	**0.7**	**0.8**
Real Personal Income	0.8	**1.6**	**1.2**	**2.5**	**1.7**	**1.8**	**1.8**
Home Price Index	3.6	3.4	**3.1**	**5.5**	**6.5**	**4.7**	**5.1**
California							
Real GDP	3.5	**3.7**	**3.5**	**3.5**	**3.4**	**3.5**	**3.4**
Employment	2.1	1.9	**1.8**	**1.6**	**1.5**	**1.7**	**1.6**
Real Personal Income	2.2	**3.5**	**3.7**	**3.6**	**2.9**	**3.4**	**2.7**
Home Price Index	5.8	16.6	**17.6**	**24.2**	**23.3**	**20.4**	**18.0**
Florida							
Real GDP	2.4	**2.6**	**2.5**	**3.1**	**3.3**	**2.9**	**3.1**
Employment	1.8	1.7	**1.8**	**2.2**	**2.4**	**2.1**	**2.3**
Real Personal Income	1.4	**3.4**	**3.7**	**4.6**	**3.7**	**3.8**	**3.8**
Home Price Index	7.6	9.6	**7.8**	**11.3**	**11.7**	**10.1**	**10.2**
Texas							
Real GDP	4.8	**4.6**	**4.1**	**4.2**	**4.2**	**4.3**	**4.1**
Employment	2.8	3.1	**3.1**	**3.0**	**3.0**	**3.0**	**2.7**
Real Personal Income	3.0	**3.7**	**4.3**	**4.6**	**4.0**	**4.2**	**3.8**
Home Price Index	5.2	6.2	**5.5**	**8.5**	**7.6**	**7.0**	**5.8**

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

Table 11

Economic Structure

	U.S.	AL	AZ	CA	CO	FL	NM	TX
GDP (2012 $ Bns)	15,076	179	256	1,909	265	746	80	1,321
Population (2012 Thousands)	313,914	4,822	6,553	38,041	5,188	19,318	2,086	26,059
Labor Force (Apr '13 Thousands)	155,028	2,165	3,031	18,629	2,763	9,412	943	12,722
NonFarm Payroll (Apr'13 Thousands)	135,350	1,893	2,495	14,602	2,363	7,515	811	11,146
Unemployment Rate (Apr'13)	7.6	7.2	7.9	9.4	7.1	7.5	6.9	6.4
Total Building Permits, (YTD Apr '13)	201,163	2,928	6,273	11,869	5,170	18,693	1,224	31,342
Change in Building Permits (YTD YoY (%))	28.2	14.1	24.6	55.1	47.1	48.0	1.2	18.6
Home Ownership Rate (1Q13)	65.0	72.6	66.8	54.2	63.7	66.8	68.6	63.1
Housing Prices (1Q13 YoY Change (%))	6.7	3.4	19.8	16.6	11.9	9.6	2.4	6.2
Exports of Goods (1Q13 $ Bns)	383.1	4.7	4.7	39.4	2.0	15.5	0.6	66.1
Change in Exports (1Q13 YoY Change (%))	0.5	-2.7	4.2	-1.3	4.2	-4.5	-23.0	2.0

Source: BEA, BLS, Census, WiserTrade & FHFA

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