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United States Economic Outlook

4th Quarter 2017 | United States Unit

Index

Closing date: **27 October 2017**

1. Editorial

The current economic expansion has reached 100 months and if trends continue, by spring of next year, it will become the second longest in 160 years. On the one hand, for most Americans, the current cycle has failed to raise living standards as is customary during expansions. On the other hand, there are fears that the cycle is nearing its end and the next recession is around the corner.

The current cycle will go as one of the most disappointing in modern history. Despite sustained expansion, between 2010 and 2017, growth in real GDP per capita averaged 1.4%, almost one percentage point lower than 1950-2007. Had real GDP per capita grown at the historical average, each person and household would be 7% and $3,000 more wealthy, respectively. In addition, while each expansion has winners and losers, the current cycle appears to have created only a few winners. Between 2007 and 2017, average real weekly earnings for people with college degree or higher in the top 9th decile increased 6.4%, while for those in the first decile with less than a high school diploma declined 0.3%. Moreover, since 2007, the share of income for all but the highest quintile has declined, worsening income distribution and awakening feelings of frustration and polarization, which have intensified brinkmanship. Not surprisingly, recent polls highlight that one-half of individuals between 18 and 24 years-old have a positive view on socialism and a managed economy, reflecting the strong dissatisfaction with capitalism and the market economy.

While some of these outcomes may have been inevitable due to global trends and changes in demographics and technology, it is also evident that policymakers failed to use the expansion period as an opportunity to fix some of the most daunting structural challenges facing the economy. For example, according to the American Society of Civil Engineers, the U.S. is facing a $2 trillion infrastructure gap. Different reports suggest that entrepreneurial activity has declined or remains below historical averages, federal obligations for R&D stand near their lowest share of GDP since the late 50s, and although the U.S. ranks 6th in spending per pupil among 73 countries, it ranks 19th and 31st in science and mathematics performance, respectively.

On the duration of the current cycle, Chair Yellen once said, “I think it's a myth that expansions die of old age”. This is particularly true for postwar expansions, which have lasted longer than prewar cycles. In part, this reflects a structural shift away from tangible goods in favor of services, which has reduced the importance of inventory cycles and moderated business fluctuations. In fact, although industrial production declined at an average of 1.4% year-over-year for 20 consecutive months between April 2015 and November 2016, GDP growth still managed to expand 1.5% in 2016, without ever recording a single negative quarter. In addition, the economy has also experienced a more comprehensive and active role of the federal government in managing economic outcomes and taming business fluctuations.

However, for the same reasons, the economy has become more exposed to financial and asset price fluctuations, and policy mistakes. In fact, some common features of the last few recessions include forceful monetary, fiscal and regulatory policies aimed at extending the expansion cycle, which resulted in unsustainable leverage ratios and significant asset price appreciation that in turn led to sharp asset price corrections.

Not surprisingly, a prolonged period of low real interest rates, excessive liquidity, elevated asset valuations, and the potential of detrimental fiscal and regulatory actions are seen by some people as a prelude to the next crisis. However, while it is true that a sharp correction in asset prices could be highly damaging for consumer and business expectations, a comparison between previous pre-recession periods and a range of key economic fundamentals suggests that the current expansion could last for several more quarters. For example, no postwar recession has occurred without the share of fixed investment (excluding intellectual property) to GDP exceeding 14%; the current value is 12.4%. In addition, households' balance sheets remain healthy as evidenced by the low leverage and financial obligations ratios. Corporate profits are also expanding at a solid pace amid muted cost pressures. Although inflation- and cycle-adjusted valuations of equity and home prices stand at high levels and continue to increase, recessions have historically started around 12 months after these indexes began to decline.

Additionally, even if the Federal Reserve continues raising interest rates, there is still some way to go before monetary conditions become restrictive. In fact, a source of risk could arise if the Fed delays normalization amid accelerating inflation and inadequate fiscal stimulus that force the Fed to raise rates faster at a later stage. Moreover, we cannot ignore the risks of counterproductive regulatory policies that would damage the well-functioning of labor markets, foreign trade and capital flows.

With what we know about the current business cycle and the retrospective view of the recovery, it is imperative that in 2018, the administration and Congress engage in a collaborative dialog and implement sweeping reforms that will improve economic fundamentals. Some key challenges include modernizing decades-old entitlement programs and improving performance in education and healthcare while reducing wasteful spending. In addition, there is an urgent need to modernize the current system that creates vast distortions and unnecessary costs, encourages rent-seeking behavior, and picks winners and losers opting instead for comprehensive tax reform that is fair, efficient and simple.

These changes should also include fundamental reforms to the institutional and regulatory frameworks that boosts competition, reduces burdensome costs on businesses and individuals and facilitates access to technology like computers, internet and mobile technologies. Policymakers should avoid the temptation to take short-cuts or seek short-term gains at the expense of future generations. These steps are needed to boost productivity growth, real income gains, and living standards for the next generation.

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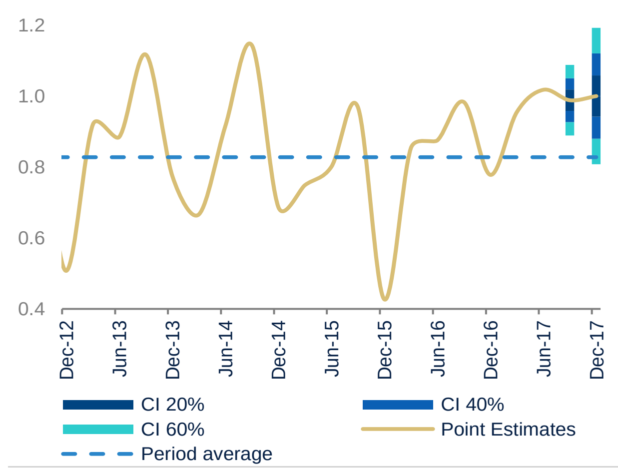
2. Synchronized global growth

Our new global growth forecast assumes acceleration to 3.4% in 2017-18, which implies an upward revision of around 0.2pp. This reflects a stronger economic performance in all areas (Figure 2). In advanced economies, growth has improved dispelling doubts of persistent headwinds in the coming quarters. In emerging economies, stable growth in China will continue to support the rest of Asia and Latin American. In addition, Russia and Brazil will no longer be dragging global growth down. Hence, the current recovery is proving to be both stronger and more synchronized.

In the third quarter, market dynamics were broadly unchanged since the first half of the year. Central banks are pressing ahead with the gradual process of withdrawing monetary stimulus. Specifically, the U.S. Federal Reserve started reducing its balance sheet in October. The European Central Bank (ECB) at its October meeting announced its plans to scale down its net asset purchase program to EUR 30bn, which it will begin implementing in January. The withdrawal of stimulus will be gradual and the ECB will remain as flexible as possible, although the precise strategy it will adopt is uncertain. Like in the previous quarter, the combination of low volatility, reduced interest rates and dollar weakness have resulted in a favorable outlook for emerging markets (EM).

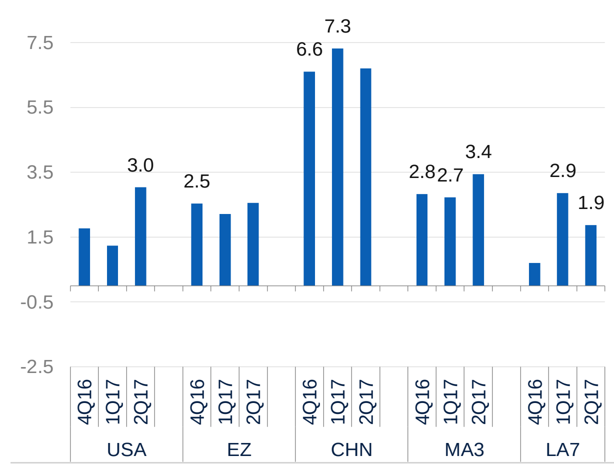
Despite the stronger growth outlook and abundance of liquidity in financial markets, inflation remains moderate. In the case of EM, the appreciation of their currencies and increases in commodity prices has helped inflation to continue to abate. Among the developed economies weaker than expected inflation is due to the lower energy prices, especially in Europe.

Figure 2.1 World GDP growth
(QoQ, %, forecasts based on BBVA-GAIN)



Source: BBVA Research

Figure 2.2 GDP growth by region
(Seasonally adjusted annual rate, %)

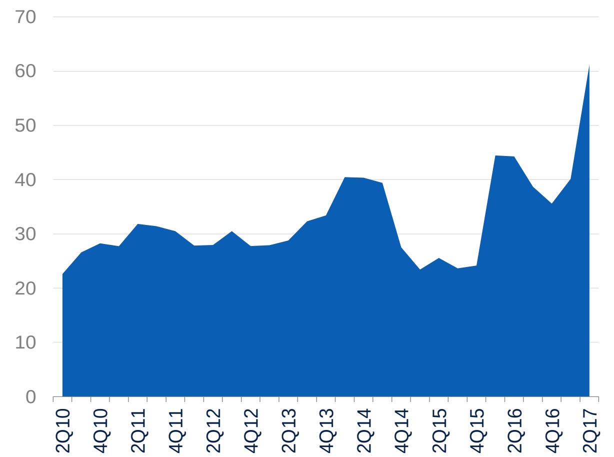


Source: BBVA Research

In Europe, a surge in global demand has supported exports, while higher confidence and labor market fundamentals has led to sustained improvements in consumption and investment. As such, for 2017, we have revised up our GDP forecast by 0.2pp to 2.2%, which implies above-potential growth for the third year in a row.

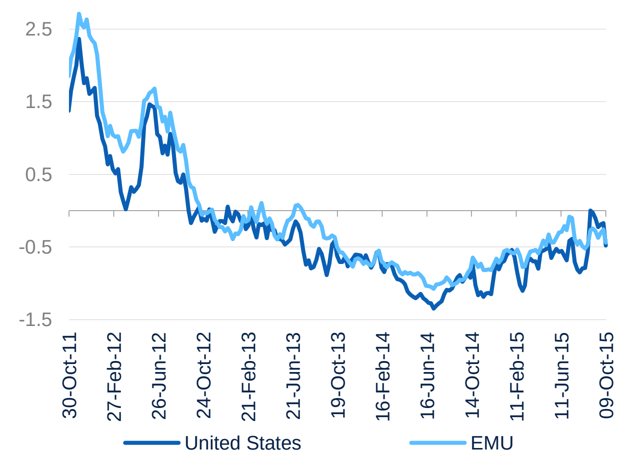
In terms of risks, Brexit negotiations, unresolved banking problems in certain European countries, and political tensions in some E.U. Member States remain a source of uncertainty with respect to the European economy. In the U.S., a retrenchment in business confidence or a sharp correction in asset prices could jeopardize growth synchronization. In China, although fiscal stimulus and a more gradual slowdown in growth have diminished the risks over the forecast horizon, they are still rising over the medium term. In fact, increasing debt levels amid moderate reforms to state-owned companies could result in a nontrivial correction. That said, the balance of risks remains modestly tilted to the upside for the near-term given the strong tailwinds from growing global business cycle synchronicity.

Figure 2.3 Synchronization index (Based on the time variance of GDP)



Source: BBVA Research

Figure 2.4 Financial tensions index. USA vs. Eurozone (Normalized)

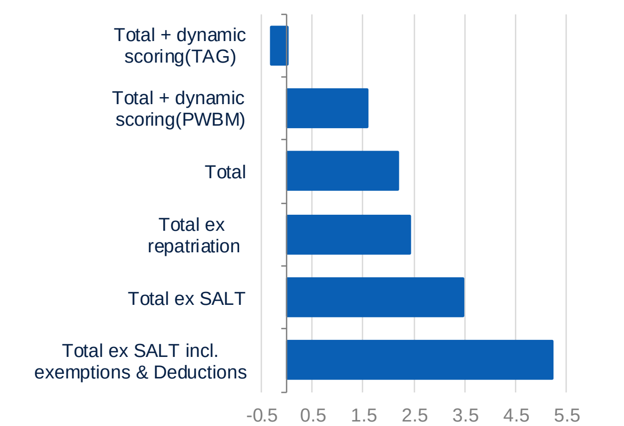


Source: BBVA Research

3. U.S. on track for moderate growth

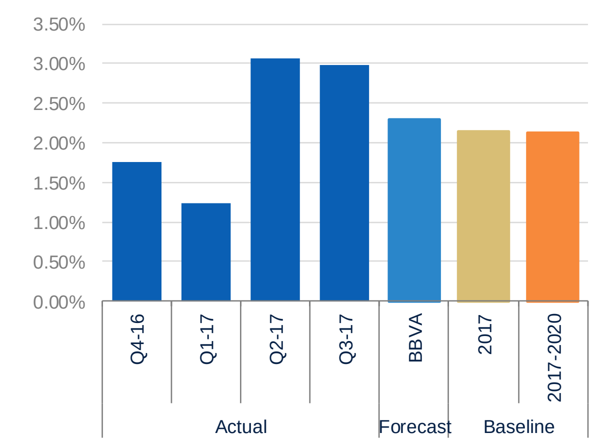
Although the “Unified Tax” framework distributed by the White House and the passage of a budget resolution in Congress reinforces the GOP’s commitment to tax policy, the scant details within the document and lack of consensus are not enough to alter our outlook for moderate growth in 2017 or 2018. Regardless, domestic fundamentals are solid with consumers well positioned after a painful deleverage process, and industrial activity is recovering from the slump in 2016. Financial conditions are also supportive of growth despite the Federal Reserve (Fed) further removing accommodation in 2017: three interest rate increases (one 25bp increase anticipated in December) and the start of balance sheet normalization on October. More broadly, global activity has improved throughout the year with increased growth synchronicity among developed and emerging markets. Notwithstanding any unanticipated rise in geopolitical or economic policy uncertainty, we expect growth to continue to converge with our baseline scenario that assumes growth of 2.1% in 2017 and 2.2% in 2018. However, a strong mid-year upturn in growth has increased the possibility of growth surprising to the upside in 2017.

Figure 3.1 Static deficit impact of “Unified Framework” proposal, $trillions



Source: BBVA Research & TPC

Figure 3.2 GDP growth, %



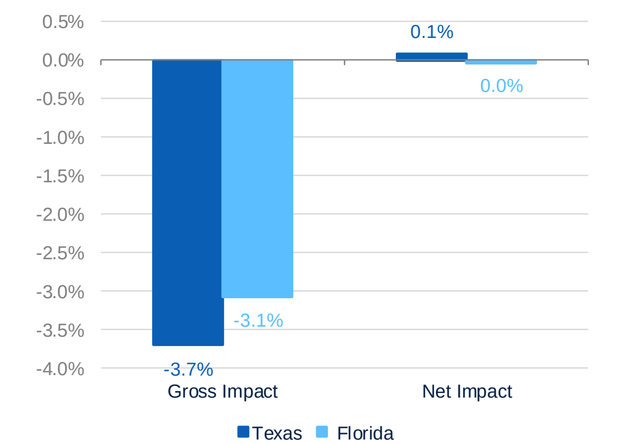
Source: BBVA Research, NY Fed & ATL Fed

While quarterly annualized real GDP growth disappointed in 1Q17, domestic activity rebounded strongly in the 2Q17 and 3Q17, rising to 3.1% and 3.0%, respectively. Fears of demand-side headwinds for the consumer were short-lived, as stronger consumer sentiment indicators finally translated into stronger growth of personal consumption (3.3% and 2.4%). On the supply-side, private nonresidential fixed investment also benefited from the tailwinds of higher business confidence, as investment in information processing equipment expanded at a double-digit pace in both the 2Q17 and 3Q17. Moreover, net exports also contributed positively to domestic growth for the second consecutive quarter due stronger growth abroad and the absence of major frictions from changes to global trade policy. With respect to government activity, aggregate consumption remained weak in the 2Q17 and 3Q17 given a significant drop in investment at the state and local level.

However, accelerated investment in national defense in the 2Q17 and a rebound in national defense consumption expenditures helped counteract the headwinds in other government-related expenditure categories.

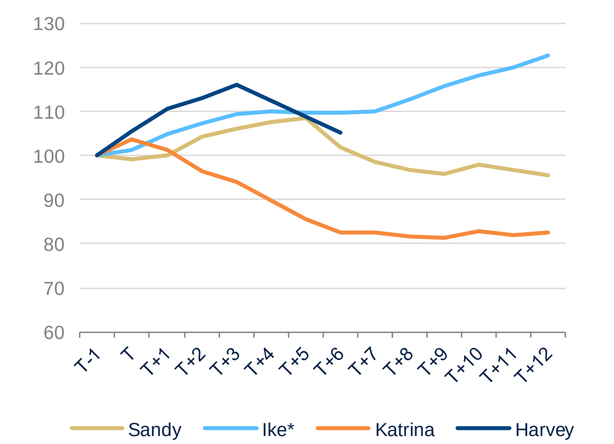
Although evidence suggests that natural disasters have small and transitory net effects on the national economy, Hurricanes Harvey and Irma could add noise to short-term indicators and growth estimates for the third and fourth quarter. That said, preliminary estimates for 3Q17 GDP suggests national growth was largely unaffected by the storms. At the regional-level, we estimate the damage could exceed $160bn. This includes damage to physical capital and economic losses from short-term flows. That said, notwithstanding the negative surprise in the labor market in September (-33K jobs), national indicators particularly those in the manufacturing and construction sectors have surprised to the upside. In fact, the ISM in September reached its highest level since the pre-crisis period while the monthly pace of auto sales on a seasonally adjusted basis increased by 204K. Ultimately, we expect the labor market to recover quickly in the coming months.

Figure 3.3 Growth impact from hurricane's Harvey & Irma, pp



Source: BBVA Research

Figure 3.4 Unemployment insurance claims index, week prior to major hurricane=100



Source: BBVA Research & BLS

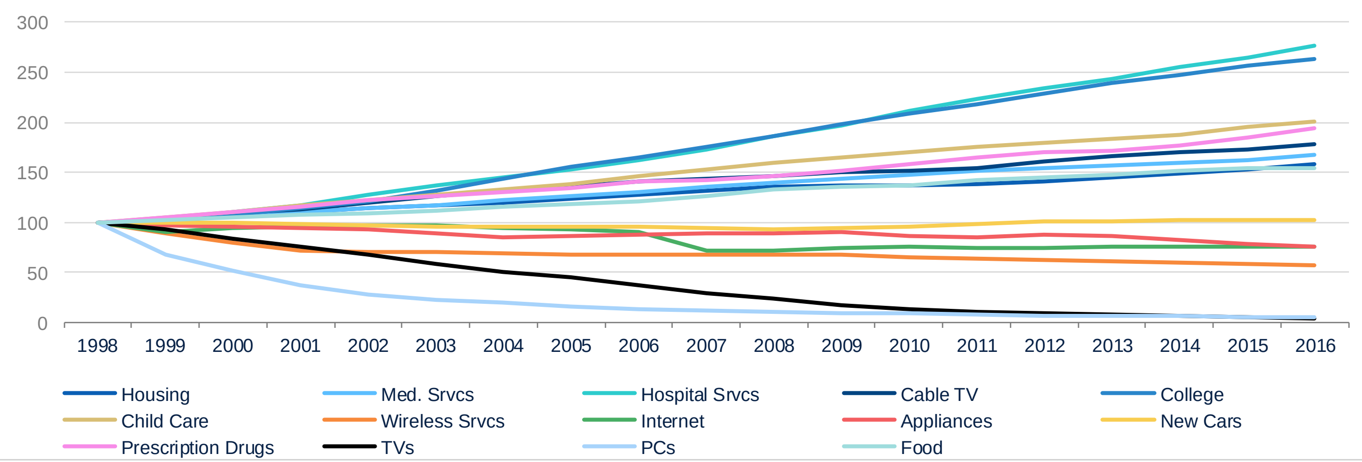
Beyond the short-term volatility associated with the storms, labor market conditions continued to improve. In fact, in September, the unemployment rate declined to 4.2% in spite of the frictions created by the storms. Moreover, the participation rate reached its highest level since 2013, which is uplifting given the structural headwinds an aging population poses to labor force participation. Moreover, prime-age participation, which had failed to recover in the post-crisis period, reached its highest level in a decade at 82.0%—between 1990-2010 average prime-age participation was around 83.5%.

Broader measures of labor market utilization such as the U-6 unemployment rate and the nonemployment rate[1] also suggest the labor market is approaching levels that are consistent with an economy at full employment. Despite the strong cyclical recovery, we continue to expect some frictions to remain given their structural nature. As such, we anticipate

1: Hornstein, A., Mariana Kudlyak and Fabian Lange (2015) monthly employment growth to average around 140K jobs per month in 2018-2019, which is above the pace needed to absorb new entrants, and the unemployment rate to continue to trend well below consensus estimates of long-run unemployment rates, reaching 4.1% in mid-2018.

Despite tight labor market conditions, expectations of expansionary fiscal policy and depreciation of the U.S. dollar, trend inflation remains below 2.0%. In fact, in August, core inflation for personal consumption expenditures (PCE), the preferred measure of the Fed, decelerated to 1.3% year-over-year–the lowest in two years; market based core PCE decelerated to 1%. In addition, implied inflation expectations, which rose in the post-election euphoria, have declined to levels that represent an undershooting of the Fed's symmetric inflation target for several years.

Figure 3.5 Consumer price index, 1998=100



Source: BBVA Research & BLS

When looking at the contributions of major components to consumer prices the argument for a quick return to 2% is tenuous. In fact, the idea that the sharp contraction in mobile phone contracts prices explained a majority of the weakness in core prices is unconvincing, as it accounts for roughly 2 percent of consumer prices. In addition, even with less negative contributions over the past quarters, core prices are averaging around 1.7% year-over-year. Conversely, medical care and education have decelerated substantially since 2015, which tend to move without respect to the business cycle. Ultimately, these sectors are also facing regulatory and policy headwinds relating to pricing and service, which reduces the likelihood for a sharp turnaround in the near future.

The factors that explain the common trend have also shifted over time. An analysis of 18 independent components of personal consumer expenditures, prior to 2014 and after, shows that the components that explain a majority of the common trend in inflation have decelerated for services such as health care, recreation, transportation and finance, and contracted for energy commodities and clothing. In fact, if the factor loadings from the estimation after 2014 are applied to historic data, the results suggest that current inflation is slightly above or at trend; if the entire sample is estimated with pre-2014 factor loadings the results show that inflation is below trend and has been since the 1990s. If energy is excluded from the estimation, the results support the conclusion that the post-2014 inflation common trend is close to the average whereas the full sample suggests a significant undershooting of the 2% target of the common inflation trend. As a result, there remains a moderate likelihood of persistent undershooting of the 2% target in 2018 and possibly 2019; a reality some FOMC members have alluded to in recent communications.

Table 3.1 Inflation components, year-over-year % change

Rank	2014-2017	Average Growth	1960-2017	Average Growth
1	Health Care	1.1	Food Svcs & Accommodations	4.3
2	Housing & Utilities	2.9	Furnishings & Household Equip	1.3
3	Other Durable Gds	-0.7	Recreation Services	3.7
4	Gasoline & Other Energy Gds	-8.9	Transportation Services	4.0
5	Recreation Services	2.1	Other Services	4.1
6	Transportation Services	1.0	Health Care	5.5
7	Clothing & Footwear	-0.4	Other Nondurables	3.5
8	Finance & Insurance	4.6	Housing & Utilities	3.9
9	Electricity and Gas	0.8	Recreational Gds & Vehicles	-1.8
10	alc Bev Purch for Off-Premises Cons	0.6	Other Durable Gds	2.5
11	Other Nondurables	1.4	Electricity and Gas	4.1
12	Final Consumptn Exps of Nonprofit	3.9	Alchohol Off-Premise	2.6
13	Other Services	1.3	Motor Vehicles & Parts	2.3
14	Furnishings & Household Equip	-2.8	Food & Nonalc Bev (Off-Premises)	3.6
15	Food Svcs & Accommodations	2.6	Clothing & Footwear	1.3
16	Recreational Gds & Vehicles	-4.7	Finance & Insurance	3.9
17	Food & Nonalc Bev Purch for Off-Premises Cons	0.4	Final Consumptn Exps of Nonprofit	1.3
18	Motor Vehicles & Parts	-0.5	Gasoline & Other Energy Gds	6.1

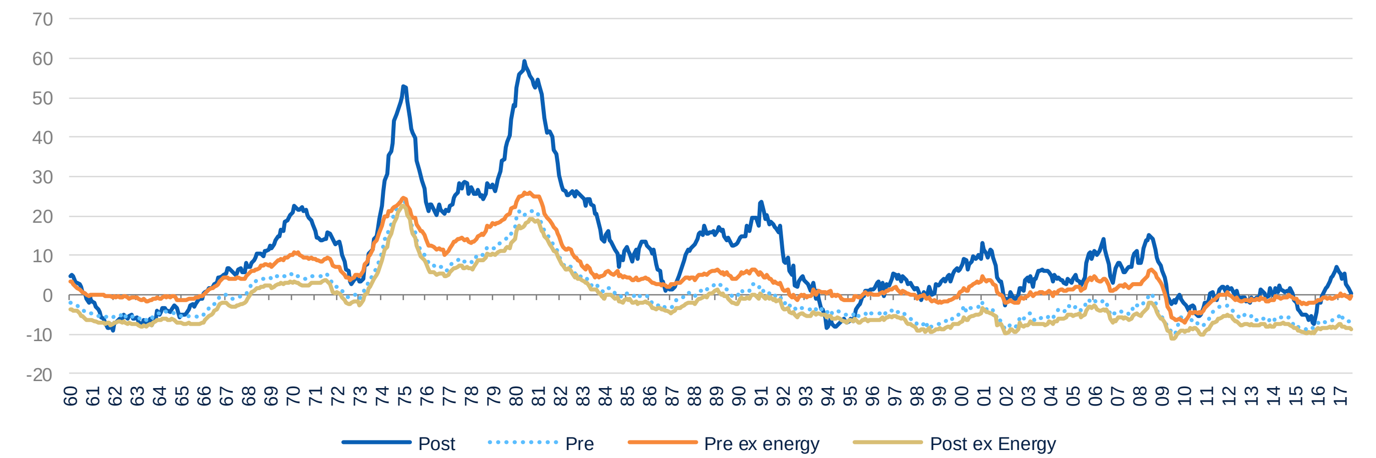
Source: BBVA Research

Although, this result is consistent with other empirical studies, there is no guarantee that trend inflation will stay low despite recent evidence of a disinflationary trap.[2] Between 1960-1965— a similar duration to the current disinflationary environment— U.S. core inflation was low and stable at around 1.3% year-over-year. Funding for the Great Society and the Vietnam War, coupled with demand-side concerns at the time led to significant increases in spending and deficits and a substantial rise in inflation, which peaked at 6.25% in 1970 (fiscal shock). After easing in following years, pressures from the White House and President Nixon to ease monetary conditions in the 1970s led to a quadrupling of the money supply with a fairly small or positive output gap, leading to double digit inflation in 1975 and to the stagflation of the 1980s (monetary shock).[3]

While the uncertainty around our inflation scenario has grown with the potential for extreme outcomes from monetary and fiscal policy, our baseline assumes low stable prices with core inflation remaining below the Fed's target for some time. That said, any fiscal expansion or unresponsive monetary policy could tilt the balance quickly to the upside.

2: See for example *Deflating Inflation Expectations: The implications of Inflation's Simple Dynamics* from Cecchetti et al (2017) and *Core and Trend Inflation* by JH Stock (2015)
3: Other factors that contributed to the period of stagflation such as increase funding for the Vietnam War, the 1972 expansion of social security, the oil embargo and the fall of the Gold Standard.

Figure 3.6 Common personal consumption expenditure trend, normalized



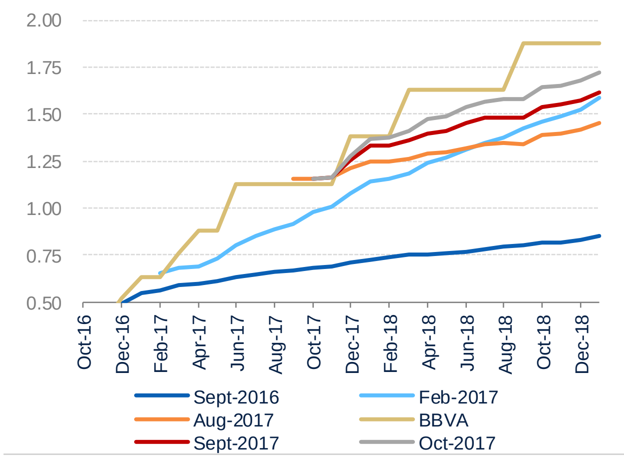
Source: BBVA Research

In terms of the monetary policy, we expect the Fed to continue on its normalization path in 2017. This will include ceasing reinvestment of principal payments under the established caps (Balance Sheet Normalization) and one additional 25bp rate increase at the final meeting of the year in December. Following the September meeting, market expectations have realigned with our view of a December hike despite concerns that the Fed may pause to assess the impacts of balance sheet normalization. Nonetheless, a major downward correction in inflation in November or December could give members some reservations about raising rates for a third time in 2017.

Going forward, however, there is a high degree of uncertainty about the path of monetary policy. Chair Yellen's tenure as head of the Fed will expire on February 3, 2018, which opens up the possibility that there could be a new Chairperson in 1Q18. The top candidates to replace Yellen include John Taylor, Kevin Warsh, Jerome Powell, Gary Cohn; other potential, but less likely candidates include Neel Kashkari and Glenn Hubbard. Kevin Warsh, John Taylor and Gary Cohn would be a significant departure from the current monetary policy regime approach of discretion, flexibility and risk management. These candidates would advocate for a rules-based approach, with increased transparency and accountability. Powell, on the other hand, would likely represent a continuation of the status quo albeit with a slightly higher appetite for modest financial deregulation. Moreover, even after the confirmation of Randy Quarles to the board of Governors there are still three remaining vacant seats on the Board of Governors, leaving the possibility that the FOMC could be comprised of a blend of these preferences and approaches.

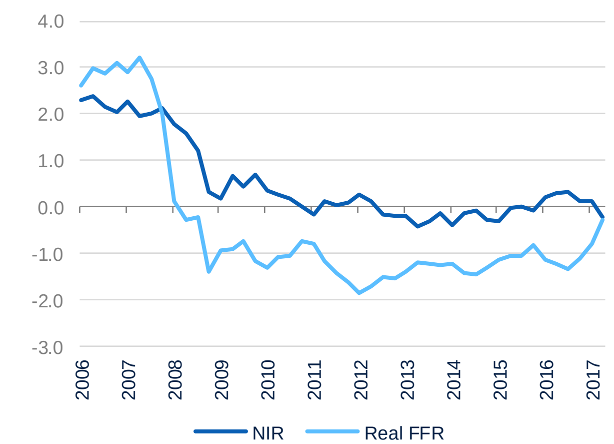
In terms of the implications for interest rate policy, a shift to a Taylor-like rule would likely imply a much steeper tightening path than implied by the FOMC Summary of Economic Projections. Yet, a rules-based approach coupled with a more accommodative stance towards fiscal policy and the political economy could imply a less aggressive tightening path, assuming actual inflationary pressures remain somewhat contained. That said, we are maintaining our baseline scenario, which assumes the Fed will raise rates twice in 2018 and two more times in 2019 despite the growing uncertainty around the future path of monetary policy.

Figure 3.7 Fed funds projections vs. markets expectations, %



Source: BBVA Research and Bloomberg

Figure 3.8 Real and neutral interest rates, %



Source: BBVA Research and FRBSF

With respect to fiscal policy, our scenario in 2017 is for the status quo to persist: deadlock. Thereafter, the urgency to deliver tax reform before the mid-term elections will increase the probability of the GOP passing modest fiscal legislation with limited base-broadening, but nontrivial tax cuts. In fact, we currently assume the likelihood of passing tax reform in 2018 is higher than 50%. In terms of the impact from fiscal policy, available details and preliminary third party analysis suggests that, at best, there will only be a slightly positive economic impact in the short-run. Those benefits, however, are eroded in the medium-run due to higher deficits and borrowing costs that tend to distort the way people, and companies work, save and invest. However, if the tax changes include measures that boost investment and efficiency, the economic effects would be larger and potentially even increase potential output.

With the cyclical headwinds of 2016 fading and global growth in lockstep, our outlook beyond 2017 is for the U.S. to continue grow at a moderate pace of around 2%. Similarly, we expect inflation to trend towards 2% target albeit at a slower pace than previously expected. In terms of risk, the fact remains that the U.S. has enjoyed a historically long period of economic prosperity and monetary accommodation is declining, implying slightly higher downside risks from an aging business cycle. In addition, there are potential pitfalls in terms of geopolitical economic policy related risks that could derail the U.S. recovery. Agreeing on the fiscal agenda and nominating a commonsense choice for the Fed Chair will improve the chances of continuing on this stable growth path.

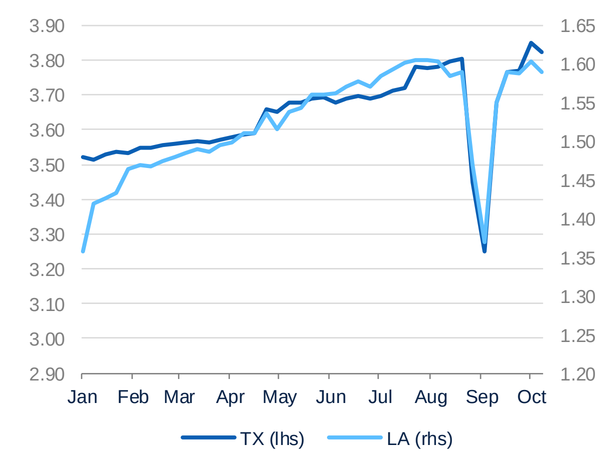
4. Hurricane Harvey and the oil and gas sector

More than two months since Hurricane Harvey wreaked havoc in Texas and Louisiana, the oil and gas sector seems to have recovered almost entirely. Available information provides an overall view on the sector's reaction to one of the most devastating storms registered in the U.S. as well as its consequences and implications for the future of energy markets.

Starting with production, Harvey forced several platforms in the U.S. Gulf Coast to evacuate their personnel and shut-in production. At the peak of the storm, about 15% of production platforms were evacuated and 25% of oil and gas production (equivalent to 428,568 b/d and 835 bcf/d) was shut in, according to data from the Bureau of Safety and Environmental Enforcement (BSEE).

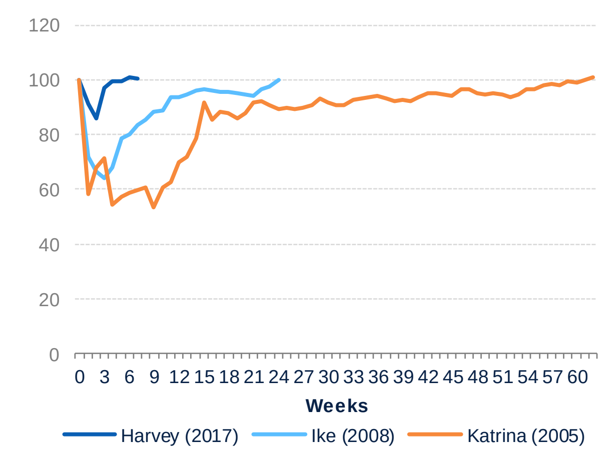
Onshore production was also affected. Operators in the Eagle Ford region scaled down drilling, completion and production activities as the storm battered the area. However, most of the shut-ins were done for precaution or in response to refinery and transportation outages rather than for actual damages to the wells. How much shale production was shut-in is uncertain since no government agency recorded the actions taken by operators (as it was the case with the BSEE and offshore platforms), and companies do not always disclose that information. However, a day after Harvey reached land, the Texas Railroad Commission calculated that between 300,000 and 500,000 b/d of crude oil and 3 bcf/d of natural gas production had been shut-in in the Eagle Ford from a pre-storm production estimate of 870,000 b/d and 6 bcf/d. As more crude oil production data has become available, our estimates point to a lower figure of approximately 250,000 b/d.

Figure 4.1 U.S. estimated crude oil production in 2017 (million b/d)



Source: BBVA Research and Haver Analytics

Figure 4.2 U.S. estimated crude oil production after hurricanes (Index, t_0=100)



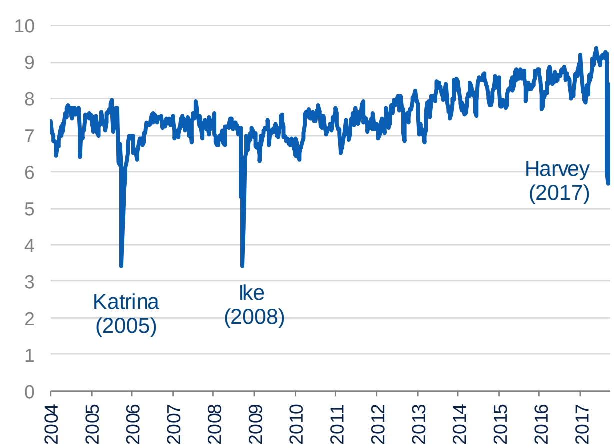
Source: BBVA Research and Haver Analytics

Once the super-storm dissipated, it took about four weeks for total crude oil production in Louisiana and Texas to return to their combined pre-storm levels of 5.4 million b/d. In contrast, it took production around 22 and 62 weeks to return to pre-storm levels after Hurricane Ike (2008) and Hurricane Katrina (2005), respectively.

One explanation for the rapid normalization of production is that, since the shale revolution, most of the oil and gas extraction has moved inland where rigs and wells are less vulnerable to hurricanes and tropical storms. Today, only 19% of crude oil is produced offshore as opposed to 2005 when this share was 26%. Another explanation is that the rapid weakening of the hurricane prevented devastating winds from severely damaging production facilities. In any case, the upstream sector seems to have weathered the storm without significant harm.

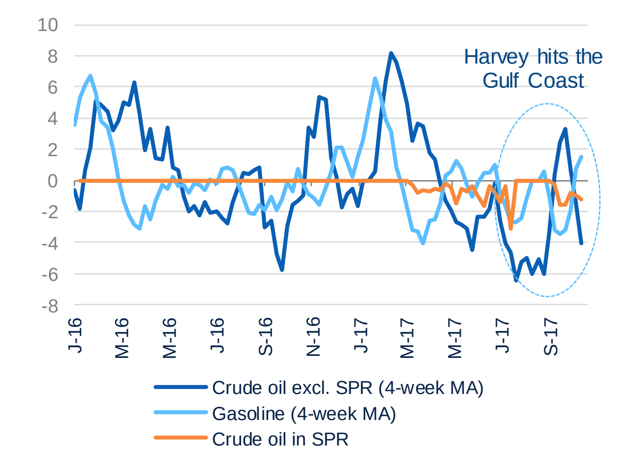
This wasn't the case of refineries which experienced substantial damage from floodwaters. According to the Department of Energy, about 34% (3,268,449 b/d) of refining capacity in the Gulf Coast (18% of total U.S.) was shut-down during the worst part of the storm. This included six refineries in the Corpus Christi area, seven refineries in the Houston-Galveston area and one refinery in the Beaumont-Port Arthur area. In addition, one more refinery in the Houston-Galveston area, two refineries in the Beaumont-Port Arthur area, and two refineries in the Lake Charles area had to operate at reduced rates. These refineries had a capacity of 1,777, 276 b/d, equivalent to 18.3% of total capacity in the Gulf Coast and 9.6% of total capacity in the U.S. Some of the biggest refinery complexes in the country were temporarily shut-down. Crude oil input to refineries, a proxy of refining demand, declined by 3.6 million b/d in the two weeks following the storm or 35% down from pre-storm levels. Contrary to what happened with production, input to refineries has not recovered entirely. In the week of October 13, it was still 14% below pre-storm levels. Data from the Energy Information Administration shows that capacity utilization has gone up from 60.7% to 83.7%, but it still below the 97% registered in early August. Notwithstanding, losses appear to have been less than in the aftermath of Hurricane Katrina, when input to refineries declined by about 4.3 million b/d (55% from pre-storm levels). In fact, seven weeks after Katrina, input to refineries was still 33% below the levels observed before the storm. Today most of the refineries are operating at full or reduced rates, in contrast with some refineries during Hurricane Katrina for which it took months to restart.

Figure 4.3 Crude oil input into refineries in the Gulf Coast region (million b/d)



Source: BBVA Research and Energy Information Administration

Figure 4.4 U.S. stocks of crude oil and gasoline (1-week change, eop, million barrels)

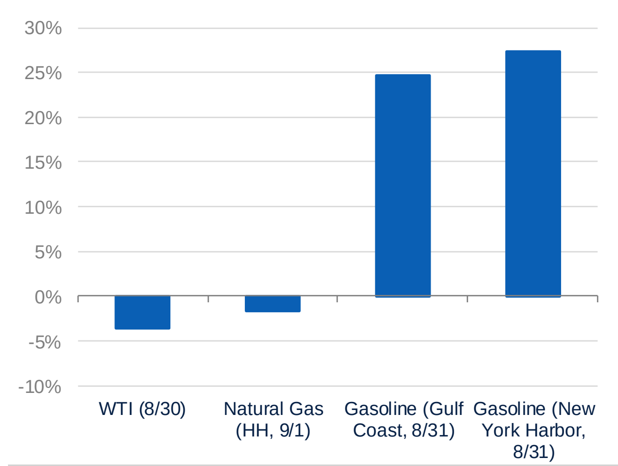


Source: BBVA Research and Energy Information Administration

Refinery outages forced producers to store crude oil for a while, which pushed inventories up. Stocks of crude oil excluding strategic reserves temporarily broke a downward trend and went up by 15.262 million barrels in the three weeks after the storm, causing a 3.5% decline in the price of WTI crude, and expanding the gap between this and Brent. Although it took about four days for WTI to return to pre-storm levels, the WTI-Brent differential continued to expand, reflecting the impact of refining capacity below normal and other domestic factors such as robust production and historically high stocks that have partially offset the positive effects of solid global demand and OPEC cuts. In contrast, natural gas prices were the least affected by Harvey as production is regionally more diversified and less vulnerable to refinery outages.

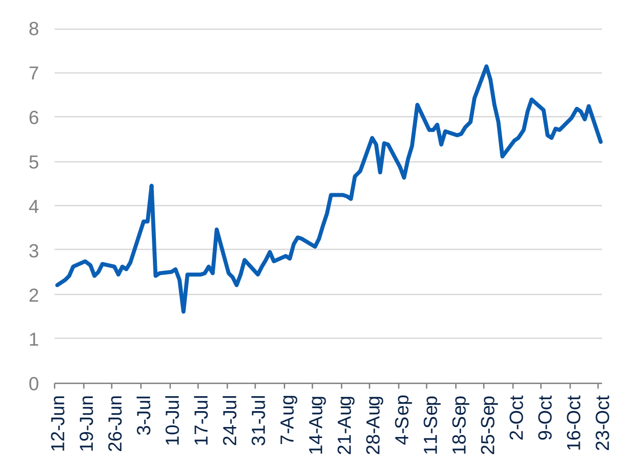
Prices of refined products experienced a significant boost in the aftermath of Harvey. In particular, gasoline prices in the Gulf Coast jumped almost 16%. Higher prices at the pump were also felt in other parts of the U.S., particularly in the South and the East. This is because the Texas portion of the 5,500 miles Colonial Pipeline system that connects refineries and consumers between the Gulf Coast and the New York Harbor area was also impacted. Until September 5, when the line going from Houston to Lake Charles was finally repaired and restarted, products such as gasoline, heating oil and jet fuel, could not reach their markets normally, resulting in widespread price increases. To stabilize the market, the federal government authorized the release of 1 million barrels of crude oil (400,000 barrels of sweet crude and 600,000 barrels of sour crude) from the strategic reserves and sent them to the Phillips 66 refinery in Lake Charles, LA. In addition, the fact that Harvey arrived at the end of the holiday season, that gasoline stocks remained at high levels, and that some regulations on fuel quality were temporarily suspended could have helped prevent a more pronounced increase in fuel prices. As refineries gradually return to normal, gasoline prices have slowed down, but remain slightly above pre-storm levels.

Figure 4.5 Energy prices
(% change from August 25 to highest/lowest)



Source: BBVA Research and Haver Analytics

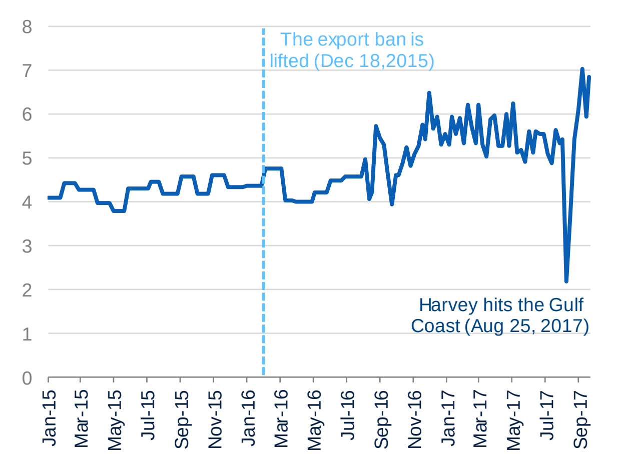
Figure 4.6 Brent-WTI price differential
($)



Source: BBVA Research and Haver Analytics

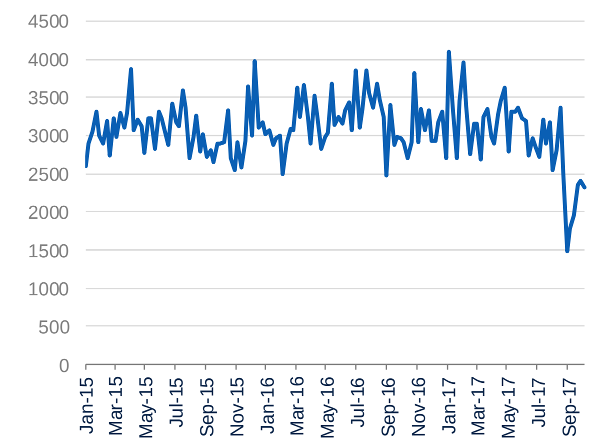
Harvey also caused significant damage to the port's infrastructure. Floodwaters dumped several tons of silt and sand into the Houston Ship Channel and throughout Galveston Bay, and the Sabine Pass that gives access to the Port of Beaumont and Port Arthur. This and the subsequent dredging efforts have prevented cargo from moving normally even after the ports were reopened. Impairments to port infrastructure together with refinery outages led to a strong decline in crude oil imports, which dropped 56% in the two weeks since August 18 and to date have not recovered to pre-storm levels. Similarly, exports plummeted by 83% in the week of the storm; however, they rebounded quickly and sharply as refinery outages and arbitrage opportunities from the widening Brent-WTI gap prompted producers to sell more crude overseas. In the week of September 29, crude oil shipments went up by 1.98 million b/d, the highest level since the start of government weekly exports data (1993). This wouldn't be possible without the repealing of the export ban in 2015, which allowed exports to serve as an effective escape valve in response to refinery disruptions. Exports of refined products also fell sharply, but recovered a few weeks later reaching 4.8 million b/d in the week of October 13, the highest level since May.

Figure 4.7 U.S. total crude oil exports (million b/d)



Source: BBVA Research and Energy Information Administration

Figure 4.8 Gulf Coast crude oil imports excluding SPR (thousand b/d)



Source: BBVA Research and Energy Information Administration

Despite the unprecedented magnitude of Hurricane Harvey, the damaged caused to oil and gas infrastructure proved to be manageable and short-lived. This was the result of learning from past experiences, specifically Hurricanes Katrina and Ike, and of a fundamental change in the market structure characterized by the increasing relevance of onshore production and the possibility of selling crude oil outside of the country. The relatively modest decline in oil prices contrasting with the sharp increase in gasoline prices confirms that the storm wasn't as detrimental for production as it was for refining, which was not prepared for the excessive amount of water brought by Harvey.

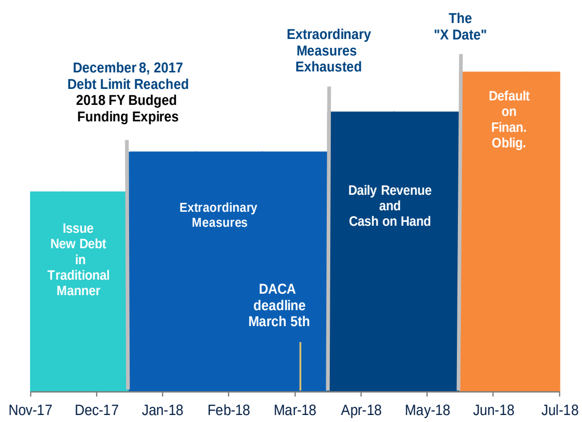
In this sense, Harvey has revealed a new type of risk coming from more frequent and severe flooding, and the consequent disruptions to refining and transportation capacity. The scientific community has pointed out that the next super-storms could be more frequent and as strong as or even stronger than Harvey due to the warming of the Gulf of Mexico. As a result, substantial investments need to be done in order to improve the resiliency of the entire value chain. However, resources are limited, and it is not clear what would be the best option. Should more refinery capacity and pipelines be built in order to avoid disruptions to domestic markets? If so, should they be built outside the Gulf Coast? Would a more fragmented system of refineries compensate the risks of the more concentrated system that we have today? As the industry comes up with an optimal solution, Hurricane Harvey has also built a case for preserving and using the strategic reserves, not necessarily as a buffer to geopolitical risks, as they were meant to be when created, but as a tool to deal with supply shocks resulting from climate change. Finally, as the U.S. oil and gas industry increases its participation in global markets via exports of crude oil and LNG, the vulnerability of the Gulf Coast infrastructure to future natural disasters will most likely impact international markets. This would imply that, without the appropriate preparations, the effects of the next Harvey will be felt at the global level.

5. Fiscal policy through the lens of business cycle timing

The state of fiscal policy conduct since the change in administration in the White House has not delivered a different course from the past politics of partisanship. As a result of the deal struck between the President and Democrats that included temporary hurricane relief funds for victims of Harvey and Irma, Congress has pushed back the deadline for passing a budget resolution and suspended the debt ceiling until December 8, 2017. Nevertheless, business optimism remains at pre-recession highs and markets are bullish in expectation of tax code reform. This leaves Congress with a packed agenda of fulfilling the expectations of businesses - namely regulatory stability, permanent tax relief, and an end to the debt ceiling drama.

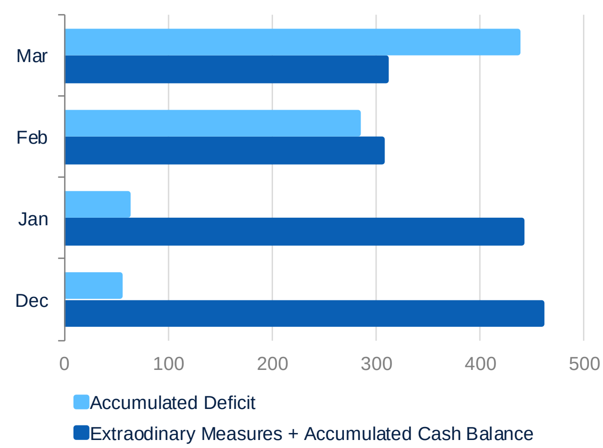
The ability to pass tax reform hinges on Congress allowing the passage of tax reform through the reconciliation process which needs only 50 Yes votes in the Senate. Thus, the overall eagerness to enact a 2018 budget prompted early adoption of a budget plan on October 19th. Congress is likely to overlook the expiration of the debt-limit suspension on December 8th with no negative consequences. Our research, in line with that of the Bipartisan Policy Center, finds that the Treasury secretary can resort to extraordinary measures at least until March 2018, when the debt ceiling negotiations should become imminent.

Figure 5.1 Defense against default



Source: BBVA Research & Bipartisan Policy Center

Figure 5.2 Expected period to exhaust the means to pay the nation's bills (US$ billions, 2014-2017 average)



Source: BBVA Research & Haver Analytics

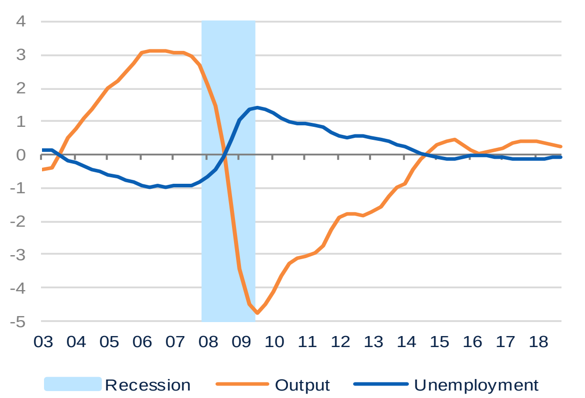
With the Senate Budget Committee advancing the budget resolution and with health care legislation put aside, the primary focus of the Congress and the White House has shifted to tax reform.

The tax reform proposal from the Trump Administration and the "Big Six", termed the "Unified Framework," was revealed on September 27, 2017. The essential changes proposed in the Unified Framework are a simplification of the individual tax rate structure from seven brackets down to three brackets of 12%, 25% and 35%, a reduction of the businesses pass-through income tax from 39.6% to 25%, and corporate tax rate reduction from 35% to 20%. These key components of the reform are similar to the tax plan formulated by House GOP leaders in the summer of 2016. The pivotal provisions above are estimated to permanently increase the budget deficit. The preliminary estimate of the effect of the tax reform is that it will add $2.8 trillion to the national debt over the next 10 years.[4] This estimate will continue evolving and will be refined when more details of the proposed tax reform become known.

Given the substantial burden that the Unified Framework will place on the federal budget and public debt, the question becomes whether this tax reform will provide the necessary economic stimulus to boost the U.S. growth rate?

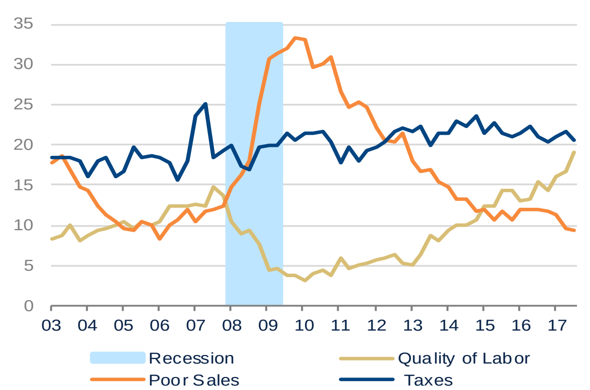
Considering that the U.S. economy is in its eighth year of recovery and is approaching its full potential growth rate, the cyclical slack of the Great-Recession has diminished. In addition to the estimations on near zero output and unemployment rate gaps, the diminished cyclical slack in labor markets is also evident from the small business survey that reports concerns on the structural mismatch between job openings and skills. According to the survey, the concern about labor quality has risen nearly to a level not seen since September 2007 and has consistently exceeded the concern about poor sales in 2017. Similarly, the level of concern about labor quality is now close to the level of concern about taxes. Thus, for the reform to permanently increase the rate of economic growth, it should address the long-term structural headwinds to growth outlined by Gordon in "The Rise and Fall of American Growth"[5] – demographics, education, debt, and inequality.

Figure 5.3 Output and unemployment rate gaps (%)



Source: BBVA Research

Figure 5.4 Single most important problem (% reporting)



Source: BBVA Research, NFIB & Haver Analytics

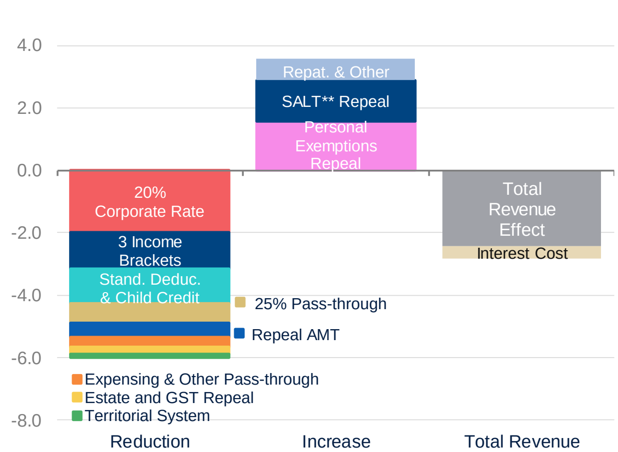
In economics terms, for the tax reform to affect potential GDP growth it has to deliver a supply side positive change of technological advancements, reduction in structural unemployment, and/or fresh capital investments. From the Unified Framework stance, incentives to boost technological advancement and to reduce structural unemployment through education and training are not addressed directly. The framework's provision for "expensing" of new investment "for at least

4: Tax Policy Center (2017, September 29)
5: Gordon (2017)

five years" can provide temporary tax incentives for businesses to increase Research and Development spending along with incentivizing a rise in capital expenditures. However, the Unified Framework's main reform is centered on delivering changes to personal income tax and corporate income tax policy.

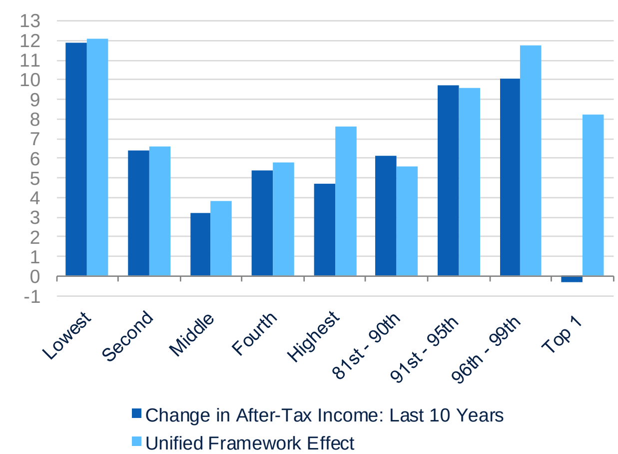
Individual provisions: While pivotal details on income tax reform such as the definitions of the three income brackets are still unknown, the proposed switch to a three bracket structure, together with changes to deductions and credits, will on average increase households' take-home pay thereby prompting additional consumption expenditures and greater economic activity. Income tax multiplier estimates for the U.S. range between 0.8 and 1.1 with the effect being greatest in the first year. The range of estimates of the impact on growth is wide with the average short-term annual impact between 0.8% and 2.6%. Additionally, the consumption expenditures of high-income households are less sensitive, relative to lower income ones, to the increase in income. Meanwhile, assessments suggest that most tax reductions will accrue to high-income households. Thus, the economic impact from the outlined reform has a higher likelihood to emerge as a short-run effect and should fall towards the lower end of the multiplier effect estimates.

Figure 5.5 Revenue 10-year impact of unified framework* (US$ trillions)



Source: BBVA Research & Tax Policy Center
* Estimates are static
** State and Local Tax Deduction

Figure 5.6 Unified framework 10-year effect on income distribution* (% change)



Source: BBVA Research, CBO & Tax Policy Center
* Estimates are static

The personal income tax reform outlined in the framework is not expected to mitigate the structural challenges of inequality and the decline in the labor force participation rate. Preliminary estimates suggest that the outcome will not alter the widening gap in income inequality and the "hollowing out of the middle." Over the long-run, the lowest two quintiles are estimated to receive a 0.2% increase in after tax income, compared to a 2.9% increase for the top quintile and a 9.8% increase for the top 0.1 percentile.[6] Additionally, personal income tax cuts will not alter the future path of the labor participation rate. The compensated labor supply elasticity, which is the responsiveness of labor force participation to

6: Tax Policy Center (2017, September 29) changes in real wages, is on average fairly small and is near zero for prime age males. Likewise, while personal income tax reform will decrease total personal tax revenue, we do not find evidence for a long-run relationship between potential GDP growth and a decline in real personal tax revenue.

Business provisions: The U.S. top statutory federal corporate tax rate of 35% is the highest among developed nations, and economists agree that corporate tax reform can result in wide economic benefits. Some economists have even proposed the extreme measure of abolishing the corporate income tax altogether. Reducing the corporate tax rate will increase U.S. competitiveness and attract capital and profitable projects that generate higher welfare. At the same time, the overall success of corporate tax reform will depend on complementary factors such as assurance of unobstructed capital flows and political stability.

In the short-run, a decrease in the corporate tax rate can impact not only business at large but also households, altering the incentives to save and invest. On average the annual multiplier for a decrease in the corporate tax rate is much lower, between 0.3 and 0.4, compared to the individual income tax cut multiplier. The relationship between wage growth and the corporate tax rate is weak. Previous estimates on corporate tax cuts in the U.S. find that a rate cut from 35% to 25% has a modest positive effect on wages and GDP. However, the academic findings that corporate taxes depress wages and thus that a lower tax rate should result in stronger wage growth were challenged by cross-country studies that show that most mobile firms are skillful in separating taxable income from their investment and employment choices.

We find evidence of a long-run relationship between a decline in corporate tax income and real GDP growth. Other things equal, our estimates find that a 1% decline in real government tax revenue from corporate income can boost potential GDP growth by 0.4%. Similarly, studies also point to the strong dependence of investment on cash flow and thus a strong response to changes in the tax rate. At the same time, while a permanent change in the corporate tax rate can provide a boost to potential GDP growth by altering incentives to invest and by widening the tax base, the cut to the 20% rate might not be sizable enough to generate these incentives. Corporate tax differentials between countries narrow when weighted to reflect the sizes of the economies. For example, a 14 percentage point statutory tax rate differential is estimated to narrow to 9 percentage points when weighted by the size of the economies.[7] Additionally, studies indicate that firms make their business location decisions based on effective rates. The U.S. effective rate is estimated at 18.6%[8] and is comparable with other developed nations.

Overall, the Unified Framework tax reform, in line with any tax reduction, will reduce total government revenue. At the same time the tax cuts can be partially self-financed through an increase in the taxable base. Studies find that the lost tax revenue effect can be lessened by 25-50% if they occur within a stable monetary policy environment. While many details on the tax reform are still unknown, we expect a short-term positive effect on aggregate output if the tax reform is passed.

7: Gravelle (2014)
8: Congressional Budget Office (2017, March)

However, consistent with simulations on tax reforms, the benefits will not be widespread and that there will be groups that will have to bear the burden of the tax cuts.

The plan in its current form is likely to increase the budget deficit, which could trigger tighter monetary policy and higher interest rates that would eventually crowd-out investment and decrease GDP growth to its potential level. The reduction in the corporate tax rate and other incentives that will increase corporate cash flows can potentially boost the rate of economic growth in the long-run. Economic efficiency gains from corporate tax cuts are possible, while estimates suggest that the gains for the U.S. will be small. It has been shown that for the first 10 percentage point cut in the U.S. corporate tax, the world will see a 1.5% efficiency gain and the U.S. portion of that 1.5% gain will be equal to its share of world GDP.[9] However, the final impact on economic growth depends on further details that are still to be negotiated.

The short-run fiscal stimulus effect of the tax cuts should be positive but the size of the impact on growth is still yet to be determined because of the lack of the details on the bill. The reform could shift upward the levels of the macroeconomic aggregates and put upward pressure on inflation, yielding a faster pace of monetary policy tightening, higher borrowing costs, and a larger crowding out effect.

Long-run growth rates are governed by exogenous shifts in population and factor productivity, and it is not clear whether the reform can have a permanent positive effect on economic choices. Over the long-run, the cut in the corporate tax rate may deliver a boost to the rate of growth while the magnitude of that boost depends on the counterbalancing force of widening income inequality gap, low labor force participation, and servicing of the rising public debt. The suggested move to a territorial system under the Unified Framework can spur additional positive effects with respect to corporate taxation. Estimates suggest that it could substantially increase repatriation of active foreign source earnings of U.S. multinational corporations and reduce the current tax system's lockout effect. However, much of the final effect would depend on how the territorial tax system will be structured in terms of simplifying the system and on the balance between protecting the domestic corporate tax base and exempting foreign business activity.

9: Gravelle and Smetters (2006)

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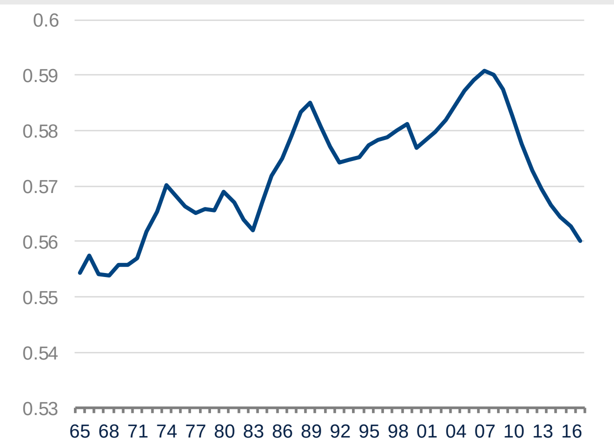
6. Housing market: is history repeating itself?

Although the U.S. housing market has been in recovery mode since 2011, it has not reached full normalization. While a decade ago the challenge was a meltdown in home prices as a result of overbuilding, speculation, and easy underwriting standards, the sector now exhibits a suboptimal level of new construction and tight inventory of existing homes for sale, which results in elevated home prices across important metropolitan areas (MSAs). In this article we analyze current trends and provide our outlook for the residential sector for the next two years.

Housing demand and supply

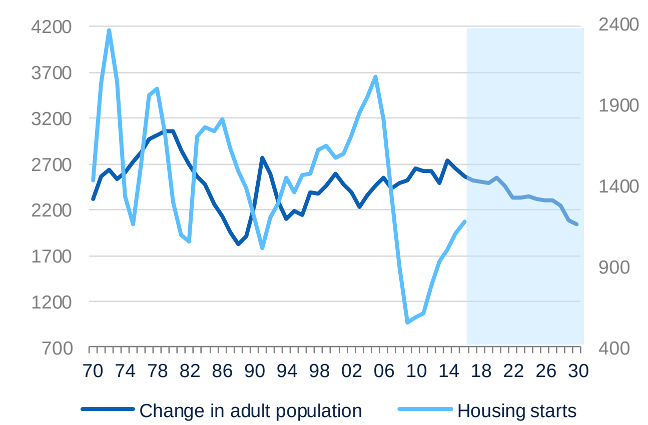
The most important driver of housing demand is population growth. The increase in adult population during the last decade and the low level of new construction, have facilitated the absorption of most excess inventory, particularly in economically attractive MSAs. Figure 6.1 shows the ratio of housing units per adult, which has declined since 2007 and stands at its lowest level in 45 years. While housing starts have increased significantly since bottoming out in 2009, they remain below demand and will stay as such over the next one to two years (Figure 6.2).

Figure 6.1. Housing units per resident, 20+ years old (Units)



Source: BBVA Research and Census Bureau

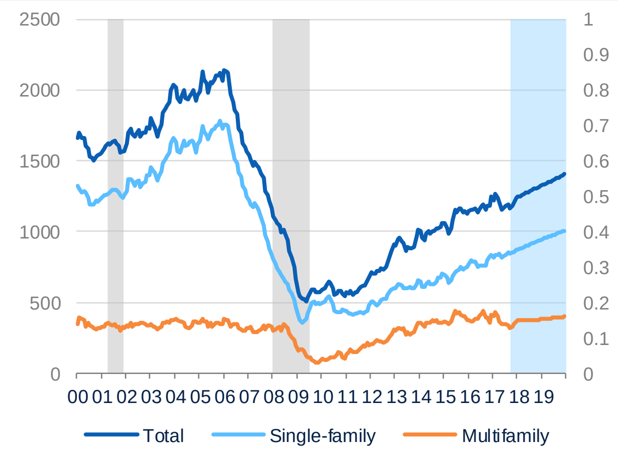
Figure 6.2. Population growth and housing supply (Thousands)



Source: BBVA Research and Census Bureau

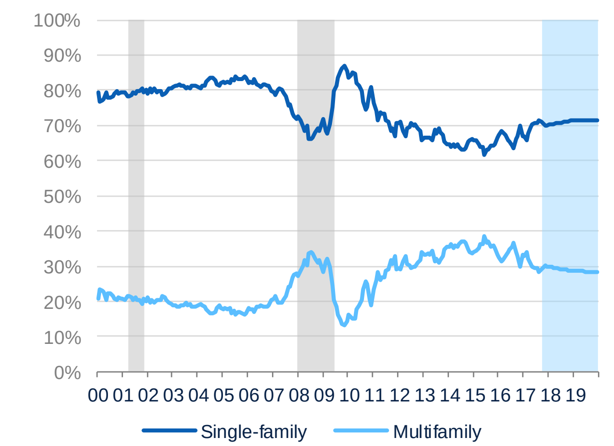
Housing starts can be divided into single-family and multifamily. Since last March, total units have had difficulty to maintain an upward trend, mostly due to lower multifamily, which are the smaller component. Meanwhile, although single-family housing starts have not been able to compensate fully for the retreat in multifamily construction, they have increased 9% YoY during the first nine months in 2017. The retreat in multifamily construction has been particularly strong in the third quarter (Figure 6.3), but this is likely transitory and will be offset in the coming months, as evidenced by the stronger trend in multifamily construction permits that tend to lead housing starts. Nonetheless, the share of multifamily housing starts is still expected to decrease gradually due to demographic factors. For example, Millennials will demand more single-family housing units as they enter into their 30s (median age of first-time homebuyer in 2016 was 32)[10], form families, and require more space (Figure 6.4). As a result, total housing starts are projected to reach 1.4 million units SAAR in 4Q19, 17% higher than their current level.

Figure 6.3. Housing starts (Thousand units, SAAR, 3mma)



Source: BBVA Research and Census Bureau

Figure 6.4. Share of single-family and multifamily housing starts (%)



Source: BBVA Research and Census Bureau

Apartment market conditions

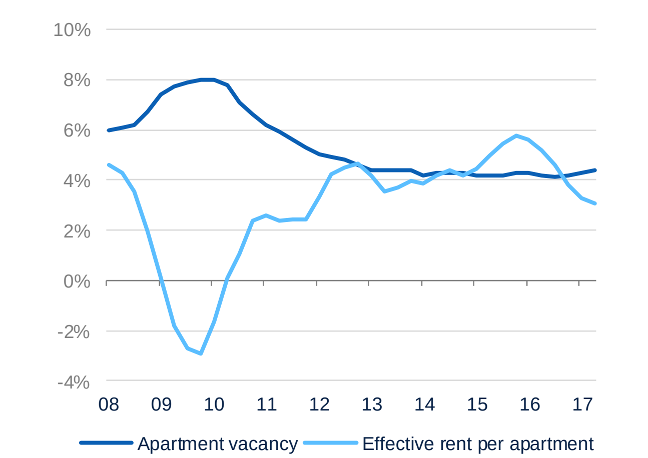
The slowdown multifamily housing starts in 2016, and especially in 2017, will cause lower apartment completions, which will help stabilize rent growth and vacancy rates (Figure 6.5). Notwithstanding, relative to 2012-2016, we expect rents to increase at a slower pace and vacancy rates to edge up modestly.

That being said, the balance of apartment demand vs. supply varies significantly by MSA. The markets that have the most favorable environment for landlords –low and declining vacancy rates– are generally in Florida, California, and certain pockets of the Mid-Atlantic and the Midwest (Figure 6.6). In great part, this reflects supply constraints, a large retirement population, and a large share of prime age apartment renters, which tend to be residents between 20 and 29 years-old. With the exception of Florida, which is a popular retirement destination, the MSAs that are experiencing strong apartment demand have higher than average or increasing share of prime age renters due to stronger relative attractiveness (Figures 6.7 and 6.8).

10: NAR. 2016 Profile of Home Buyers and Sellers. https://www.nar.realtor/sites/default/files/reports/2016/2016-profile-of-home-buyers-and-sellers-10-31-2016.pdf

BBVA Research

Figure 6.5. Apartment vacancies and rents (% and %YoY)

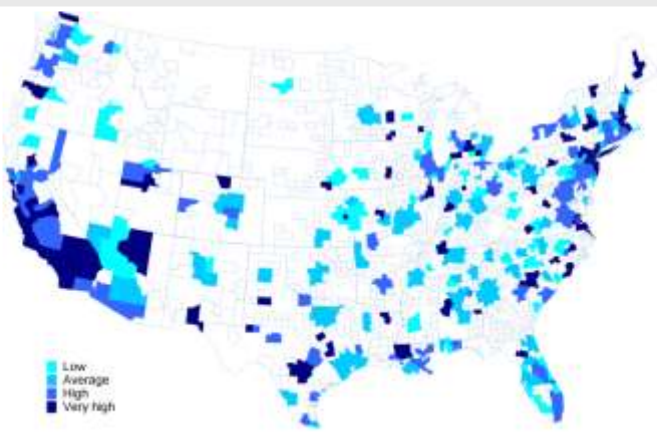


Source: BBVA Research and REIS

Figure 6.6. Rental apartment market by MSA, 75 largest, 2Q17 (relative balance of demand vs. supply)

Source: BBVA Research

Figure 6.7. Share of population of age 20-29, 2015



Source: BBVA Research and Census Bureau

Figure 6.8. Increase in the share of population of age 20-29 in total, 2010-2015

Source: BBVA Research and Census Bureau

Single-family market conditions

The MSAs with a large share of population in their 20s are also expected to provide opportunities to the single-family segment. Particularly if population growth remains strong, home prices remain affordable for first-time homebuyers, and economic attractiveness does not diminish. Given the aging of population and the decline in geographic mobility over time, remaining attractive to younger residents has become an even more determinant for long-term success. In 2016, only 5%

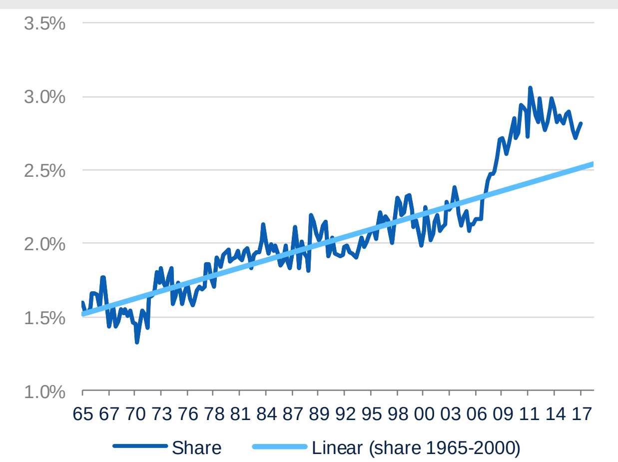
of total residents moved to a different county, state or abroad. This rate was 9% and 10% for residents aged 20-24 and 25-29, respectively.[11]. For MSAs, ensuring net positive inflow of young residents will alleviate the challenges from population ageing and support residential investment.

Housing starts are inversely related with vacancies, particularly with vacant units held off market for reasons other than occasional use. These units are generally associated with locations with low or negative population growth due to low economic attractiveness and are different from homes vacant for sale, for rent, for seasonal use or temporarily occupied by people with residence elsewhere. The share of vacant units held off market for reasons other than occasional use has increased significantly at the national level after the subprime mortgage boom mostly due to previous overbuilding. It remains elevated since the Great Recession (Figure 6.9), but is geographically relatively concentrated.

The MSAs that are burdened with surplus inventory and deficit demand are predominantly clustered in the eastern part of the Midwest, parts of the Mid-Atlantic such as western Pennsylvania, and the South, excluding Texas and Florida. On the opposite side of the spectrum are MSAs with very low level of vacancies due to high demand for housing, geographical constraints, or regulatory restrictions. They are most often located in the western part of the country, the western part of the Midwest, as well as parts of the East Coast, Florida and Texas (Figure 6.10).

The MSAs that are poised to benefit the most from new construction are characterized by solid to high economic attractiveness, elastic housing supply, and low inventory of vacant units. Single family housing starts are expected to increase 7.3% in 2018 and 6.3% in 2019.

Figure 6.9. Share of vacant units held off market for reasons other than occasional use (%)



Source: BBVA Research and Census Bureau

Figure 6.10. Share of vacant units held off market for reasons other than occasional use, 2016

Source: BBVA Research and Census Bureau

11: See 2016 Census Bureau data: https://www.census.gov/newsroom/blogs/random-samplings/2017/01/mover-rate.html

Existing home sales

Years of suboptimal construction and supportive monetary policy, which has allowed homeowners to lock in low interest rates, as well as lower population mobility (Figure 6.11), has resulted in a historically low supply of existing homes for sale (Figure 6.12). Seasonally adjusted months' supply of homes for sale currently stands at four months; two months below the level usually considered indicative of a balanced market. The market for existing homes is particularly tight in attractive markets of the West Coast (Figure 6.13). These trends are likely to persist until more new construction reaches the secondary market.

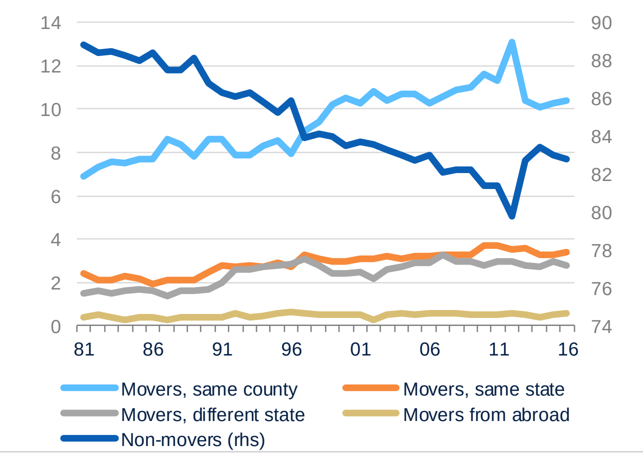
This has been a slow process because the second largest generation cohort – the Baby Boomers – are still not old enough to start selling their homes and downsizing in larger numbers. Although the oldest Baby Boomers are turning 71, half of the Baby Boomers are below 61. The age at which seniors downsize and start to move into multifamily units at a faster pace has been pushed to 75, in line with healthier lifestyles and increasing longevity.[12]

With Baby Boomers staying put and lack of supply, some MSAs face the risk of ageing Millennials (especially older ones) moving to locations that offer more affordable housing in order to raise families, assuming they can find career opportunities. The impact is unlike to damage the most attractive MSAs. Likewise, it could benefit some of the hardest hit MSAs in the past decade such as Detroit, Cleveland and Baltimore, as long as they can become a magnet for Millennials.

Existing home sales remained below 5.4 million SAAR for the second month in a row in September 2017. In part, Hurricanes Harvey in Texas and Irma in Florida delayed sales in 3Q17. Going forward, we expect a rebound in 4Q17 and an annual average of 5.54 million in 2017; 1.2% higher than in 2016. Sales are expected to increase to 5.65 million in 2018 (Figure 6.14). Over the mid-term, existing home sales expressed as a share of the entire housing stock, will remain around 4%, which is close to their historical average but significantly lower than in the early 2000s. This is consistent with an environment characterized by low migration, gradually rising interest rates and a large majority of Baby Boomers that continue to own their homes.

12: See for example Rappaport, J. (2015). Millennials, Baby Boomers, and Rebounding Multifamily Home Construction, Federal Bank of Kansas City. https://goo.gl/pejo2W

Figure 6.11. Geographic mobility (%)

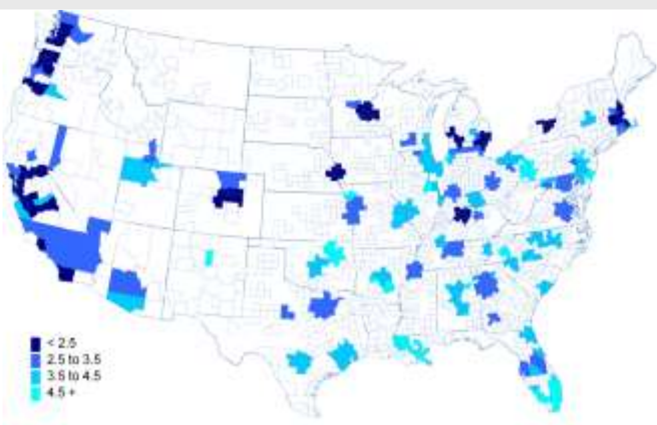


Source: BBVA Research and Census Bureau

Figure 6.12. Supply of existing homes for sale (% and months, seasonally adjusted)

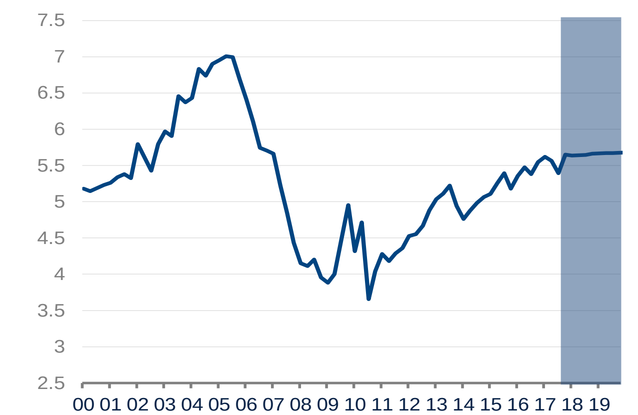
Source: BBVA Research, NAR and Census Bureau

Figure 6.13. Supply of existing homes for sale by MSA, September 2017 (months at current sales rate)



Source: BBVA Research and Redfin

Figure 6.14. Existing home sales (million, SAAR)



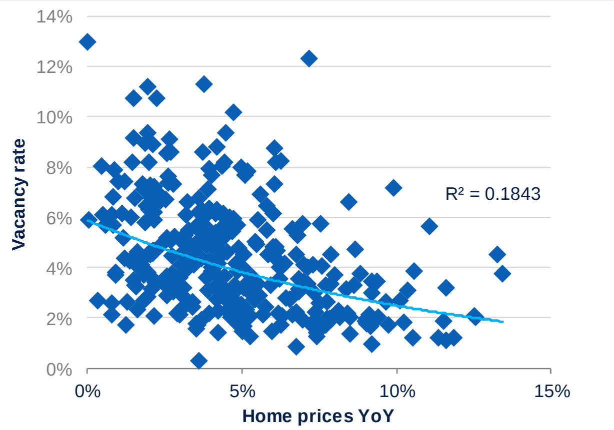
Source: BBVA Research and NAR

Home price misalignment

After a period of stable growth, generally between 5% and 5.6% YoY during May 2015-April 2017, the CoreLogic home price index started accelerating in late spring, reaching a level of 7% YoY in August. Strong price appreciation is driven by a low supply of houses in attractive locations (Figure 6.15). We expect home prices to continue increasing at a solid pace nationwide (Figure 6.16). We anticipate home price appreciation to gradually slow towards the end of 2018, supported by increasing new construction.

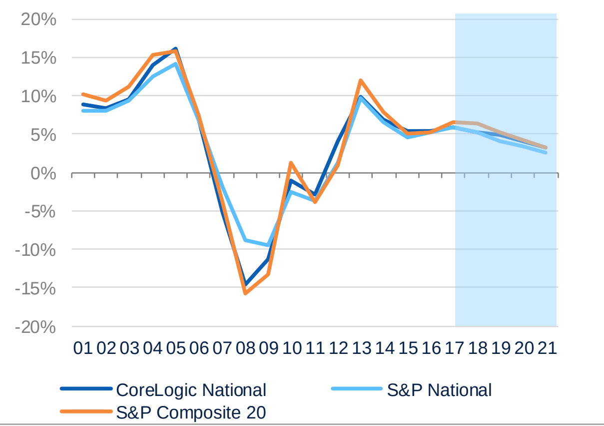
The strong increase in home prices begs the question of whether home prices are getting misaligned from fundamentals. This question is particularly important from a banking perspective, since housing booms and busts can be particularly damaging to financial stability and the economy, and lead to banking distress.

Figure 6.15. Share of vacant units held off market for reasons other than occasional use vs. home prices, 2016



Source: BBVA Research and Redfin

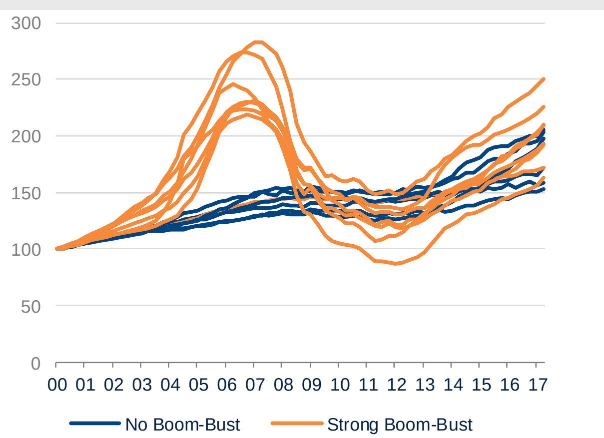
Figure 6.16. Home prices indices (YoY)



Source: BBVA Research, CoreLogic and S&P

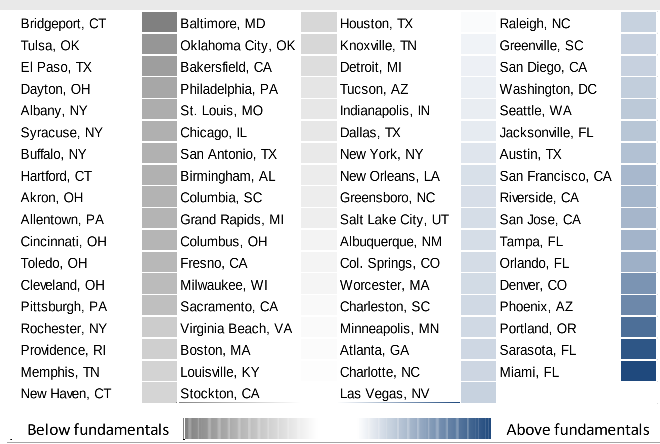
In general, there are some MSA that are prone to boom-bust cycles. These places tend to exhibit regulatory restrictions or geographical constraints that fuel home price appreciation at a faster pace than national average. Rising prices in turn generate speculation, which further fuels higher prices that eventually produces an asset bubble (Figure 6.17). This is exactly what happened in some locations during the 2000s.

Figure 6.17. Home prices in two groups of MSAs



Source: BBVA Research and FHFA

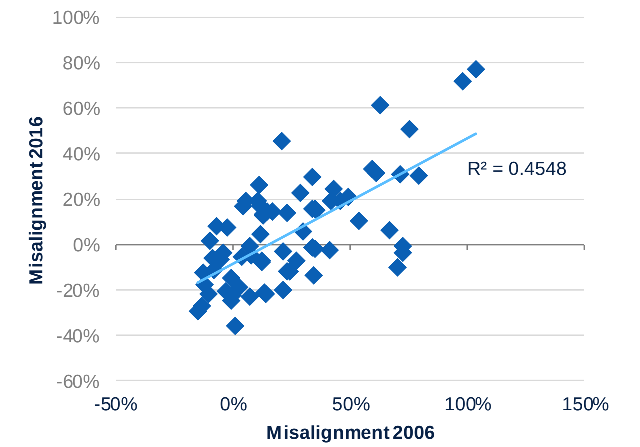
Figure 6.18. Home prices vs. fundamentals in major MSAs (BBVA Research HPI Misalignment Index)



Source: BBVA Research

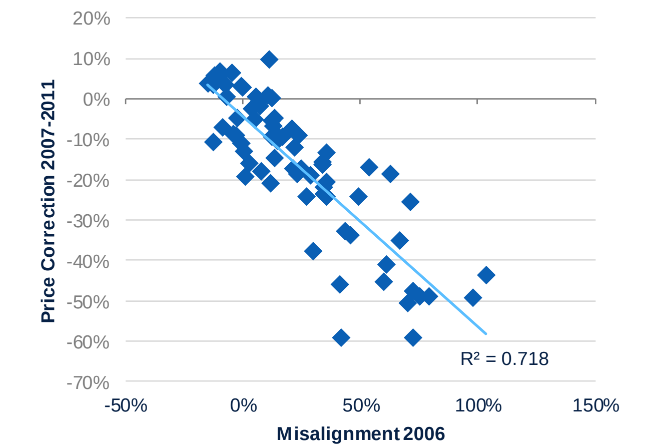
According to our analysis, despite the healthier footing of the housing market compared to a decade ago, risk is building up. The BBVA Research HPI Misalignment Index indicates potential for higher risk levels in certain locations (Figure 6.18), many of which had elevated home prices before the Great Recession (Figure 6.19). Since misalignment levels in 2006 are highly correlated with the level of price correction in 2007-2011 (Figure 6.20), the current degree of high misalignment in some markets generates concerns.

Figure 6.19. Misalignment in 2016 vs. 2006 (%)



Source: BBVA Research

Figure 6.20. Misalignment in 2006 vs. correction 2007-2011 (%)



Source: BBVA Research

However, one feature that differentiates the current situation from the previous cycle is that there is significantly less speculation and credit is tighter, thus not fueling high leverage positions. While the previous boom-bust cycle was based on easy credit, this time around the appreciation seems to be driven by significantly suppressed supply. The combination of high home prices in some parts of the country could help the relative competitiveness of locations that have more affordable markets, but these locations nevertheless would need strong economic fundamentals in place that attract new population, especially aged 20-40. Public policy can play a significant role in catalyzing faster development of until now overlooked MSAs, which would not only benefit them, but also the places that are currently highly attractive but cannot accommodate new residents by building out at a faster pace.

7. Forecasts

Table 7.1 U.S. Macro Forecasts

	2011	2012	2013	2014	2015	2016	2017 (f)	2018 (f)	2019 (f)	2020 (f)
Real GDP (% SAAR)	1.6	2.2	1.7	2.6	2.9	1.5	2.1	2.2	2.1	2.0
Real GDP (Contribution, pp)										
PCE	1.5	1.0	1.0	1.9	2.5	1.9	1.8	1.4	1.5	1.5
Gross Investment	0.7	1.6	1.0	0.9	0.9	-0.3	0.4	0.6	0.5	0.6
Non Residential	0.9	1.1	0.4	0.9	0.3	-0.1	0.6	0.5	0.5	0.6
Residential	0.0	0.3	0.3	0.1	0.3	0.2	0.1	0.0	0.0	0.0
Exports	0.8	0.4	0.4	0.6	0.1	0.0	0.4	0.6	0.5	0.6
Imports	-0.8	-0.4	-0.2	-0.7	-0.8	-0.2	-0.6	-0.5	-0.7	-0.7
Government	-0.6	-0.4	-0.5	-0.1	0.2	0.1	0.0	0.1	0.2	0.1
Unemployment Rate (%, average)	8.9	8.1	7.4	6.2	5.3	4.9	4.4	4.1	4.1	4.2
Avg. Monthly Nonfarm Payroll (K)	132	186	184	213	240	208	173	135	138	145
CPI (YoY %)	3.1	2.1	1.5	1.6	0.1	1.3	2.0	1.7	2.0	2.0
Core CPI (YoY %)	1.7	2.1	1.8	1.7	1.8	2.2	1.8	1.6	1.7	1.8
Fiscal Balance (% GDP)	-8.4	-6.8	-4.1	-2.8	-2.4	-3.2	-4.0	-2.8	-3.3	-3.6
Current Account (bop, % GDP)	-2.9	-2.6	-2.1	-2.1	-2.4	-2.4	-2.4	-2.3	-2.4	-2.4
Fed Target Rate (%, eop)	0.25	0.25	0.25	0.25	0.50	0.75	1.50	2.00	2.50	2.75
Core Logic National HPI (YoY %)	-2.9	4.0	9.8	6.8	5.4	5.4	5.9	5.3	4.9	4.0
10-Yr Treasury (% Yield, eop)	1.98	1.72	2.90	2.21	2.24	2.49	2.48	2.73	3.26	3.37
Brent Oil Prices (dpb, average)	111.3	111.7	108.7	99.0	52.4	43.6	52.4	56.7	59.6	59.6

(f): forecast
Source: BBVA Research

Table 7.2 U.S. State Real GDP Growth, %

	2013	2014	2015	2016	2017 (f)	2018 (f)	2019 (f)	2020 (f)
Alaska	-4.4	-3.3	0.6	-5.0	-0.1	0.4	0.2	0.2
Alabama	0.9	-0.1	1.1	1.3	1.7	1.0	1.2	1.2
Arkansas	2.9	1.4	0.2	0.8	0.7	0.7	0.7	0.7
Arizona	0.5	1.8	1.4	2.1	1.7	1.6	1.5	1.8
California	2.5	3.7	4.4	2.9	3.3	3.1	3.0	2.8
Colorado	3.2	4.7	3.0	2.0	2.2	2.1	2.0	2.0
Connecticut	-1.4	-0.6	2.2	1.0	1.1	1.1	1.3	1.3
Delaware	-1.4	5.3	2.2	0.3	2.6	3.3	2.8	2.6
Florida	2.1	2.6	3.6	3.0	2.5	3.4	2.9	2.8
Georgia	1.4	3.0	2.5	3.0	1.8	1.7	1.9	2.0
Hawaii	1.1	0.6	2.3	2.1	0.6	1.0	1.1	1.1
Iowa	0.5	3.1	2.2	0.9	0.2	1.5	1.9	2.0
Idaho	2.9	2.4	2.2	1.8	2.6	2.1	1.9	1.9
Illinois	-0.3	1.5	1.0	0.9	1.0	1.7	1.7	1.7
Indiana	2.4	2.0	0.8	1.5	1.8	2.3	1.9	1.9
Kansas	0.2	1.4	2.2	0.2	0.6	1.2	1.0	1.1
Kentucky	0.9	0.4	1.1	1.3	1.9	0.9	0.9	1.1
Louisiana	-3.4	1.7	0.5	-0.6	1.2	1.7	1.1	0.9
Massachusetts	-0.2	1.7	3.7	2.0	1.5	1.5	2.4	2.5
Maryland	0.2	1.1	2.1	1.3	1.8	1.2	1.3	1.3
Maine	-0.6	1.6	1.1	1.4	0.9	1.2	1.2	1.2
Michigan	1.4	1.4	2.7	1.8	1.4	1.1	1.2	1.1
Minnesota	2.1	2.6	1.3	1.3	2.2	2.0	1.8	1.7
Missouri	1.6	0.2	1.4	1.1	1.2	1.3	1.2	1.2
Mississippi	0.6	-1.2	0.3	0.8	0.4	0.3	0.2	0.2
Montana	0.7	2.8	2.1	0.2	1.0	1.8	1.7	1.7
North Carolina	1.7	1.9	2.7	1.6	1.6	1.8	1.6	1.6
North Dakota	2.4	7.3	-3.1	-6.5	3.6	4.1	4.1	4.7
Nebraska	2.5	3.7	0.3	1.2	1.1	2.0	1.7	1.7
New Hampshire	0.6	1.7	2.1	3.0	1.9	1.5	1.2	1.2
New Jersey	1.4	0.1	1.6	1.2	1.1	0.9	1.0	1.0
New Mexico	-1.0	2.9	1.7	-0.5	1.4	1.0	0.9	0.8
Nevada	0.5	1.3	3.5	2.4	3.3	3.4	3.1	2.7
New York	-0.3	1.8	1.2	0.8	0.3	1.5	1.7	1.7
Ohio	1.0	2.7	1.0	1.7	2.3	2.1	1.6	1.6
Oklahoma	4.4	4.6	2.7	-2.3	1.5	3.2	2.7	2.7
Oregon	-2.0	1.6	4.5	3.3	1.9	2.0	2.7	2.7
Pennsylvania	1.6	1.9	2.6	1.1	2.3	1.5	1.5	1.6
Rhode Island	0.4	0.8	1.1	1.2	1.7	0.6	0.6	0.6
South Carolina	2.0	3.0	2.8	2.1	1.6	1.9	2.1	2.0
South Dakota	1.1	0.7	2.6	1.7	1.5	2.0	2.1	2.1
Tennessee	1.6	1.6	3.1	2.0	2.0	2.5	2.4	2.3
Texas	5.1	3.7	4.5	0.4	2.7	4.3	4.2	3.9
Utah	2.5	3.3	4.3	3.0	2.9	2.7	2.5	1.9
Virginia	0.0	0.1	2.4	0.6	1.4	0.7	0.7	0.6
Vermont	-0.2	0.3	0.9	0.8	1.3	1.0	0.9	0.9
Washington	2.4	2.8	2.9	3.7	2.6	2.7	2.8	2.9
Wisconsin	1.3	1.4	1.3	1.1	1.9	1.7	1.9	1.9
West Virginia	0.5	0.9	0.4	-0.9	1.5	0.8	0.8	0.8
Wyoming	1.0	1.2	-0.3	-3.6	0.3	1.1	1.5	2.4

(f): forecast
Source: BBVA Research

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