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Regional Economic Outlook, 2018

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- **The bright U.S. macroeconomic outlook is reflected in strong expected performance across all states**
- **The adoption of new technologies in the O&G industry is indicative of peak employment rather than peak production levels in the mining sector and will benefit high-value added service niches and regions that can adapt to the new technological demands**
- **The solid macro trends and the mining recovery result in near historically low probability of states entering recession**
- **Retail banking prospects are bright across the U.S., with Texas generally among the fastest growing markets in the short- to mid-term**

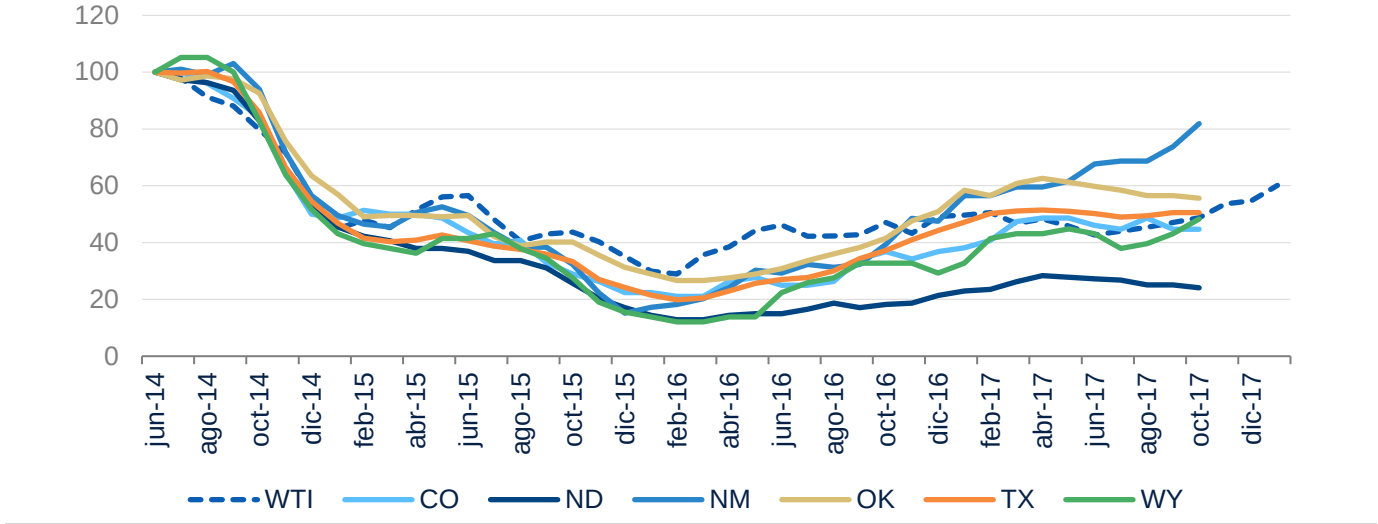
The U.S. economy is experiencing a period of solid to strong growth supported by a domestic momentum, fiscal stimulus from tax cuts and increased public spending, as well as sustained pickup in global demand. While regional economic growth patterns reflect these macroeconomic developments to a large degree, there are important differences across states based on different industry mixes, exposure to global commodity markets, as well as trade and financial trends. One factor that stands out based on its impact on these differences in 2018 is the recovery of the oil and gas (O&G) regions – an ongoing development we have been observing since the industry's recession of 2016. As a result, we find the prospects for 2018 and the mid-term to be positive for all regions of the U.S. This will also be very supportive to retail bank lending in regional markets.

Oil Prices and Regional Growth

Higher oil prices and rise in U.S. oil production capacity have the potential to reshuffle state economic growth in 2018, favoring major producing states over states that are net importers. Prior to 2017, the global supply glut and low prices created significant headwinds in states such as Wyoming, North Dakota, leading to prolonged recessions and labor force contraction in some cases. Now, with prices reaching levels consistent with average break-evens of around 60 $/bbl across the nation, there is the potential for investment to recover, implying an uptick in drilling activity in the mining-centric states.

However, the recent commodity price shock and a rapid adoption of technology in the oil & gas sector has altered the relationship between positive oil price shocks and the real economy, suggesting positive, but a more tempered response. For example, based on the two-stage estimation of the relationship between oil prices, rig activity, and mining employment, we found that, on average, for every 15.9% increase in oil prices there was a 10% increase in rig activity, which in turn led to a 3.6% increase in mining employment. Today, that relationship has changed, as every 7.5% increase in oil prices now produces a 10% increase in rig activity, but only a 2.1% in mining employment. This shift underlies a trend that is indicative of peak employment in the mining sector rather than peak production levels, similar to the transition in the manufacturing sector experienced in the 21st century.

Figure 1. Rig count & West Texas Intermediate Price Index, July-2014=100



Source: BBVA Research, OGJ and BLS

In terms of the state-specific effects, for Texas, rig activity is twice as sensitive to changes in oil prices, unlike West Virginia that requires 20% greater increase in prices for a given response in rig activity. For New Mexico, Wyoming and Oklahoma, the threshold that induces a rise in rig activity is even lower, as each is 3.6, 3.8 and 2.6 times more sensitive to price changes.

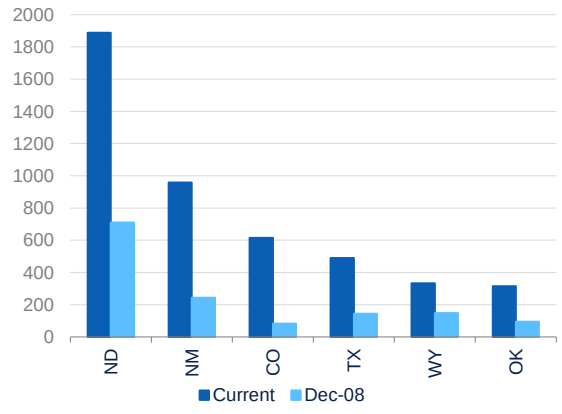
As for employment, the shift to a more capital-intensive production model has been ubiquitous. For instance, in Texas and Colorado rig activity would have to increase at a rate that is three times faster to produce a similar response in mining employment. This implies that in their respective cases, mining would only increase 1.6% and 1.3%, as opposed to pre-oil shock period in which employment would have grown 5.0% and 5.1% faster, respectively. In New Mexico, rig activity would have to increase at a rate that is 8 times faster than the pre-oil shock period to attain similar rates of mining employment growth.

As a result, the response to the current surge in mining activity is unlikely to have as large an effect on mining employment growth in major oil and natural gas producing states such as North Dakota, Wyoming and New Mexico. Instead, support services firms that supply technological advances such as artificial intelligence, data management and monitoring, advanced geological mapping and autonomous drone technology among other services will receive larger share of the economic rents, limit the local level impact in production-oriented areas. In fact, the number of O&G extraction workers per rigs has decreased to a ratio that is consistent with historical average, a trend that will likely accelerate, as the industry orients towards a more technology-driven model.

This suggests that gains from the increased economic activity in the mining sector will be more widely distributed (leakage) across industries and geographies. As a result, the relationship between state GDP growth and the O&G sector

will change. Texas, which now accounts for nearly 50% of all service-oriented employment and is home to attractive drilling basins such as the Permian will likely receive a disproportionate share of the economic gains from the recent increase in oil prices. However, while support activities should experience lower volatility in the short-run, labor markets and growth could remain vulnerable to any oil price fluctuations given the increased exposure to the extraction side of the production equation.

Figure 2. Crude oil production per worker, bbl



Source: BBVA Research and OGJ

Figure 3. Sensitivity to 10% Change in Rig Count

	1990-2014		2014-Current	
	Chng in Employment	Price Chng Neede	Chng in Employment	Oil Price Chng Needed
CO	4.1	9.5	1.3	6.7
ND	5.4	8.8	3.8	6.0
NM	4.6	15.8	0.7	4.4
OH	-3.4	25.6	0.8	6.3
OK	7.6	18.5	1.7	7.2
PA	1.8	19.9	1.7	5.5
TX	3.7	13.0	1.6	6.1
UT	3.0	10.4	0.2	3.8
WV	2.2	21.0	7.3	24.9
WY	7.0	16.5	1.3	4.4
Average	3.6	15.9	2.0	7.5

Source: BBVA Research

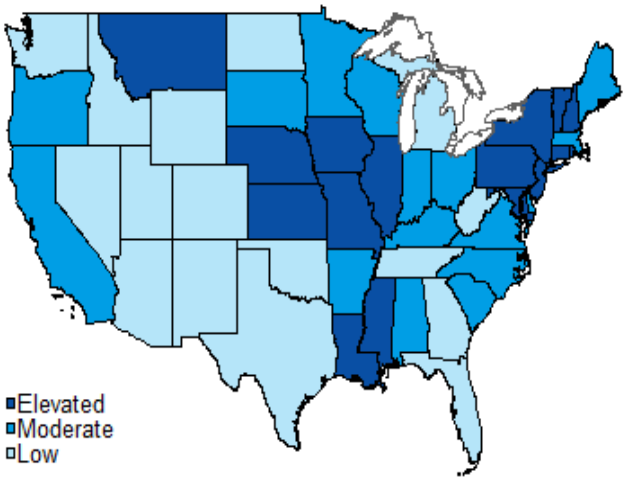
Regional Recession Risk

With the U.S. economy entering its ninth year of expansion, there are fears that the age of the current cycle alone could drive the next recession. However, there is evidence that underlying imbalances in equity valuations, commodity markets or leverage are the biggest threats to economic expansions, not longevity, as Australia has avoided a recession for over 26 years. In addition, the regional macro environment has just recovered from a commodity led state-specific recessionary period, similar to 1986, with the collapse of the energy sector. Today, however, the state-level recession risk— probability of entering recession in next 4 quarters— is near historical lows.

As of the third quarter of 2017, after accounting for the contributions to domestic growth, 83% of the U.S. states had less than a 20% probability of entering recession and only Nebraska had a higher than 40% probability of recession. Similarly, the weighted aggregate probability of recession in the U.S. is approaching lows not seen since 2014-2015. This implies the risk of entering a widespread regional recession within the next twelve months is low. Furthermore, household leverage, or the ratio of per capita debt-to-income, has returned to levels not seen since early 2000s. At 77%, this ratio remains high; although the direction of change implies less risk to asset prices, credit quality and durables consumption, as was the case in 2002-2006.1

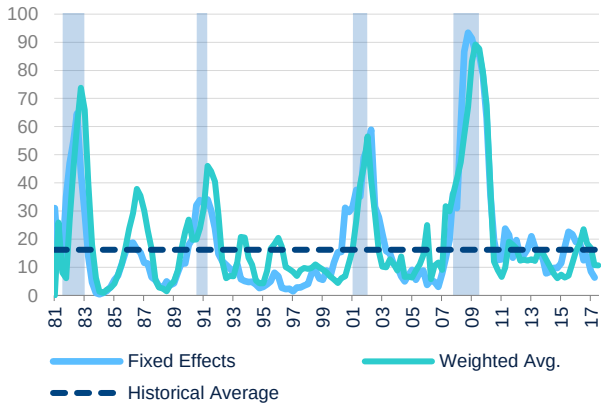
1: https://www.imf.org/external/np/res/seminars/2009/arc/pdf/sufi1.pdf

Figure 4. State Recession Probability



Source: BBVA Research

Figure 5. Aggregate State-Level Recession Probability, %



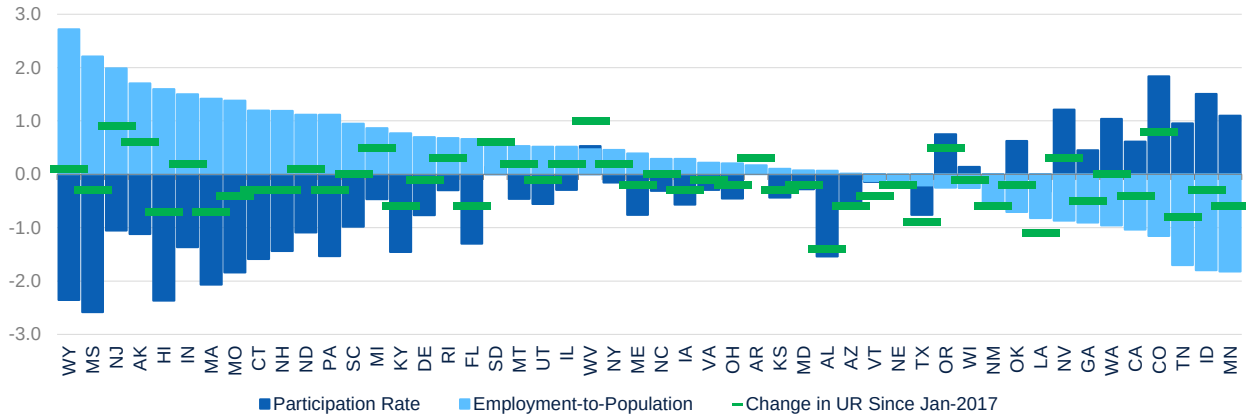
Source: BBVA Research

In terms of state macro risks, there remains some consolidation in states exposed to the downside of low oil prices, as business bankruptcies remain elevated in North Dakota and Louisiana; Virginia and Nebraska have also experienced a rise in business bankruptcies. In addition, unemployment insurance claims rose in states such as South Carolina, Michigan, North Dakota and Kansas in the 3Q17, but have eased in 4Q17 and remain well below crisis peaks. In terms of the risk of overheating, we estimate that only 19 of the 50 states have effectively closed their respective output gaps. As a result, there is no systemic risk of a majority of state economies overheating ; although, as expansionary fiscal policies and tax reform tailwinds begin to build there is a chance that largest and more productive states such as California, Colorado, Washington and Texas, which have positive output gaps could be at risk of overshooting there long-run potential.

In fact, the labor markets in many states appear to be reaching historically strong levels. For example, unemployment rates (UR) in Maine, Alabama, California, Hawaii, Wisconsin and Mississippi are at historic lows while states such as Idaho, Texas and Washington are only 10 bp away from 40-year lows. In addition, 36 states have UR that are only 1pp away from these lows.

However, despite the significant improvements in the UR in many states, in many cases, the declines in labor force participation explain the drop in the rate, rather than meaningful gains in employment relative to growth in the labor force. This suggests that the overall health of regional labor markets is not all rosy as the headline UR figures suggest, as labor force outflows and demographics continue to be a heavy influence on regional labor markets.

Figure 6. Factors Contributing to Changes in the Unemployment Rate, PP



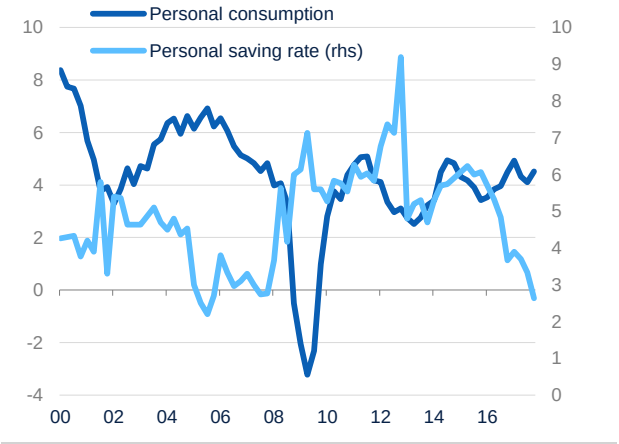
Source: BBVA Research and BLS

In the case of Alabama, the labor force participation rate declined 0.7pp over the past 12 months, explaining about 1.2pp of the decline in unemployment rate; however, the state also added employees relative to the size of the population, which pushed the unemployment rate down another 1.7pp, which together pushed the UR down 2.9pp in 2017. Conversely, for Massachusetts, the growth in labor force participation in 2017 increased the UR by 1.0pp, a trend that was not fully offset by improvements in the employment-to-population ratio, which only add approximately 0.7pp to the unemployment rate. For Texas, while labor force outflows explain about twenty percent of the decline in the UR, gains in the employment-to-population explain the bulk, at around 60%, suggesting that Texas labor market remains strong in spite of the effects of Hurricane Harvey and low commodity prices.

Regional retail lending trends

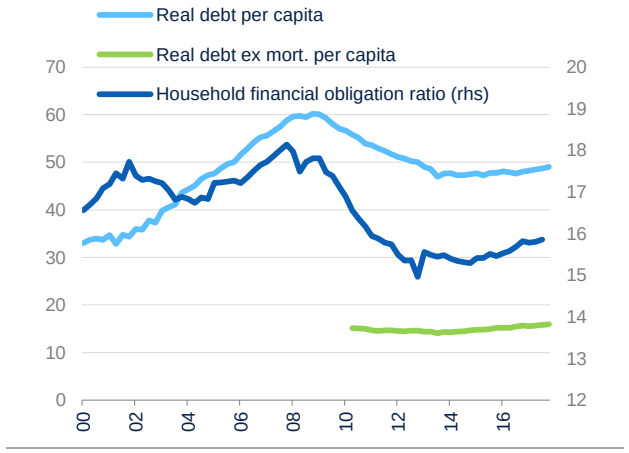
The solid current overall macroeconomic performance and the positive outlook will support retail bank lending, with some adjustments in the speed of increase in lending, depending on the level of delinquencies. Personal spending has remained robust since 2014, despite the slowdown in some areas in 2015-2016. While the solid rate of personal spending has come at the back of lower saving over the last two years (Figure 7), the sustained growth in spending going forward is expected to be supported by stronger real income growth, as well as ongoing growth in borrowing. Credit consumption will be supported by excess capacity to borrow by historical standards, measured by real debt per capita and the financial obligation ratio (Figure 8). That said, consumer delinquencies have already bottomed out in the case of credit cards and auto loans, so this will limit the upside for consumer lending to some extent. As always, however, there will be significant regional variations.

Figure 7. Spending growth and saving rate (% YoY and %)



Source: BBVA Research and FRBNY

Figure 8. Debt per capita and financial obligations ratio

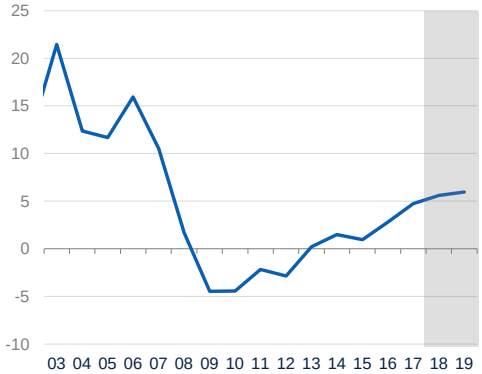


Source: BBVA Research

Mortgages

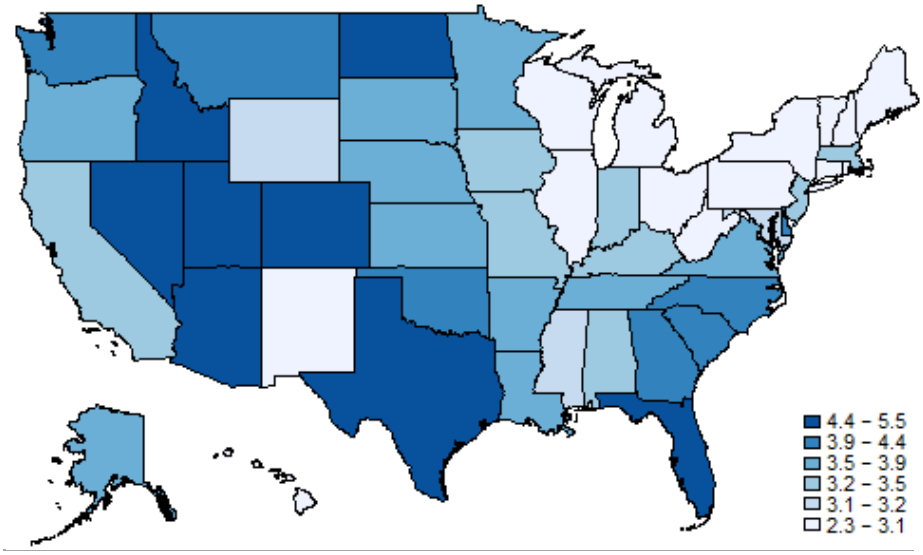
Mortgage lending was the last major type of retail lending to recover from the effects of the Great Recession. The severity of the impact of the recession on the residential real estate market was so strong, that the delinquency rates are still declining from the historically high level reached in 2010. Because of the ongoing improvements in credit quality, the economic expansion, and home price appreciation, mortgage debt will be increasing at a faster rate in the coming years (Figure 9). In 2018, mortgage growth is expected to be strongest in Idaho, followed by Texas and Nevada (Figure 10). Strong population growth in these states, as well as a solid increase in debt levels per capita, which is especially the case

Figure 9. Mortgage debt increase (% YoY)



Source: BBVA Research and FRBNY

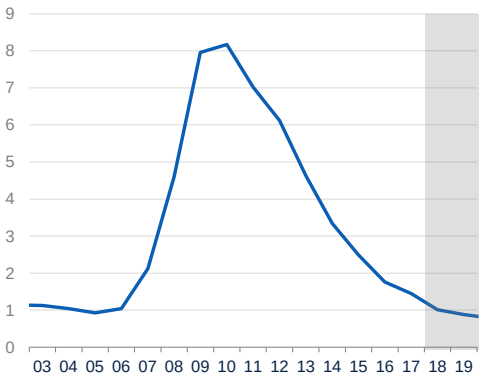
Figure 10. Mortgage debt increase in 2018 by state (% YoY)



Source: BBVA Research

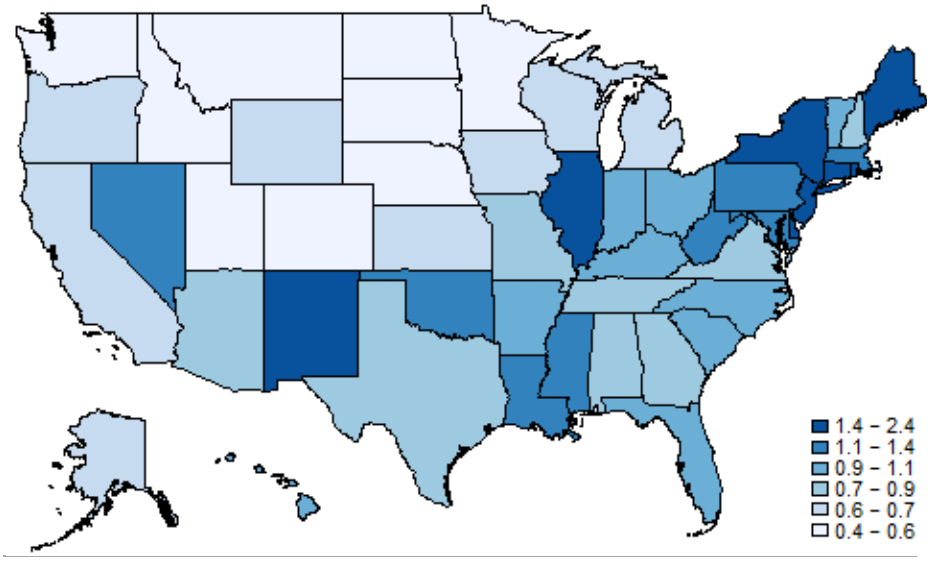
for Nevada, will support the mortgage activity. The states with the lowest rate of increase in mortgage debt will be West Virginia, Illinois and Vermont. These states tend to have low population growth and average or below average growth of home prices. Mortgage delinquencies are expected to continue declining (Figure 11). All states will post declines as a result of the solid economic outlook, the O&G recovery, the gains in labor markets, and increases in home prices (Figure 12).

Figure 11. Mortgage delinquency rate (% of balance 90+ days delinquent)



Source: BBVA Research and FRBNY

Figure 12. Mortgage delinquency rate in 2018 by state (% of balance 90+ days delinquent)

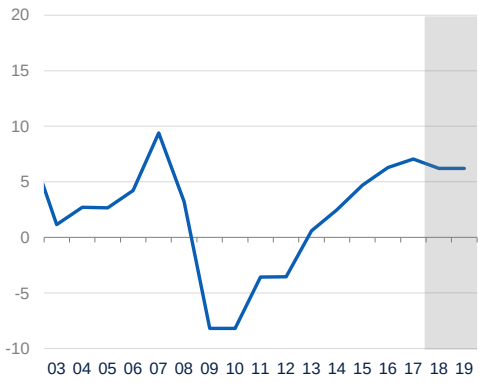


Source: BBVA Research

Credit cards

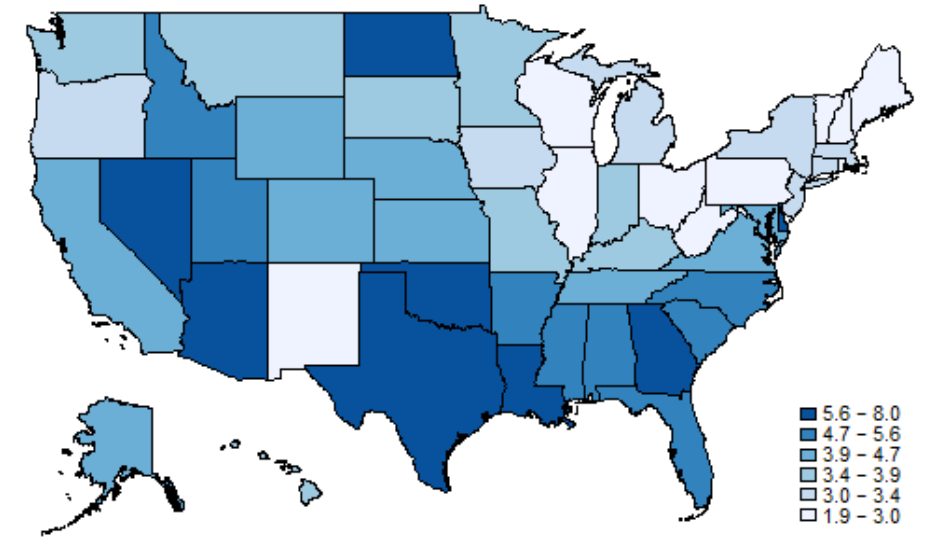
Credit card lending increased at a solid rate during 2017, which is set to continue in the coming period (Figure 13). Lenders will have to balance the expansion in lending with the increase in delinquencies, however, which are also expected to continue inching higher. That said, we expect delinquencies to remain below their pre-crisis peak, which will contribute to the solid financial performance of credit card issuers. Some of the strongest increases in credit card debt year-over-year in 2018 will be in states where the O&G industry commands a large share of the economy – the fastest rate of growth in credit card debt is expected in Oklahoma, followed by Texas. Other high performers in 2018 are expected to be Nevada, North Dakota and Delaware (Figure 14). All of these states, with the exception of Delaware have credit card debt per capita that is around or below the U.S. average of $3,110. Growth in debt per capita will be solid in all of these states, and particularly so in Oklahoma. Texas and Nevada will also see strong population growth, beneficial for lenders in these states.

Figure 13. Credit card debt increase (% YoY)



Source: BBVA Research and FRBNY

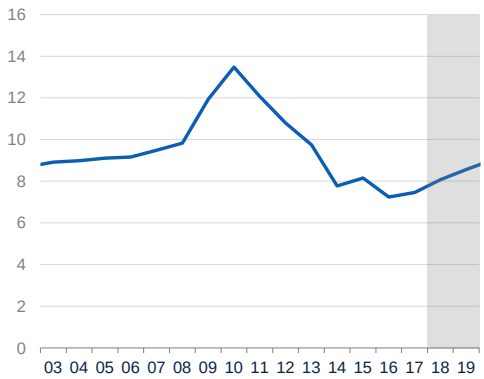
Figure 14. Credit card debt increase in 2018 by state (% YoY)



Source: BBVA Research

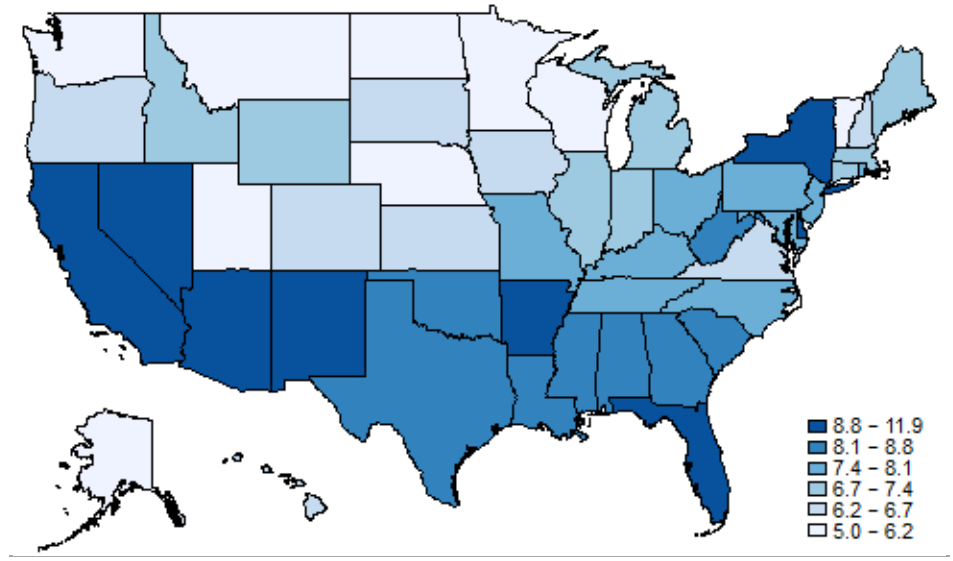
Credit card delinquencies are expected to increase slightly in almost all states, except Alaska. The highest levels of credit card delinquencies are expected to remain in Nevada, Arizona and Florida (Figure 16), while the highest increases in credit card delinquency rates in 2018 are expected to be in Arizona, Nevada and Georgia.

Figure 15. Credit card delinquency rate (% of balance 90+ days delinquent)



Source: BBVA Research and FRBNY

Figure 16. Credit card delinquency rate in 2018 by state (% of balance 90+ days delinquent)

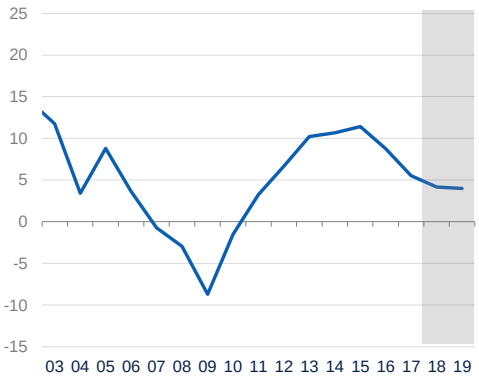


Source: BBVA Research

Auto loans

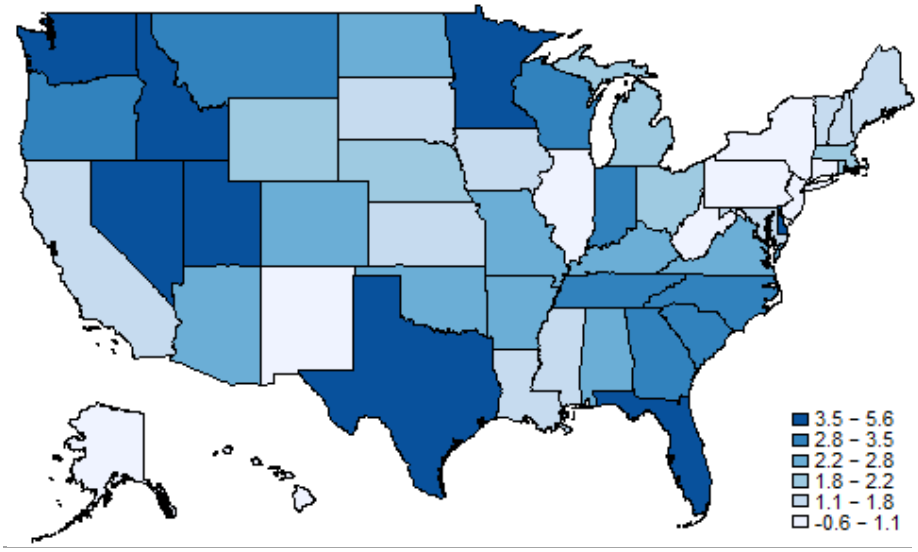
Auto lending was the first major type of retail lending to recover after the Great Recession. It increased at a particularly strong rate in 2013-2015. This meant, however, that the delinquency rates for this type of loans were the first to start increasing. As lenders limited their expansion in the lower credit quality market segments, a slowdown in auto lending growth occurred in 2016 and 2017. The deceleration in the increase in auto debt is likely to continue in 2018, with growth settling slightly below 5% YoY (Figure 17). The highest increases in auto loan balances in 2018 are expected to occur in Idaho, Delaware, Florida, Minnesota and Texas. Growth in Idaho will be driven by both an increase in per capita debt as well as population growth. This will also be the case to some extent with Florida and Texas. Growth in Delaware and Minnesota will be supported primarily by increases in per capita balances. The per capita auto loan balance for the U.S. in 2017 was $4,550. The per capita balance in Idaho and Minnesota was slightly below that figure, while in Florida and Delaware was slightly above. Texas is the outlier among all states, with an average auto loan balance per capita of around $6,800 in 2017. Growth in average auto loan balances in 2018 is expected to stall in Hawaii, Connecticut, and New Mexico (Figure 18).

Figure 17. Auto debt increase (% YoY)



Source: BBVA Research and FRBNY

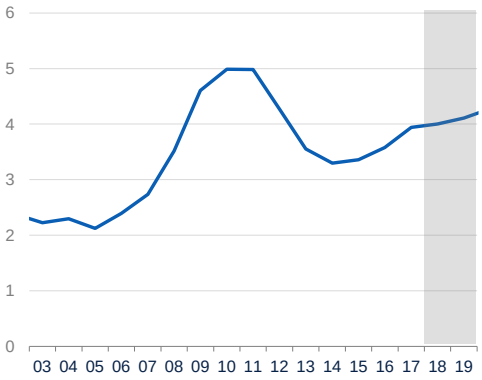
Figure 18. Auto debt increase in 2018 by state (% YoY)



Source: BBVA Research

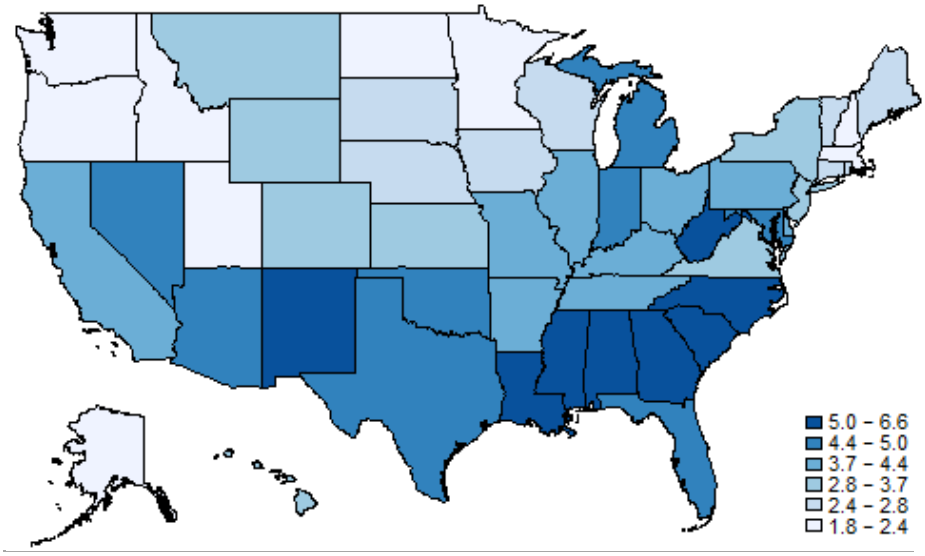
As lending growth slows, the pace of increase in delinquencies is expected to slow as well (Figure 19). In some states – particularly O&G industry exposed, delinquencies are even expected to decline. This group includes Oklahoma, North Dakota, Texas and Wyoming. Compared to 2017, auto loan delinquencies are expected to increase the most in Hawaii, California and Maryland. In terms of the levels of delinquencies in 2018, Mississippi will have the highest level of delinquencies, as was the case in 2017. The second highest level of delinquencies will be New Mexico (Figure 20).

Figure 19. Auto loan delinquency rate (% of balance 90+ days delinquent)



Source: BBVA Research and FRBNY

Figure 20. Auto loan delinquency rate in 2018 by state (% of balance 90+ days delinquent)



Source: BBVA Research

Bottom line

The solid macroeconomic fundamentals, economic momentum, fiscal stimulus and strengthening global growth underlie our strong economic outlook for all U.S. states. Moreover, some states are experiencing an added tailwind from higher oil prices and a recovery in the O&G sector. However, this recovery looks to be less labor-intensive, but rather knowledge-intensive, which will favor regions that can adapt to the new trends. The bright economic outlook will support the expansion in retail lending in all regions, with ongoing strong credit quality.

Table 1. Regional Forecasts

	2015	2016	2017	2018 (f)	2019 (f)
Alaska					
Real GDP growth	0.3	-5.4	-1.0	0.5	0.5
Unemployment rate	6.4	6.6	6.9	7.3	7.0
Alabama					
Real GDP growth	1.5	1.5	2.3	1.6	1.6
Unemployment rate	6.1	6.0	4.7	3.5	3.5
Arkansas					
Real GDP growth	0.5	0.9	2.6	2.0	2.1
Unemployment rate	5.0	4.1	3.6	3.8	3.8
Arizona					
Real GDP growth	2.0	2.6	2.4	1.6	1.5
Unemployment rate	5.9	5.2	4.9	4.9	4.6
California					
Real GDP growth	4.4	3.3	3.3	3.4	3.2
Unemployment rate	6.2	5.4	4.8	3.9	3.7
Colorado					
Real GDP growth	3.4	1.1	3.2	3.0	2.8
Unemployment rate	3.8	3.3	2.6	3.6	3.8
Connecticut					
Real GDP growth	1.9	0.0	-1.2	0.8	0.9
Unemployment rate	5.6	5.1	4.7	4.5	4.4
Delaware					
Real GDP growth	2.8	0.1	2.6	2.2	2.4
Unemployment rate	4.8	4.4	4.7	4.4	4.4
Florida					
Real GDP growth	3.9	2.4	2.5	3.8	3.5
Unemployment rate	5.3	4.9	4.2	3.6	3.5
Georgia					
Real GDP growth	3.1	3.0	2.4	2.4	2.5
Unemployment rate	5.9	5.4	4.8	4.3	4.1
Hawaii					
Real GDP growth	3.2	1.9	1.8	2.1	2.0
Unemployment rate	3.6	3.0	2.6	1.8	1.7
Iowa					
Real GDP growth	4.0	1.6	-0.1	1.2	2.0
Unemployment rate	3.8	3.7	3.1	2.7	2.7
Idaho					
Real GDP growth	3.0	2.7	3.1	4.3	2.1
Unemployment rate	4.2	3.8	3.2	2.8	2.9
Illinois					
Real GDP growth	1.2	1.0	0.6	1.6	1.7
Unemployment rate	5.9	5.9	5.0	4.4	4.1
Indiana					
Real GDP growth	0.8	2.5	2.0	1.9	1.9
Unemployment rate	4.8	4.5	3.6	3.1	3.2
Kansas					
Real GDP growth	1.1	-0.9	-0.1	1.9	1.2
Unemployment rate	4.2	4.2	3.7	3.2	3.0
Kentucky					
Real GDP growth	1.0	1.2	1.8	0.9	1.4
Unemployment rate	5.2	5.0	5.0	3.9	3.9
Louisiana					
Real GDP growth	0.6	0.2	1.0	2.1	1.1
Unemployment rate	6.3	6.1	5.3	4.4	4.2
Massachusetts					
Real GDP growth	3.8	1.5	2.2	2.2	2.4
Unemployment rate	4.8	3.7	3.8	3.2	3.1
Maryland					
Real GDP growth	1.9	2.5	1.2	1.1	1.1
Unemployment rate	5.0	4.3	4.1	3.9	3.8
Maine					
Real GDP growth	0.8	1.6	1.0	0.2	0.3
Unemployment rate	4.3	3.9	3.4	2.7	2.8
Michigan					
Real GDP growth	2.9	2.2	2.8	1.1	1.2
Unemployment rate	5.4	5.0	4.5	4.7	4.7
Minnesota					
Real GDP growth	1.5	2.1	2.6	2.0	2.0
Unemployment rate	3.8	3.9	3.7	2.9	3.0
Missouri					
Real GDP growth	1.5	0.3	0.4	0.7	0.7
Unemployment rate	5.1	4.6	3.8	3.6	3.5
Mississippi					
Real GDP growth	0.2	1.2	1.3	0.8	0.4
Unemployment rate	6.3	5.9	5.1	4.3	4.1

	2015	2016	2017	2018 (f)	2019 (f)
Montana					
Real GDP growth	2.3	1.1	0.9	2.1	2.3
Unemployment rate	4.1	4.1	3.9	4.1	4.0
North Carolina					
Real GDP growth	2.7	1.9	2.2	1.8	1.6
Unemployment rate	5.7	5.1	4.5	4.3	4.1
North Dakota					
Real GDP growth	-2.5	-5.0	0.3	4.1	4.1
Unemployment rate	2.8	3.2	2.6	2.6	2.5
Nebraska					
Real GDP growth	2.1	0.9	0.0	2.1	2.1
Unemployment rate	3.1	3.2	2.9	2.6	2.5
New Hampshire					
Real GDP growth	2.6	1.6	0.8	0.9	1.3
Unemployment rate	3.4	2.8	2.8	2.6	2.8
New Jersey					
Real GDP growth	1.1	0.7	0.3	1.0	0.7
Unemployment rate	5.8	5.0	4.5	4.8	4.7
New Mexico					
Real GDP growth	1.6	0.2	1.7	1.0	1.2
Unemployment rate	6.5	6.7	6.4	5.6	5.3
Nevada					
Real GDP growth	3.5	1.4	2.4	3.4	3.3
Unemployment rate	6.8	5.7	4.9	4.7	4.2
New York					
Real GDP growth	2.0	0.4	1.3	1.5	1.5
Unemployment rate	5.3	4.9	4.6	4.4	4.3
Ohio					
Real GDP growth	1.1	1.1	1.8	1.4	1.3
Unemployment rate	4.9	5.0	5.1	4.5	4.3
Oklahoma					
Real GDP growth	3.1	-4.1	1.5	2.5	2.6
Unemployment rate	4.4	4.9	4.4	3.8	3.5
Oregon					
Real GDP growth	4.8	3.8	1.9	1.9	2.2
Unemployment rate	5.6	4.9	4.0	3.8	3.8
Pennsylvania					
Real GDP growth	2.3	0.6	1.4	1.3	1.5
Unemployment rate	5.3	5.5	4.9	4.8	4.7
Rhode Island					
Real GDP growth	1.9	0.5	0.8	0.5	0.3
Unemployment rate	6.0	5.3	4.3	4.3	4.1
South Carolina					
Real GDP growth	3.1	1.8	2.3	1.7	1.8
Unemployment rate	5.9	4.9	4.1	4.0	3.8
South Dakota					
Real GDP growth	2.8	0.7	-0.9	2.6	2.5
Unemployment rate	3.1	2.8	3.1	3.4	3.2
Tennessee					
Real GDP growth	3.0	2.9	2.0	1.9	1.6
Unemployment rate	5.5	4.8	3.9	3.4	3.5
Texas					
Real GDP growth	4.2	-0.3	2.7	4.8	4.5
Unemployment rate	4.4	4.7	4.4	3.9	3.8
Utah					
Real GDP growth	4.1	3.7	3.3	2.7	2.9
Unemployment rate	3.6	3.4	3.3	2.9	2.8
Virginia					
Real GDP growth	2.2	0.5	1.5	0.6	0.4
Unemployment rate	4.4	4.1	3.8	3.7	3.6
Vermont					
Real GDP growth	0.9	0.7	0.9	1.9	1.7
Unemployment rate	3.6	3.3	3.0	2.7	2.8
Washington					
Real GDP growth	3.7	4.2	3.8	2.9	2.9
Unemployment rate	5.6	5.4	4.6	4.4	4.2
Wisconsin					
Real GDP growth	2.1	1.3	1.5	1.3	1.5
Unemployment rate	4.5	4.2	3.3	2.8	2.9
West Virginia					
Real GDP growth	0.7	-1.1	2.3	1.2	0.8
Unemployment rate	6.7	6.0	5.0	5.4	4.8
Wyoming					
Real GDP growth	0.6	-1.8	1.7	-0.8	0.4
Unemployment rate	4.3	5.3	4.3	3.7	3.1

Source: BBVA Research

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