United States Economic Outlook

Second quarter 2018

United States Unit

BBVA Research

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Closing date: **3 May 2018**

1. Editorial

As the calendar turned to May, the economic expansion became the second longest in modern history. If trends continue, by July 2019 it will become the longest ever, an event that under current economic conditions has a high likelihood of materializing. In fact, the probability of entering a recession within the next 12 months is currently not significantly different than the historical average of 15%.

However, predicting turning points in the business cycle is complex and error prone. For example, minutes of the FOMC meeting on October 30-31, 2007, released one month before the start of the Great Recession, indicate that the Fed had very little clues of what was about to come: “Looking further ahead, participants noted that economic growth should increase gradually to around its trend rate by 2009 as weakness in the housing sector abated and stresses in financial markets subsided. With aggregate demand showing somewhat greater than expected strength in the third quarter and little evidence of significant spillovers from the housing sector to other components of spending, participants viewed the downside risks to growth as somewhat smaller than at the time of the September meeting”

There are three primary reasons for why recessions are so hard to predict. First, no recession is alike and the triggers tend to fluctuate over time, particularly when the economy experiences structural changes that can mask where the pressures points or imbalances are. Second, even if macroeconomic imbalances or asset price bubbles can be identified, these could last well past their expiration date, often resulting in abrupt swings in sentiment and harsh corrections. Third, recessions are poorly correlated with the length of the expansion. In other words, recessions are as likely to occur after a short expansion as they are after a long one.

Nonetheless, there are some common features that tend to occur before the start of a recession. The unemployment rate hits bottom two to four quarters before the drop in economic activity. Labor and non-labor costs rise significantly, exerting pressures on profits and interest rates, which in turn weaken investment and borrowing. Moreover, the economy usually experiences a period of elevated leverage before a downturn. As these and other negative pressures buildup, financial markets react in what usually results in strong asset price corrections and rising short-term interest rates. As a result, the difference between long- and short-term interest rates tends to narrow and becomes negative. This is why it is common for analysts to use the yield curve spread to gauge the risk of recession. Most importantly, no recession in modern history has occurred without real short-term interest rates reaching around 2.5% at some point shortly before the start of the recession.

A closer look at current economic dynamics reveals only one potential element that could be consistent with the imminent end of the current expansion. This is the low level of the unemployment rate, which edged down to 3.9% in April –the lowest rate since 2000-, after remaining unchanged at 4.1% for six consecutive months. However, rising participation of prime-age workers suggests that there is some labor market slack remaining. Likewise, the increase in the number of people aged 65 years and older not in the labor force is almost three times faster than the historical average. In other words, we have not reached the lowest unemployment rate during the current cycle.

Meanwhile, although wages and non-labor costs appear to be moving up, they still remain below historical averages. The employment cost index, which measures wages, salaries and benefits for civilian workers, increased 2.7% year-over-year during the first quarter 2018. Although this was the fastest pace in almost 10 years, in real terms the increase is similar to the average in the last five years. But even if nominal wages rise rapidly, these could be absorbed more

easily compared to other periods given that the labor share of output has declined to 57%; around 3 percentage points (pp) lower than before the Great Recession and 6pp below the historical average.

Of course, pressures could come from non-labor costs such as energy prices or financial costs. In fact, rapid increases in energy prices and borrowing costs tend to precede economic downturns. Nonetheless, structural shifts in the economy signal that the impact could be milder than in previous episodes as the economy has become less negatively dependent on fossil fuels on the consumer side and more positively dependent on the producer side. Steep declines in oil prices during 2014-2016 helped to boost private consumption, which increased 3.6% in 2015; the strongest reading in more than 10 years. However, this also resulted in a sharp contraction in the mining sector, which was longer and deeper than in 2008-2009. As a result, total industrial production turned negative. However, for the first time in modern history, the overall economy escaped recession even as industrial output was negative for almost two years. In contrast, while the rebound in oil prices since the third quarter 2017 could be exerting some pressures on private consumption, it has also fueled a boom in the oil sector. Recently, U.S. crude oil production reached a record-high while private investment in mining exploration and wells peaked to its strongest level in three years.

Despite an ongoing increase in interest rates, borrowing costs remain low. Mortgage interest rates are around 50 basis points (bp) above their average during the current expansion but 100bp below the pre-crisis. Corporate bond yields are near their lowest level in 60 years and real short-term interest rates are just returning to 0% after staying in negative territory for 10 years. Thus, it will take an increase of at least 200-250bp in nominal interest rates for real interest rates to reach a threshold that could trigger a downturn; this is unlikely assuming that inflation remains between 2% and 3% and the Fed continues normalizing monetary policy at a gradual pace. Furthermore, the recently enacted tax reform will help alleviate potential cost pressures both from labor and non-labor inputs. Lower business tax rates will improve cash flows while the various incentives to boost investment will help lift aggregate supply and in turn, contain potential price pressures.

Finally, credit conditions are still supporting the expansion: leverage ratios are low -particularly for households-, and credit growth has not shown abnormal growth for a prolonged period, except for smaller firms in some sectors. The debt-to-net worth ratio for nonfinancial noncorporate business has remained relatively stable at 46% for the past five years. This ratio is significantly lower than in the aftermath of the crisis although around 8pp higher than the 20-year average before the Great Recession. For nonfinancial corporate business, the ratio stands near the lowest level in 50 years. In the household sector, the ratio of debt-to-disposable income has begun to edge up after declining for almost 10 years. However, it is not significantly different from what would be consistent with an extrapolation from its historical trend.

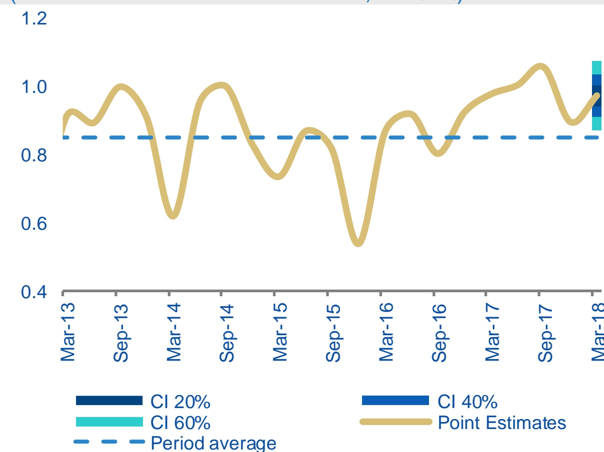
The evidence suggests that the current expansion is likely to continue for at least a few more quarters. However, it is clear that some pressures are building up. Therefore, we should remain cautious of potential downside risks. The fiscal stimulus -the largest during an expansion period- could result in a sharp increase in inflation if the economy cannot absorb the boost in demand. This would probably trigger a more aggressive response from the Fed, which in turn would exert downward pressures on business activity and credit demand. Counterproductive policies on foreign trade or immigration, or deterioration in our political institutions could also hinder business confidence and economic activity. Therefore, policymakers should focus on preparing for rainy days by strengthening the economic fundamentals that will support future long-term sustainable economic growth.

2. Global growth remains firm but risks intensify

The global economy is currently being subjected to divergent forces, yet data available for the first two months of the year suggests that **global growth in the first quarter will show a similar rate to the 2017 average**. Specifically, our BBVA-GAIN model predicts that world GDP growth in 1Q will have reached 0.97% QoQ, meaning that activity will have rebounded, following the stumble recorded at year-end 2017.

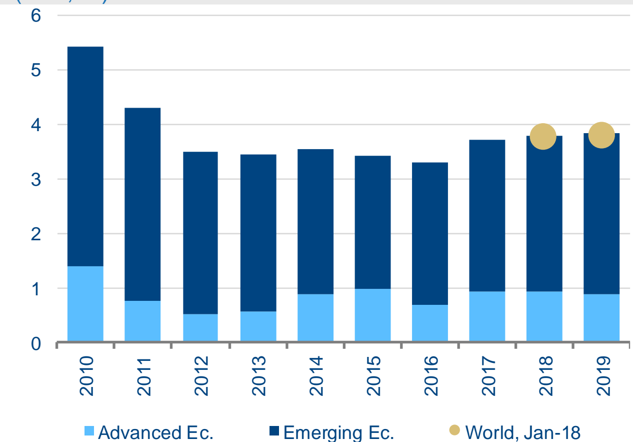
Growth was supported by **an increase in world trade performance**. According to our BBVA-Trade indicator in January[1], and especially during February, trade in real terms grew significantly, regaining the dynamism seen in 2016. The main contributor to this development was export growth in emerging economies, particularly Asian countries such as China and India. A second factor underpinning the rebound in global growth was the **sustained expansion of industrial output**. Here too, emerging countries stand out, led by China and India, as well as Latin America despite the hiccups in the two biggest economies— Mexico and Brazil. Within the developed countries, the U.S. gained traction, though this was partly offset by the weakness of the euro zone.

Figure 2.1 Global GDP growth
(Forecasts based on BBVA-GAIN, % QoQ)



Source: BBVA Research

Figure 2.2 World GDP growth forecast
(YoY, %)



Source: BBVA Research

Following a year dominated by optimism and risk taking in the financial markets, the first quarter of 2018 showed **a more cautious tone. Global financial conditions are tightening, as central banks withdraw stimulus and long-term interest rates rise.** The ECB, as expected, is smoothing the way towards ending its asset purchase program and preparing its communication for future interest rate hikes. **In the case of the U.S. Federal Reserve, we expect the gradual process to continue** with three more 25-bp rate increases this year. Furthermore, long-term interest rates are settling at higher levels, especially in the U.S.

1: This is also verified by the CPB World Trade Monitor, January 2018, prepared by CPB Netherlands Bureau for Economic Policy Analysis - https://www.cpb.nl/en/figure/cpb-world-trade-monitor-january-2018

The spate of volatility at the beginning of February[2], which triggered a sharp correction in the stock markets, may be an early sign that **the days of low volatility are numbered, a**lthough this phenomenon was concentrated in the equity market, and spillovers to other segments has so far been limited. However, **the withdrawal of stimulus measures by central banks will leave markets more exposed to these types of shocks.** As a result, we foresee the dollar continuing to depreciate against the euro to 1.26 at the end of 2018 and 1.28 at the end of 2019.

In the short term, the U.S. fiscal stimulus will have a positive effect on the world economy, prolonging the cyclical recovery and leading to an increase in demand at the global level. Thus, even taking into account the dollar's weakness and of moderating growth in China, our estimates indicate that the increased growth in the U.S. in 2018-19 **could boost GDP growth in both the euro zone and Latin American** by about a tenth of a percentage point per year.

The global outlook is generally favored by a high level of confidence and the improvement in global trade, despite an environment threatened by trade protectionism. **Overall, our forecast for world growth remains at 3.8% in both 2018 and 2019, supported by real GDP growth of almost 5% in emerging markets.**

In China, we are maintaining our growth forecast at 6.3% and 6.0% for 2018 and 2019 respectively. The majority of recent economic indicators show that **momentum in both domestic demand and exports** is holding up. Although we are leaving our forecasts for China unchanged, we expect **the bloc of emerging countries to expand slightly less. The economies in Latin America continue recovering in our baseline scenario due to stronger** trade and improved commodity prices. In fact, we expect Brazil's GDP growth to strengthen from 1% in 2017 to 2.1% in 2018 and 3% in 2019. In Mexico, we expect the economic expansion to remain hoovering at around 2.1% in 2018-2019.

For developed economies, we expect growth of 2.3% in 2018 and 2.2% in 2019. In Europe, the **solid figures for exports and fixed investment last quarter,** together with resilient private consumption, lead us to increase our growth forecast **for the Euro Zone in 2018 to 2.3% from 2.2% previously. For 2019, we maintain our forecasts unchanged at 1.8%.** Even so, the euro zone economy should continue to close its output gap, given that its potential growth is below 1.5%.

The greatest risk to the global outlook lies in protectionist measures announced by the U.S. administration, which come on top of the U.S. withdrawal from the TPP, the suspension of negotiations on the TTIP and the renegotiation of NAFTA with Mexico and Canada. These developments have the potential to evolve into a global trade war that could destabilize the world economy. Other major risks include monetary policy normalization, especially a faster-than-expected withdrawal by the U.S. Federal Reserve. In addition, the risk associated with a sudden sharp adjustment of China's economy has diminished somewhat, following the measures approved at the NCCPC and signs of gradual containment of indebtedness. Finally, the political risk persists in Europe following the Italian elections, which could affect the process of integration in the euro zone, a debate that should be reactivated in the next few months.

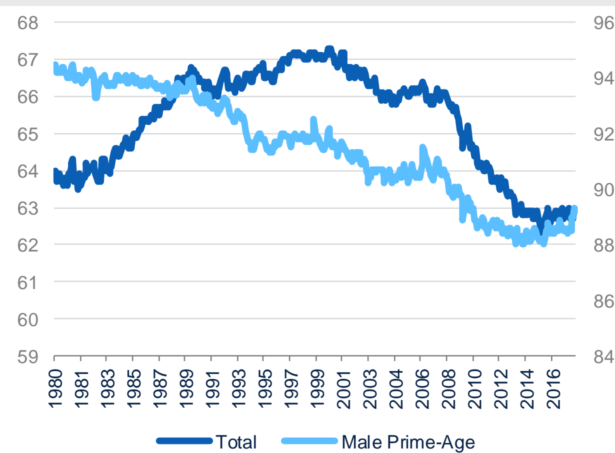
2: In this episode, the VIX, the measure of volatility of the US stock markets used as an indicator of risk aversion in the markets, surged above 40 points. Part of the rise was due to technical issues - investors' positioning in derivative products linked to volatility. See BIS, Quarterly Review, March 2018.

3. Sunny days ahead for U.S., but clouds lurking on the horizon

Although economic indicators in the first quarter have been a mixed bag, our baseline scenario assumes growth of 2.8% in 2018 and 2019. The upward revision reflects stronger global growth, solid domestic momentum, as well as the recent budget deal and the tax cuts, which are expansionary in nature. Given the large fiscal expansion at a time when the economy is near full employment, we also expect inflation to tick up slightly, although we expect core prices to remain within the symmetric target of the Fed (1.5% to 2.5%). With stronger growth and higher inflation, we anticipate that the Federal Reserve will raise rates three more times (25bp each) in 2018.

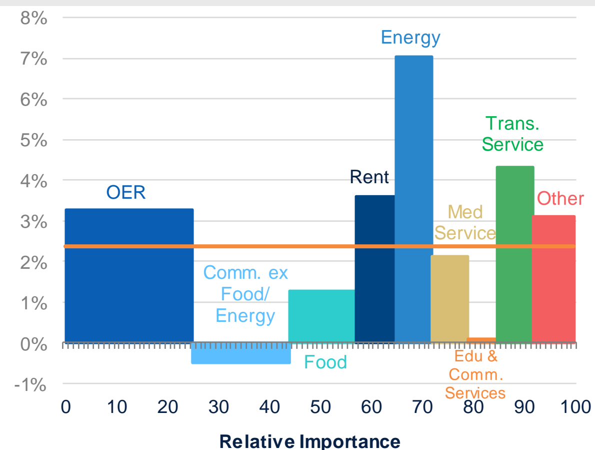
The labor market remained strong in 1Q18, adding 205K jobs per month, more than what is needed to absorb new entrants to the labor market and remove any remaining slack. That said, the unemployment rate (UR) held steady at 4.1% due to the strong inflows from prime-age workers; the pause in March was the sixth consecutive month for which the UR did not change. Stronger domestic growth and rising wages should continue to encourage greater prime-age participation and push the UR to 3.9% and 3.6% in 2018 and 2019, respectively.

Figure 3.1 Participation rate, %



Source: BBVA Research & BLS

Figure 3.2 Contributions to consumer price inflation

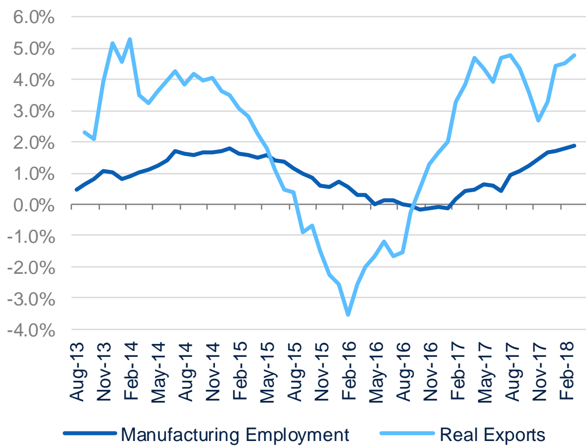


Source: BBVA Research & BLS

Given the tightness of the labor market and impetus from the fiscal package and tax reform, both core and headline measures of inflation are beginning to edge up. In fact, in March, headline CPI accelerated to 2.4% year-over-year while core CPI surged to 2.1%, a 25bp acceleration from February. The biggest contributors to the gains in March were in core services such as household operations, wireless telephone services, and personal and miscellaneous services, which reflects modest upward pressure on wages. In fact, average hourly earnings increased 2.7% year-over-year, the largest improvement since 2009. Conversely, commodity prices less food and energy continued to be a negative contributor to the year-over-year growth in consumer prices. This shift, which reflects structural forces that extends beyond cyclical labor market conditions, will likely keep a lid on any excess inflation in the medium-term. However, we have revised up our inflation outlook based on the recent changes in fiscal policy. The limited slack remaining in the labor market also supports higher prices, although the link is unlikely as strong as in the past. As such, with the

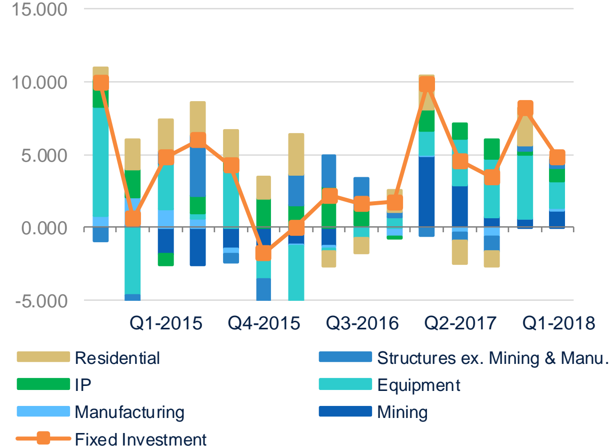
additional tailwinds from the expansionary fiscal policy, we expect core CPI to reach 2.5% in 2019 before a return to 2.3% in 2022.

Figure 3.3 Manufacturing employment & real exports, Year-over-year %



Source: BBVA Research, BLS, & BEA

Figure 3.4 Private fixed investment, Year-over-year %



Source: BBVA Research & BEA

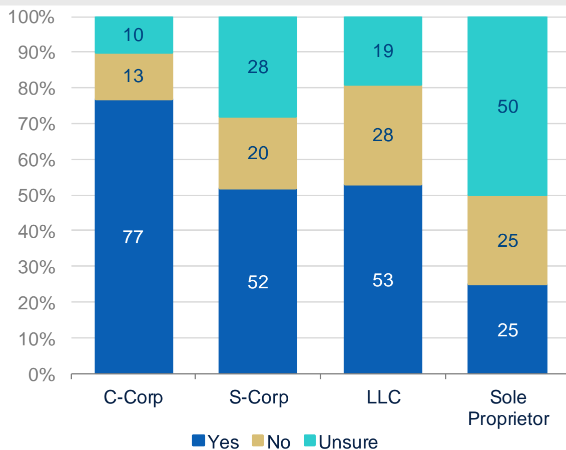
Despite a slight deceleration from the fourth quarter, growth remained upbeat in the 1Q18. As expected, auto demand and other household nondurables consumption slowed after growing significantly during the rebuilding efforts from Hurricane Harvey and Irma. Expenditures on services grew 2.1% over the quarter in real terms, which was consistent with growth over the past three years and buoyant consumption. The mining sector continues to support growth in nonresidential fixed investment, contributing 1.1pp to quarter-over-quarter annualized growth.

Investment in equipment decelerated from the 4Q17 despite the incentives from the tax reform, suggesting firms may be sorting out the details and waiting for the rules-making process to finish before taking on any major irreversible projects. In fact, a survey done by the Atlanta Fed found that the TCJA has not altered the investment plans for a majority of firms in the U.S., with 75% and 73% stating that they had no plans to increase capital expenditures in 2018 and 2019, respectively. That sai, the single-family residential housing sector remained strong even with headwinds from higher residential home prices and higher interest rates. Lower growth in imports helped to ease headwinds to consumption and investment in the quarter, with the drop leading to a positive contribution from net exports over the quarter.

We expect financial conditions to remain supportive despite some tightening in response to rising domestic policy uncertainty. Credit conditions from both supply and demand side remain favorable as evidenced by low corporate spreads and a rebound in bank lending. Equity prices, which were up 4.9% in 1Q18, will benefit from the tailwinds that the corporate tax reform brings, strong domestic demand and favorable global growth conditions. This will support consumer expectations and produce positive wealth effects. Meanwhile, although increased inflation expectations have pushed the 10-year Treasury above 3.0% for the first time since 2014, they remain below pre-crisis levels after adjusting for inflation. This recent increase in nominal long-term rates has also lowered the probability of the yield curve inverting, a sign commonly used to gauge the probability of an upcoming cyclical downturn.

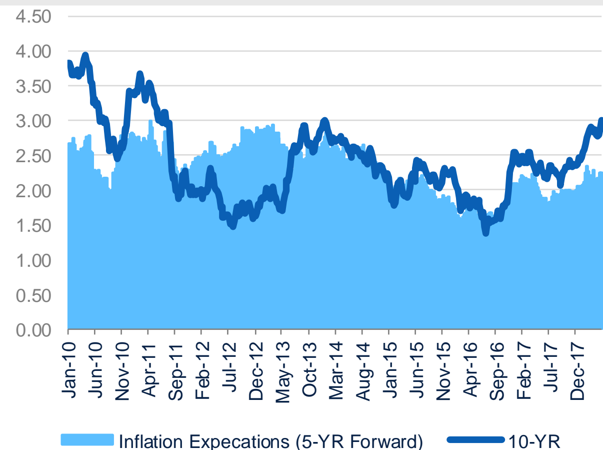
However, the external growth dynamics and changes in domestic policy will shift the underlying growth trends going forward. In terms of consumption, while the nature of the individual tax cuts and position in the cycle suggests a low fiscal multiplier, we still expect the recent tax changes to boost domestic demand.

Figure 3.5 Do firms expect to see a reduction in tax bill, %



Source: BBVA Research & Atlanta Fed

Figure 3.6 Inflation expectations & 10-year treasury, %



Source: BBVA Research & Haver Analytics

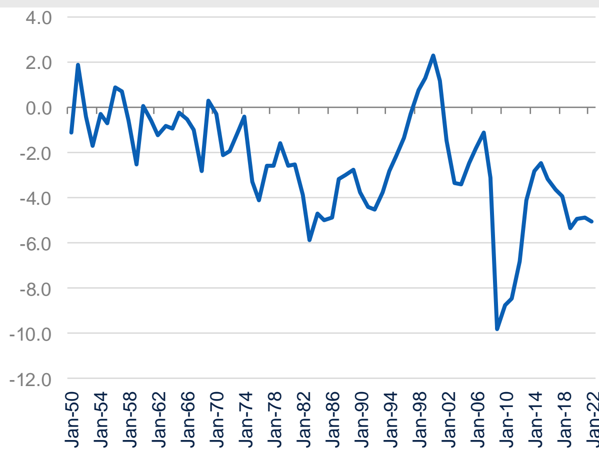
On the corporate side, the permanence of the cuts and the underlying provisions, which lower the cost of capital and encourage domestic investment, are likely to have compounding effects on growth. First, the provisions that allow for the immediate deduction of capital expenses for the first five years will boost the incentives to invest in structures and equipment. Second, the lower corporate tax rate should boost profitability and business expectations, and encourage investment in longer-term capital intensive projects, which should boost labor demand, productivity and real wages. Third, the change from a pseudo-global corporate tax structure to a pseudo-international system with base-erosion measures and taxes on profits from intangible services should reinforce the previous two provisions and encourage a modest boost in domestic investment from repatriated earnings and lower outflows of profits and investment. That said, higher deficits and the potential for stock buybacks and dividend payments could moderate any upside on the corporate side.

Ultimately, we expect the corporate and individual tax cuts to boost growth in 2018 and 2019 by 40bp, and the budget deal to increase GDP in those years by around 20bp.

In terms of the impact that the recent policy changes will have on fiscal deficits, we expect both the Tax Act and recent budget deal to increase the U.S. debt burden by $5.1T over the next 5 years even when considering the positive impact the policies could have on growth. While lower marginal tax rates for individuals and comprehensive corporate tax reform are likely to boost both supply and demand side conditions, the magnitude of the drop in revenue and additional outlays could significantly alter the fiscal outlook. Congress could make changes in future years that either cut spending or increase revenues. Running pro-cyclical budget deficits of 5% of GDP for 10 years would be unprecedented.

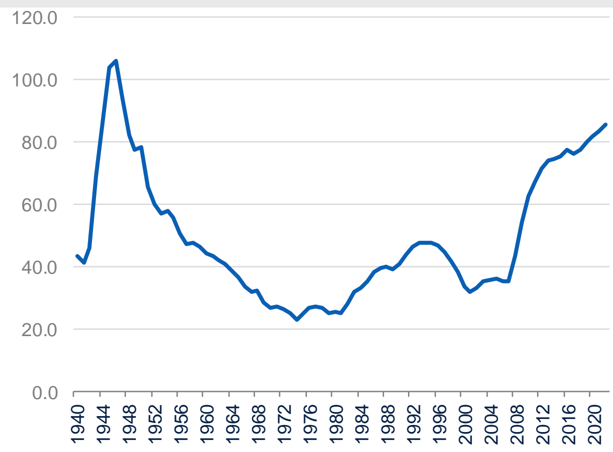
In fact, the revised CBO projections now assume deficits as a share of GDP are set to surpass 5.0% by 2022, which would represent the largest pro-cyclical deficit since WWII. Our forecasts, which assumes a slightly less optimistic growth outlook in the short-run implies a deficit-to-GDP ratio of 5.3% in 2019. As a result, average annual interest costs in the baseline scenario are likely to triple in nominal terms and double as a share of GDP, pushing outstanding public debt-to-GDP to 85% in 2022.

Figure 3.7 U.S. Fiscal deficits, as share of GDP %



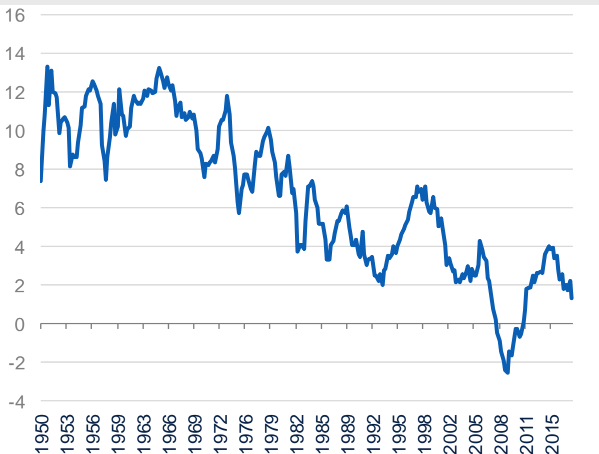
Source: BBVA Research & Haver Analytics

Figure 3.8 Debt held by the public, as share of GDP %



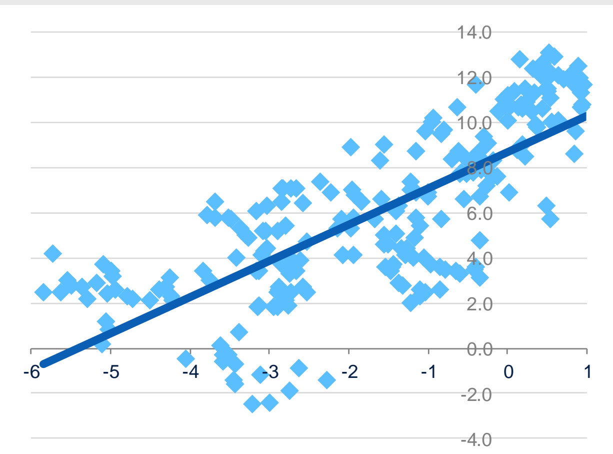
Source: BBVA Research & Haver Analytics

Figure 3.9 Net domestic savings, as Share of GDP %



Source: BBVA Research & Haver Analytics

Figure 3.10 Net Domestic Savings and Trade Balance, as Share of GDP %



Source: BBVA Research

Weak savings at the business and household level are compounding the lack of public saving, which pushed net domestic savings to 1.3% of GDP in 4Q17, which is the lowest level in modern history excluding the 2008 financial crisis and recovery. The lack of domestic savings and stable consumption and investment outlook all but assures that the U.S. will borrow more from abroad to finance imports and investment. As a result, the current account deficit will widen. However, there are changes to the corporate tax code that discourages corporate profit shifting and inversion.

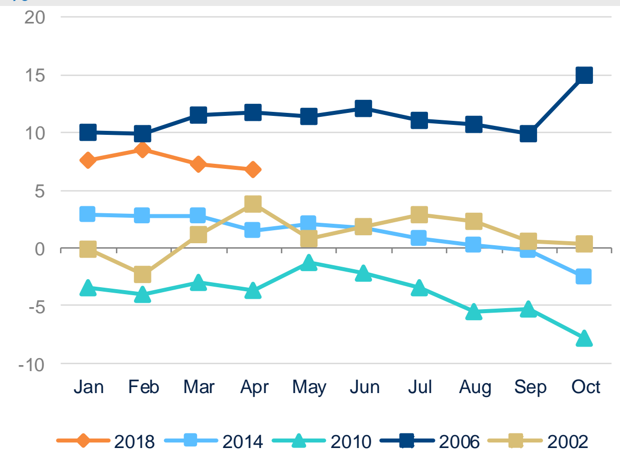
These include taxing overseas profits on intangible goods, base-erosions taxes, the immediate expensing of domestic investment and the lower, and more globally competitive, tax rate, all of which could lower the trade deficit—a more politically desirable outcome- while increasing the supply of funding from internal sources as they shift unrepatriated foreign earning to the U.S. In fact, there are estimates that suggest that these types of efforts have led to a $200bn distortion in the National Income and Product Accounts (NIPA).

If these measures discourage firms from moving intangible assets or high-value added components outside the U.S., and thus being booked as a domestic service charges for the use of IP, the trade deficit could be reduce by 1pp of GDP, all things equal. Furthermore, this type of shift could have a nontrivial impact on the national accounts, as the lower trade deficit would boost GDP and most likely lift productivity given that these items tend to be more high-value added in nature— this could close some of the gap related to the missing productivity paradox in the age of digitization and automation. Nevertheless, if the incentives to keep profits in low-tax jurisdictions remain elevated or if the U.S. tax policy encourages a “race to the bottom” from other countries, the potential upside from the changes to the international corporate tax code could be small.

A strong challenge from the Democrats in the Midterms could encourage the GOP to ramp up the trade protectionist rhetoric in an effort to secure any at-risk GOP seats in the Midwest.

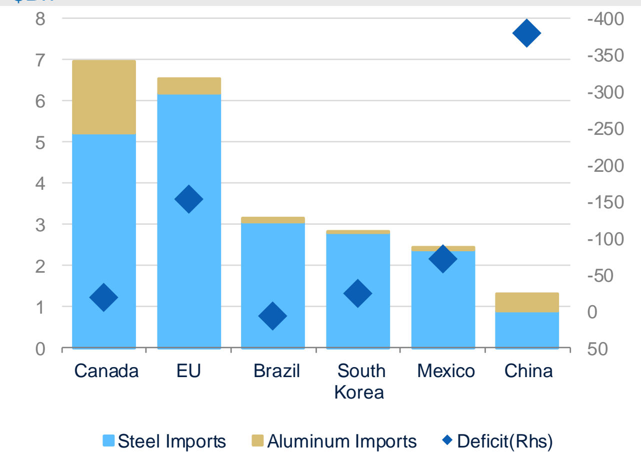
Lowering the trade deficit could also provide much needed political capital for the GOP heading into the Midterms. Current generic Congressional polling data favors Democrats by around 6.7pp according to April’s polling data. This represents the largest lead in a generic Congressional polling since 2006, an election that flipped the balance in Congress to the Democrats after they won 31 seats and the majority in the house and the majority in Senate.

Figure 3.11 Generic congressional polling averages, %



Source: BBVA Research & Real Clear Politics

Figure 3.12 U.S. steel and aluminum imports and deficits, $Bn



Source: BBVA Research & Haver Analytics

In addition, there is research that suggests that Democrats have outperformed in the recent specials elections. For example, while the GOP candidate won in the recent Arizona special election the margin of victory was much smaller than would be implied by the voting history of the district, which Mitt Romney won by 25 points in 2012 and President

Trump won by 21 points in 2016. In addition, seven of the other eight special elections saw the margin of victory shrink relative to what would be implied by the GOP's performance in the past two elections.[3]

The threat of losing the unified government could force the President and GOP to ratchet up there conservative agenda, possibly pulling forward policies that would have been left for the second half of the president's first term or his second term into 2018.

While domestic political risks and cyclical headwinds remain, we now see both downside and upside risks as small relative to our last report. To the upside, with the tax reform and budget deal in place and limited fiscal capacity for additional changes to fiscal policy, we do not anticipate there being additional fiscal stimulus in the next two years. In addition, with the outlook for inflation picking up, there will be less room for the Fed to delay its normalization plans without jeopardizing its credibility or the stability of the inflation outlook. That said, there remains a possibility that greater confidence at the small business level and a more favorable view of the current tax reform could jumpstart a sector that has struggled in the post-crisis period. In addition, policies that encourage prime-age participation such as support for addicts, vocational training, mobility and work-life balance initiatives could also boost labor supply and productivity.

To the downside, trade protectionism remains a major risk. After a series of escalating tariff announcements from the Trump administrations, trade tension have eased somewhat given that a nontrivial share of countries were removed from the list subject to the steel and aluminum tariffs, either permanently or temporarily. In fact, now approximately 30% and 45% of U.S. steel and aluminum imports, respectively, would be subject to the tariffs. This suggests the economic impact will likely be much smaller than an unabated version of the tariffs. Moreover, this represents a trivial share of global trade flows, suggesting limited spillovers into the global economy. As a result, the impact on the trade deficit, consumer prices and growth are likely to be small. That said, while the possibility of an escalating tit-for-tat trade remains less than a coin-flip, the impact effects could be extremely costly for the U.S.

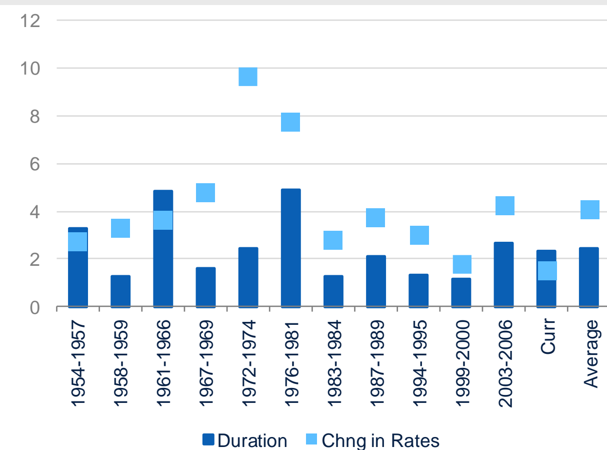
To the downside, the probability of recession remains low based on both economic and financial factors. That being said, the output gap is positive and the current expansion will become the second longest on record this year, suggesting that cyclical headwinds are building. The large fiscal expansion at a time when the output gap is positive and debt-levels are at dangerously high levels also has the potential to open up a severely adverse scenario that could tilt towards debt-deflation or stagflation like scenario depending on how the demand side responds to the fiscal impetus. If the tax reform is successful in lifting potential GDP, at least in the short-run, the chances of either extremely adverse scenario materializing will be small. As a result, we continue to anticipate that the growth outlook will remain bright.

3: https://fivethirtyeight.com/features/arizona-8-special-election-result/

4. Hawks to have their day with fiscal tailwinds

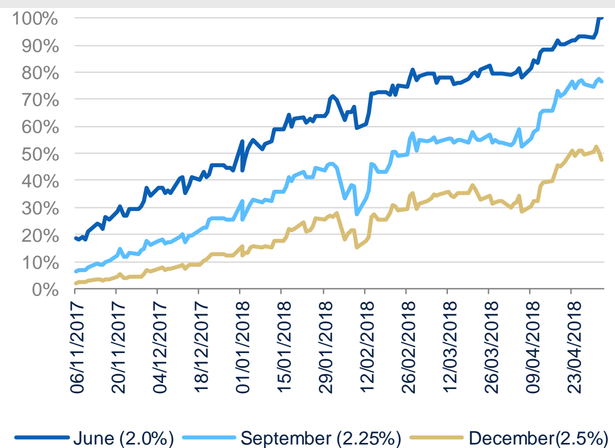
Relative to its past tightening cycles the Fed has been slow and deliberate in its pace of interest rate normalization. The magnitude of the crisis and additional commodity price shock in 2016 that led to an industrial sector slump required unconventional tools and timing adjustments to avoid missteps. In fact, the current cycle, which is only at its midpoint, has been as long as the average tightening cycle over the past 70 years, but has increased rates only a one-third as much as previous cycles. The downward shift in the neutral interest rate and lack of wage pressures also allowed the Fed to delay and stagger the rate increases. However, the debate at the Fed is shifting from one that was concerned with defending against stagnation and deflation, to one that questions the risks that the current pace of normalization poses to resource utilization, inflationary pressures and the demand-side in an environment of fiscal stimulus and a positive output gap.

Figure 4.1 Fed interest rate normalization, Years & PP



Source: BBVA Research & Federal Reserve

Figure 4.2 Fed funds implied probability, %



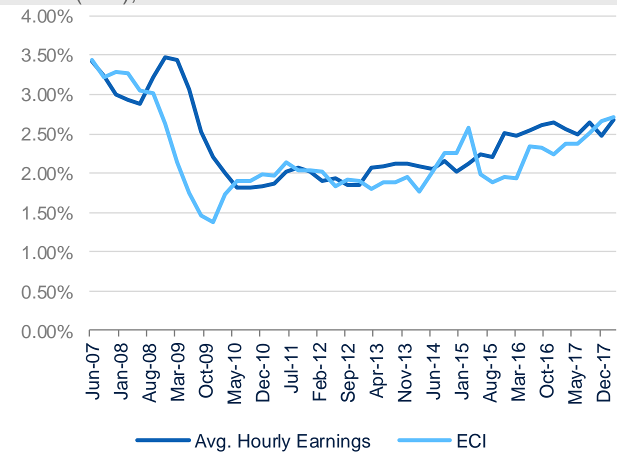
Source: BBVA Research & Bloomberg

As we expected, and in line with the slow and deliberate pace, the Federal Reserve at its May meeting maintained the current level of the Fed Funds rate at 1.5-1.75%. The pause was largely anticipated by markets given that the committee is continuing to digest recent rise in both actual and expected inflation. However, with inflation and inflation expectations edging up, and the tailwinds from the tax reform building, we expect future communications to begin to reflect these dynamics with the emergence of a slightly hawkish bias. In fact, in May's statement, the FOMC stated, "Inflation on a 12-month basis is expected to run near the Committee's symmetric 2 percent objective over the medium term". In addition, they dropped the phrase, "... the Committee is monitoring inflation developments closely."

The data in the 1Q18 seems to be supportive of the move away from the defensive strategy that prevailed until the end of Yellen’s tenure. While the unemployment remained unchanged over the quarter, the labor market continued to tighten. Weekly hours worked in the private sector increased to their fastest pace since September 2015. In addition, more the 664K prime age workers entered the labor force, pushing the prime age participation rate up 30bp; the most since the first quarter of 2016. In spite of this, year-over-year growth in employment held steady at 1.5% despite a surge in February. Nonetheless, the job creation rate remains at a level that is well above the rate needed to absorb additional slack and new labor market entrants.

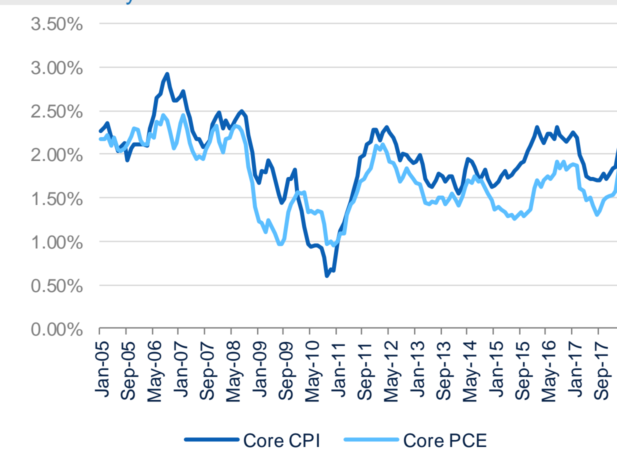
Wage and price pressures also began to show some signs of intensifying with average hourly earnings and the Employment Cost Index up to 2.7% year-over-year, the strongest pace in almost 10 years. This growth could give ammunition to hawks to argue that conditions are normalizing and are now converging to a more traditional Phillips Curve environment. In fact, both the PCE index and CPI surged in March, accelerating 36bp and 27bp in year-over-year percent terms. As a result, at 1.9% and 2.1%, core PCE and CPI inflation were in striking distance of the Fed's target. Moreover, headline PCE, which is the preferred Fed measure, already surpassed the March Summary of Economic Projection (SEP) yearend projection of 1.9%, with the acceleration to 2.0% in May.

Figure 4.3 Average hourly earnings & employment cost index (ECI), Year-over-Year %



Source: BBVA Research & BLS

Figure 4.4 Core CPI and PCE, Year-over-year %



Source: BBVA Research & BLS

The May meeting gave the committee the chance to reaffirm its steady pace of normalization, however, we expect future Fed speak to become more hawkish and projections to begin edging up, as the tailwinds from the expansionary fiscal policy begin to build and emerge from all sides. As a result, the dot plot is also likely to reflect this with four rather than three rate increases in 2018, and possibly additional rate increases in 2019. This upward shift in 2019 is consistent with a narrow output gap and the implied overshooting that the 2.7% median GDP forecast and 3.6% UR from the SEP imply.

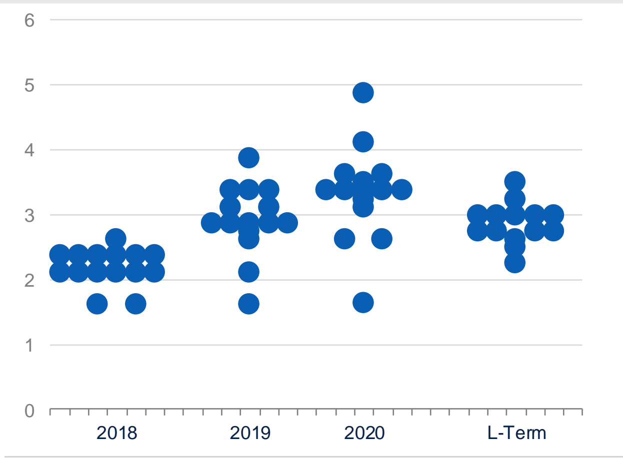
Furthermore, the members will need to further the discussion the committee's preparedness and ability needed to confront the next cycle given the challenges that low equilibrium interest rates and persistently low inflation pose. In addition, the members need to address the likelihood of a medium-term overshooting of the equilibrium short-term nominal interest rate, which we estimate will converge to around 3.0%— in line with current Fed expectations. Any signal from the SEP of a willingness to overshoot beyond their current implied median rate of 3.5% could be an early sign of concerns of excessive demand-side pressures.

That said, financial conditions remain within a comfortable range for the Fed. Overly aggressive or passive policy actions could destabilize this delicate balance, particularly when considering the recent bouts of volatility.

Powell's time at the Fed has coincided with an atypical economic cycle and seems to have left him with slightly less rose-colored glasses with respect to macroeconomic orthodoxy than the recent chairs. In fact, he has noted that he believes "relationship between slack and inflation is not so tight… reflects flatness of the Phillips Curve" and that he is

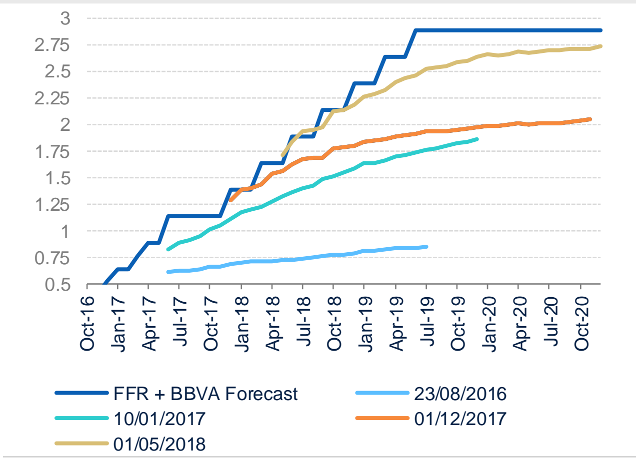
"trying to take the middle ground." In his first press conference he also said, "generally speaking the committee sees the neutral rate of interest as still quite low and is not seeing it as having moved up and is open to the possibility that it will." Below the surface, these comments seem to suggest that he is not willing to preempt any policy actions or panic at sight deviations from Fed benchmarks. Instead, he will rely on a more active management style that respects insight from influential committee members and incoming data, but at a discounted rate.

Figure 4.5 FOMC Fed funds rate projection, %



Source: BBVA Research & FRB

Figure 4.6 Fed funds future curve, %



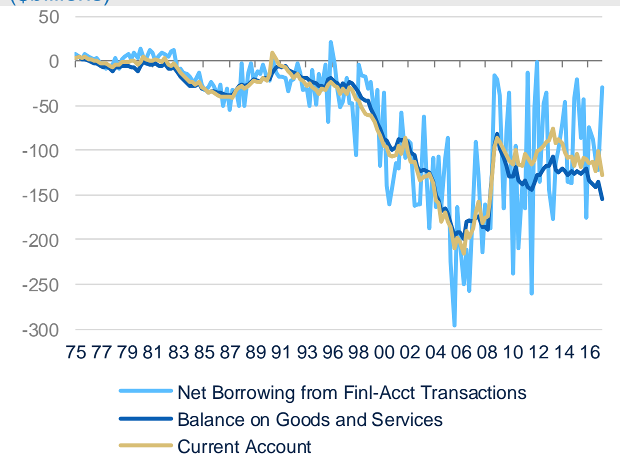
Source: BBVA Research & Bloomberg

As a result, we continue to forecast that the FOMC will increase rates for the second time this year at their June 12th-13th meeting, followed by two more increases in the second half of the year. In 2019, we still believe the committee will not be eager to remove accommodation and thus will raise rates two additional times, reaching the 3.0% long-run level before pausing. That said, keeping policy and geopolitical risks aside, the balance of risks to the economic outlook are clearly tilting to the upside in 2019, which could force the committee to begin preparing markets for the idea of either higher long-term equilibrium rates, or a temporary overshooting of the implied terminal rate.

5. The U.S. trade deficit is here to stay

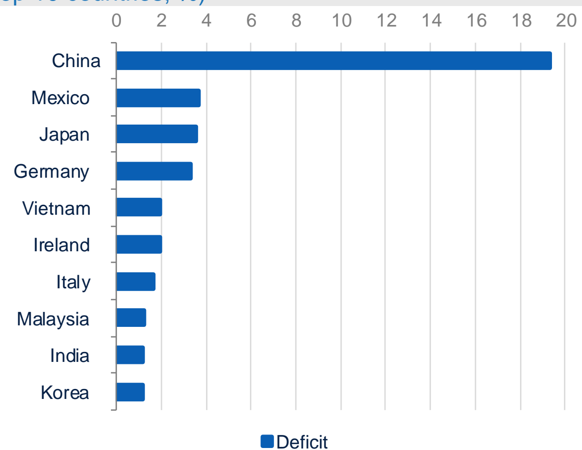
The trade deficit reflects a country's resource constraints, where the resource constraint is a function of the domestic production structure and the patterns of global trade. A country's trade balance position is determined by relative resource endowment, resource intensities, and its position in international production networks. For the U.S. the trade deficit signifies that the country is drawing on global trade for those resources.

Figure 5.1 Current account and net capital flows ($billions)



Source: BBVA Research

Figure 5.2 2017 U.S. trade deficits as percent of GDP (Top 10 countries, %)



Source: BBVA Research

The comparative advantage and trade liberalization: Although the U.S. trade balance has been negative since 1975, it was not until the mid-1990s that it started to widen. This trend has been mainly due to two coinciding economic factors.

First, with time the U.S. has gained a comparative advantage in services. The estimation of the Revealed Comparative Advantage (RCA) index, which measures the degree of relative advantage or disadvantage in a certain class of goods or services, illustrates that the U.S. has a high and upward sloping comparative advantage in services. By contrast, U.S. creditors Germany, Japan, and, China have a much lower and stable RCA index in services, with the exception of China whose index is downward sloping.[4]

Second, the asymmetric trade liberalization process has benefited trade in goods over trade in services. Liberalization of trade launched in the mid-1990s with the conclusion of the Uruguay round, and the creation of the World Trade Organization spurred trade liberalization in goods and agricultural products. The construction of an index that captures the trade liberalization process in manufacturing versus services shows that the manufacturing index has been declining since 1995 while the services index has overall remained flat.[5] Likewise, since 1995, the world's aggregated

4: Barattieri, A. (2014). Comparative advantage, service trade, and global imbalances. *Journal of International Economics*, 92(1), 1-13.
5: ibid.

trade costs for services have remained mostly flat with a slight upward tendency while trade costs for goods have had a prominent downward slope.[6]

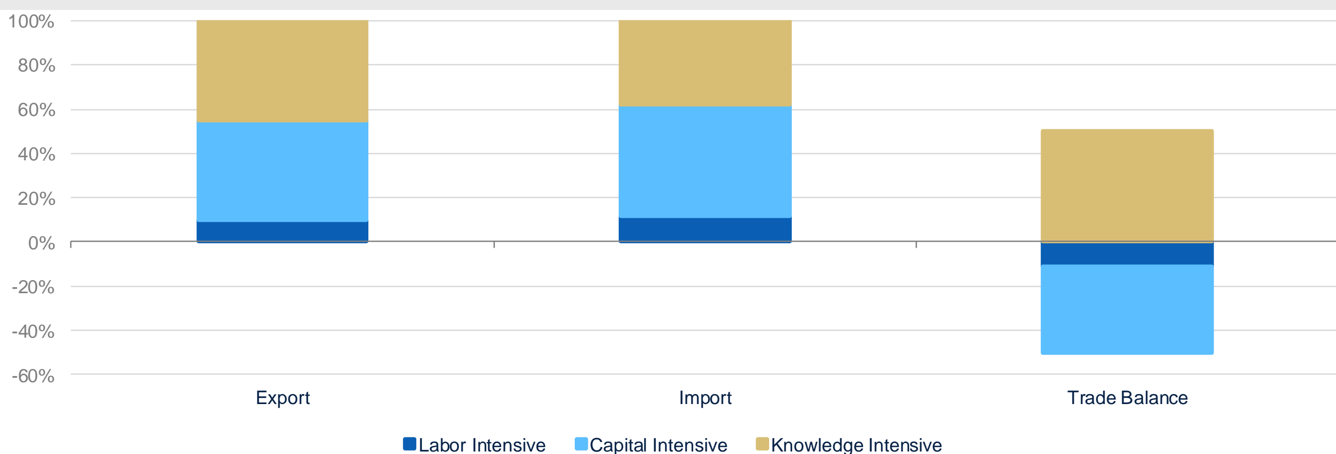
As a result, the U.S. trade balance in services has remained positive while the trade deficit in goods has turned ever more negative. However, the trade surplus in services as a share of GDP accounted for only 1.5% at its peak in 2014 and declined to 1.3% in 2017. Meanwhile, the trade deficit in goods jumped from around near 1% of GDP in the early 1980's to 6% in 2005 and 2006. Since 2010 it has remained relatively stable at around 4.2%.

The empirical analyses illustrate a strong negative correlation between the U.S. export specialization in services and its current account in the post-1995 period. The same relationship holds for the UK, Spain, and Italy who also specialize in the export of services. Per documented evidence, the negative correlation is strongly statistically significant and robust, explaining 50% of the variation of the current account balances.[7]

The structural break test confirms that the structural changes in the U.S. trade deficit closely coincide with structural changes in both imports and the trade balance of goods. At the same time, the historic dynamics of U.S. exports is consistent with the dynamics of the services trade balance with no structural changes found for either one.

Supply-chain trade and the chase after lower cost of production: The fundamental changes in trade structure brought about by globalization, Information and Communication Technologies (ICT), and digitization further strengthened the U.S. comparative advantage in services, particularly in knowledge intensive exports. Advancements in managing globally diversified manufacturing networks, in communication, and in transportation resulted in a globally diversified production process. The rise in the international mobility of the core factors of production – capital, labor, and technology – prompted a pursuit for lower costs by shifting manufacturing to emerging markets. Overall, ICT and digitization have accelerated the flow of intermediate goods and have resulted in deeper fragmentation of trade flows.[8]

Figure 5.3 Imports and exports as a share of total (%)



Source: BBVA Research

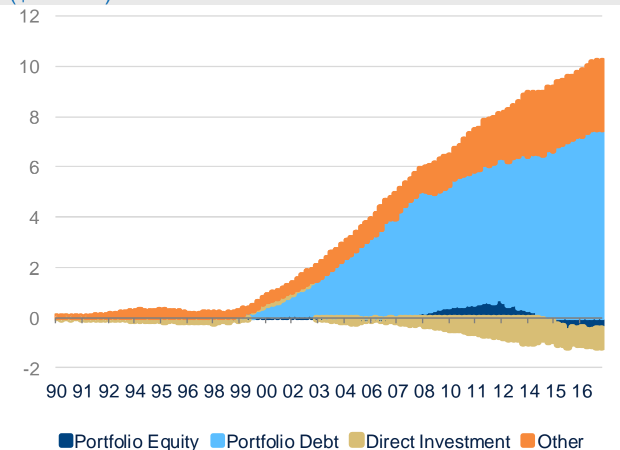
6: Joy, M., Lisack, N., Lloyd, S., Reinhardt, D., Sajedi, R., & Whitaker, S. (2018). Mind the (current account) gap.
7: Barattieri, A. (2014). Comparative advantage, service trade, and global imbalances. *Journal of International Economics*, 92(1), 1-13.
8: Baldwin, R., & Lopez-Gonzalez, J. (2015). Supply-chain trade: a portrait of global patterns and several testable hypotheses. The World Economy, 38(11), 1682-1721.

In the world of new technologies and digitization, the knowledge-intensive portion of U.S. trade flows has become increasingly dominant. The U.S. has experienced a rise in cross-border flows of purely digital goods and services. Moreover, the creation and enhancement of e-commerce platforms has empowered smaller market participants to trade and has challenged traditional business models. It has eased entrance into international markets and created new payment systems giving rise to microscale activities and microshipments.

Capital Flows: The capital account is the mirror image of the current account (trade balance plus income balance), reflecting the borrowing that is needed to finance the deficit. The two terms are used interchangeably; however, they reflect different measures of economic health and have to be examined from different scopes. Capital account flows embody a country's financing constraint. Thus, the financing constraint should be examined as a gross rather than a net concept.[9]

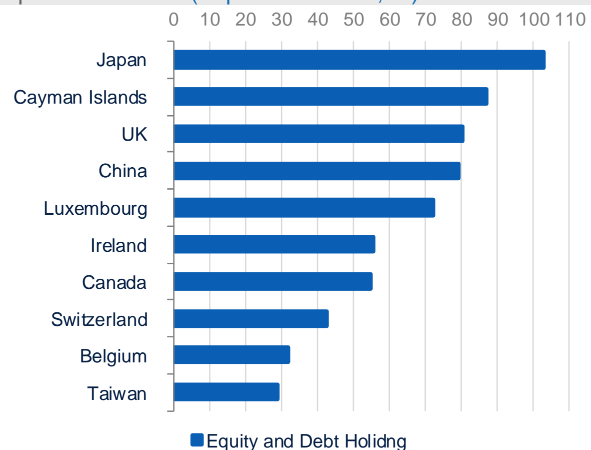
The U.S. current account deficit is predominantly financed by the sale of government bonds to the banks of China, Japan, Switzerland, Taiwan, Korea, Thailand, and the world's main oil exporting states. However the capital flow pattern has changed since 2015. The sale of Agency and corporate bonds to large institutional investors in Europe and to government-run pension funds in East Asia have become a substantial source of financing. The shift in the composition of U.S. creditors is likely driven by the search for yield by European and Asian pension funds and life insurers during the time of Quantitative Easing in Europe and tight fiscal policy in Asia. Additionally, U.S. gross bilateral positions in capital flows are also large with the United Kingdom and with offshore financial centers.

Figure 5.4 Cumulative net inflows into the U.S. ($trillions)



Source: BBVA Research

Figure 5.5 2017 holdings of U.S. equity and debt securities as percent of GDP (Top 10 countries, %)



Source: BBVA Research

Fiscal expansion and return of twin deficits: The $1.3 trillion spending bill passed by Congress in March 2018 coupled with the tax bill signed in December 2017 are estimated to increase the government deficit to 4.6% of GDP within two years. Fiscal stimulus late in the business cycle can further widen the trade deficit. At a time when the U.S. economy is operating at full capacity and the unemployment rate is at a low level, the demand created by the fiscal stimulus is bound to leak to the rest of the world. Arguably, evidence of the stimulus leak into imports can be found in the increase in the share of imports in the GDP from 4.8 percent in the third quarter of 2017 to 5.6 percent in the first

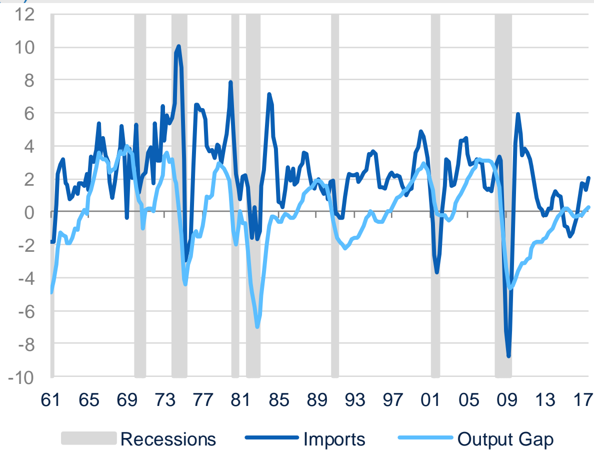
9: Borio, C. E., & Disyatat, P. (2015). Capital flows and the current account: Taking financing (more) seriously.

quarter of 2018. Likewise, the U.S. trade deficit further increased to $57.6 billion in February 2018, in contrast to an average of $42.2 billion per month in the 2010-2016 period and $47.4 billion per month in 2017. Nevertheless, the estimated impact of fiscal stimulus on the trade deficit is soft, adding around 0.5% to 1% of U.S. GDP.

The rising federal budget deficit is subject to financing constraints and will affect the U.S. gross external balance. From 2009 to 2013, the U.S. financed its budget deficit by selling Treasury bonds and notes that were purchased by the Federal Reserve and foreign investors. However, since then the demand composition for Treasuries has changed and U.S. investors have been purchasing overwhelmingly to meet banks' regulatory requirements, to match pension funds' long-term liabilities, and to achieve risk parity for private funds. Accounting for an increase in the budget deficit as well as a shrinking Federal Reserve balance sheet, the market absorption of U.S. Treasuries has to increase from 2% to over 5% of U.S. GDP.

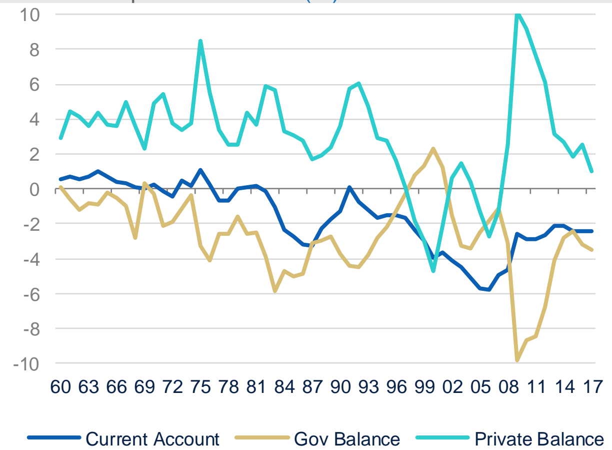
The observed economic conditions are likely to warrant an episode of twin deficits. However, for both the budget deficit and the trade deficit to move in the same direction the third – private balance – has to remain broadly unchanged. In the historic cases when the private balance sheet of corporations and households changed, the two deficits moved in opposite directions.

Figure 5.6 U.S. imports growth and output gap (%)



Source: BBVA Research

Figure 5.7 U.S. current account, government, and private balances as percent of GDP (%)



Source: BBVA Research

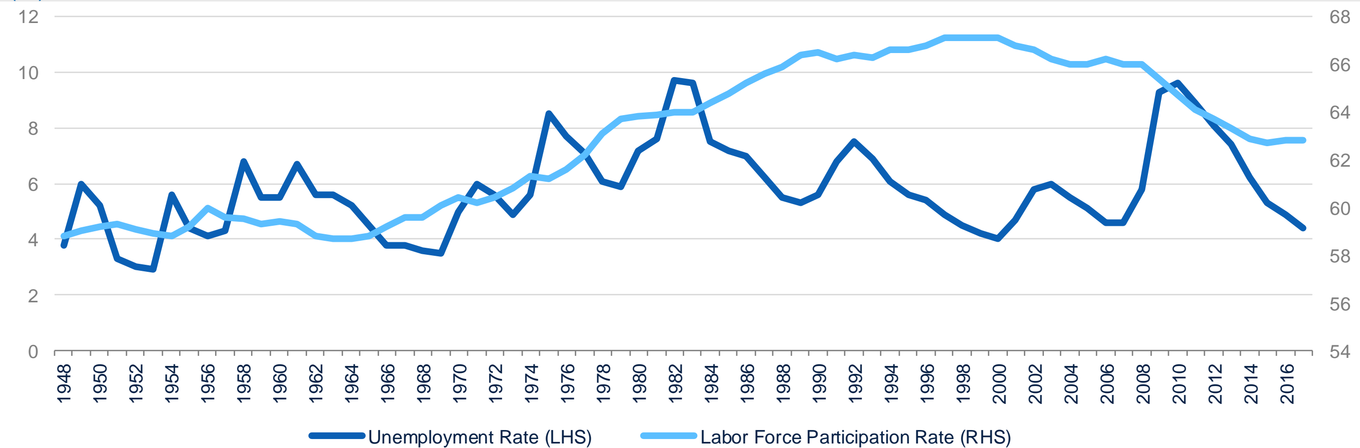
Outlook: In the medium term, the U.S. trade balance will remain a function of structural resource constraints and global trade costs. The U.S. comparative advantage in the services trade and in technology driven trade fragmentation will keep the trade balance wide and negative. Additionally, late-cycle fiscal stimulus and the growing income inequality gap in the U.S. could put further pressure on the widening trade deficit as low-income households benefit from competitively priced import goods. However, global progress towards trade liberalization in services would assist in narrowing the U.S. trade deficit and would reduce global risks from trade imbalances. The capital account standing will be determined by the ability of the U.S. to finance its growing federal budget deficit. However an increased reliance on the domestic market could put further upward pressure on long-term yields. Nevertheless, domestic incentives to save can alleviate the financing constraint and maintain domestic demand for bonds.

BBVA Research

6. Labor force participation

After peaking around 2000, the labor force participation rate (the number of people who are either employed or are actively looking for work as a percent of the working-age population) gradually dropped from 67.1% in 2000 to 62.8% in 2017, a 40-year low. Such secular decline suggests that increasingly more people are reluctant to "get off the couch," and seems to contradict the stellar reading of the unemployment rate signaling a favorable labor market in the last few years. This puzzle has provoked extensive discussions on a wide range of structural factors that affect labor decisions. In this section, we try to analyze the key factors that have profoundly influenced the labor force participation rate in the past decades and make a projection based on long-run trends of those factors.

Figure 6.1 Labor force participation rate and unemployment rate
(%)



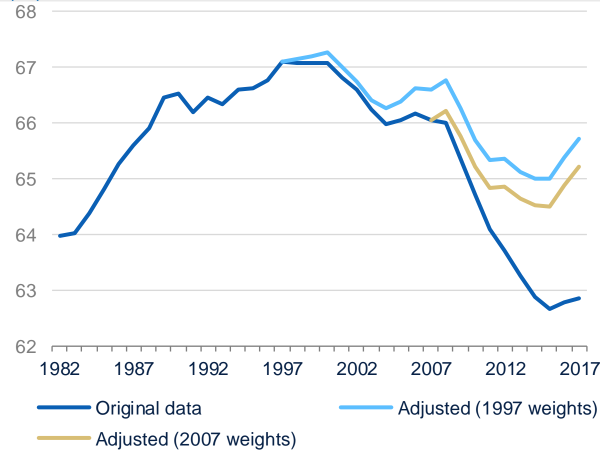
Source:: BLS, Haver and BBVA Research

Population aging

Individuals' economic behaviors, such as working, saving and consumption, significantly vary during different periods in their life cycle. Therefore, shifts in the demographic structure, as we have seen in many developed countries, have considerable effects on their economies' trends and cycles. For example, Jaimovich and Siu (2009)[10] showed that changes in the age composition of the labor force account for up to one-third of the business cycle volatility for the U.S. between 1948 and 2004. In particular, the labor force participation rate, as a critical indicator for labor supply, is profoundly affected by aging. Moreover, the decline in the labor force participation rate will be even more visible in the next decade, as baby boomers, the largest demographic cohort in the modern US history, move towards retirement age.

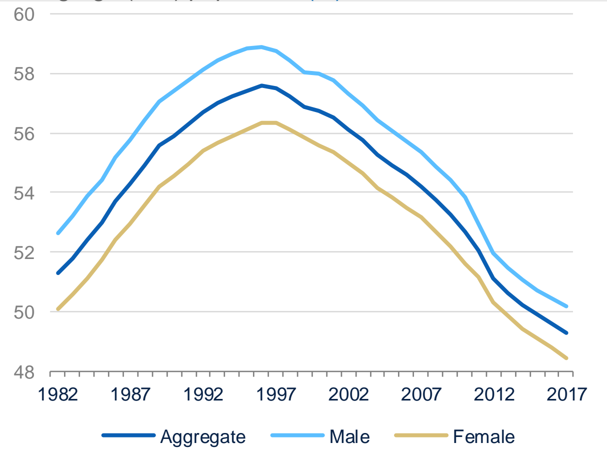
10: Jaimovich, N. and Siu, H.E., 2009. The Young, the Old, and the Restless: Demographics and Business Cycle Volatility. *American Economic Review, 99(3), pp.804-26*.

Figure 6.2 Ageing-adj. labor force participation rates (%)



Source: BLS, Haver and BBVA Research

Figure 6.3 Ratio of prime-age (25 - 54) population to working-age (16+) population (%)



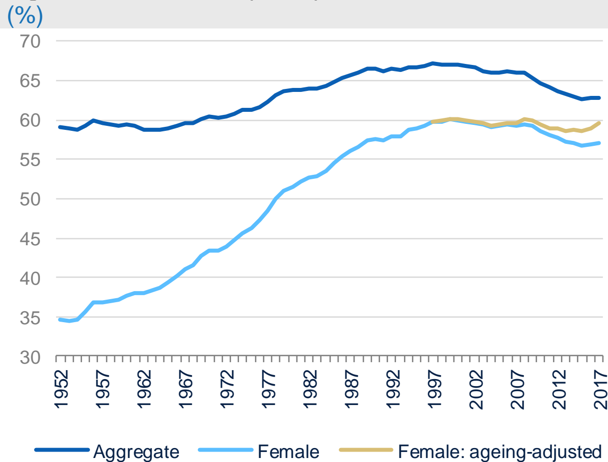
Source: BLS, Haver and BBVA Research

Baby boomers' leaving the prime-age labor force en masse will inevitably lower the overall participation rate. Figure 6.2 illustrates the effect of changing age composition in labor force participation rate. In this figure, we created an aging-adjusted labor force participation rates with the assumption that the weight of each age group is "frozen" after 1997. Since the constructed series remove the decline caused by shifting demographics, its distance to the actual series captures the effect of the change of age structure on labor force participation. As we can see from Figure 6.2, after freezing the age composition since 1997 and thus eliminating the effect from aging in the last two decades, the aging-adjusted labor force participation rate would be 65.7% in 2017, which is only 1.4% lower than the peak in 1997. Given that the actual labor force participation rate is merely 62.9%, our experiment shows that population aging can directly explain two-thirds of the decline of labor force participation rate since 1997. Additionally, we also constructed the aging-adjusted labor force participation rate using the age distribution in 2007. From the same figure, we can see that the difference in the aging effect was relatively small between 1997 and 2007. The aging effect took off after 2007 when the first baby boomers reached 65 and began to retire.

Stabilization of participation rate for female

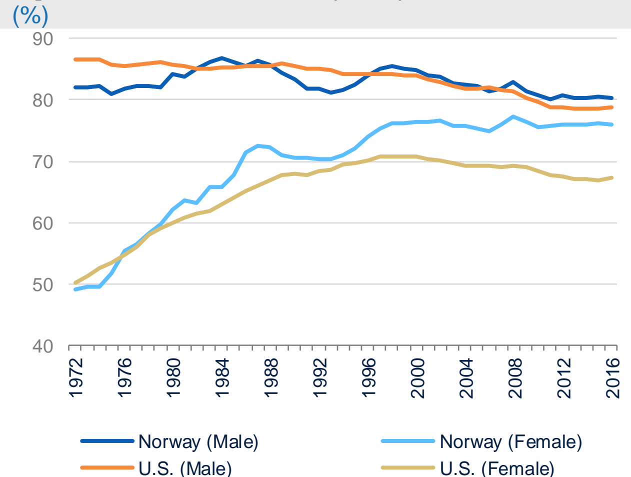
The narrowing of the gender gap in the last decades has encouraged more women to join the job market, which explains the rising labor force participation rate from the 1960s to the 1990s. However, as we can see from Figure 6.4, both aggregate and women's labor force participation rates stopped increasing after 2000 with visible declines after 2007. After adjusting for aging, the series indicates that the secular rise has come to an end and stabilized since the early 2000s.

Figure 6.4 Labor force participation rates
(%)



Source: BLS, Haver and BBVA Research

Figure 6.5 Female labor force participation rates
(%)



Source: OECD, Haver and BBVA Research

It is worth noting that compared to other industrialized countries, the U.S. still has much room to improve on labor regulations and incentivize more women to join the labor force. For example, even after the Family and Medical Leave Act of 1993 (FMLA), the U.S. is still the only advanced economy that does not have a mandatory paid leave for parents. Figure 6.5 compares the labor force participation rates for the U.S. and Norway. We can see that the two countries started from similar places, yet Norway is much more effective in empowering women in the workplace, especially after the late-1990s.

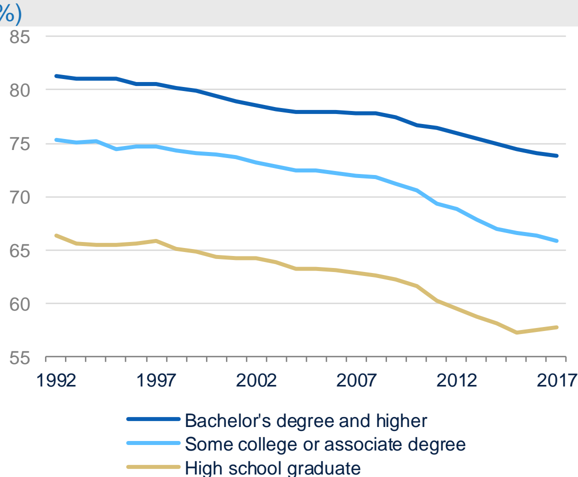
Educational attainment

Higher education levels are associated with higher skills and higher wages. Therefore individuals with different levels of degrees are practically in different segments of the labor market. Figure 6.6 shows the labor force participation rates for 25 years old and over by various educational attainments. While Figure 6.6 indicates that downward trends present in all three series, the decline of the people with college degrees is the mildest among all three groups.

While advancing technologies have been continually transforming the labor market, empirical studies have suggested that the computerization of a range of low-skill and medium-skill has led to growing employment in high-income jobs and diminishing mid- and low-income jobs[11]. That is, higher education will play a critical role in raising labor force participation rates in the future.

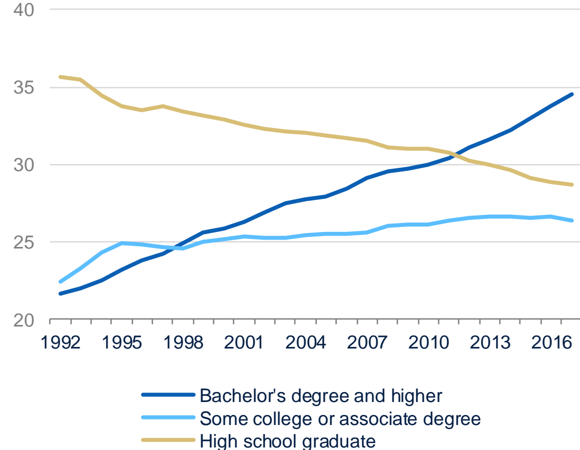
11: Acemoglu, D. and Restrepo, P., 2017. *Robots and Jobs: Evidence from US Labor Markets* (No. w23285). National Bureau of Economic Research.

Figure 6.6 Participation rates by educational attainment (%)



Source: BLS, Haver and BBVA Research

Figure 6.7 Percentages of the population by educational attainment (%)



Source: BLS, Haver and BBVA Research

The significant gap in participation rates between the most- and least-educated individuals illustrates the power of higher education in boosting labor force participation. Since individuals with bachelor's degrees are much less likely to withdraw from the job market than their peers with only high school degrees, the increasing share of the college-educated population (Figure 6.7) will contribute positively to the labor force participation in the next decades.

Projection based on age, sex, and education

In previous sections, we have demonstrated the influence of aging, trends in participation rates for women, and educational attainments on the aggregate labor force participation. Therefore, based on the statistics of different demographic groups, we can obtain their secular trends and make forecasts of the labor force participation rates within the next decade.

Table 6.1 shows our forecast of the labor force participation rate between 2018 and 2028. Additionally, we also list the projections by CBO and BLS. As we can see from the table, assuming that there is no structural change in the long-run trends in the primary factors, different institutions all predict a gradually declining labor force participation rate for the next decade. In sum, boomers will continue withdrawing from the labor market, and thus lower the aggregate labor force participation rate. A higher percentage of the college-educated population will partially offset the adverse effect of aging. By 2028, the total labor force participation rate will be around 61%.

Table 6.1. Labor force participation rate projections

Year	BBVA	CBO[12]	BLS[13]
2018	62.9	62.9	62.3
2019	62.7	62.9	62.1
2020	62.6	62.7	62.0
2021	62.4	62.5	61.8
2022	62.2	62.2	61.6
2023	62.1	61.9	61.4
2024	61.9	61.5	61.3
2025	61.7	61.1	61.1
2026	61.5	60.8	61.0
2027	61.3	60.4	
2028	61.1	60.1	

Source: CBO, BLS, and BBVA Research

Reforms of labor policies could play a key role in alleviating the secular decline of the labor force participation. As we have shown above, closing the gender gap would effectively boost the aggregate labor force participation. If the female labor force participation rate could increase to 76%, i.e., the Norwegian level, it will raise the aggregate rate by roughly 4%. It will require provisions such as paid maternity, paternity, sick child leaves, and other measures that match the west European standard. Also, since higher education is the key to future employment, today's ballooning student loans could prove to be destructive to young workers with low-to-medium skills. The debt-ridden individuals who cannot afford to pursue higher degrees will likely be replaced by computers and eventually quit the labor market. Therefore, policies that aim to lower education costs could help to build a larger workforce with adequate skills in the age of AI and robots.

12: Joshua Montes, 2018. CBO's Projection of Labor Force Participation Rates. 2018-04. Congressional Budget Office.
13: Lacey, T.A., Toossi, M., Dubina, K.S. and Gensler, A.B., 2017. Projections Overview and Highlights, 2016–26. *Monthly Labor Review, pp.1-25.*

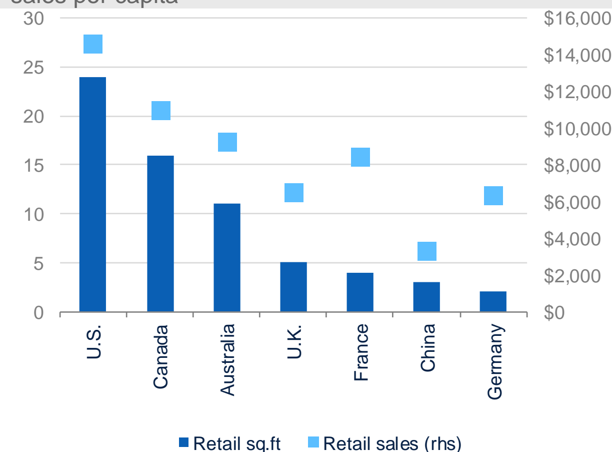
7. The evolution of retail real estate

Massive recent store closures by iconic firms such as RadioShack, Payless and ToysRUs, paint a bleak picture of the future of retail commercial real estate (CRE). Historically new store closures have been offset by openings. However, the trend could be shifting with store closures in 2017 outnumbering new openings for the first time since 2009[14]. Moreover, some new stores could require smaller footprints. As a result, retail gross leasable area relative to population has likely peaked, but physical retail is not going to go away quickly. The environment presents opportunities to operators and investors that are able to recognize them and adapt.

Retail real estate in perspective

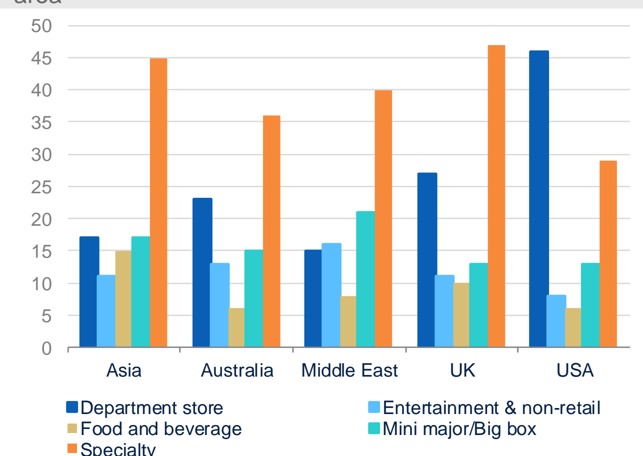
The U.S. has 24 sq. feet of retail CRE per capita, according to data published by the International Council of Shopping Centers. This is significantly higher than other major countries (Figure 7.1). Based on the data, U.S. retail generates $608 of sales per sq. foot, compared to $3,100 in Germany. The mix of retail CRE in the U.S. is also heavily tilted to department stores (Figure 7.2), which are particularly exposed to the current wave of technological disruption. This is being recognized by the industry, resulting in revamped shopping centers with increased availability of events, social environments, technology, and food and entertainment options. Department stores such as Neiman Marcus and Nordstrom are also repurposing some space in their stores to include restaurants and coffee shops. Struggling smaller regional malls are increasingly being transformed into mixed-use properties with an important residential component in the hope of turning them into thriving urban villages in a process called place-making.

Figure 7.1 Gross leasable retail real estate area and sales per capita



Source: GGP and ISCS

Figure 7.2 Retail category share of total gross leasable area



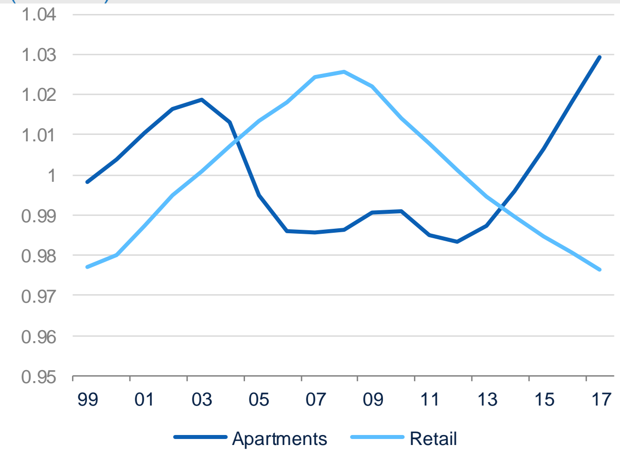
Source: GGP and Cistry/Urbis

The U.S. has had an average of 11.4 sq. feet of metropolitan area-based community and neighborhood retail CRE per capita, according to data provided by REIS. An inspection of retail gross leasable area (GLA) per capita shows a structural break after peaking in 2008 (Figure 7.3), reflecting the significant effects from the Great Recession, e-

14: See Fung Global Research (2018). What Retail Apocalypse? Reviewing Trends in US Brick-and-Mortar Retail. https://goo.gl/juiogY

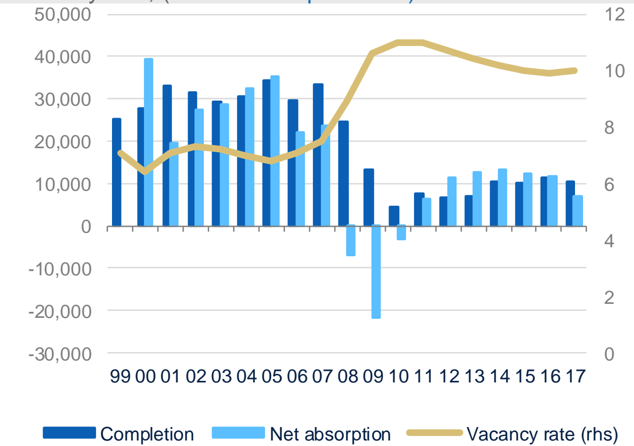
commerce, a shift in consumer preferences and changing demographics. Since 2008, we have seen consistently lower retail CRE construction compared to the previous period and a higher vacancy rate (Figure 7.4). The higher vacancy rates, despite the decline in supply of retail CRE relative to population, have resulted in subdued retail rent growth.

Figure 7.3 Metro CRE[15] per capita, rescaled (Mean=1)



Source: BBVA Research, Reis and Census Bureau

Figure 7.4 Metro retail CRE[15]: completion, absorption and vacancy rate, (Thousand SqFt and %)



Source: BBVA Research and Reis

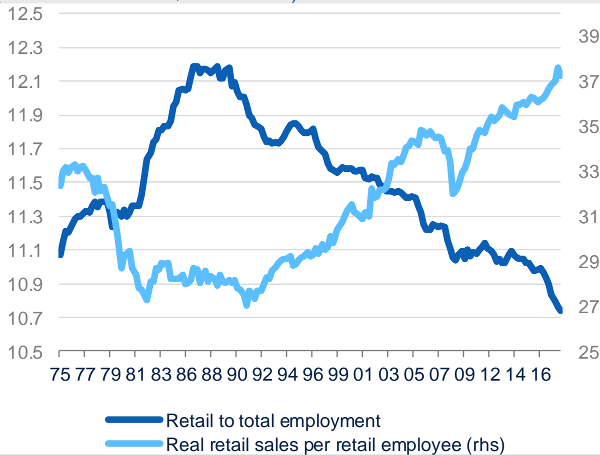
Technology driving retail transformations

The lower relative demand for retail space is a reflection of the changes in the retail industry, as retailers continuously search for a competitive edge in a highly competitive environment. The retail sector has undergone multiple changes over the last 80 years. After World War II, there was a mass adoption of self-service stores driven by the wide use of automobiles, home-based refrigeration, and an increase in population and real incomes. In the 1980s and 1990s, the industry went through the big-box revolution, which increased labor productivity and led to a decline of retail employment as a share of total employment (Figure 7.5). This was driven by the introduction of computerized inventory management, point-of-sale systems, and the resulting economies of scale.

Today, we are witnessing a shift of some retail online. The share of e-commerce in total retail sales excluding automobiles and gas stations has increased from around 5% in 2007 to over 13% at the end of 2017 (Figure 7.6). The retail industry will likely continue becoming less real estate intensive, as more retail transactions are conducted online. However a large share of retail sales still benefit from or require in-person product assessment and salesperson contact, suggesting that some retail will continue to be in-person, thus requiring CRE. Also, the demand for CRE from in-person service industries (healthcare, beauty salons, restaurants, etc.) will increase. These sectors also tend to be segments that are at lower risk of automation and computerization. Moreover, the expansion of e-commerce also results in demand of nonretail real estate such as warehouses.

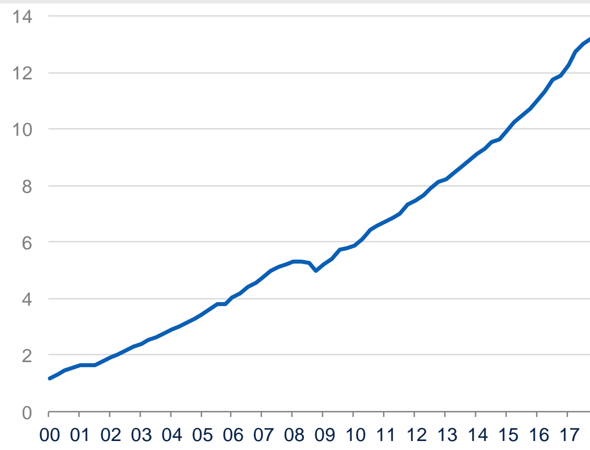
15: Community and neighborhood centers

Figure 7.5 Share of retail employment in total employment and real retail sales per employee, (% and 1982-84 $Thousand)



Source: BBVA Research, St. Louis Fed and BLS

Figure 7.6 Share of e-commerce sales in total sales, (%)



Source: BBVA Research and Census Bureau

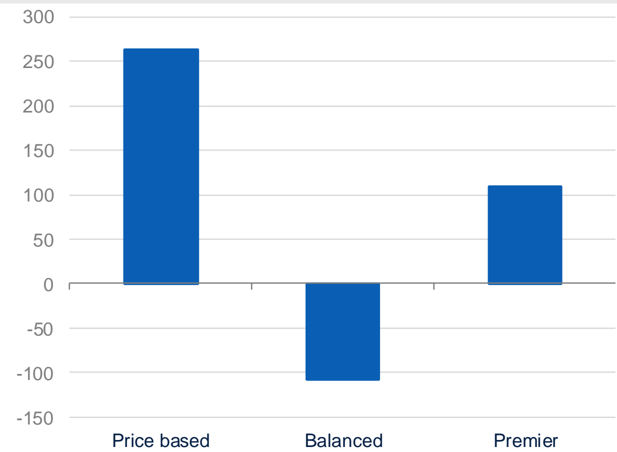
Consumer economics impacting retail CRE

Technology is only a part of what drives long-term retail trends. Economic changes have also made a major impact on retailers' fortunes recently. A 2018 study by Deloitte[16] found that revenue remained flat at balanced retailers, while increasing at premier and price-based retailers over the preceding five-year period[17]. As a result, balanced retailers closed more stores than they opened, unlike price-based and premier ones (Figure 7.7). This divergence reflects the bifurcation of consumers' income growth, with families in the middle of the income distribution coping with stagnant or negative real income growth (Figure 7.8). The divergence in income growth will continue as globalization, domestic taxation, education and mobility benefit high-income earners and high-skilled individuals.[18]

With a lot of the balanced retailers being located in regional malls that cater to middle-class clientele, many such malls are facing difficulties. According to REIS, "there is a gap between the higher-end malls, which are thriving, and the increasingly vacant lower-end malls"[19]. Regional malls are also struggling because many of the expanding retailers nowadays choose to locate stores outside malls. According to Fung Global Research, the retailers that announced the most store openings in 2017 "opted to open either some or all of their new stores in off-mall locations".[20,21]

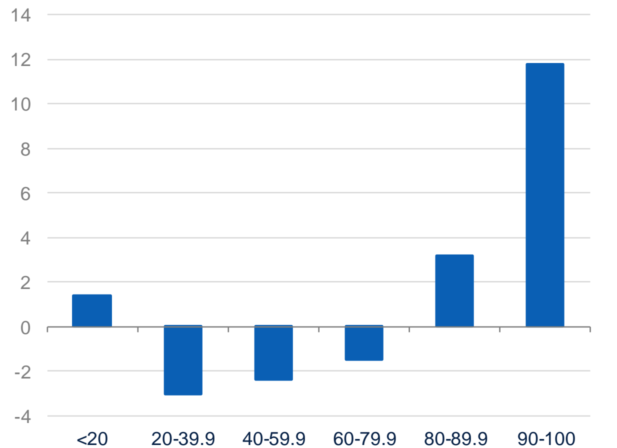
16: Deloitte. (2018). The Great Retail Bifurcation. https://goo.gl/sLkxxd
17: Balanced retailers are defined as ones that deliver value through a combination of price and promotion, with many offering widely available products or experiences.
18: See Augustine, A., Papanyan, S. (2016). Income disparity, technology and globalization. BBVA Research. https://goo.gl/A2XWh9
19: REIS. (2018). Retail First Glance. First Quarter 2018
20: Fung Global Research. (2018). What Retail Apocalypse? Reviewing Trends in US Brick-and-Mortar Retail. https://goo.gl/juiogY
21: The retailers that announced the most store openings in 2017 were Dollar General, Dollar Tree, Aldi, TJX Companies, Five Below, Ulta, Lidl and Ross Stores

Figure 7.7 Net store openings, 2015-2017



Source: Deloitte

Figure 7.8 Increase in average real family income by percentile group 2007-2016 (%)

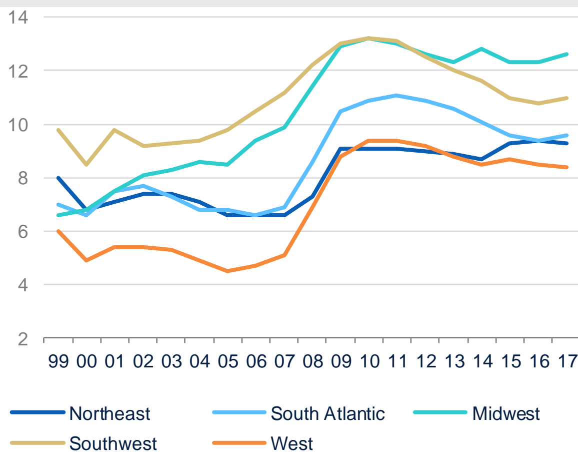


Source: BBVA Research and FRB

Location as a factor of success

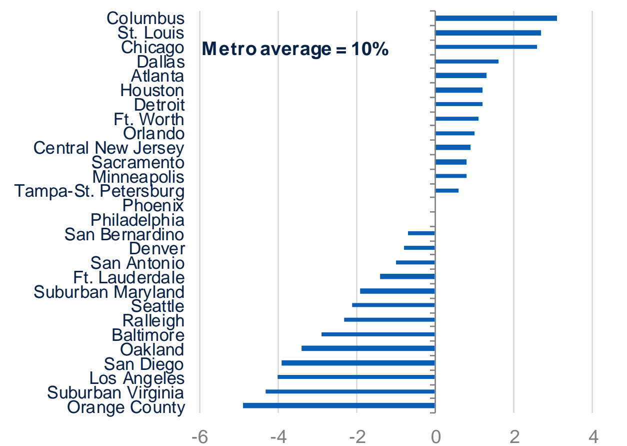
Retail CRE will generally perform better in locations with lower vacancy rates, high and growing median incomes and strong population growth. Vacancy rates indicate that any problems related to potential overbuilding of retail CRE in the past would be highest in the Midwest (Figure 7.9) in cities like Columbus, St. Louis and Chicago. The areas with the lowest vacancy tend to be in the West or in the Washington D.C. metropolitan area (Figure 7.10). In fact, four out of the five places with the lowest vacancy rates are located in California.

Figure 7.9 Vacancy rates by region, metro areas (%)



Source: BBVA Research and Reis

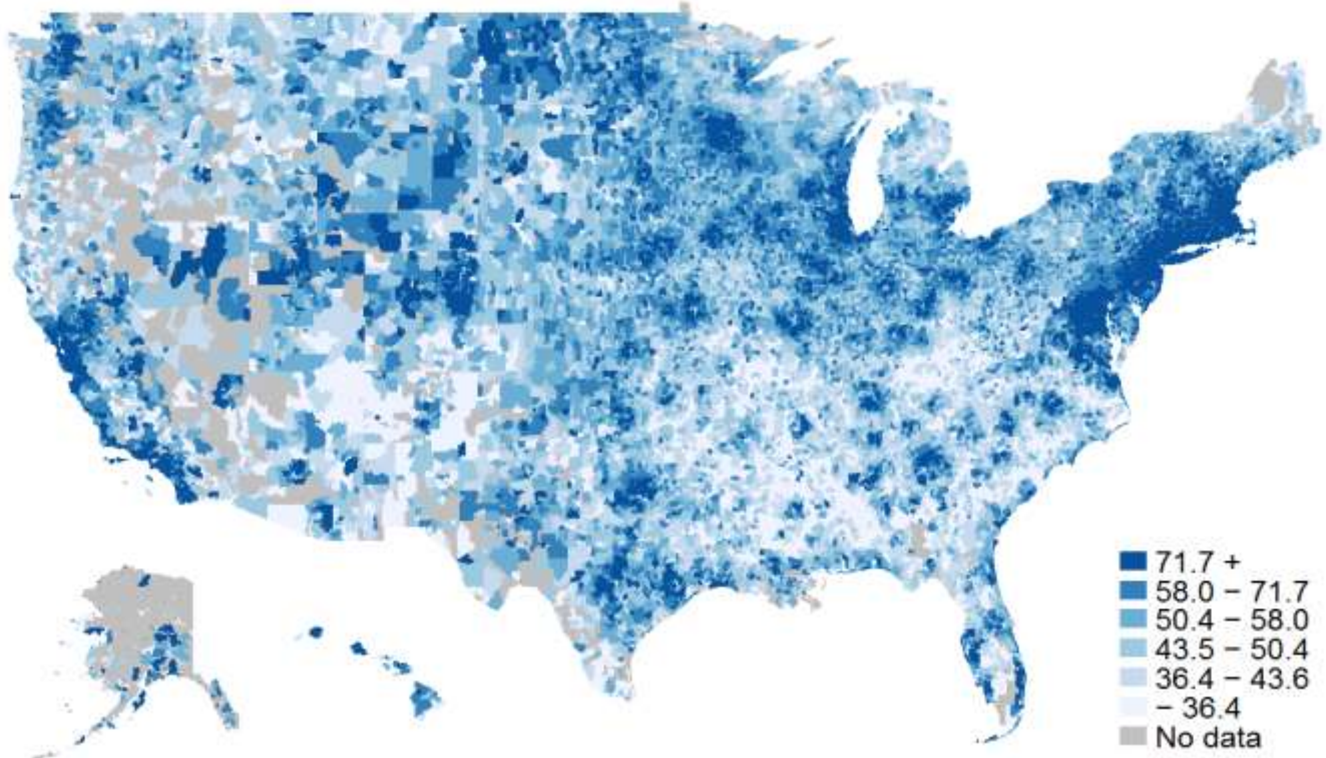
Figure 7.10 Vacancy rates above or below U.S. metro average (p.p.)



Source: BBVA Research, Bloomberg and Reis

Areas with high median incomes clustered in the Northeast, California and around the major urban centers throughout the rest of the country are more appropriate for higher-end retailers (Figure 7.11). However, the change in median incomes during 2011-2016 is more broadly distributed (Figure 7.12), which points to the need for a more granular analysis of where retail CRE opportunities indeed exist.

Figure 7.11 Median household income by zip code, ($Thousand)



Source: BBVA Research and Census Bureau

Figure 7.12 Change in median income by zip code, 2011-2016 (%)

Source: BBVA Research and Census Bureau

Retail real estate in areas with high population growth is less likely to be at risk of disruption in the short- to mid-term. Population growth during the 2011-2016 period has been stronger than average in North Dakota, Montana, large cities in Texas, Utah, Colorado, the mid-Atlantic region, as well as in select major cities in the South (Chart 7.13), which benefited from the commodity price boom, global growth and higher affordability. Between 2015 and 2017, six states accounted for 61% of the fastest population growing 100 counties. Twenty-five counties were in Texas, 12 in Florida, 9 in Colorado, 8 in Utah and 7 in Georgia.

Figure 7.13 Population change by zip code, 2011-2016 (%)

Source: BBVA Research and Census Bureau

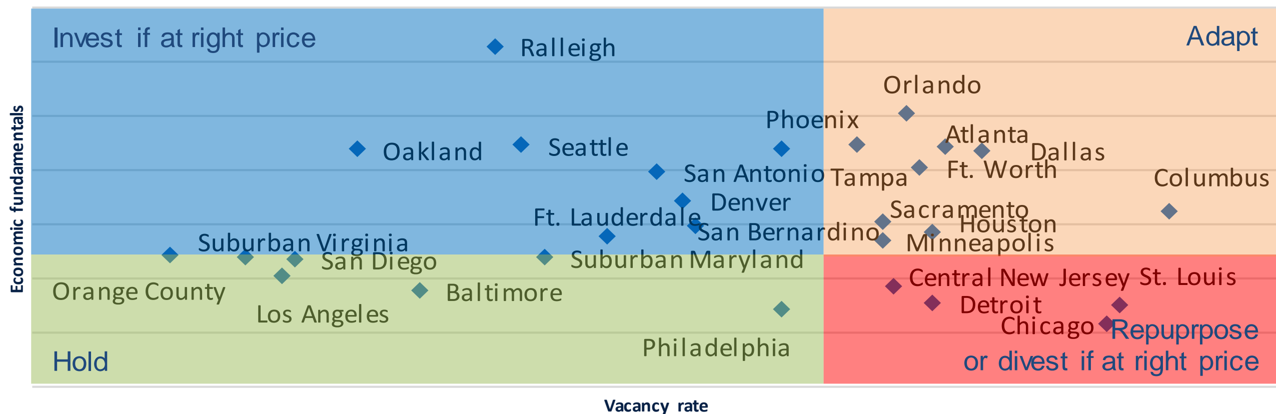
Fight, flight or adapt?

Technology is causing a major shift in retail, leading to a less real estate intensive industry. At the same time, consumer preferences are also moving away from shopping for physical products to experiences and entertainment, which requires different real estate solutions. On top of this, consumer economics are also changing, as is population overall. The question that every investor and lender is asking is how to adapt to the new environment. One simple tool used in business strategy analysis, which can provide a starting point in this case, is the so-called BCG matrix. It was originally applied to product portfolio selection and optimization, and can be adapted to provide indicators for relative location attractiveness and strategy differentiation using the factors discussed above. An illustrative example using the data for a selection of major cities is provided in Figure 7.14.

The implications of the tool are the following: locations that have strong economic fundamentals (population and income growth) and a low vacancy rate are likely going to need more investment in retail CRE and could provide an attractive and relatively low risk investment if priced right. On the other hand, locations that have weak economic fundamentals and high vacancy rates should be repurposed or divested if feasible, in order to limit risk exposure. Locations that have weak economic fundamentals, but low vacancy rates can still be profitable, although investments there could have a higher risk profile. Last but not least, locations with high vacancy rates but strong economic

fundamentals warrant an investment that would allow them to adapt to the new preferences and needs of the customers, which could range from a basic redesign to redevelopment into a mixed-use site. These generic strategies need to be further refined when applied in practice, as each location has its own specifics and every property is unique and influenced by a number of factors not taken into consideration in the tool.

Figure 7.14 Relative attractiveness and generic strategy identification tool (illustrative)



Source: BBVA Research

Bottom line

Retail is undergoing a profound transformation driven by demographics, changing consumer preferences and new technologies. The industry will become less real estate intensive although many locations will continue experiencing strong demand, as even online retailers like Amazon open stores in strategic places. Retail CRE operators and investors need to take into account a large number of location specific factors when developing their strategy. The starting points are relative supply and demand, income and population growth. Locations with high relative supply and low population and income growth are at highest risk as retail evolves. The adaptation will be property-specific and ranges from attracting a different mix of retailers to repurposing the properties. With customers ever more interested in experiences rather than physical products, the demand for conveniently located services will remain strong, but retail CRE will have to change in order to meet the challenge.

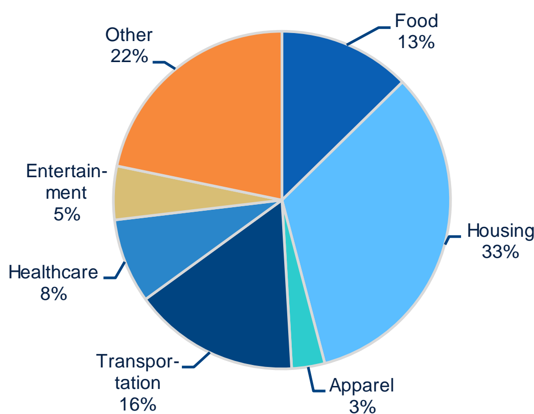
8. U.S. food service industry: digitalization and the redefinition of convenience

Preferences, demographics and technology are constantly shaping the way restaurants interact with their customers. Today, Americans are eating more at home, but they are cooking less. This article focuses on the implications of this trend for restaurants in the fast food, casual and fine dining segments.

Food away from home: a changing but enduring love

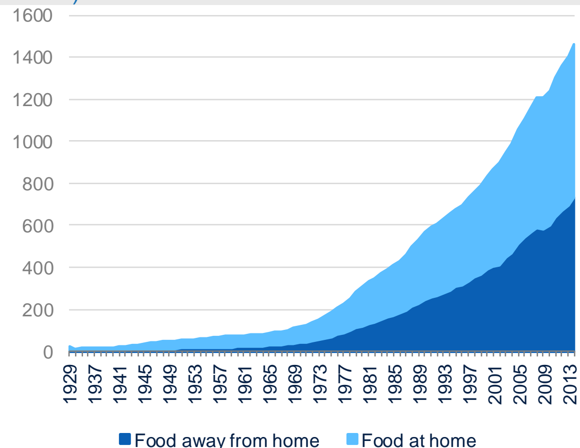
We cannot exaggerate the importance of food away from home in the American diet. In 2016, American households devoted an average of $3,154, nearly 44%of their food expenditures, on restaurants and special food services.[22] This is the largest share on record. Most Americans would agree that food away from home is first and foremost convenient. Yet, structural changes have modified the notion of convenience through the years.

Figure 8.1 Average annual expenditures by category (all consumer units, share of total)



Source: BBVA Research and BLS Consumer Expenditure Survey

Figure 8.2 Total expenditures on food ($ billion)

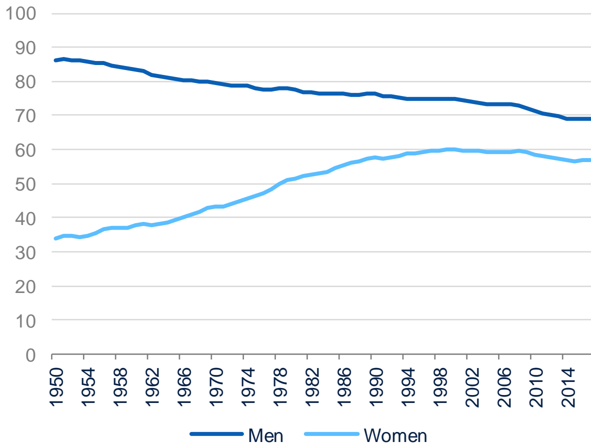


Source: BBVA Research and U.S. Department of Agriculture

Between 1970 and 2000, the rapid incorporation of women into the labor force increased the amount of households with two income earners. The average size of households declined. The expansion of sub-urban life implied longer commuting times. Families found themselves with more disposable income, but less time to prepare and consume meals at home. As a result, the demand for food away from home surged and so did the number of food service chains. In this stage, convenience was associated primarily with speed. These were the golden decades of fast food names such as McDonalds and Burger King.

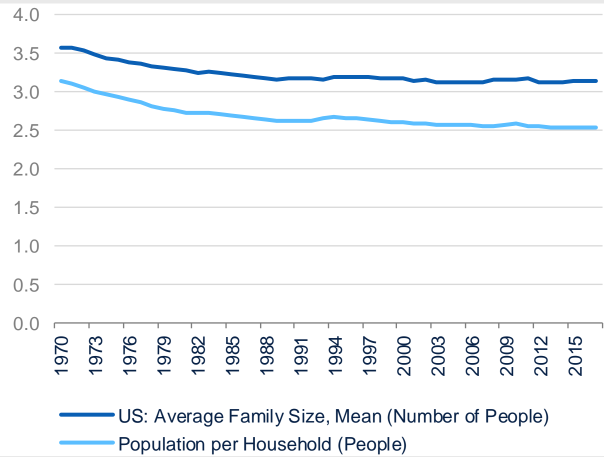
22: Source: BLS Consumer Expenditure Survey

Figure 8.3 Labor force participation rate (%)



Source: BBVA Research and BLS

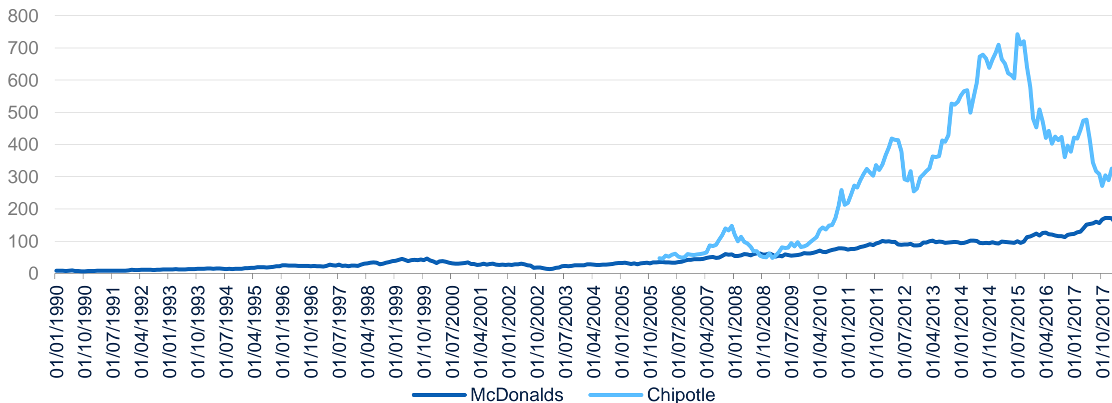
Figure 8.4 Average size of U.S. households



Source: BBVA Research and Census Bureau

In the 2000s, increasing health awareness created a robust demand for attributes such as organic, fresh, non-GMO, and gluten-free. Consumption of meat went down. Restaurants adapted to these changes by adjusting their menus to incorporate healthier options. Vegetarian and vegan alternatives became more frequent. The concept of casual dining restaurants emerged. In particular, fast-casuals started offering meals of higher quality and moderately higher prices than the typical fast food chain. Their value proposition consisted on simple meals prepared on-site and in front of the customer, to be eaten in the establishment or to be taken away. Like in fast food chains, staff was kept at minimum, but was better trained and engaged. Many of these fast-casuals were committed to source ingredients from organic or local producers when possible. Panera and Chipotle are two prominent examples of this segment. The later saw exponential growth between 2006 and 2015 until a series of salmonella outbreaks and increasing competition undermined its momentum. In this stage, the notion of convenience evolved to incorporate not only the notion of speed but also wellness.

Figure 8.5 McDonalds & Chipotle historical stock price ($)



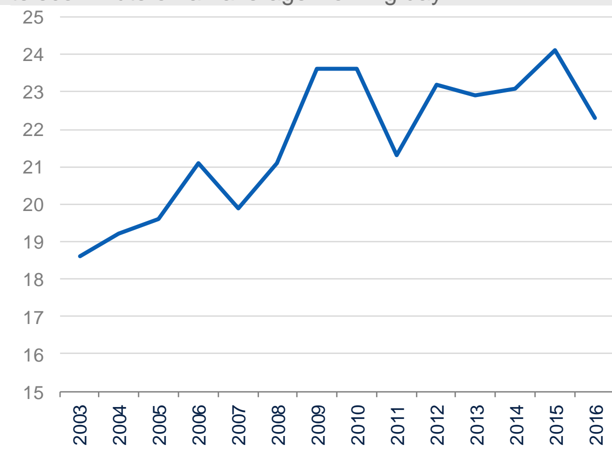
Source: BBVA Research and Bloomberg

Food away from home…to stay at home

A third wave of change is currently underway: Americans seem to be spending more time at home. The reasons are multiple: First, telecommuting has become more frequent. In 2016, the American Time Use Survey (ATUS) showed that, on an average day, 22.3% of participants with a job reported to work from home. This is 20% more than in 2003.

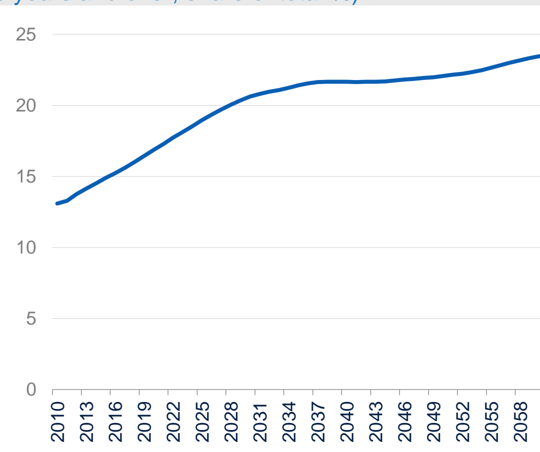
Second, there are more options for entertainment at home. According to the information and measurement company Nielsen, out of the 118.4 million TV homes in the country, 34% are connected to some type of streaming player device like Apple TV, Amazon Fire, Google Chromecast or Roku. On average, households use these devices 15 days of the month for three and a half hours per day.[23] The use of TV connected devices is projected to grow quickly as media and streaming companies compete for household screens, which also include smartphones and tablets. In addition, 37 million households own a game console that is used to play video games or stream video an average of 15 days per month for more than four hours per day. This is consistent with evidence from ATUS showing that, between 2003 and 2016, the time spent on playing games and using the computer for leisure activities went up 50% and 31% respectively.

Figure 8.6 ATUS: percent of participants that telecommute on an average working day



Source: BBVA Research and BLS

Figure 8.7 Resident population projections (65 years and over, share of total %)



Source: BBVA Research and Census Bureau

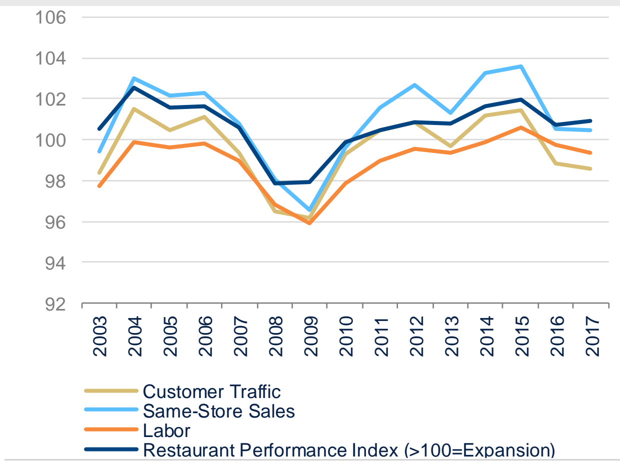
Third, the population is aging. By 2028, U.S. residents 65 years and older will account for 20% of the population (from 13% in 2010). In general, an older population spends less time on activities outside home. The aging of the population also implies that a larger portion of a household's budget will be dedicated to healthcare and special food services (e.g. nursing home cafeterias) at the expense of restaurants and other categories. On a per-capita basis, healthcare spending for the elderly is almost three times higher than for the working population.[24]

Yet, despite staying longer at home, Americans don't seem to be cooking more. The Restaurant Performance Index posted its seventh consecutive year of expansion in 2017, a trend that is confirmed by personal consumer expenditures on food services (adjusted for inflation). Yet, restaurant traffic has declined in recent years, according to

23: Nielsen, "TV Connected Devices Pave the Way For New Ways to Watch Content." http://www.nielsen.com/us/en/insights/news/2017/tv-connected-devices-pave-the-way-for-new-ways-to-watch-content.html
24: Source: Centers for Medicare and Medicaid Services

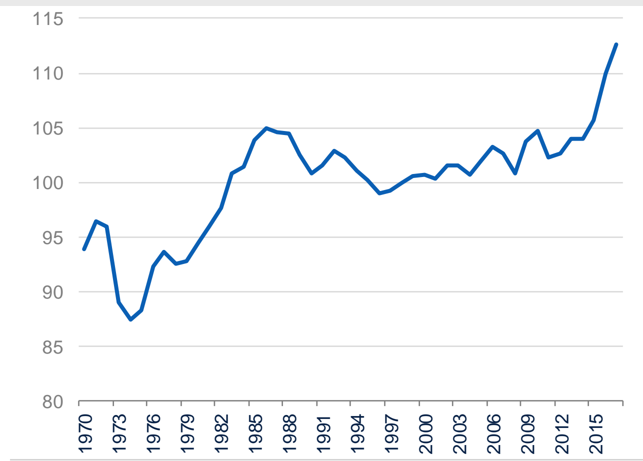
the above mentioned index. Meanwhile, prices of food away from home are at an all-time high relative to food at home, which is also an indication of robust demand for food services.

Figure 8.8 Restaurant performance index



Source: BBVA Research and National Restaurant Association

Figure 8.9 CPI-Food away from home / Food at home

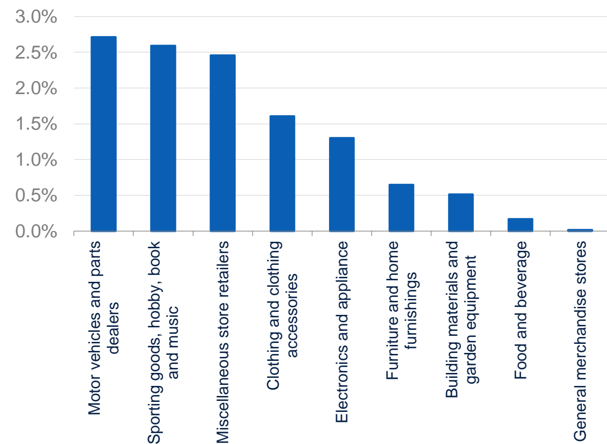


Source: BBVA Research and BLS

The above mentioned trends confirm that Americans are spending more time at home, cooking less and buying more food outside. This seemingly conflicting behavior makes sense when we consider the increasing use of digital technologies. Digitalization has reached the food service industry by enabling on-line ordering and more efficient delivery. It explains the emergence of complementary delivery services like Seamless, Doordash, UberEATS and GrubHub. Digital computing technologies have introduced the food service industry to the world of e-commerce, whose penetration is still low relative to other sectors like apparel or electronics, suggesting that most of the benefits are yet to be reaped.

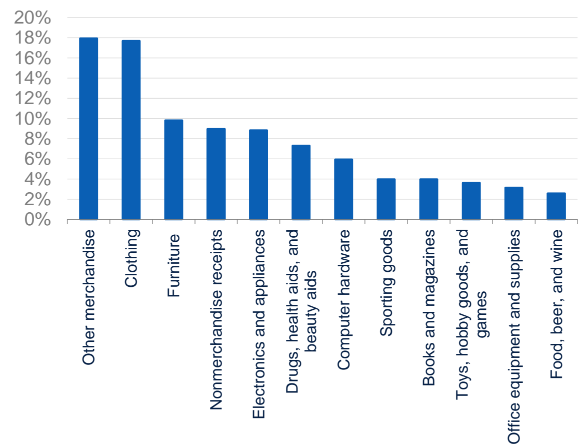
However, the digital economy has also allowed supermarkets to compete directly with restaurants and facilitated the emergence of new business models. In the first case, some supermarkets have been able to incorporate on-line shopping and pick-up services that include prepared food. Meanwhile, independent same-day grocery delivery services like Instacart, Shipt and Peapod have appeared, saving customers the time to visit the supermarket. The recent acquisition of Whole Foods by Amazon is indicative of the possibilities that e-commerce platforms can bring to supermarkets. Meanwhile, new companies delivering fresh, cooked or pre-cooked meals have also made their mark in this new landscape. Plated, Blue Apron or Hello Fresh deliver fresh food and recipes with customized plans and flexible schedules.

Figure 8.10 E-commerce
(share of total retail sales excl. non-store retailers)



Source: BBVA Research and Census Bureau

Figure 8.11 E-commerce
(share of total electronic and mail-order houses)



Source: BBVA Research and Census Bureau

Fast, good and extremely portable

What does the future of food services look like?

For **fast food chains,** increasing health awareness, the expansion of fast casual restaurants and more Americans eating off-premises are some of the most important challenges. Going forward, the fast food industry is expected to continue incorporating healthy and gourmet items into their menus. In addition, they are also expected to continue improving the variety, portability, and availability of breakfast offerings. McDonalds all-day breakfast best illustrates this strategy. Its implementation, back in 2015, helped revert three years of same store sales contraction. Fast food chains will increasingly move to on-line ordering and delivery. An example of this trend is Domino's Pizza, which has redefined itself as a delivery service and invested in technology that allow customers to order on-line (sometimes with no address) and follow their pizzas through the different stages of production and distribution. Fast food chains will try to erase the line between them and fast casual restaurants by increasing customization. They will also become faster through the adoption of automation (self-serve kiosks) and pay in advance systems. Because the domestic market is saturated and there is an intense competition from existing and new players, fast food chains will continue to look into emerging markets for further growth.

Fast and Fine Casual Restaurants. For many years, the casual segment exhibited the fastest growth in the food service industry. However, the market has already matured. Barriers of entry are low, which have enabled fast food chains and supermarkets to compete effectively, particularly with fast casuals. Nevertheless, the concept of "casual" (that incorporates attributes such as fine-décor, speed, simplicity, creativity and affordability) will remain popular among consumers, particularly among Millennials, who have the highest level of per-capita meals purchased at restaurants. The challenge, therefore, is how to differentiate in an already congested industry.

This is where casual meets fine dining. Going forward, it is expected that an increasing number of fast casual restaurants will start offering higher quality and more sophisticated meals –often designed by renowned chefs, who

may also share ownership of the restaurant. Meanwhile fine casuals will try to appeal to customer looking for pre-order and take away options. The merge serves two purposes; on the one hand, it meets the expectations of customers who expect more quality but remain price sensitive, and on the other hand it protects profitability by charging a premium over higher quality meals and additional services. Enhancing delivery and digital capabilities will be a critical part of successful strategies not only to face the tendency towards dine off-premises, but also to have a better understanding of the customer behavior through the use of big data analytics.

Although Millennials will still be the most important customers for casual restaurants, the aging of the population opens the door to niche markets like meals specifically crafted for elderly people. This is the case of “Engay foods”, easy to swallow meals aimed at preventing elderly people to accidentally die from choking. Engay foods were first developed in Japan, the country with the highest share of people 65 years and older, and where deaths from choking surpass those from traffic accidents.

Fine Dining. This segment is influenced primarily by trends in personal income and wealth. Affluent customers spend at least 50% of their food budget away from home. Customers in this segment are less interested in convenience and simplicity and more on the experience of tasting a sophisticated meal with personalized service in a pleasant atmosphere. The success of this segment is also linked to geography as high-income earners tend to concentrate in major metropolitan areas. Going forward, wealth and corporate profits are expected to increase, supporting the demand for fine dining. Like their counterparts in the fast food and casual segments, restaurants in fine dining are also expected to invest in technology, but with a marketing purpose in mind as opposed to on-line ordering and delivery. This is because the youngest customers tend to search for these restaurants on-line.

To sum up, restaurants have been challenged by a redefinition of convenience that involves not only affordable and healthy food, but also food that can be easily ordered and consumed off-premises. Digitalization is the answer to this challenge. However, this has also strengthened the ability of supermarkets to compete directly with restaurants, while also allowing the introduction of complementary and disruptive business models that operate entirely on-line. In this environment, the most successful restaurants will be those that are not only creative and put more emphasis on quality and wellness, but also those that invest in cutting-edge technology as well as data analytics to maximize customer experience, while focusing on niche markets (healthy eating, ethical food, elderly, etc.). In the not too distant future, the restaurant industry could be an intensive user of breakthrough technologies like artificial intelligence (e.g. to automate certain processes or anticipate customer behavior) or blockchain (e.g. to track the safety, quality and sustainability of food inputs at every stage of the supply chain). Competition promises to be fierce, but consumers will be the ultimate winners.

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9. Forecasts

Table 9.1 U.S. Macro Forecasts

	2012	2013	2014	2015	2016	2017	2018 (f)	2019 (f)	2020 (f)	2021 (f)	2022 (f)
Real GDP (% SAAR)	2.2	1.7	2.6	2.9	1.5	2.3	2.8	2.8	2.5	2.3	2.1
Real GDP (Contribution, pp)											
PCE	1.0	1.0	1.9	2.5	1.9	1.9	2.1	1.8	1.6	1.5	1.4
Gross Investment	1.6	1.0	0.9	0.9	-0.3	0.6	0.8	1.1	0.9	0.8	0.7
Non Residential	1.1	0.4	0.9	0.3	-0.1	0.6	0.8	0.9	0.7	0.6	0.6
Residential	0.3	0.3	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1
Exports	0.4	0.4	0.6	0.1	0.0	0.4	0.7	0.8	0.7	0.7	0.6
Imports	-0.4	-0.2	-0.7	-0.8	-0.2	-0.6	-1.2	-1.1	-0.9	-0.8	-0.7
Government	-0.4	-0.5	-0.1	0.2	0.1	0.0	0.2	0.2	0.2	0.1	0.1
Unemployment Rate (%, average)	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.6	3.7	4.0	4.3
Average Monthly Nonfarm Payroll (K)	186	183	214	240	211	190	201	192	160	122	94
CPI (YoY %)	2.1	1.5	1.6	0.1	1.3	2.1	2.7	2.7	2.5	2.4	2.3
Core CPI (YoY %)	2.1	1.8	1.7	1.8	2.2	1.8	2.3	2.5	2.4	2.4	2.3
Fiscal Balance (% GDP)	-6.8	-4.1	-2.8	-2.4	-3.2	-3.6	-3.9	-5.3	-4.9	-4.8	-5.1
Current Account (bop, % GDP)	-2.6	-2.1	-2.1	-2.4	-2.4	-2.4	-2.6	-2.8	-2.9	-3.0	-3.0
Fed Target Rate (%, eop)	0.25	0.25	0.25	0.50	0.75	1.50	2.50	3.00	3.00	3.00	3.00
Core Logic National HPI (YoY %)	4.0	9.7	6.8	5.3	5.4	5.9	6.3	6.2	6.1	6.3	6.3
10-Yr Treasury (% Yield, eop)	1.72	2.90	2.21	2.24	2.49	2.40	3.14	3.61	3.78	4.12	4.12
Brent Oil Prices (dpb, average)	111.7	108.7	99.0	52.4	43.6	54.3	65.9	64.1	62.1	61.5	60.0

(f): forecast
Source: BBVA Research

Table 9.2 U.S. State Real GDP Growth, %

	2013	2014	2015	2016	2017	2018 (f)	2019 (f)	2020 (f)	2021 (f)
Alaska	-4.4	-3.6	0.3	-5.4	-0.8	1.0	1.1	0.2	0.2
Alabama	0.9	-0.3	1.5	1.5	3.0	2.1	2.2	1.9	1.7
Arkansas	2.9	1.4	0.5	0.9	2.8	2.5	2.7	2.4	2.2
Arizona	0.5	1.8	2.0	2.6	2.5	1.8	1.8	2.1	2.0
California	2.5	4.2	4.4	3.3	2.5	3.9	3.8	3.3	3.0
Colorado	3.2	4.8	3.4	1.1	3.4	3.2	3.1	3.0	2.8
Connecticut	-1.4	-0.7	1.9	0.0	-1.0	1.3	1.5	1.0	0.7
Delaware	-1.4	5.4	2.8	0.1	2.8	2.7	3.0	2.8	2.5
Florida	2.1	2.8	3.9	2.4	2.7	3.6	3.5	3.2	2.9
Georgia	1.4	3.3	3.1	3.0	2.6	2.9	3.1	2.7	2.6
Hawaii	1.1	1.1	3.2	1.9	2.0	2.6	2.6	2.3	2.0
Iowa	0.5	3.8	4.0	1.6	0.1	1.7	2.6	2.4	2.2
Idaho	2.9	2.4	3.0	2.7	3.3	4.8	2.7	3.9	3.9
Illinois	-0.3	1.8	1.2	1.0	0.8	2.1	2.3	2.0	1.8
Indiana	2.4	2.5	0.8	2.5	2.2	2.4	2.6	2.4	1.9
Kansas	0.2	2.0	1.1	-0.9	0.1	2.4	1.8	1.6	1.3
Kentucky	0.9	0.5	1.0	1.2	2.0	1.4	2.0	1.8	1.5
Louisiana	-3.4	2.1	0.6	0.2	1.2	2.6	1.7	1.2	1.0
Massachusetts	-0.2	1.8	3.8	1.5	2.4	2.7	3.0	2.7	2.4
Maryland	0.2	1.3	1.9	2.5	1.4	1.6	1.7	1.3	1.1
Maine	-0.6	1.7	0.8	1.6	1.2	0.7	0.9	0.6	0.5
Michigan	1.4	1.6	2.9	2.2	3.0	1.6	1.8	1.4	1.5
Minnesota	2.1	2.8	1.5	2.1	2.8	2.5	2.6	2.4	2.2
Missouri	1.6	0.3	1.5	0.3	0.6	1.2	1.3	1.0	0.7
Mississippi	0.6	-0.9	0.2	1.2	1.5	1.3	1.0	0.7	0.5
Montana	0.7	2.7	2.3	1.1	1.1	2.6	2.9	2.6	2.4
North Carolina	1.7	2.1	2.7	1.9	2.4	2.3	2.2	1.9	1.9
North Dakota	2.4	7.2	-2.5	-5.0	0.5	4.1	4.1	4.4	4.3
Nebraska	2.5	3.7	2.1	0.9	0.2	2.6	2.7	2.4	2.2
New Hampshire	0.6	1.8	2.6	1.6	1.0	1.4	1.9	1.2	1.1
New Jersey	1.4	0.2	1.1	0.7	0.5	1.5	1.3	0.9	0.5
New Mexico	-1.0	2.8	1.6	0.2	1.9	1.5	1.8	1.4	0.7
Nevada	0.5	1.7	3.5	1.4	2.6	3.9	3.9	3.4	3.3
New York	-0.3	1.7	2.0	0.4	1.5	2.0	2.1	1.9	1.7
Ohio	1.0	3.3	1.1	1.1	2.0	1.9	1.9	1.7	1.6
Oklahoma	4.4	5.6	3.1	-4.1	1.7	3.0	3.2	2.9	2.7
Oregon	-2.0	1.9	4.8	3.8	2.1	2.4	2.8	2.5	2.1
Pennsylvania	1.6	2.0	2.3	0.6	1.6	1.8	2.1	1.8	1.6
Rhode Island	0.4	0.9	1.9	0.5	1.0	1.0	0.9	0.6	0.4
South Carolina	2.0	3.0	3.1	1.8	2.5	2.2	2.4	2.3	1.9
South Dakota	1.1	0.9	2.8	0.7	-0.7	3.1	3.1	2.7	2.4
Tennessee	1.6	1.7	3.0	2.9	2.2	2.4	2.2	2.1	1.9
Texas	5.1	3.5	4.2	-0.3	4.9	4.6	4.5	4.1	3.7
Utah	2.5	3.5	4.1	3.7	3.5	3.2	3.5	3.3	3.1
Virginia	0.0	0.2	2.2	0.5	1.7	1.1	1.0	0.7	0.5
Vermont	-0.2	0.5	0.9	0.7	1.1	2.4	2.3	1.8	1.5
Washington	2.4	3.2	3.7	4.2	4.0	3.4	3.5	3.2	3.0
Wisconsin	1.3	1.5	2.1	1.3	1.7	1.8	2.1	1.8	1.6
West Virginia	0.5	0.6	0.7	-1.1	2.5	1.7	1.4	1.2	1.0
Wyoming	1.0	0.4	0.6	-1.8	1.9	1.1	1.2	1.3	2.0

(f): forecast
Source: BBVA Research

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