

United States Economic Outlook

Third quarter 2019



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Closing date: August 2, 2019

1. Editorial

The exponential growth of the digital economy in the last 20 years has had profound effect on the lives of billions of people around the globe, and has led to an environment where the “winner takes all.” The interaction between economies of scale and scope, within and cross-market network effects, platform economics, low or zero marginal costs, switching costs, attractiveness to talent, strong user brands and geographic clusters have led to a “tipping point”. Not surprisingly, the national debate on how to deal with these challenges continues to intensify. In fact, at the end of July, the Department of Justice and the Federal Trade Commission announced a broad antitrust review of tech giants. What is motivating increasing government scrutiny?

A few tech firms have amassed substantial market power, mainly stemming from the vast amount of data that they collect and control. In the U.S., Google captures 75% of all search ad revenues, Facebook controls 83% of social ad spending, Microsoft accounts for 67% of game consoles and Amazon's e-commerce market share is about 38%. Globally, Amazon dominates one-third of the cloud infrastructure services market, Google's market share in search engines is 92% and Facebook accounts for 74% of social media. The combined market capitalization of these four firms represents around 16% of U.S. GDP and is larger than the economies of France, the U.K. and India.

Conventional economic theory states that monopolies cause harm through noncompetitive pricing behavior by restricting output and delivering lower quality products or services. Critics of tech giants contend that their increasing market power and concentration lead to lower competition and consumer welfare. For example, with the support of large cash balances, these data-opolies can easily acquire competitors; Facebook has acquired 72 companies, including WhatsApp, Instagram and Oculus for a combined cost of \$24bn. Meanwhile, with a comparative advantage in accessing and analyzing data, tech giants can crush emerging competitive threats by diverting traffic to their own products or making it more difficult for rivals to reach potential buyers. If these strategies fail, these firms can produce their own alternatives.

Although people can use digital platforms to monetize creative content, data-opolies can extract wealth from creators and users that would not have been possible in competitive markets. For example, companies can charge advertisement fees above competitive levels or under compensate content creators. In Europe, regulators have fined Google for three years in a row for abusing its dominance in the online advertising market and as a search engine, and for anti-competitive practices. Meanwhile, Amazon is under investigation for preventing fair competition.

However, supporters of minimal government intervention highlight the fact that these data-opolies often provide services at a low cost or that are seemingly free, and because of network effects and scale, the quality of the services they can deliver improves with the number of users. In addition, startups are encouraged by the possibility of being acquired, with many small firms competing in niches not served by big firms. Therefore, breaking up the incumbents could hurt innovation. Amazon, for instance, is the world's top-spender on R&D, and Google and Microsoft are among the top ten. If new technologies reduce barriers to entry and promote innovation, competition in other industries can flourish and consumer welfare will increase.

However, data privacy and consumer behavior are more troubling concerns for lawmakers' on both sides of the aisle. Lawmakers fear situations where privacy protection tools fail and personal data collection has no restrictions. Another concern of lawmakers is the addictive power of social media and digital technologies, which influence and affect user's moods. In fact, some studies have found experimental evidence of massive-scale emotional contagion via social

networks. This raises concerns of behavioral manipulation, which implies selling goods that consumers do not need at higher prices.

Given that information is filtered and content can be controlled or blocked there is a higher risk of creating biases, enforcing censorship and promoting particular political viewpoints, which can impact how people vote. Opaque privacy policies increase the vulnerability to domestic and foreign threats, covert surveillance, or systemic data breaches. In other words, there is an increasing fear of the power that these firms have to influence democracy.

Policymakers are debating the benefits and risks of digital monopolies. While technological changes that created new markets and players led to lower market dominance of IBM's hardware market and Microsoft's operating system and browser, there is no assurance that the same will occur in a world dominated by data analytics, artificial intelligence and machine learning. Proponents of regulatory changes advocate for data mobility, open standards, data openness and better merger policy. There are important lessons from the past. When regulatory changes promoted competition in the electricity sector or enforced phone number portability, national uniformity of credit reporting guidelines and e-mail standards, innovation, competition, quality, and affordability improved. In the current environment, this would equate to giving users control of their data and the ability to change providers. In addition, antitrust and merger policy need to consider the potential risks from allowing tech giants to enter other sectors such as healthcare or finance without a level playing field.

More extreme alternatives like breaking up tech giants may be counterproductive, particularly if market dominance is an efficient outcome. In addition, without national champions, foreign competitors will fill the space left behind. Therefore, a case-by-case and incremental approach seems like a better alternative to regulate big tech, particularly given the elevated uncertainty of what lies ahead in a fast-paced and dynamic environment. As Stephen Hawking once said, "The rise of powerful AI will be either the best or the worst thing ever to happen to humanity. We do not know which."

Governments are also concerned about protecting stakeholders and the responsible and ethical use of individual's private data while also balancing the right to free speech and the need to prevent the dissemination of false or hateful information.

The negative consequences that tech clustering has on communities is a concern of policymakers -lower housing affordability and high homelessness in certain geographies. In addition, artificial intelligence and automation are displacing labor. This could lead to the expansion of what Y. Harari calls a "useless" class of people that offer no economic value to society. This requires a careful analysis of the effects these trends will have on consumption, employment, tax revenues and investment, as well as potential remedies such as apprenticeships, learning accounts and universal income, and ways to fund these programs like a robot tax, conditional unemployment benefits and private sector collaboration.

The U.S. can learn important lessons from Europe's General Data Protection Regulation and from several other countries that have passed similar laws. Ultimately, comprehensive federal legislation requires a strong focus on integrity, transparency, fairness, accuracy, confidentiality and accountability. If tech companies adhere to these basic principles when handling data, consumers will benefit with little downsides.

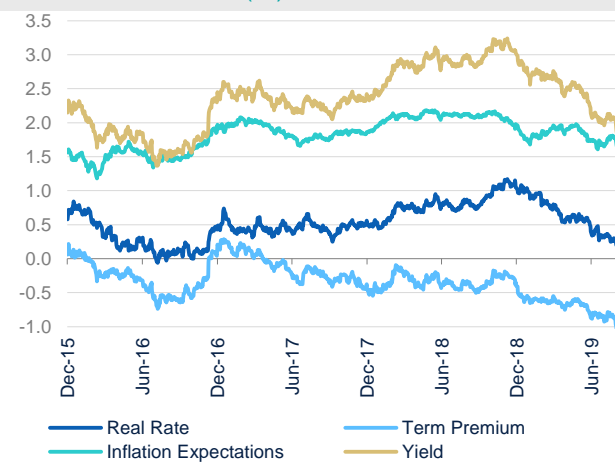
2. Record setting U.S. expansion on the ropes

As of July, the U.S. has officially been in the longest economic expansion of modern times. However, since the first quarter of this year, doubts about the sustainability of that expansion have risen. Fears of foreign crosscurrents, trade policy uncertainty, and the subdued inflation outlook have grown globally, prompting a dovish tilt in global monetary policy. However, labor markets remain healthy while financial conditions, business and consumer optimism have improved domestically.

In spite of the fact that the U.S. economy continues to expand and that post-war expansions are unrelated to longevity, the Fed embarked on its first rate-cutting regime since 2007. As long as trade policy remains the elephant in the room, the Fed's commitment to do "whatever it takes" to sustain the expansion should be enough to fend off the risk of recession...for now. As a result, our views on the prospects for economic growth in 2019 and 2020 have not changed. Nonetheless, risks remain skewed to the downside.

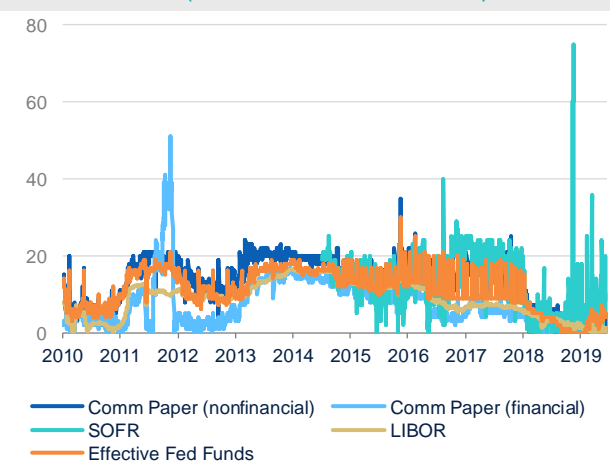
Global financial markets conditions have been mixed given the countervailing currents of increased risks of a "no-deal" Brexit and with whipsawing on the trade front. In spite of this, domestic equity performance has been solid. Second-quarter earnings and corporate guidance was also more upbeat than in the first quarter, even as policy uncertainty remained elevated. Furthermore, the risk of a fiscal showdown declined, as the preliminary agreement reached between the White House and Congressional leadership reduced the threat of pushing the debt ceiling negotiations to the brink. The dollar was up slightly over the quarter, as weaker growth abroad and risk-off sentiment generated by the elevated trade tension increased the demand for U.S. assets.

Figure 2.1 **10-YEAR TREASURY YIELD DECOMPOSITION (%)**



Source: BBVA Research, ACM & Haver Analytics

Figure 2.2 **SHORT-TERM INTEREST RATE DISPERSION (BP RELATIVE TO IOER)**



Source: BBVA Research & Haver Analytics

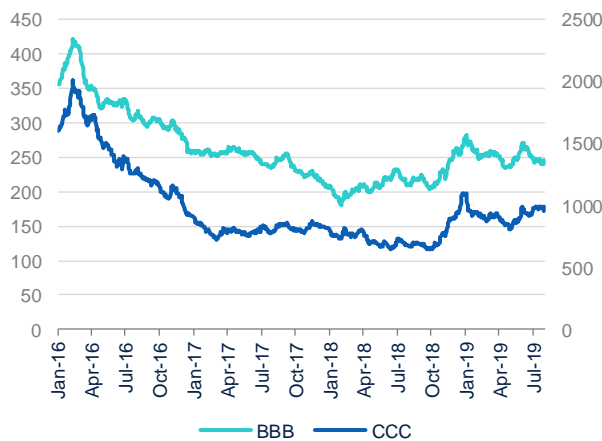
Although leverage remains high in several domestic sectors, systemic financial risks seem contained. Supply-side credit conditions remain favorable, as the appetite for loan growth in the C&I and residential mortgages segments remains positive while pro-cyclical categories such as credit cards, consumer loans, and autos tightened somewhat, reflecting growing late-cycle concerns among financial institutions. Moreover, the Fed Senior Loan Officer Survey

suggests that demand for retail and commercial credit has responded aptly to increased risks of an economic downturn, with a majority of respondents indicating waning demand. Similarly, spreads on the riskiest corporate credit have widened relative to other higher-quality categories. For example, spreads on CCC-rated debt relative to its nearest tranche (BBB+) of high yield corporate debt increased 100bp. Alternatively, spreads on AAA-rated corporate debt has declined somewhat after rising in June, as expectations for greater monetary accommodation have eased fears of a major contraction in market liquidity.

U.S. Treasury yields continue to reflect growing late-cycle fears and a more moderate investment outlook, as yields on the 10-year Treasury remains below two percent, which is the first time since 2016, a period when benchmark rates were 2 percentage points lower than they are today. The term premium also remains at historically low levels in spite of the prevailing market view that the Fed will lower rates by at least 75bp this year. On short-term rates, the expectations of adjustments in the path of monetary policy continue to explain the bulk of the movement in short-term rates, with three-month and six-month yields anchored around the benchmark interest on excess reserve (IOER). Alternatively, the belly of the yield curve has adjusted even further to the downside, reflecting the more dovish interest rates outlook, rising global policy uncertainty and market expectations for additional rate cuts over the next 12-24 months.

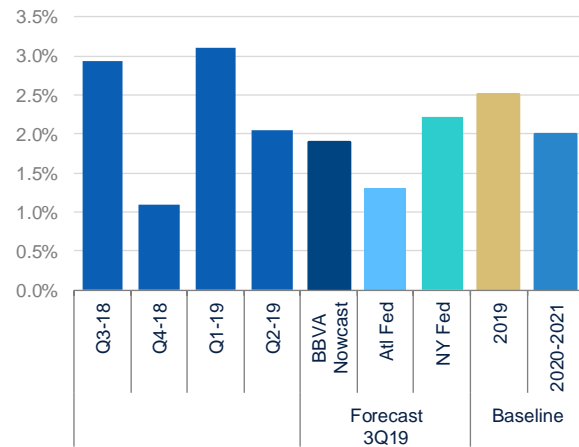
While the slope of the yield curve should steepen with a change in the path of monetary policy, our baseline assumes that the difference between the 10-year Treasury and the 3-month and six-month will remain flat or slightly negative throughout the remainder of 2019. In fact, stronger inflation data, a resilient consumer, and a more positive domestic macro environment will reduce market expectations for monetary easing this year, potentially increasing the downward pressures on the yield curve slope. That being said, the increasing trade tensions and weaker global growth expectations have increased the downside risks to the yield curve.

Figure 2.3 **HIGH-YIELD CORPORATE SPREADS (BP)**



Source: BBVA Research & Haver Analytics

Figure 2.4 **REAL GDP (QoQ SAAR, %)**



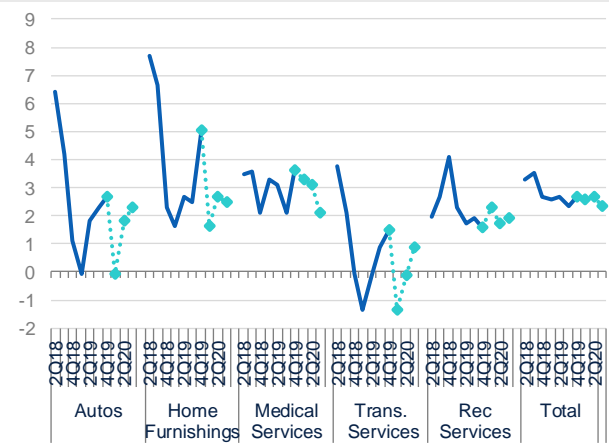
Source: BBVA Research, NY Fed, ATL Fed, Haver Analytics

Consumption resilient despite growing downside risks to private Investment

GDP growth decelerated to 2.1% QoQa in the second quarter from 3.1% QoQa in the previous period, in line with our view of continued growth moderation. In terms of the details, the data were mixed. On the one hand, consumption growth was the strongest since 4Q17, contributing 2.85pp to the top line figure. Similarly, federal, state and local government investment and consumption remained strong, adding 86bp to growth in the second quarter. In fact, the contribution from the federal government to growth was the highest since the last recession.

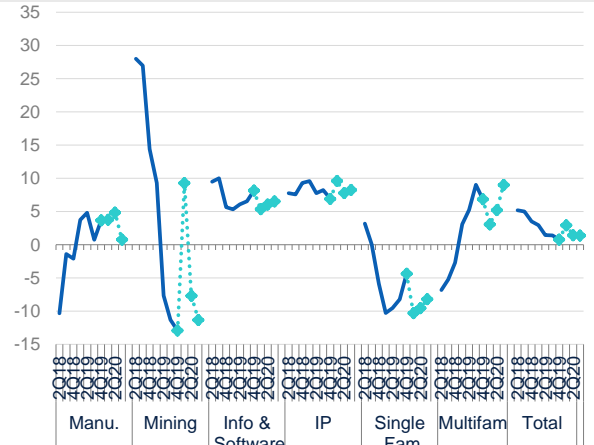
On the contrary, net exports and inventories whipsawed to the downside. Both nonresidential and residential investment contracted, marking the first time that these series were both negative contributors to economic growth since the financial crisis. A boost from lower interest rates and the fact that growth in residential investment was less negative than the previous quarter, suggests a possible upswing in the second half of 2019. However, with corporate optimism waning because of lower global growth expectations, omnipresent risk of a reescalation of trade tensions and late cycle fears, we do not anticipate a significant rebound in nonresidential investment going forward. In fact, private fixed investment conditions are reminiscent of 2016, a period in which the U.S. faced a moderate investment slump.

Figure 2.5 **REAL PRIVATE FIXED INVESTMENT (YoY%)**



Source: BBVA Research, BEA & Haver Analytics

Figure 2.6 **REAL PERSONAL CONSUMPTION EXPENDITURES (YoY%)**



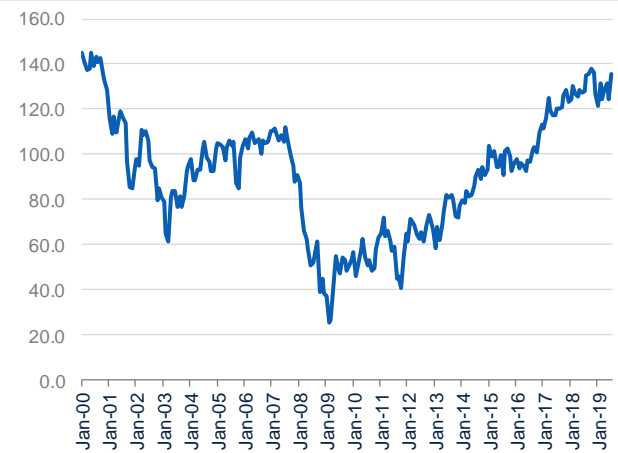
Source: BBVA Research, BEA & Haver Analytics

In the three-year revisions to the national accounts, growth was revised up by 40bp between 2014-2018, with the majority of the change coming in 2017 (15bp). That being said, 4Q18 GDP growth was revised down significantly to 1.1% QoQa. This revision is more consistent with our view at the time, which included a drag from the government shutdown and declining consumer expectations that were due to a significant drop in household wealth.

The tentative budget deal that suspends the debt ceiling through July 2021 and increases discretionary spending above 2019 levels by \$46.5 and \$56.5 billion for defense and non-defense respectively over the next two fiscal years, should be a positively growth. Without the agreement, discretionary spending was set to decline 3% fiscal year-over-year, which would have been a substantial drag on growth in 2020. Equally important, the deal alleviates some of the policy uncertainty that has been looming over the 2H19. While the devil remains in the details, the increase in discretionary spending relative to 2019 should add between 0.1-0.3pp to growth in 2020 and 2021.

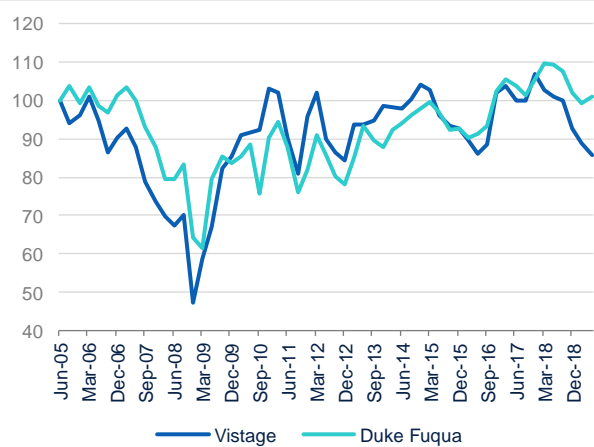
In addition, consumer confidence recovered strongly in July to levels not seen since before the equity market correction in 4Q18. Moreover, the rebound in July was the largest month-over-month change since 2011, possibly presaging stronger growth in 3Q19. Small business optimism is also high despite increased concerns of competition from large corporations and rising wages.

Figure 2.7 **CONSUMER CONFIDENCE**
(1985=100)



Source: BBVA Research & Haver Analytics

Figure 2.8 **DUKE FUQUA CFO & VISTAGE CEO CONFIDENCE SURVEYS** (2Q05=100)



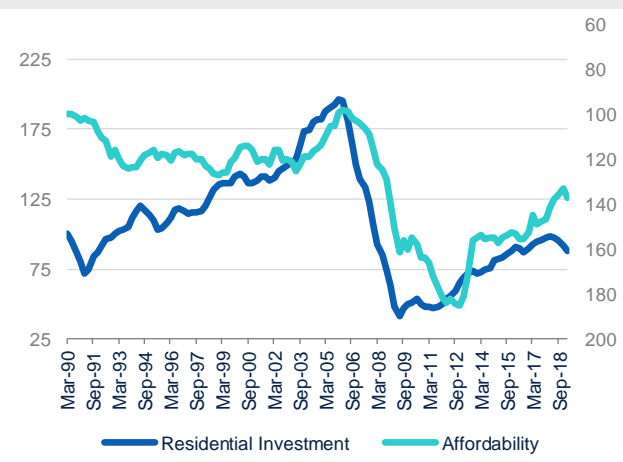
Source: BBVA Research, Vistage, Duke's Fuqua School & Haver Analytics

In terms of overall private fixed investment, we believe the weak second quarter will prove to be a harbinger of more unfavorable investment conditions going forward. Although our baseline assumes the correction will be shorter-lived than the 2016 investment slump. New orders of nondefense capital goods excluding aircraft have decelerated while the ISM manufacturing index continues to trend towards the threshold implying overall contraction in the manufacturing sector (+/-50). Moreover, a handful of C-suite surveys suggest expectations about future economic prospects are deteriorating. In fact, the Vistage CEO and the Duke Fuqua CFO survey are both trending near levels not seen since the industrial-manufacturing slump in 2016. As a result, in terms of private nonresidential fixed investment in 2019-2020, our baseline assumes growth will be roughly 3 percentage points lower than 2018 at 3.0% year-over-year.

Residential investment, on the other hand, appears poised for a rebound in 2H19. Lower interest rates and slower home price appreciation should improve affordability for homebuyers. In addition, despite some headwinds abroad, labor market conditions in the U.S. remain strong, and wages continue to rise, albeit at a slower pace than home prices. Lower market uncertainty and stronger household balance sheets should encourage bank lending, particularly in residential mortgages. As a result, we believe real private residential investment will be positive in 2H19, which will mark the first time since 2017 that residential investment was positive on year over year basis.

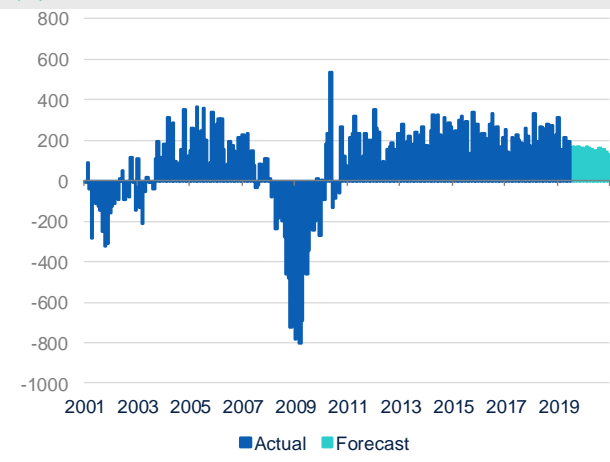
Ultimately, given the strong start to the year, positive impact from accommodative monetary and fiscal policy, lower financial tensions and improving optimism, we are maintaining our baseline forecast for GDP growth of 2.5% in 2019 and 2.0% in 2020.

Figure 2.9 **RESIDENTIAL INVESTMENT AND HOUSING AFFORDABILITY (INDEX 1990=100)**



Source: BBVA Research & Haver Analytics

Figure 2.10 **NONFARM PAYROLLS (K)**



Source: BBVA Research & Haver Analytics

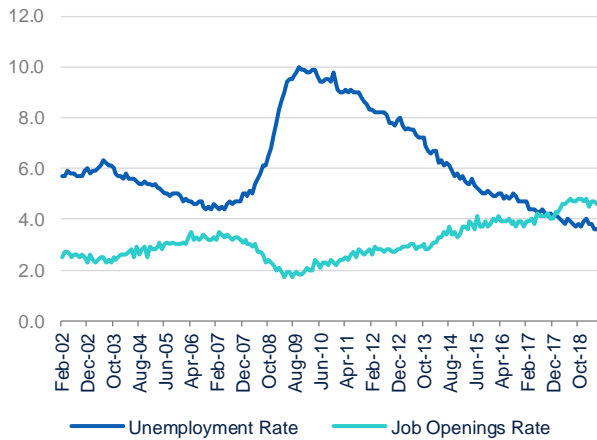
Broader labor market indicators showing signs of weaker growth prospects

In the latest employment report, the unemployment rate remained unchanged at 3.7% while nonfarm payrolls grew 164,000, after growing 193,000 in June, following a downward revision. A number of sectors such as professional and technical services (31K), health care (30K), social assistance (20K), and financial activities (18K) experienced strong monthly job gains. The labor force participation rate and the employment-population ratio were little changed at 63.0% and 60.7%, respectively. In addition, average hourly earnings accelerated slightly to 3.2% YoY. In terms of the broader industry trends, high skilled services such as professional business services and educational and health continue to do most of the heavy lifting.

In fact, broader labor market trends from the most recent report from the BLS suggests underlying conditions may be weaker than implied by the headline job creation figures. For example, the prime-age participation rate dropped to its lowest level since January of 2018 with 338K females leaving the labor force. Moreover, the average workweek fell to 34.3 hours, as wholesale trade, transportation and warehousing and manufacturing reached lows not seen since 2010-2011. That said, labor utilization (U-6) declined to 7.0% in July while overall wage growth regained some momentum after slowing in 2Q19, increasing 3.2% year over year.

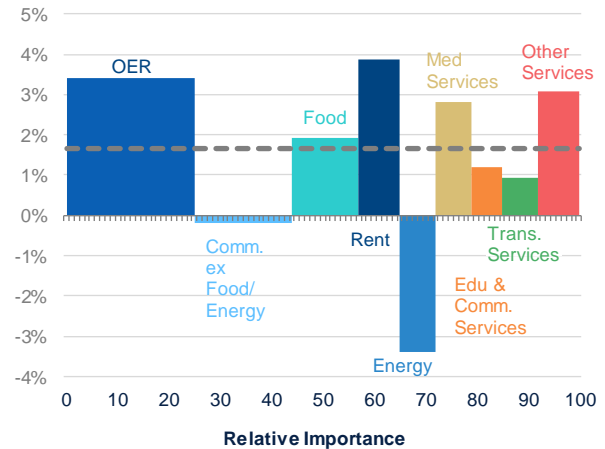
With manufacturing, wholesale trade and transportation struggling because of the trade tensions and slower global growth, and given the tepid outlook for business fixed investment, we anticipate the labor market will continue to improve, but at a more moderate pace; this implies adding between 150-175K jobs per month, on average for 2H19. In terms of the unemployment rate, we anticipate some modest pressures to the downside in the short-term, as the number of jobs created exceeds the amount needed to absorb new entrants. However, our baseline assumes the unemployment rate will remain close to 3.7% by yearend.

Figure 2.11 **UNEMPLOYMENT RATE & JOB OPENINGS** (INDEX 1990=100)



Source: BBVA Research & Haver Analytics

Figure 2.12 **CONSUMER PRICE INFLATION** (YoY %)



Source: BBVA Research & Haver Analytics

Inflation undershooting to persist

The widespread fears of a slowdown in inflation appear to be overdone. In June, headline CPI increased by a modest 0.1%, reflecting a 2.3% decline in energy prices and no change in food prices. However, core CPI rose 0.3%, the fastest pace since January 2018, underpinned by a 1.6% and 1.1% jump in prices of used cars and apparel, respectively.

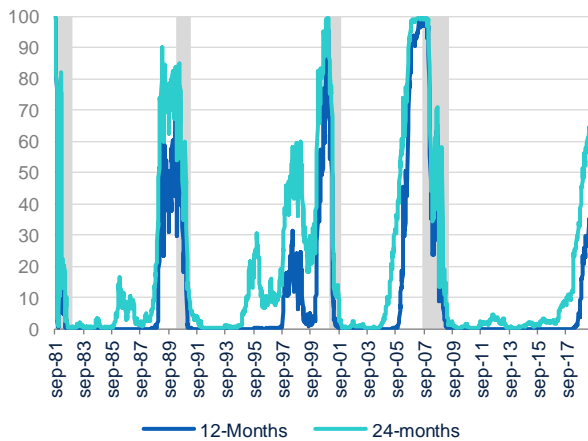
Meanwhile, core services increased 0.3% in June, boosted by a 0.4% in rent of primary residence and atypical increases in some other services like dental (1.1%). The former falls within the common monthly change in recent years while the latter matches the second-highest increase since at least February 1995. The 12-month change for core CPI was 2.1%, slightly higher than the 2% increase in the previous month. June's PCE data should also assuage some the Fed' disinflationary fears, as core PCE rebounded to 1.6%, after dropping below 1.5% in May. Steady growth in services and a bounce back in durables are positive signs heading into the 3Q19.

Assuming domestic demand conditions remain stable and supply-side pressures remain skewed to the upside, we believe Q4/Q4 core PCE will be closer to 1.7%. This implies CPI should be around 1.9% by the end of the year. In 2020, we continue to expect the transitory headwinds to fade with core PCE returning to slightly below two percent.

Monetary policy action may fall short in defusing global risks

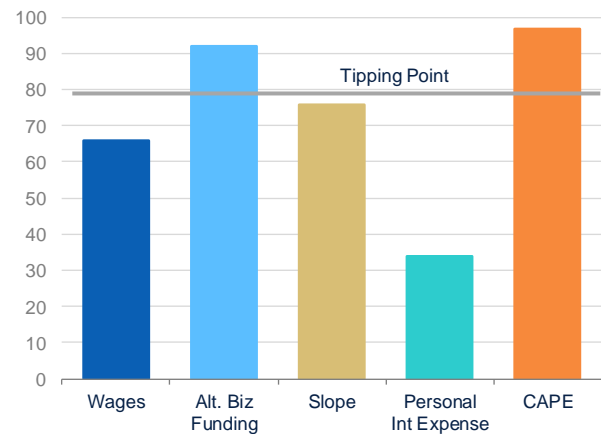
How the adjustments in monetary policy in the developed world impact emerging markets will have a significant impact on the prospects for growth in 2H19 from a risk perspective. In 2020, while the risk balance is skewed to the downside, we maintain our view that the U.S. will experience positive growth for the year. Based on incoming data, it appears the risk of recession remains elevated—38% and 69% over the next 12 and 24 months, respectively. Modest wage growth, relatively and low levels of consumer debt have been offset by higher financial and nonfinancial corporate leverage and an inverting yield curve. However, small, medium and systemically important banks continue to be well capitalized, with risk-based capital buffers at historic highs. Similarly, asset quality continues to improve with loan loss allowances and charge offs trending close to three-decade lows.

Figure 2.13 **PROBABILITY OF RECESSION (%)**



Source: BBVA Research

Figure 2.14 **RECESSION RISK FACTORS (PERCENTILE RANK)**



Source: BBVA Research

On the political front, it appears that the risk of a major standoff between the GOP and the Democrats over the debt ceiling and the 2020 budget has been overcome by the recent agreement between the White House and Congress. However, there remains a possibility that some political frictions resurface during the markups, appropriations, reconciliation in Congress, and during final negotiations between the White House and Congress. Moreover, the odds of President Trump being impeached have declined, but tensions are rising between the parties ahead of the 2020 election. As such, it is unlikely that either party will be willing to concede any victories to the opposing party so close to the presidential election. In light of this, we expect volatility and political tension to persist.

That being said, there remain unsettled issues with respect to trade that could influence the growth in the short-term. For example, President Trump decided to delay his decision on whether or not to impose tariffs on auto imports and could impose tariffs by November if the U.S. is not satisfied with the negotiations with its main trading partners. Moreover, the capricious nature of the tariffs imposed on, and suspended with Mexico in June suggests that further deterioration in the president's view of the immigration situation could prompt new action against Mexico. Moreover, conditions are ripe for escalation with the EU as a number of EU members are considering a turnover tax on big U.S. technology firms. Most importantly, issues with respect to trade between the U.S. and China are far from being settled, leaving the potential for reversion to the ultimatum game played thus far as the most likely outcome. A recent

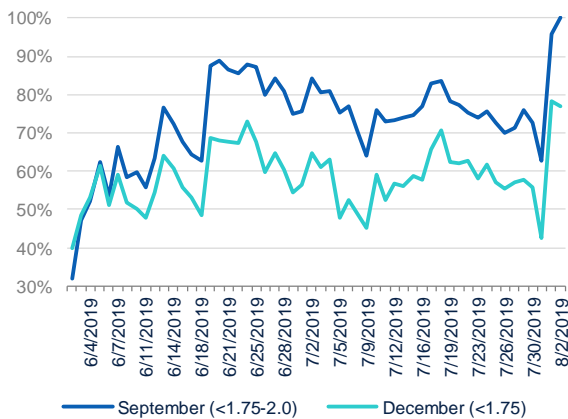
announcement on the potential for increased tariffs on China in September highlights the unpredictability of the current administration's trade policy agenda.

Ultimately, the final Brexit agreement and a more pronounced slowdown in global growth present the greatest non-domestic risks to our outlook. A messy "no-deal" Brexit has the potential to severely afflict EU economies that are vulnerable, particularly when considering the limited capacity for fiscal and monetary stimulus. For the UK, the outlook could be even direr, as Mark Carney (Governor of the BOE) has suggested that a "no deal" scenario could shave 3.5% off the U.K.'s GDP. While the direct trade links between the U.S. and the U.K are modest, at around 4 percent of total exports, the spillovers to Europe and the global economy could be significant and with U.S. business sentiment marred by trade policy and late-cycle fears, there is the potential for a self-fulfilling recession prophecy to take hold.

3. Is Fed one-two punch enough to combat trade uncertainty and global risks?

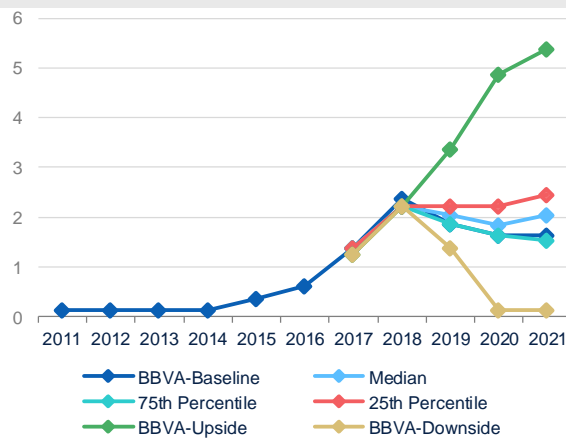
On the monetary policy front, as we expected, the Fed lowered its benchmark interest rate by 25bp to 2-2.25%, citing “implications of global developments for the economic outlook as well as muted inflation pressures” as the reason for cutting. However, the assessment of incoming data was rather benign with no change to the language surrounding inflation developments and only minor changes to the committee’s degree of certainty on the evolution of investment and consumption. The recent GDP report cleared up some of the uncertainties surrounding the committee’s outlook in June. Moreover, the committee announced the end of the “reduction of its aggregate securities holdings in the System Open Market Account in August, two months earlier than previously indicated.”

Figure 3.1 **PROBABILITY OF FED FUNDS RATE CUT (%)**



Source: BBVA Research & Bloomberg

Figure 3.2 **BBVA & DEALERS PROJECTIONS OF FED FUNDS (%)**



Source: BBVA Research & Haver Analytics

Based on market expectations, the dovish bias signaled at the June meeting and the dovish comments thereafter, it was no surprise that the Fed delivered an insurance cut. However, as evidenced by the drop in equity prices during the Q&A, the justification for doing so was far from clear. At times Powell jawboned with a prepared comment on the rationale for the cut, alluding to the need to “insure against downside risks from weak global growth and trade policy uncertainty; to help offset the effects these factors are currently having on the economy; and to promote a faster return of inflation to our symmetric 2 percent objective.” However, when pushed in the Q&A to clarify if this move was data-dependent, related to trade policy or related to something else, he had a difficult time reconciling his responses. Some of the more befuddling exchanges in the Q&A session centered on the idea of “mid-cycle” cuts versus a more prolonged tightening cycle, and data dependence vs. what he described at times as a domestic economy with no significant domestic headwinds. Similarly, he suggested that in spite of the positive surprises in the data, when looking back on how markets responded to the shift in monetary accommodation, it was natural to believe further removal of accommodation would help to sustain the expansion and assuage market concerns.

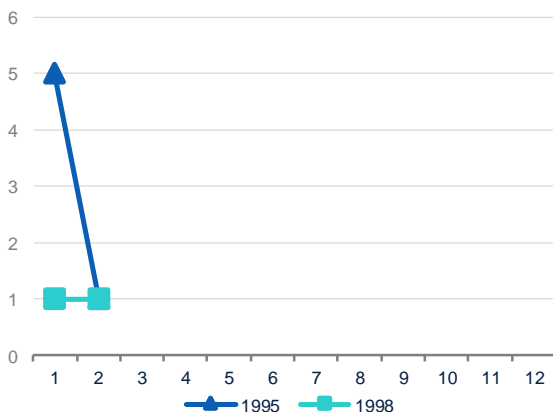
The change in balance sheet normalization plan was unexpected, particularly when considering that balance sheet normalization was set to expire in two months and the amount that was projected to be runoff between now was no

more than \$30bn. At face value, this move appears out-of-step with the Yellen analogy of “watching paint dry”, but the desire to have non-competing policies—as more balance sheet runoff would imply a less accommodative stance of monetary policy—likely motivated the move. Given the committee’s fears around the amount of monetary policy ammunition available to combat the next downturn, it is reasonable to avoid sterilizing the interest rate cuts with additional balance sheet runoff. While the committee has the capacity to re-embark on quantitative easing, doing so would likely deplete their available tools.

In terms of future rate cuts, past allusions by the Chairman and FOMC members to the 1990s “mid-cycle” cuts now seem far less coincidental. As such, these episodes should provide a strong baseline for upcoming policy fine-tuning.

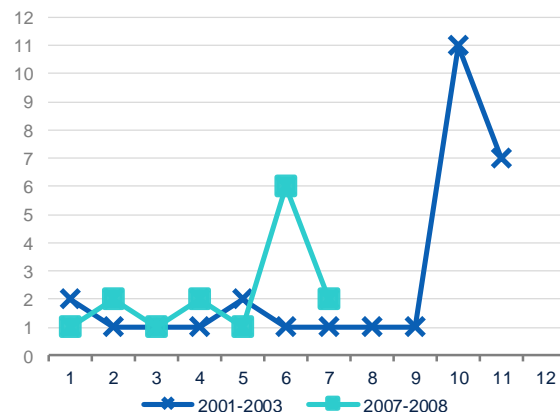
In the 1990s, there were two “mid-cycle” cuts. In both cases, rates fell three times by no more than 25bp. The main difference between the two cycles was the timing, as the Fed paused for 5 months after their first cut in 1995. Similar to today’s environment, the cuts in 1995 were based on weakening price pressures whereas in 1998, there was a bout of “financial tumult” and collapse of Long-Term Capital Management that motivated the tweaks to policy rates. In addition, Fed members believed that tightening over the previous years was too aggressive and the adjustment was viewed as a rebalancing to more appropriate levels. Powell’s remarks were closely aligned with the 1995 scenario of slowing price pressures, global financial tensions, and concerns that over estimates of the natural interest rates and overly optimistic inflation projections meant that the actual stance of monetary policy was more restrictive than the committee intended. Today, “trade uncertainty” has the potential to be a significant influence on monetary policy, unlike the examples in the 1990s.

Figure 3.3 TIMING OF FED RATE CUTS (MONTHS)



Source: BBVA Research

Figure 3.4 TIMING OF FED RATE CUTS (MONTHS)



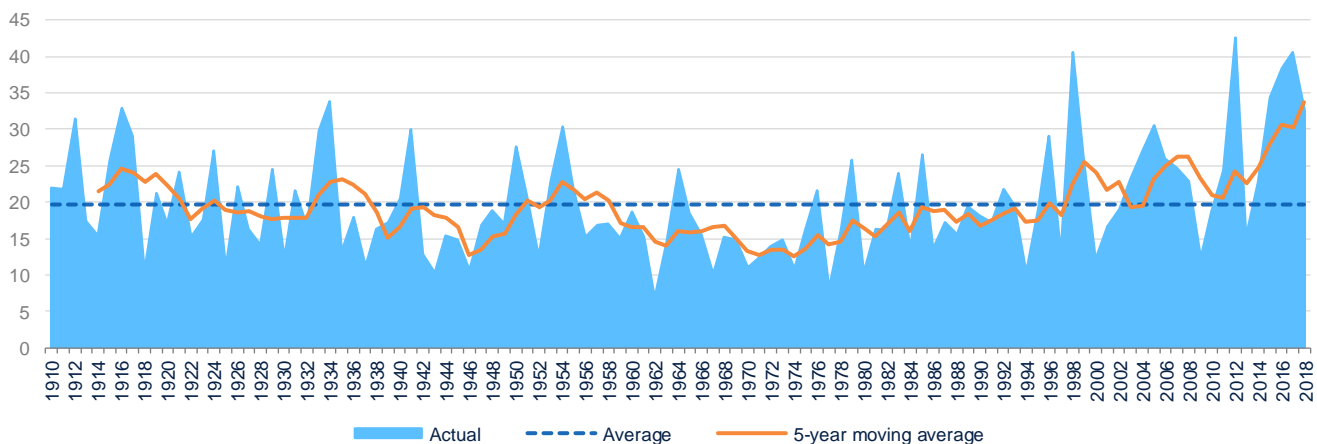
Source: BBVA Research

While the positive surprises in the data appeared to have the potential to alter the Fed’s plans for future interest rate cuts, Powell’s press conference seems to suggest that risk monitoring has gained some relevance relative to data dependency, complicating the task of anticipating future cuts. As such, based on Powell’s responses and emphasis on trade-policy uncertainty, it appears that further improvements in the inflation outlook and labor market conditions may not be enough to deter additional rate cuts in the short-term. With this in mind, it seems highly likely that that the Fed will cut rates 25bp again in September, especially when considering the President has reignited tensions between the U.S. and China, one day after the meeting. If tensions continue to rise, the potential for another 25bp throughout the year will increase.

4. Climate action and public opinion

The Fourth National Assessment on Climate (NAC4)¹² leaves no doubt. The country is being impacted by climate change in multiple ways. Record-breaking temperatures are more frequent. Warming has accelerated since 1979 and the latest decades are the warmest in at least 1,500 years. In 2017, the capacity of hurricanes Harvey, Irma, José, and Maria to quickly reach and maintain high intensity was unusual, with Harvey and Maria also throwing record levels of rainfall. Relative to the 1960s, tidal flooding is now 5 to 10 times more recurrent in several coastal cities due to the increase in sea level. Wildfires burned around 3.7 million acres every year between 2000 and 2016, except on three occasions. As the climate warms, Americans have become more exposed to heatwaves, vector-, food- and water-borne diseases, as well as health issues related to the deterioration of air, food, and water. There is ample expert consensus that, in the absence of meaningful actions, the incidence of these phenomena will intensify in the future.

Figure 4.1 **U.S. CLIMATE EXTREMES INDEX (CEI)**
(CONTIGUOUS U.S. WITH TROPICAL CYCLONE INDICATOR ANNUAL (JANUARY-DECEMBER) 1910-2018)



Source: NOAA National Centers for Environmental information, Climate Monitoring: Extremes, published July 2019, retrieved on July 31, 2019 from <https://www.ncdc.noaa.gov/extremes/cei/graph>

The social and economic implications are equally worrisome. The economic costs could reach several hundred billion dollars by the end of the century.³ Some sectors are particularly vulnerable, such as the poor, the children, the elderly, rural populations, tribes, and indigenous peoples. Without mitigation and adaptation strategies, income inequality,

1 USGCRP. "Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II." Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.). U.S. Global Change Research Program, Washington, DC, USA. 2018. <https://nca2018.globalchange.gov>.

2 The National Climate Assessment is a quadrennial report mandated by Congress and prepared by the U.S. Global Change Research Program (USGCRP). The USGCRP was mandated by Congress under the Global Change Research Act of 1990. It comprises the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, the Department of State, the Department of Defense, the Department of Energy, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Agriculture, the Department of Transportation, the Department of the Interior, the U.S. Agency for International Development, the Smithsonian Institution, and the National Science Foundation. Source: www.globalchange.gov.

3 Thompson, Andrea. "Here's How Much Climate Change Could Cost the U.S." Scientific American. December 03, 2018. Accessed July 31, 2019. <https://bit.ly/2BOZuPq>.

racial tensions, and political polarization could exacerbate and fracture social cohesion. Not surprisingly, the military and intelligence community consider climate change a “threat multiplier” and a matter of national security.

The consequences of a “do-nothing” scenario should have been enough to trigger bipartisan action in Washington a long time ago. After all, it has been more than 50 years since Stanford Research Institute warned that if left unabated, rising CO2 levels “could bring about climatic changes.” Moreover, climate change affects everybody, regardless of political affiliation, creed, ethnicity, or gender. However, few topics have been more contentious in U.S. politics than climate change.

At the national level, the two main political parties have different views on the issue. The majority of Democrats agree on the anthropogenic causes of climate change while many Republicans disagree. Moreover, some groups within the GOP deny climate change all together, while others acknowledge that global warming is real, but do not accept human activity as the leading cause. The Democratic leadership generally advocates for bold action against climate change, which the Republican leadership commonly opposes. This division is unique in the developed world where, for the most part, opposite political parties tend to accept the scientific consensus.⁴ This may be changing.

A tipping point in public attitudes toward climate change

As more Americans experience first-hand the adverse effects of global warming, we should expect their views to align with 97% of climate scientists who agree that evidence of human-caused climate change is robust. Although the information provided by recent polls is not conclusive, current trends suggest that public perceptions could be reaching a tipping point.

a. Increasing awareness

Despite the rise in number of extreme climate events, the share of adults who believe that human actions are responsible for climate change has declined since 2017; however, that same share is significantly higher than a decade ago. According to Gallup,⁵ in 2019, 66% of U.S. adults believe human actions cause climate change, less than the 68% peak observed in 2017 but more than the 57% average between 2001 and 2014. Similarly, 65% of Americans say most scientists believe global warming is occurring, higher than the 60% average between 2001 and 2014, but less than the 71% peak registered in 2017.

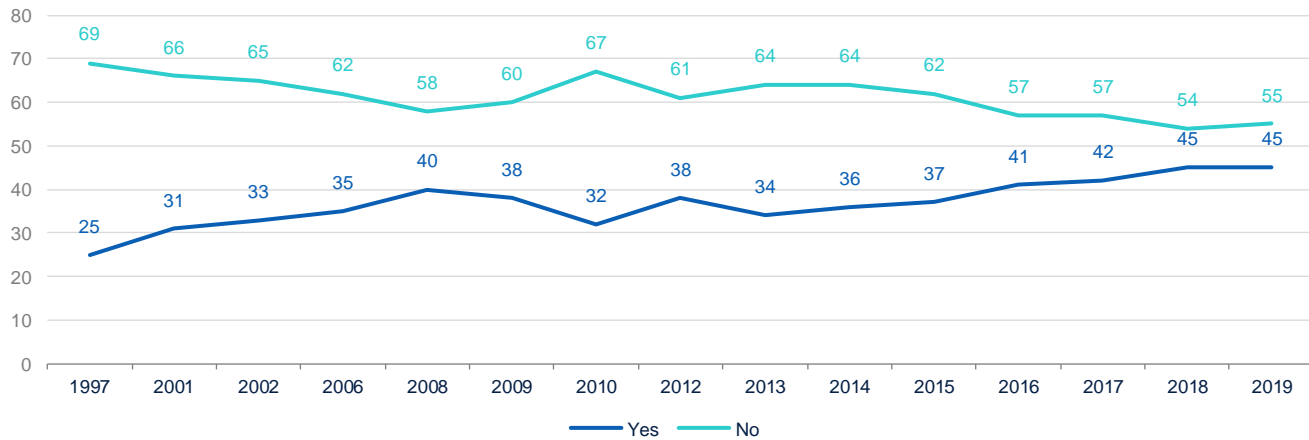
For the first time since 2001, the majority of Americans (51%) fell into Gallup’s classification of “Concerned Believers”, defined as those who are “highly worried about global warming, think it will pose a serious threat in their lifetime, believe it’s the result of human activity, and think news reports about it are accurate or underestimate the problem.” Meanwhile, 30% of respondents fell into “Mixed Middle,” the lowest share since 2012. These are individuals who have mixed views; for example, that climate change is the result of human actions but will not pose a severe threat in their lifetime. The share of “Cool Skeptics” or those who “worry little or not at all about global warming, do not think it will

⁴ Romm, Joseph. “Climate Politics and Policies” in *Climate Change. What Everyone Needs to Know*. (New York, NY: Oxford University Press, 2016) 182-183.

⁵ Saad, Lydia. “Americans as Concerned as Ever About Global Warming.” Gallup.com. June 05, 2019. Accessed July 29, 2019. <https://bit.ly/2PqhNzW>.

pose a serious threat in their lifetime, think it's attributable to natural environmental changes and think the news exaggerates the problem" has been relatively stable at 20% but below its previous peak of 28% in 2010.

Figure 4.2 **DO YOU THINK THAT GLOBAL WARMING WILL POSE A SERIOUS THREAT TO YOUR WAY OF LIFE IN YOUR LIFETIME? (%)**



Source: Gallup. "America's Views on Global Warming, 2019 (Trends)." Accessed July 31, 2019. <https://bit.ly/3177XYq>

The same survey shows that 44% of Americans worry a great deal about global warming, and 45% think global warming will pose a severe threat in their lifetime. Both figures are the highest since 2001.

In a separate survey conducted by Pew Research Center in 2018⁶, 56% of U.S. adults agreed that "protecting the environment should be a top priority for the president and Congress." Also, 59% replied that climate change was affecting their communities a great deal or some. The share went up to 67% for people living within 25 miles of coastline. The majority of Americans (67%) said the government is not doing enough to combat global warming.

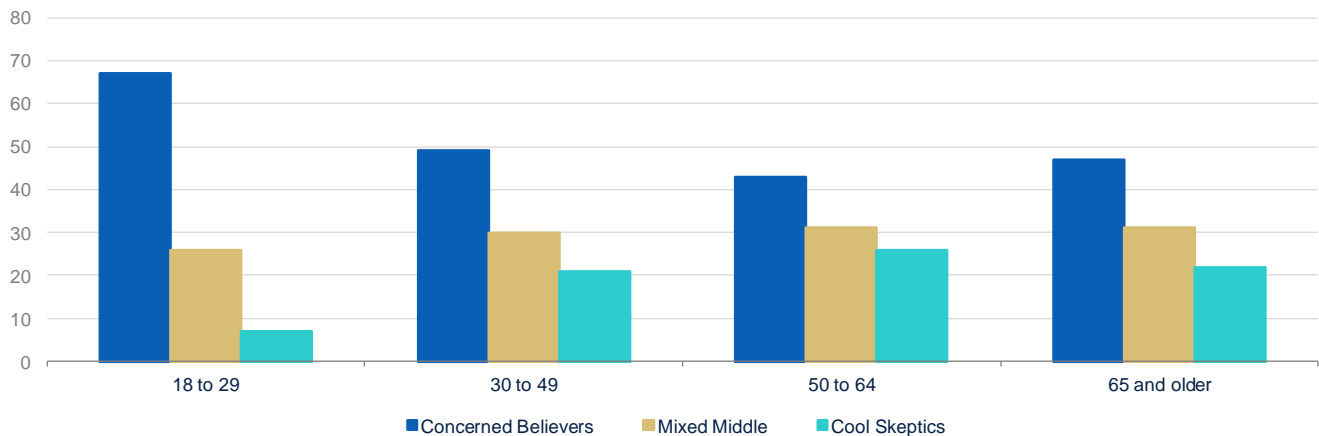
b. Contrasting views by age

The Gallup survey showed contrasting views among Americans depending on their age. For instance, 67% of participants between 18 and 29 years old fit into the "Concerned Believers" cohort, compared to 43% of those between 50 and 64 and, 47% of those between 65 and older.

Similarly, the Pew survey revealed that Millennial Republicans were twice as likely to acknowledge that global warming is the result of human activity (36%) than their Baby Boomer counterparts (18%). Millennial Republicans were also less supportive of increasing the use of fossil fuel energy (43%) than Baby Boomers (71%).

⁶ Funk, Cary and Kennedy, Brian. "How Americans see climate change in 5 charts." Pew Research. April 19, 2019. <https://pewrsr.ch/2DoF1Bp>

Figure 4.3 **2019 GLOBAL WARMING OPINION GROUPS, BY AGE (%)**



Source: Gallup. "America's Views on Global Warming, 2019 (Trends)." Accessed July 31, 2019. <https://bit.ly/3177XYq>

The difference in opinions by age reflects an inter-temporal internalization of the costs and benefits that climate change poses. All other things being equal, a young person is more likely to experience the adverse effects of climate change through her lifetime than someone who is over 65 years old. Therefore, older generations are less likely to accept the costs of environmental policies today to improve the wellbeing of young and future generations tomorrow. This could influence policymaking. At the beginning of the 116th Congress, the average age of Representatives and Senators was 58 and 63, respectively. These are 20 and 25 years higher than the U.S. median age of 38 years old.

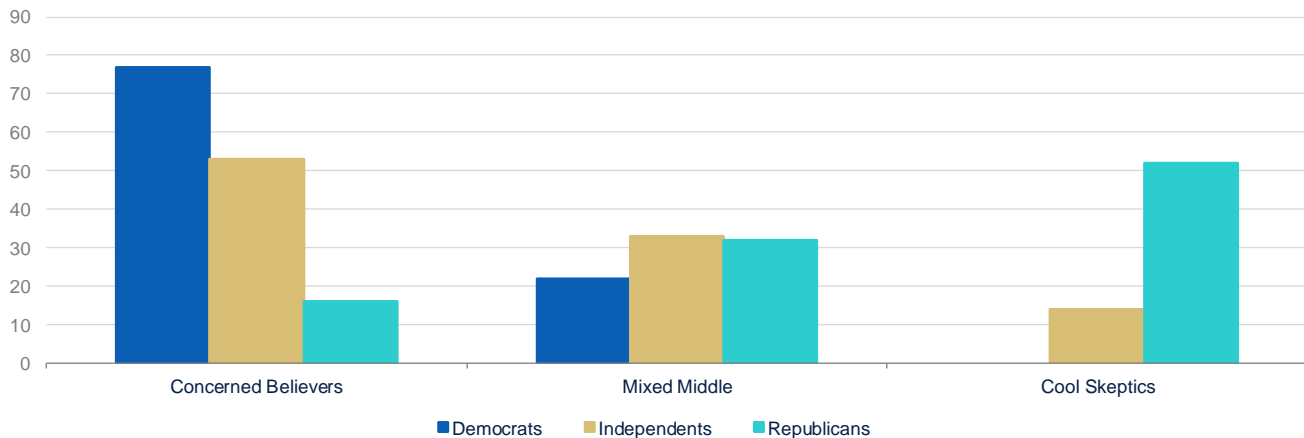
c. **Contrasting views by political affiliation**

The Gallup survey captured significant differences when considering political affiliations. For instance, 77% of Democrats match the characteristics of “Concerned Believers” compared to 16% of Republicans and 53% of Independents.

Regarding policies, two-thirds of Democrats see benefits in strategies to deal with climate change, while roughly one-third of Republicans share this view. Moreover, 57% of Republicans think such policies hurt the economy.

Partisanship is a significant determinant of people's views on climate change even when controlling for levels of science literacy. The Pew Research survey found that 93% of Democrats with “high science knowledge” believe climate change is caused by human activity, compared to only 23% of Republicans with “high scientific knowledge.”

Figure 4.4 **2019 GLOBAL WARMING OPINION GROUPS, BY PARTY I.D. (%)**



Source: Gallup. "America's Views on Global Warming, 2019 (Trends)." Accessed July 31, 2019. <https://bit.ly/3177XYq>

The status of climate action

Two years ago, President Trump announced that the U.S. would stop participating in the Paris Agreement, implying that by November 2020, the federal government won't have to commit to preventing the average global temperature from being 2°C (3.6°F) above pre-industrial levels.

Despite the decision, several measures are still in place, including tax credits to renewable energy, greenhouse gases (GHG) regulation, support for the development of low-carbon electricity, etc. Nevertheless, the federal government set out on a process of de-regulation that could result in the ease or elimination of many of these policies. Consequently, mitigation and adaptation efforts are now in the realm of states, cities, and private businesses.

According to the NCA4, at least 455 cities support reductions in carbon emissions, and 110 of them have emission reduction targets already in place. States are implementing measures in areas such as GHS emission targets; cap-and-trade systems; fuel economy standards; carbon pricing; carbon capture and storage; nuclear energy; transportation; non-CO₂ GHG, forestry, and land use.

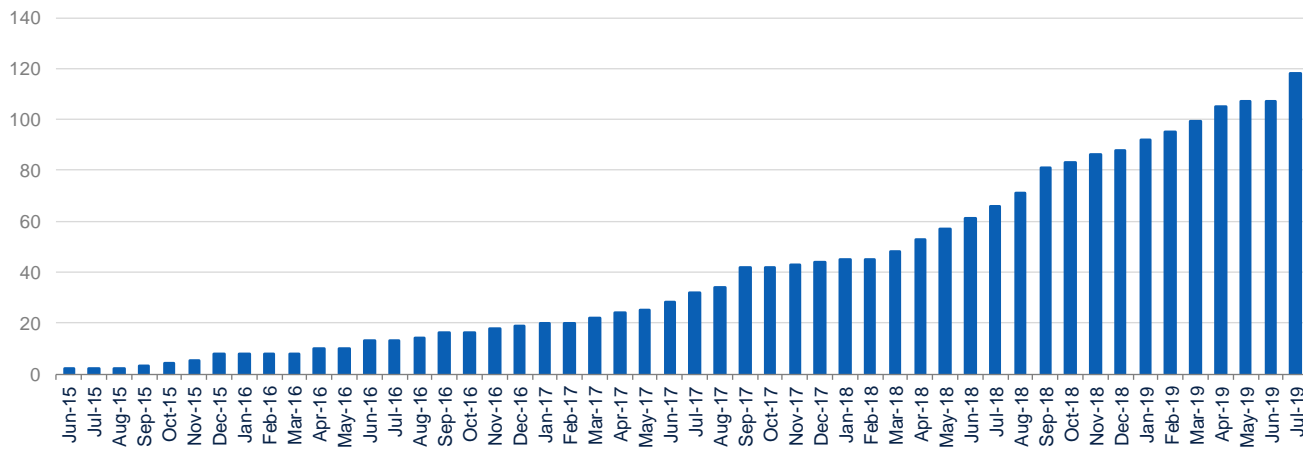
Chart 4.5 **REGIONAL EXAMPLES OF CLIMATE ACTION**

Policies	Examples
GHS reduction targets	<ul style="list-style-type: none"> • 23 states and the District of Columbia have GHS targets. • 24 states decided to keep the goal committed by the U.S. in the Paris Agreement. • 142 cities have set measurable goals to lower GHS.
Transportation	<ul style="list-style-type: none"> • 34 of the 285 most populated U.S. cities have policies to promote alternative fuel vehicles.
Renewable portfolio standards	<ul style="list-style-type: none"> • 29 states have renewable portfolio standards.
Oil and gas methane emissions	<ul style="list-style-type: none"> • Colorado and California have adopted methane pollution standards.
Cap and trade	<ul style="list-style-type: none"> • The Regional Green House Gas Initiative, a mandatory cap-and-trade program to limit CO2 emissions from the power sector, includes Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. The goal is to lower annual emissions by 45% below 2005 levels by 2020, and 30% more by 2030.
Energy efficiency	<ul style="list-style-type: none"> • 26 states and 56 large cities have adopted energy efficiency standards.
Vehicle Miles Traveled	<ul style="list-style-type: none"> • California, Vermont and Washington have programs to reduce vehicle miles traveled • 32 large cities intend to lower VMT directly or indirectly.

Source: Center for Climate and Energy Solutions and "Fulfilling America's Pledge." Americas Pledge On Climate. Accessed July 30, 2019. <https://www.americaspledgeonclimate.com/fulfilling-americas-pledge/>.

Meanwhile, an increasing number of private businesses are adopting or expanding strategies, such as purchasing renewable energy, managing and reporting climate risk, lowering the carbon footprint of supply chains, increasing recycling, etc. Little by little, consumers and investors expect businesses to take action.

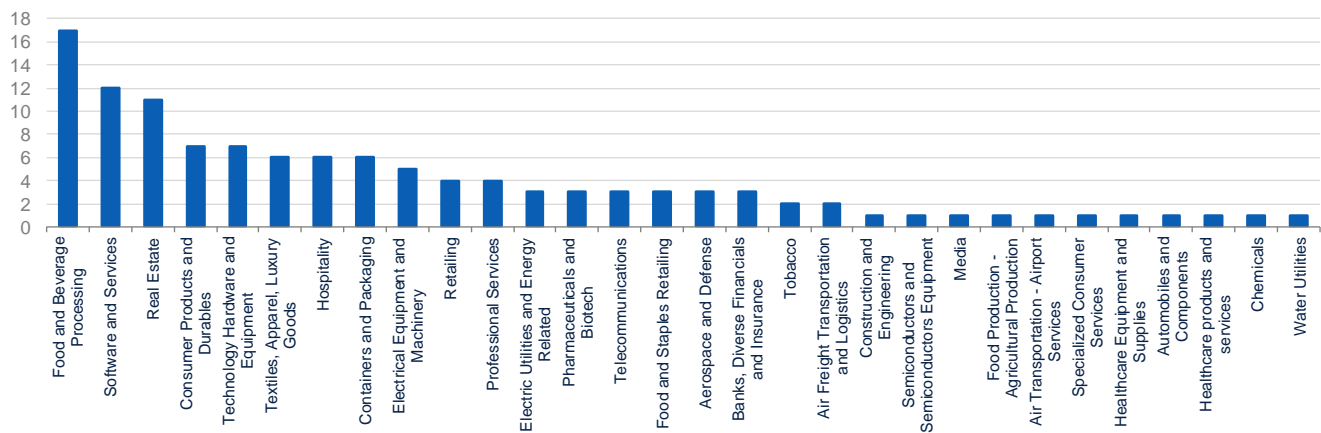
Figure 4.6 **U.S. COMPANIES SETTING EMISSION REDUCTION TARGETS BASED ON CLIMATE SCIENCE**



Source: <https://sciencebasedtargets.org/companies-taking-action/>

Can the U.S. meet its commitments to the Paris Agreement without the aid of the federal government? Probably not. According to Fulfilling America’s Pledge – a project sponsored by the former NY Mayor Michael Bloomberg⁷- the country is currently halfway through its Paris Agreement commitment of 26 to 28 percent reduction in carbon emissions below 2005 levels by 2025. Assuming no federal government help, the interaction of current measures, commitments, and market forces would allow the country to meet only two-thirds of its original target.

Figure 4.7 **U.S. COMPANIES SETTING EMISSION REDUCTION TARGETS BASED ON CLIMATE SCIENCE BY SECTOR**



Source: <https://sciencebasedtargets.org/companies-taking-action/>

7 "Fulfilling America's Pledge." Americas Pledge On Climate. Accessed July 30, 2019. <https://www.americaspledgeonclimate.com/fulfilling-americas-pledge/>.

As good as it may be, fragmented action by subnational players and the private sector may not result in the most efficient outcome. Economists have identified two problems that result from the lack of a common environmental policy: “free-riding,” and “carbon leakage.” These problems have been analyzed mainly in the context of international cooperation, but they are as relevant to states, cities, and businesses as they are for countries.⁸

Free-riding implies that the benefits of stringent environmental policy in one region extend to regions with lenient policies. For example, California’s fuel economy standards may result in cleaner air quality that would benefit states that don’t adhere to them.

Carbon leakage occurs when polluters move out to regions with soft or no environmental policies. In other words, when economic agents have to pay for the amount of carbon they produce in a particular area, they could opt to move to places where they don’t have to pay. The result is that net emissions may fall short of the national goal or, even worse, they may increase.

Although evidence of free-riding and carbon leakage is difficult to calculate, we can reasonably argue that different policies across states and cities imply different ways of internalizing the cost of carbon emissions, potentially leading to market inefficiencies that could prove costly to society.

Prospects for a national strategy

Given the trends observed in public opinion and the degree of action taken by subnational governments and the private sector, climate change is likely to become a top priority for voters in the following years. As a result, both Democrats and Republicans are working on proposals to address the issue.

The Green New Deal (GND) is perhaps the most popular call to action among Democrats. It is a proclamation of policies and aspirations with climate change at the center of a much broader social and economic plan. Although a detailed analysis of the GND is beyond the scope of this article, some of its characteristics are worth mentioning. One is the GND holistic approach to climate change. Rather than treating the problem in isolation, the GND emphasizes the link between climate change and other critical issues such as job insecurity, income inequality, and healthcare. It also acknowledges the social cost of mitigation policies and calls for the protection of those who may lose from the transition to a clean economy. In essence, the GND advocates for an industrial policy with a sense of urgency that does not allow for gradual changes. The GND was neither intended to provide a road map nor to include a calculation of the actual cost of meeting its goals. However, given its popularity, it will most likely serve as a basis for new and more concrete proposals offered the future Democratic presidential candidates.

Republicans still do not have a cohesive view on how to deal with climate change. Recent proposals range from spending on innovation, promoting the use of carbon capture technologies or boosting nuclear energy to implementing a carbon tax (a.k.a carbon dividend). Many economists believe the best course of action is the Carbon Dividend.

⁸ Tirole, Jean. “The Climate Challenge” in *Economics for the Common Good*. (Princeton, NJ: Princeton University Press. 2017), 195-228.

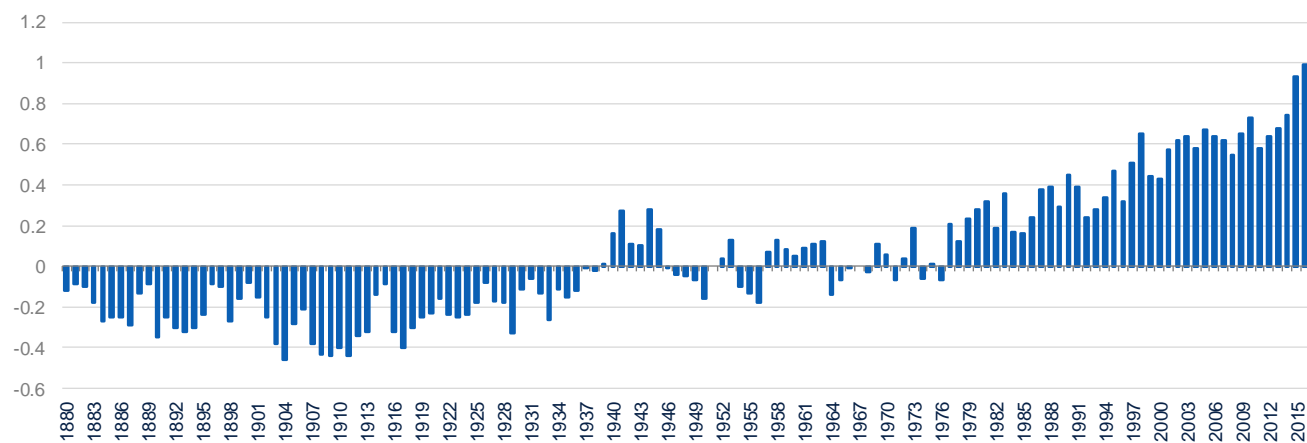
Developed by the Climate Leadership Council, the Carbon Dividend consists of a tax on carbon dioxide emissions (potentially of \$40 per ton) that would increase gradually over time. Collections would be distributed to the people via dividends, direct deposits, or contributions to retirement accounts. Border adjustments would prevent U.S. businesses to lose competitiveness against countries that do not have a similar policy. The authors of this proposal, including renowned economists such as Martin Feldstein and Greg Mankiw, estimate that a typical family of four could receive \$2,000 in the first year of implementation. To maximize efficiency and avoid unnecessary costs, any other regulation aimed at lowering carbon emissions should be discarded or eliminated.

There are different opinions on the Carbon Dividend within the Republican leadership. Supporters of lower taxes seem reluctant to accept a carbon tax, or any other form of taxation for that matter, as the flagship strategy of the GOP. Meanwhile, advocates of small government prefer the “carbon dividend” to “command and control” measures like those championed by the Green New Deal. And there are those who, in spite of mounting scientific evidence, continue to question or deny climate change.

Despite these differences, the Republican party is getting pressure to change its position on climate change to avoid alienating young voters. According to the communications and marketing consulting firm Luntz Global: “69% of GOP voters are concerned their party is ‘hurting itself with younger voters’ by its climate stance. Meanwhile, 55% of GOP voters under 40 are ‘very or extremely’ concerned about their party’s position on climate change.”⁹

It is notorious that proposals from both parties implicitly assume that the U.S. can go alone in the fight against climate change. Neither the GND nor the “carbon dividend” say much about international cooperation. And yet, international collaboration is needed precisely to avoid free-riding and carbon leakage at the global level.

Figure 4.8 **GLOBAL LAND AND OCEAN TEMPERATURE ANOMALIES, JANUARY-DECEMBER (ANOMALY °C)**



Source: NOAA National Centers for Environmental Information, Climate at a Glance: Global Time Series, published July 2019, retrieved on July 31, 2019 from <https://www.ncdc.noaa.gov/caq/>

⁹ Luntz Global Partners. “Findings and Insights on GOP Climate Strategy.” Accessed July 30, 2019. https://www.eenews.net/assets/2019/06/13/document_daily_01.pdf

Going forward, we can expect more proposals from both sides of the aisle. There are four aspects of mitigation and adaptation that could find support from both parties: 1) the need to revitalize and build infrastructure, 2) the expansion of renewable energy, particularly utility-scale projects, 3) the electrification of transportation, and 4) the need to increase spending on R&D, mainly in the fields of renewable energy, energy storage, and carbon capture.

Conclusion

In the U.S., views about climate change may be at a tipping point due to generational transition and first-hand experiences of extreme weather events associated with global warming. Acceptance of the scientific evidence that climate change is real and caused by human action continues to gain ground against denialism, particularly among young people.

Therefore, as younger generations of Americans gradually take over the majority of the electorate, we can expect political parties and candidates at every level of government to embrace mitigation and adaptation strategies. The debate on what is the best national policy to tackle climate change promises to be intense, in as much as Democrats and Republicans have fundamentally different views about the role of government. However, this is better than the previous status quo.

Meanwhile, the clock keeps ticking. The need for action is becoming an increasingly urgent matter. However, as polls have shown, urgency and awareness of potential catastrophe are not always enough to convince the whole of society about the problem.

Since generations discount the cost and benefits of future policies differently, there needs to be an effort to find more creative communication strategies and calls to action. One approach is to emphasize the opportunities that mitigation and adaptation strategies could bring such as lower energy prices, the emergence of new industries (renewables, sustainable materials, energy storage, high-tech agriculture, alternative foods, etc.), job creation, better quality of public goods and services, lower crime, better transportation, etc. Learning about these opportunities could generate a more favorable reaction from those who think that climate change will not be a significant threat during their lifetime. Proposals that best explain the risks and opportunities will have the best chance of succeeding.

5. Presidential elections and state economies

Exit polls for U.S. presidential elections, along with numerous studies in political sciences, suggest that the economy and jobs have a very high, if not the highest, priority in voters' minds. Traditionally, candidates from the two parties have policies that benefit different sectors. For example, traditional Republican policies are friendlier to oil companies than Democratic ones. Therefore, states that are rich in oil and gas resources, such as Texas, would usually support a Republican candidate in the presidential election. Similarly, states that have a high concentration of technology companies will generally support the Democratic Party, which favors larger funding for federal research programs. Therefore, given the diverse economic structures of all the states, it seems only natural that certain states would receive a greater economic benefit from the parties they support.¹⁰

Although to a certain degree, presidents try to fulfill their election promises, it is unclear whether their policies will meet the expectation and deliver a more favorable effect on the states that voted for them. Empirically, various factors can dampen the effect of policy, such as the production capacity and inelastic labor supply. In this article, we look at state-level economic data and try to find out if red (blue) states benefit from a Republican (Democratic) president.

We employ a standard event-study approach for the analysis. We constructed our sample based on four criteria. First, the sample should include both Republican and Democratic Presidents. Second, we focus on the period after the 1980s, when the domestic economy is relatively stable. Third, we only look at elections for the first-term, as most second-term presidencies feature policy continuity, rather than policy changes. Fourth, we want to exclude the periods when economic contractions systemically damaged state economies and created outliers. That is, the 2000 and 2008 elections will not be included due to the dot-com crisis and the Great Recession. In the end, only two Presidential elections remained in the sample: the 1992 and the 2016 ones.

For each election, we conduct the following steps. First, we divide all states into two groups: the red states who voted for the Republican candidates (H. W. Bush/Donald Trump), and the blue states who voted for the Democratic candidates (Bill Clinton/Hillary Clinton).¹¹ Second, we obtain the total output and employment (payroll) of the two groups and calculate their growth rates. Third, we take the average of each the variable's growth rates over the last eight years before the election, and use them as benchmarks. Finally, we compare the post-election growth rates with the benchmark. On the one hand, if the conventional wisdom – red (blue) states are better with Republican (Democratic) Presidents than blue (red) states – is true, the aggregate output and employment of red (blue) states should be higher relative to their benchmarks than the blue (red) ones. On the other hand, if we cannot detect a significant difference between the red and blue states, it may imply that federal government policies may not affect state economies in a clear-cut way.

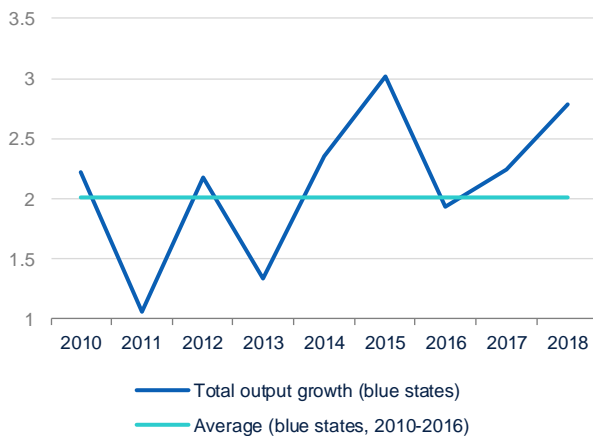
¹⁰ In this article, we follow the relatively recent convention of the U.S. politics and refer the states that vote for the Republican Party as "red" and the states that vote for the Democratic Party as "blue." However, it is worth noting that it is common for a state political preferences to change overtime

¹¹ We treat two elections as individual events. For example, for those states that voted for Bill Clinton in 1992 and Donald Trump in 2016, they were blue in 1992 and red in 2016.

Republican presidency: the case of the 2016 election

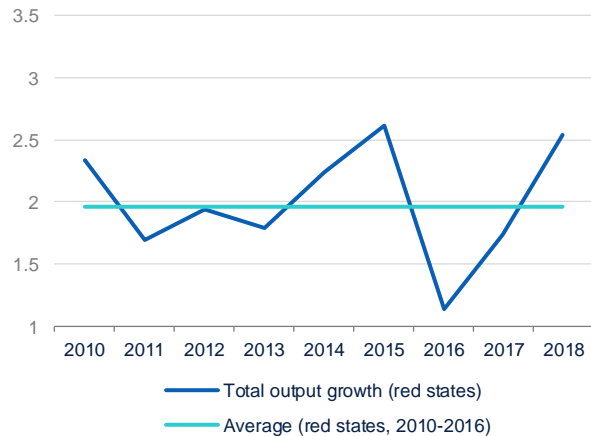
Economic issues, such as trade agreements, hollowing out of the manufacturing sector, and environmental regulations influenced the outcome of the 2016 Presidential election.¹² For example, the then-candidate Donald Trump intensively rallied in the states with a high misplaced working-class population during his election campaign, and when he became the President, most of his policies – corporate tax cuts, environmental deregulations, and trade tariffs – were directed at boosting domestic manufacturing and mining sectors. In theory, those states with a high concentration of such sectors would benefit more than other states. If the transmission from policies to economic developments is straightforward, we should expect higher above-benchmark growth in red states than in blue states.

Figure 5.1 **TOTAL OUTPUT GROWTH RATES FOR BLUE STATES (%)**



Source: BEA, Haver, and BBVA Research

Figure 5.2 **TOTAL OUTPUT GROWTH RATES FOR RED STATES (%)**



Source: BEA, Haver, and BBVA Research

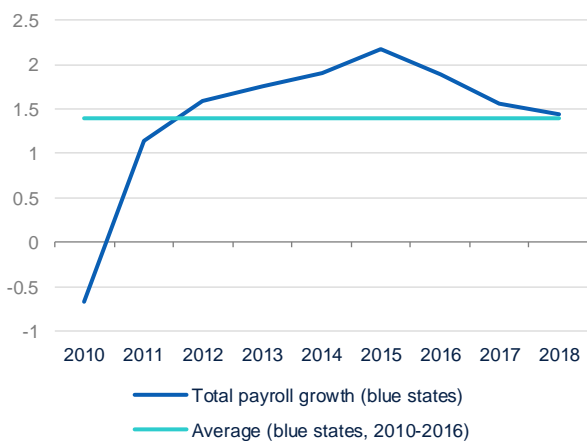
To illustrate the economic performances of red and blue states, we plot the output and employment growth rates with their historical averages in Figures 5.1 through 5.4. As we can see from Figures 5.1 and 5.2, the average growth rates for the blue and red economies are very similar between 2010 and 2016. One interesting finding is that the red states had a significant growth deceleration in 2016 – a drop from 2.6% in 2015 to 1.1% in 2016. In contrast, the fall from 3% to 1.9% during the same period in the blue states are milder. As economic conditions always affect people's attitudes toward the government, the difference in the magnitude of the deceleration may help us to understand why some states want to change the party of the leadership.

Moreover, if the conventional wisdom were correct, then the red states should outperform blue states after 2016 due to unbalanced effects from economic policies. However, the data does not support this view: for 2017 and 2018, the output growth rates are 2.2% and 2.8% for blue states, and 1.7% and 2.5% for red states. Given both blue and red economies' benchmark growth rates are 2%, the blue states are slightly better off than the red states under the Trump administration's first two years.

¹² Rodrik, D., 2018. Populism and the Economics of Globalization. *Journal of International Business Policy*, 1(1-2), pp.12-33.

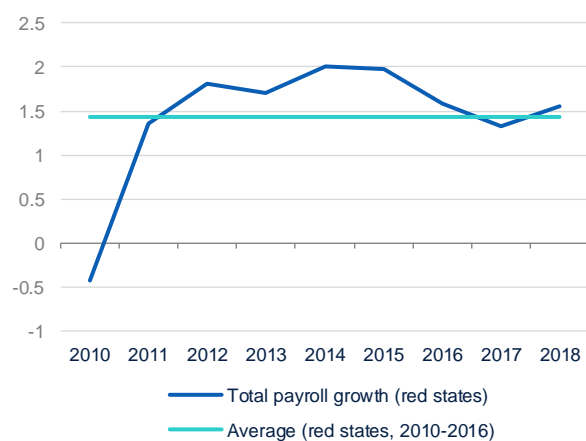
So how about jobs? As we can see from Figures 5.3 and 5.4, for 2017 and 2018, the payroll growth rates are 1.6% and 1.4% for blue states, and 1.4% and 1.6% for red states. That is, on average, the employment for both blue and red states grew at 1.5% per year under the Trump Administration. If we consider that the red states have a slightly higher average growth rate between 2010 and 2016, the same growth rate in payroll implies a smaller gain for red states than for blue states.

Figure 5.3 **TOTAL PAYROLL GROWTH RATES FOR BLUE STATES (%)**



Source: BEA, Haver, and BBVA Research

Figure 5.4 **TOTAL PAYROLL GROWTH RATES FOR RED STATES (%)**

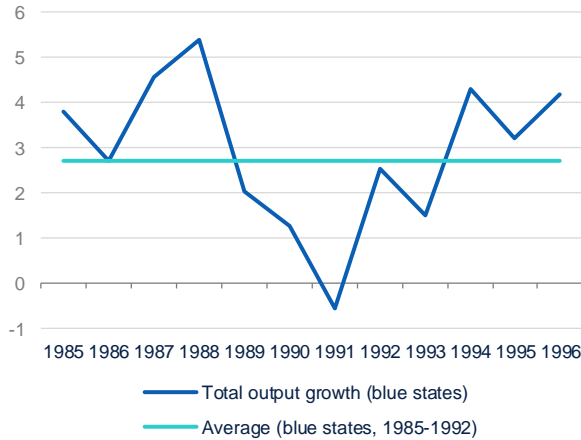


Source: BEA, Haver, and BBVA Research

Democratic presidency: the case of the 1992 election

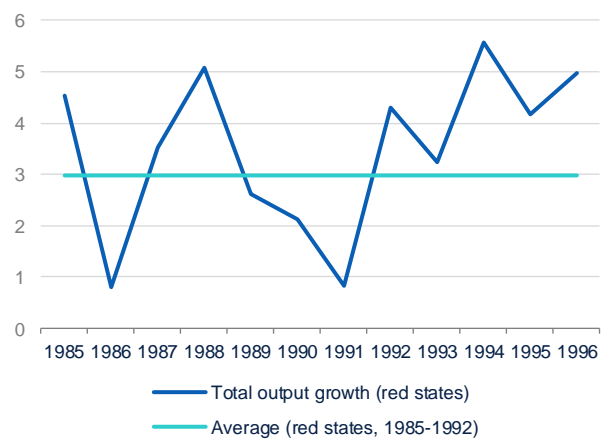
In addition to the previous analysis of the current Republican administration, we try to further explore the effect of a Democratic presidency on state-level economies. Therefore, we apply the same methodology for the 1992 election, during which the then-Democratic candidate, Bill Clinton, invented the well-known slogan, "It's the economy, stupid" and eventually won. Figures 5.5 and 5.6 plot the growth rates of the total output for states that voted for Clinton and Bush. As we can see from the figures, economic performance was indeed an important factor that helped the Democrats' win: the states that voted for Bill Clinton experienced negative growth in 1991, while the states that voted for Bush did not. However, when we look at the economic performance of both groups between 1993 and 1996, the growth rates of the red states stood visibly higher above their historical average than the blue ones did. That is, just like what we have seen for the 2016 election, states did not seem to benefit disproportionately from the candidate that they chose.

Figure 5.5 **TOTAL OUTPUT GROWTH RATES FOR BLUE STATES (%)**



Source: BEA, Haver, and BBVA Research

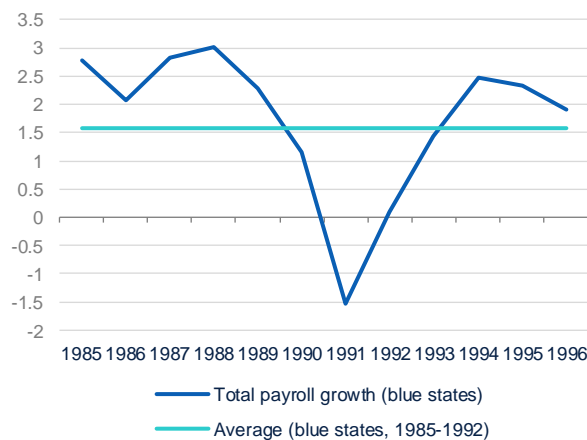
Figure 5.6 **TOTAL OUTPUT GROWTH RATES FOR RED STATES (%)**



Source: BEA, Haver, and BBVA Research

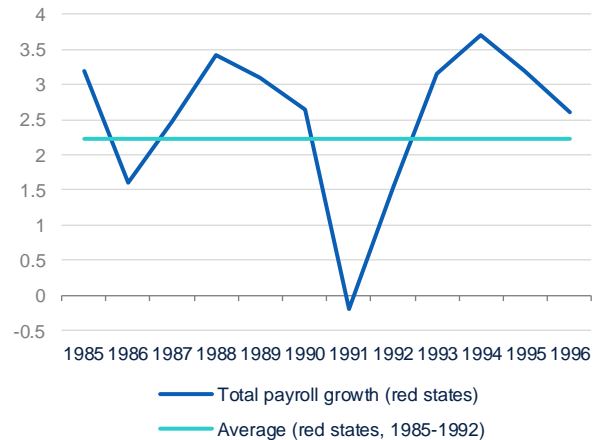
Employment data in Figures 5.7 and 5.8 further confirm the view that red states outperformed blue states during the first term of Bill Clinton’s presidency. From 1993 to 1996, the average gain in payroll growth was 0.45% per year for blue states and 0.95% per year for red states. Besides, it seems that the deeper cut in employment around 1991 and its subsequent slower recovery in blue states may contribute to the Democrats’ win.

Figure 5.7 **TOTAL PAYROLL GROWTH RATES FOR BLUE STATES (%)**



Source: BEA, Haver, and BBVA Research

Figure 5.8 **TOTAL PAYROLL GROWTH RATES FOR RED STATES (%)**



Source: BEA, Haver, and BBVA Research

Bottom line

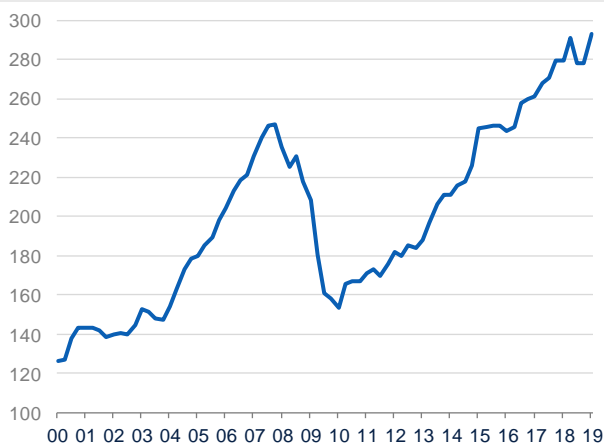
Intuitively, red (blue) states should benefit more from a Republican (Democratic) President. However, based on our analysis on state-level output and employment data, state economies may not be better off under the President that they picked.

Nevertheless, it is worth noting that our result is not conclusive. In a sense, we are presenting a puzzle that shows the inconsistency between the theory and data. Two caveats in our methodology may contribute to this seemingly counterintuitive finding. First, the effect of policies could be long-run rather than short-run. Since we only look at the first two years of the Trump administration and the first four years of the Clinton administration, our result may fail to capture the long-run impact. Second, as we use aggregates of state output and employment, the economic performance of larger states (e.g., California and Texas) may dominate our results. Given the diversity of sectors in large states, the effect of industry-specific policies may be less significant for them than for smaller ones.

6. Commercial real estate outlook

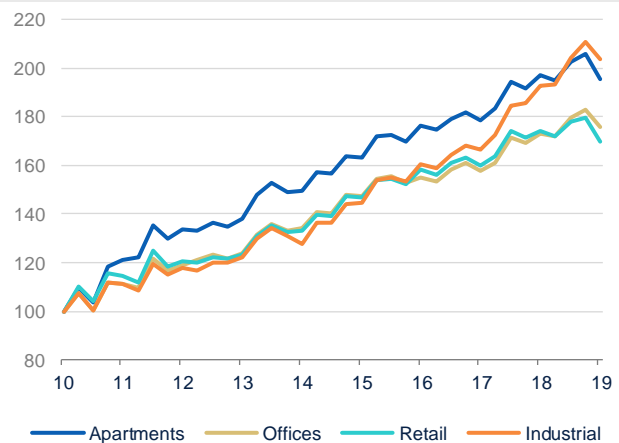
Overall, commercial real estate (CRE) fundamentals remain solid, despite an increase in inventories and some secular headwinds in the retail and office segments. The extended period of expansion and supportive monetary policy has led to higher investment and construction, which has resulted in vacancies bottoming out in all segments in 2016. The Federal Reserve CRE price index reached a record level in the first quarter of this year¹³, surpassing the peak achieved in the previous expansion by 18.6% (Figure 6.1). The increase in prices has been accompanied by commensurate growth in net operating income, so the capitalization (cap) rates¹⁴ have remained favorable, despite some compression since 2016. This article takes stock of the recent developments in commercial real estate, and presents our view of the three CRE segments- apartments, offices and retail.

Figure 6.1 **FRB CRE PRICE INDEX**
(SEASONALLY ADJUSTED)



Source: BBVA Research and Federal Reserve

Figure 6.2 **NCREIF TRANSACTIONS-BASED PRICE INDEX (100=1Q10)**



Source: BBVA Research and NCREIF

Apartments

Demand for apartments has been strong in the wake of the Great Recession, reinforced by both cyclical and long-term trends. Young people flocking into large metropolitan statistical areas (MSA) have supported the apartment segment. In addition, delayed single-family homes purchasing, uncertain job prospects, high student debt balances, strict mortgage lending criteria and high down payment requirements also supported rental demand. At the same time, demand from older Americans seeking low-maintenance living arrangements has increased.¹⁵ The strong demand for apartments has led to a rebound in multi-family construction in all regions (Figure 6.3). In 2015, housing starts for

¹³ After seasonal adjustment

¹⁴ Cap rate is the ratio of annual net operating income from real estate property and its market value

¹⁵ Jordan Rappaport. Millennials, Baby Boomers and Rebounding Multifamily Home Construction.

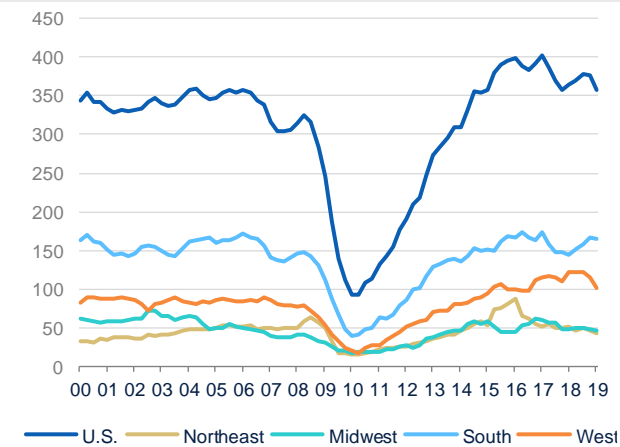
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multifamily structures surpassed the figures reached prior to the Great Recession, but construction has slowed somewhat since then in response to increasing vacancy rates.

Going forward, the segment will be subject to softer rent increases, as vacancy rates have increased somewhat and as a number of projects started in the last several years deliver new apartments to the market. By 2020, the number of apartment completions is expected to decrease, which will help stabilize vacancy rates.

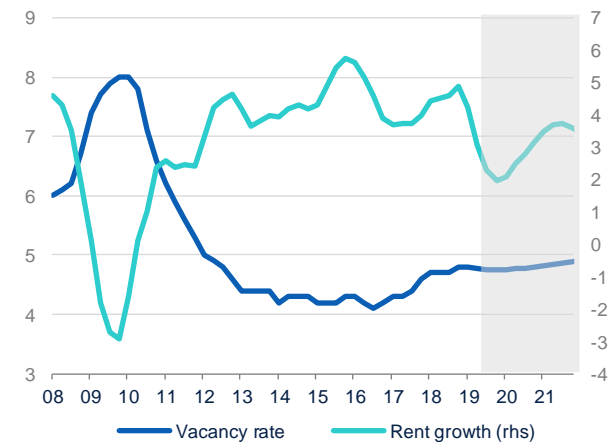
That said, conditions vary by MSA. Las Vegas and Phoenix (over 6% YoY), and Atlanta and Orlando (over 4% YoY) have experienced above average increase in rents because of stronger employment growth and solid levels of affordability. At the same time, locations that experienced very high rent increases are experiencing a slowdown in rent growth due to lower affordability, with San Francisco for example, posting rent growth of around 2% YoY.

Figure 6.3 **HOUSING STARTS OF MULTIFAMILY UNITS (THOUSANDS, 4-QUARTER MOVING AVERAGE)**



Source: BBVA Research and Census Bureau

Figure 6.4 **APARTMENT VACANCIES AND EFFECTIVE RENT (% AND %YOY)**



Source: BBVA Research and REIS

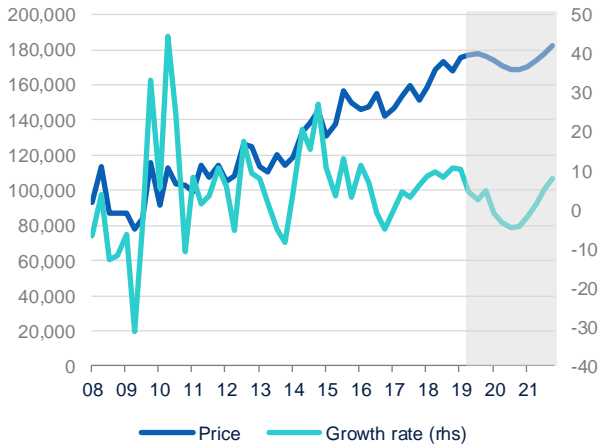
Apartment prices per unit (Figure 6.5) at the national level have been increasing since 2009, albeit with some oscillations. We expect prices to continue trending upwards but on a less steep trajectory. A rise in new completions entering the market could lead to a temporary slowdown.

Conditions will vary at the local level. Markets such as Detroit, Portland, Baltimore, Minneapolis and Seattle are already experiencing price declines due to large increases in supply, previous appreciation, slower than expected growth of the local economy, among other factors. At the same time, apartment prices are increasing significantly in markets such as Cleveland, Tampa, and Atlanta. Places that have recovered later in the expansion cycle currently offer relatively better opportunities for investment.

Going forward, we expect cap rates to fall in the short-term, but then start increasing about the same time that interest rates bottom out (Figure 6.6). The spread between apartment cap rates and U.S. Treasury yields (the cap rate risk premium) has generally been favorable, despite some compression since the beginning of 2018. The risk premium is

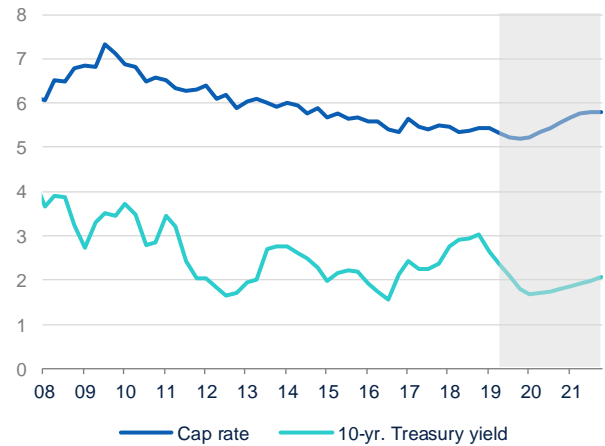
expected to recover to the levels posted between 2009 and 2016, as risk of recession is incorporated into investors' required rates of return.

Figure 6.5 **APARTMENT PRICES (\$ PER UNIT AND %YOY)**



Source: BBVA Research and RCA

Figure 6.6 **APARTMENT CAP RATES AND INTEREST RATES (%)**



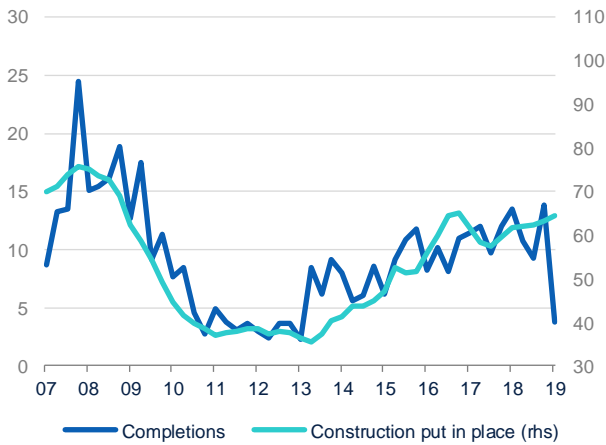
Source: BBVA Research and RCA

Offices

Employment increased substantially during the current expansion, leading to an increase in demand for office space. That, however, has not been enough to push new construction above the levels achieved in the previous cycle (Figure 6.7). Conversely, a higher prevalence of telecommuting, flexible office arrangements and trends such as hoteling, colocation and co-working has gradually decreased the average allocation of office space per employee. Despite moderate levels of construction, the vacancy rate remains elevated, leading to modest rent growth. Regardless, we consider the office CRE segment to be relatively balanced.

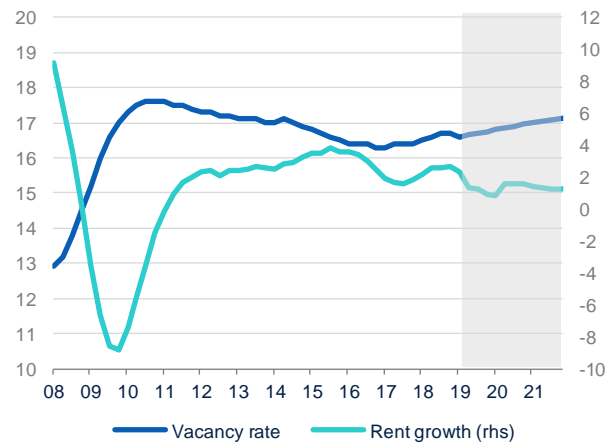
At the beginning of the year, vacancies were the lowest in New York, San Francisco, Seattle and Washington, DC, and highest in Detroit, Houston and Phoenix. Going forward, we expect vacancy rates to increase gradually, continuing a trend that started at the beginning of 2017. This will result in weaker rent growth (Figure 6.8). However, locations such as San Francisco will experience stronger rent growth than less economically vibrant parts of the country.

Figure 6.7 OFFICE COMPLETIONS AND REAL INVESTMENT (MN. SQ. FT. AND 2012 \$BN)



Source: BBVA Research, REIS and Census Bureau

Figure 6.8 OFFICE VACANCY AND EFFECTIVE RENT (% AND %YOY)



Source: BBVA Research and REIS

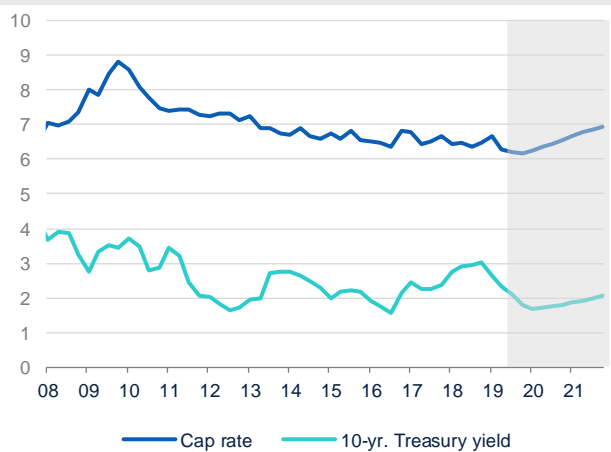
Office prices have been increasing slowly, but consistently over the last nine years. We anticipate this trend to continue, but at a slightly lower rate and with some volatility (Figure 6.9). Significant differences by location should be expected. Suburban offices will continue underperforming compared to central business districts, as has been the case throughout the current expansion. Vibrant metropolitan areas that have both a competitive advantage in the knowledge economy and a reasonable degree of affordability will continue to attract new residents and businesses. Locations that have experienced high levels of office construction over the current expansion may face some headwinds, but will likely remain attractive to new residents and businesses.

Figure 6.9 OFFICE PRICES (\$ PER SQ. FT. AND % YOY)



Source: BBVA Research and RCA

Figure 6.10 OFFICE CAP RATES AND INTEREST RATES (%)



Source: BBVA Research and RCA

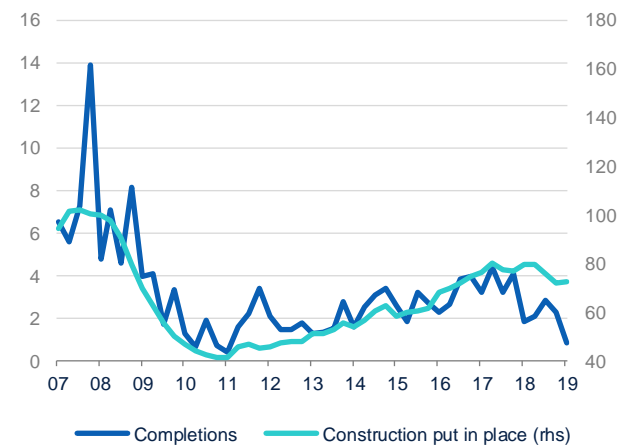
The average cap rate for offices has been favorable, but we expect cap rates to decline slightly in the short-term due to lower interest rates, before growing (Figure 6.10). The cap rate risk premium is expected to widen over time, taking into consideration the increase in cyclical risks as well as long-term trends such as increasing telecommuting, hoteling and higher office space density.

Retail

The most important trend affecting retail CRE in the current expansion has been the consumers' growing reliance on e-commerce. While retail sales have increased by 46% over the last ten years in nominal terms, and 29% in real terms, a growing share of sales has occurred through online channels. In 1Q09, 3.4% of retail sales occurred online, whereas today over 9% occur online. This share is expected to continue increasing. While the primary effects of e-commerce have been felt in lower-grade properties, the impact will reach other sub-segments. These trends and risks will limit the demand for new physical retail space, resulting in a significant drop in construction spending, which remains below pre-recession peaks (Figure 6.11).

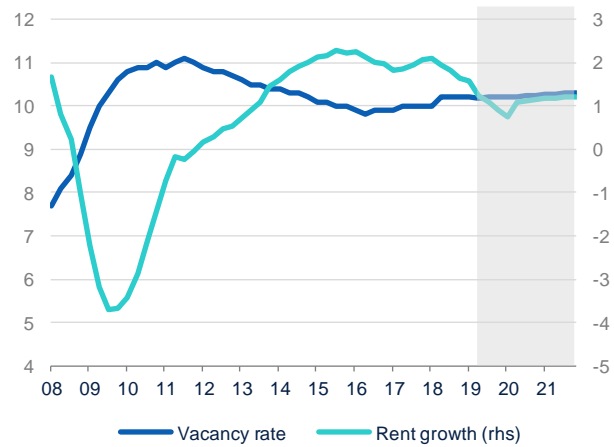
The slight increase in completions between 2014 and 2018 has contributed to an increase in vacancies. Retail vacancy rates tend to be lowest in metropolitan areas on the West Coast and highest in Las Vegas and the Mid-West. Vacancies are also relatively high in Dallas and Houston. We anticipate vacancies to continue increasing, but with some moderation due to a decline in completions. Higher vacancies will lead to slower rent growth (Figure 6.12).

Figure 6.11 **RETAIL COMPLETIONS AND REAL INVESTMENT IN NONRESIDENTIAL COMMERCIAL PROPERTIES (MN. SQ. FT. AND 2012 \$BN)**



Source: BBVA Research, REIS and Census Bureau

Figure 6.12 **RETAIL VACANCY AND EFFECTIVE RENT (% AND %YOY)**



Source: BBVA Research and REIS

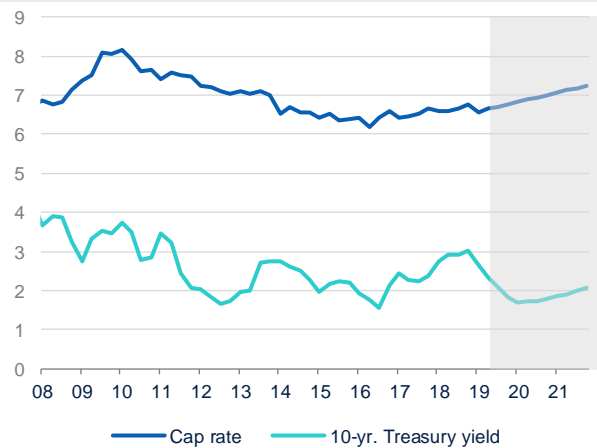
The current and expected rents, vacancies and interest rates have led to flat prices in retail CRE space, which we expected to continue (Figure 6.13). Modest new construction and repurposing of some of the existing inventory will moderate the impact of consumers relying more on e-commerce, and thus lower foot traffic in brick and mortar properties. Regardless, the risks are tilted to the downside. Higher-end properties in economically vibrant locations with a limited supply of retail real estate, such as some places on the West Coast, are expected to perform better than lower grade properties in less attractive locations or areas that have experienced an increase in supply. Cap rates are expected to continue increasing, despite lower interest rates (Figure 6.14) because of the widening risk premium.

Figure 6.13 **RETAIL PRICES**
(\$ PER SQ. FT. AND % YOY)



Source: BBVA Research and RCA

Figure 6.14 **RETAIL CAP RATES AND INTEREST RATES**
(%)



Source: BBVA Research and RCA

Bottom line

CRE is expected to perform well in the next two years, as the market is relatively balanced. That said, some slowdown in rent and price growth is likely, as new inventory comes to the market. Telecommuting, hoteling and higher office space density remain sources of downside risk in the office segment, while e-commerce presents a substantial challenge to retail. Valuations in the apartment and office sectors have increased over the last several years while remaining flat in the retail segment. We expect a pickup in repurposing of some of the properties that face particularly low demand in their current form. Cap rates are expected to increase, with widening risk premium, especially in the retail segment. Despite cyclical downside risks, CRE conditions will remain solid.

7. Forecasts

 Table 7.1 **U.S. MACRO FORECASTS**

	2012	2013	2014	2015	2016	2017	2018	2019 (f)	2020 (f)	2021 (f)	2022 (f)
Real GDP (% SAAR)	2.2	1.8	2.5	2.9	1.6	2.4	2.9	2.5	2.0	2.0	1.9
Real GDP (Contribution, pp)											
PCE	1.0	1.0	2.0	2.5	1.9	1.8	2.1	1.8	1.6	1.4	1.3
Gross Investment	1.6	1.1	1.0	0.9	-0.2	0.8	0.9	0.6	0.4	0.8	0.9
Non Residential	1.2	0.5	1.0	0.3	0.1	0.6	0.9	0.5	0.5	0.7	0.8
Residential	0.3	0.3	0.1	0.3	0.2	0.1	0.0	-0.1	0.0	0.0	0.0
Exports	0.5	0.5	0.6	0.1	0.0	0.5	0.4	0.1	0.5	0.7	0.6
Imports	-0.5	-0.3	-0.8	-0.9	-0.4	-0.8	-0.8	-0.3	-0.7	-0.9	-0.9
Government	-0.4	-0.5	-0.2	0.3	0.3	0.1	0.3	0.5	0.3	0.0	0.1
Unemployment Rate (% average)	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.7	4.0	4.2	4.4
Avg. Monthly Nonfarm Payroll (K)	181	192	251	227	193	179	223	164	151	135	113
CPI (YoY %)	2.1	1.5	1.6	0.1	1.3	2.1	2.4	1.7	2.0	2.1	2.1
Core CPI (YoY %)	2.1	1.8	1.8	1.8	2.2	1.8	2.1	2.0	2.0	2.0	2.0
Fiscal Balance (% GDP, FY)	-6.8	-4.1	-2.8	-2.4	-3.2	-3.4	-3.8	-4.6	-4.1	-4.2	-4.7
Current Account (bop, % GDP)	-2.6	-2.1	-2.1	-2.2	-2.3	-2.3	-2.3	-2.2	-2.2	-2.3	-2.4
Fed Target Rate (% eop)	0.25	0.25	0.25	0.50	0.75	1.50	2.50	2.00	1.75	1.75	2.25
Core Logic National HPI (YoY %)	4.0	9.7	6.8	5.3	5.4	5.9	5.8	3.5	3.2	3.2	3.5
10-Yr Treasury (% Yield, eop)	1.72	2.90	2.21	2.24	2.49	2.40	2.83	1.71	1.82	2.09	2.45
Brent Oil Prices (dpb, average)	111.7	108.7	99.0	52.4	43.6	54.3	71.1	64.0	55.4	60.8	60.0

e: estimated

(f): forecast

Source: BBVA Research

Table 7.2 U.S. STATE REAL GDP GROWTH, %

	2014	2015	2016	2017	2018	2019 (f)	2020 (f)	2021 (f)	2022 (f)
Alaska	-2.8	0.7	-1.8	-0.2	-0.3	1.6	0.5	0.8	1.1
Alabama	-1.0	1.3	0.5	1.8	2.0	1.6	1.3	1.0	1.1
Arkansas	0.8	0.4	0.5	0.9	0.9	0.9	1.0	1.3	1.2
Arizona	1.2	2.2	3.3	3.0	4.0	2.8	2.0	2.2	2.0
California	4.0	5.0	3.0	3.6	3.5	2.4	2.7	2.8	3.0
Colorado	4.4	4.4	2.4	3.1	3.5	3.1	2.9	3.0	2.9
Connecticut	-1.5	1.8	-0.2	-0.6	1.0	1.9	1.2	1.2	1.1
Delaware	7.7	3.0	-2.9	-0.1	0.3	2.6	1.9	1.6	1.5
Florida	2.6	3.9	3.4	2.5	3.5	2.7	2.7	2.6	2.5
Georgia	2.9	3.3	3.3	2.9	2.6	2.7	2.5	2.5	2.4
Hawaii	0.3	3.4	2.3	1.6	1.0	0.6	0.5	0.9	0.9
Iowa	5.2	2.1	0.4	-0.3	1.4	1.3	1.9	1.9	1.8
Idaho	2.6	3.0	3.7	2.4	4.1	2.8	3.1	3.0	2.8
Illinois	1.3	1.0	0.3	0.6	2.1	1.5	1.2	1.2	1.1
Indiana	3.0	-1.0	1.7	1.6	1.9	0.9	0.8	1.0	0.9
Kansas	1.9	1.2	2.3	0.8	1.9	0.9	0.6	0.8	0.8
Kentucky	0.2	0.5	0.5	1.1	1.4	1.0	0.6	1.0	0.9
Louisiana	2.3	-0.2	-1.2	0.1	1.1	0.4	0.4	0.5	0.6
Massachusetts	1.9	3.6	1.7	2.2	2.7	2.0	2.2	2.0	1.9
Maryland	1.1	1.7	3.1	2.0	1.6	1.4	2.0	2.1	2.0
Maine	1.7	0.4	2.1	1.7	1.9	1.5	1.5	1.3	1.2
Michigan	1.5	2.3	1.9	1.6	2.7	1.5	1.0	1.0	0.8
Minnesota	2.5	1.0	2.0	2.1	2.2	1.7	1.7	1.8	1.7
Missouri	0.3	1.1	-0.9	0.9	2.3	1.3	1.0	1.1	1.0
Mississippi	-0.2	0.4	0.3	0.5	1.0	0.8	0.8	1.0	0.9
Montana	1.6	3.8	-1.1	0.4	0.9	1.5	1.8	1.9	1.9
North Carolina	1.9	3.1	1.1	1.9	2.9	2.1	2.3	2.3	2.1
North Dakota	7.2	-3.0	-7.1	-1.6	2.5	2.7	0.8	0.9	1.4
Nebraska	2.0	2.4	0.5	0.3	1.5	1.9	2.4	2.4	2.3
New Hampshire	1.0	2.4	1.9	2.0	2.2	1.9	2.2	2.2	2.2
New Jersey	0.3	1.6	0.7	1.3	2.0	1.4	1.1	1.1	1.0
New Mexico	3.1	1.9	0.1	0.0	1.8	2.3	0.6	0.8	0.7
Nevada	1.1	4.2	2.4	2.5	3.2	2.4	2.8	2.9	2.7
New York	2.2	1.5	1.4	1.4	2.1	1.7	1.9	2.0	1.9
Ohio	3.6	1.2	0.7	1.6	1.8	2.1	1.4	1.3	1.2
Oklahoma	5.9	3.5	-2.8	0.2	1.8	1.9	1.8	2.2	2.1
Oregon	3.5	5.3	4.6	3.2	3.4	2.6	2.7	2.5	2.3
Pennsylvania	2.1	2.0	1.1	1.7	2.1	1.9	1.3	1.3	1.2
Rhode Island	0.2	1.5	0.0	0.8	0.6	0.3	1.4	1.5	1.5
South Carolina	2.4	3.2	2.8	2.6	1.6	2.0	1.8	1.8	1.7
South Dakota	1.1	2.6	0.3	-0.4	1.3	3.5	3.9	3.2	2.9
Tennessee	1.6	3.1	1.9	2.4	3.0	2.6	2.0	2.0	1.9
Texas	2.7	5.1	0.2	2.0	3.2	3.4	2.9	3.1	3.0
Utah	3.0	4.0	3.9	2.7	4.3	3.1	3.9	3.8	3.7
Virginia	-0.2	1.9	0.3	1.8	2.8	2.2	2.1	2.1	2.0
Vermont	0.0	1.1	1.6	1.3	1.2	1.1	1.2	1.5	1.5
Washington	3.5	4.2	3.8	4.1	5.7	3.0	2.5	2.4	2.3
Wisconsin	1.8	1.4	1.1	1.4	2.5	1.3	1.2	1.5	1.4
West Virginia	-0.4	-0.5	-1.2	1.4	2.4	2.5	1.2	1.0	0.9
Wyoming	0.1	2.6	-3.8	0.5	0.3	2.6	-0.1	0.6	0.9

(f): forecast

Source: BBVA Research

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