BBVA Research

U.S. Economic Outlook

October 2018

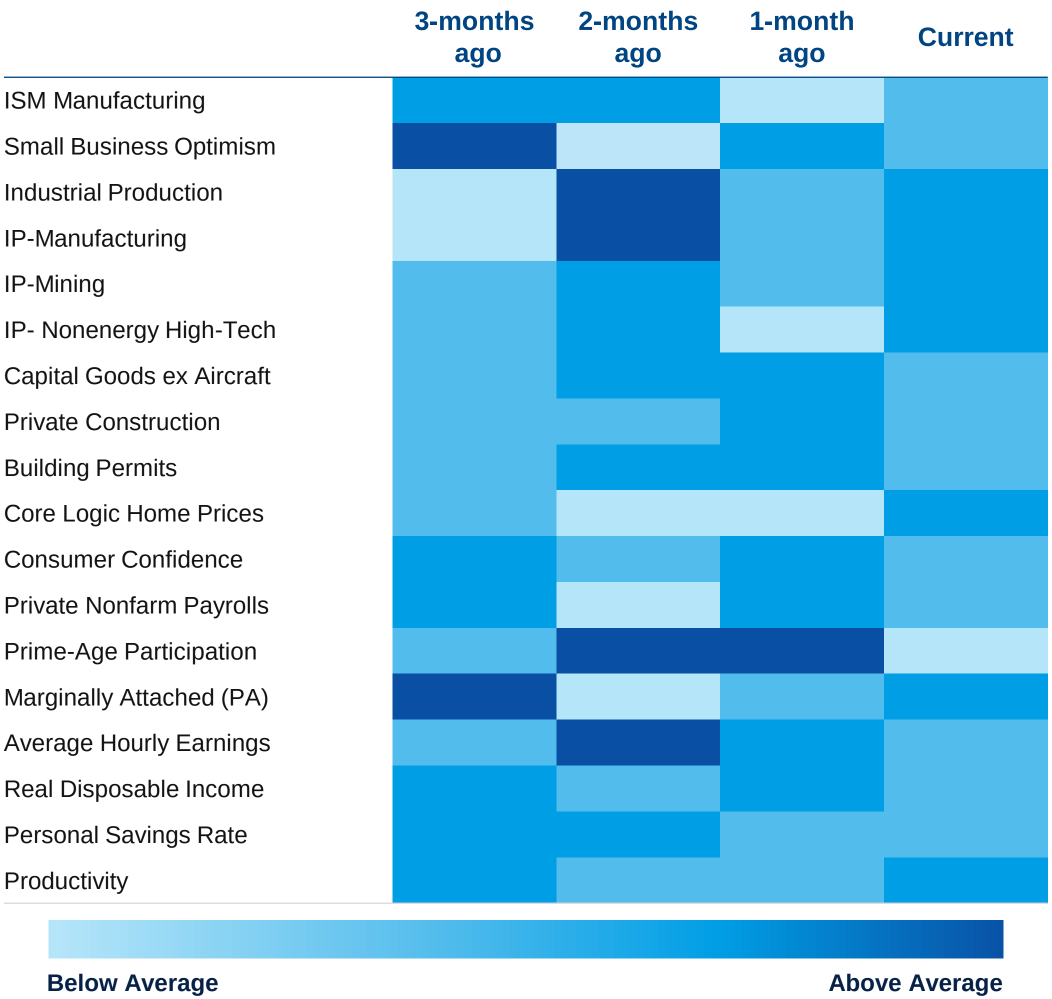
Creating Opportunities

Economic Outlook

- Economic conditions remain consistent with high growth in 2018 & 2019, upside risks to inflation contained
- FOMC remains poised to raise rates in December. Baseline assumes three additional increases in 2019
- Labor market slack continues to decline, as unemployment rate nears 50 year lows at 3.7%
- Inflation pressures ease in 3Q18, but tariffs and rising nonlabor price pressures will continue to buoy inflation expectations. Our scenario continues to anticipate a slight overshooting of 2% target
- A correction in market expectations exerts upward pressure on 10-year Treasury yields in line with our baseline
- Higher uncertainty about long-run equilibrium oil prices

Economic activity

Real-Time Economic Momentum Heat Map

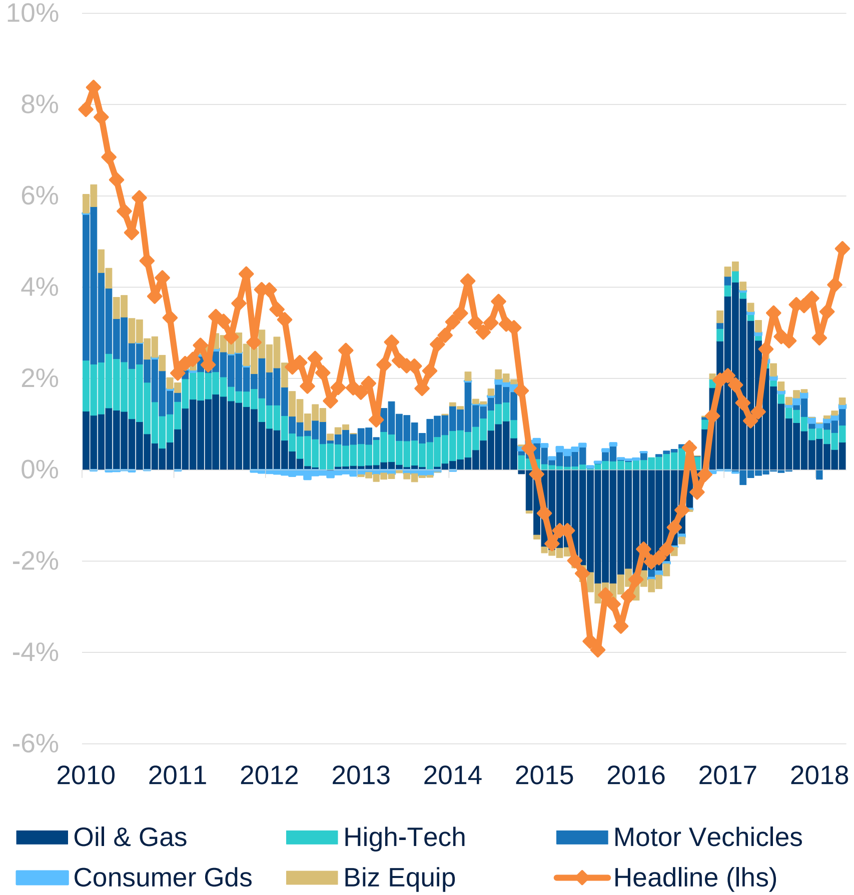


Source BBVA Research

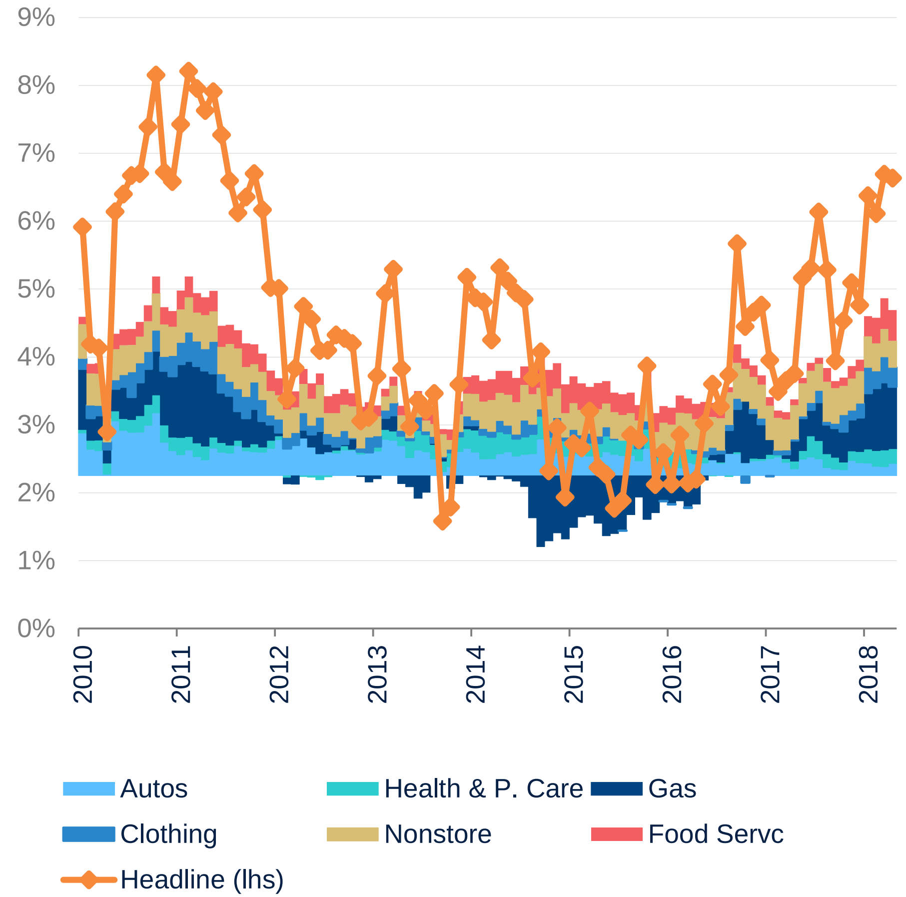
- Momentum slowing, but broader economic trends remain positive
- Mining, manufacturing and utilities all growing positively
- Consumers remain extremely optimistic about current conditions and the future
- Some short-term labor market volatility from major weather events
- Productivity growth highest since 2015

Economic trends: Pervasive growth in industrial sectors, consumer momentum slowing somewhat

Industrial Production
(Year-over-year %)



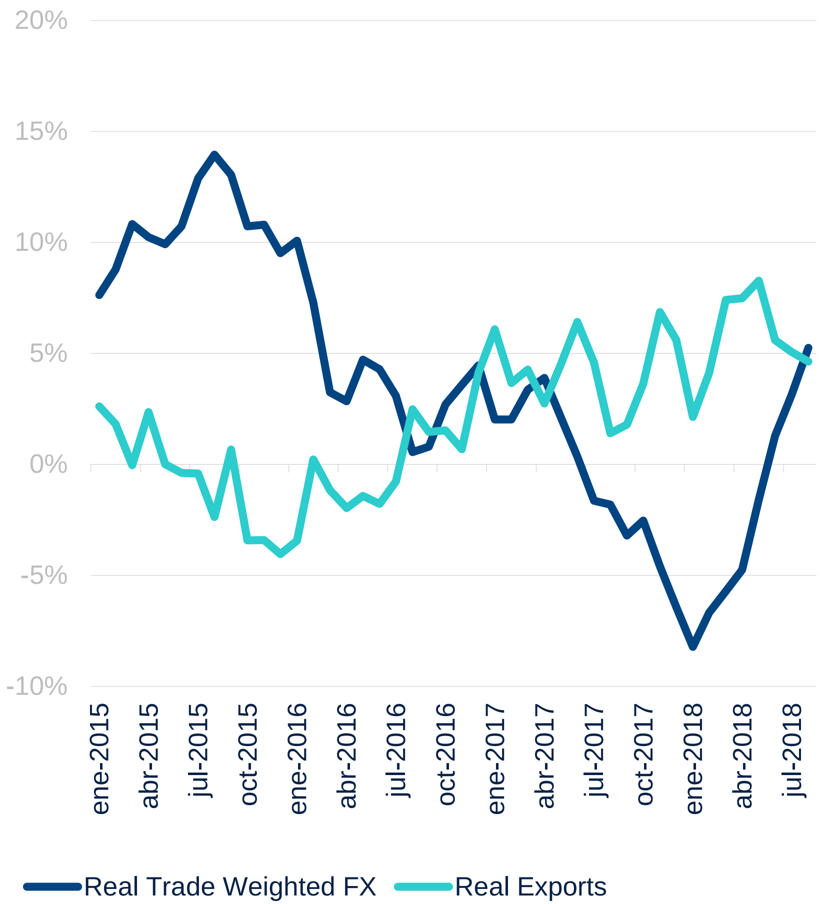
Retail Sales
(Year-over-year %)



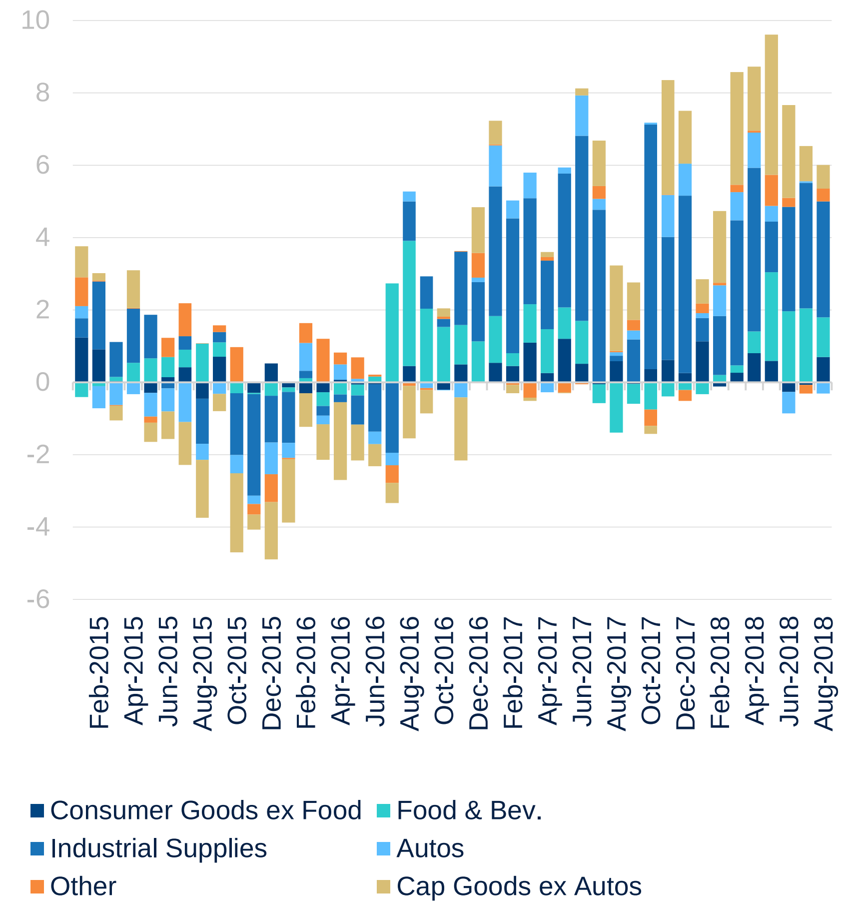
Source: BBVA Research, FRB & BEA

Economic trends: Exports face persistent headwinds from tariffs and dollar strength

Real Exchange Rates and Exports
(Year-over-year %)



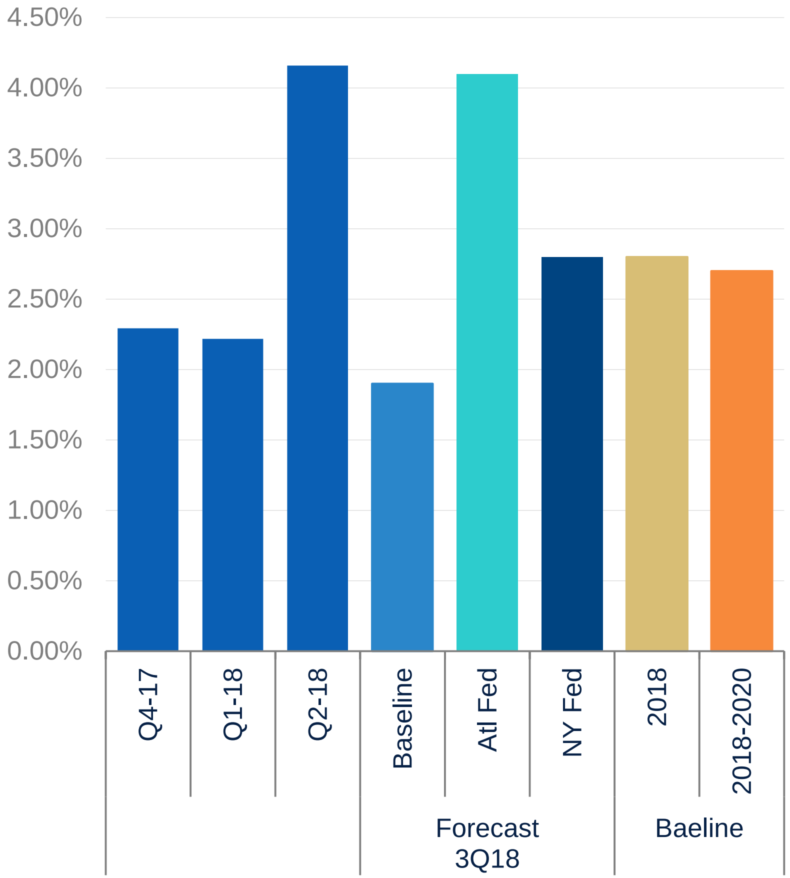
Real Exports
(Contribution to year-over-year %)



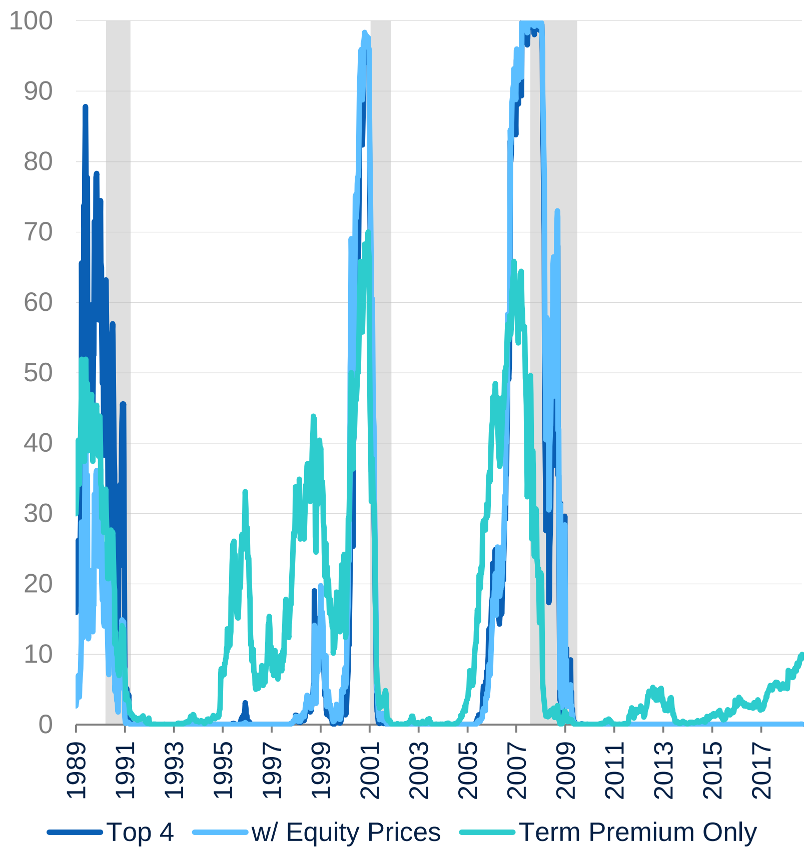
Source: BBVA Research, FRB & Census

Economic trends: Growth likely to decelerate in 3Q18, but recession probability remains low

Real GDP
(QoQ SAAR, %)



Probability of Recession in 12 Months
(%)

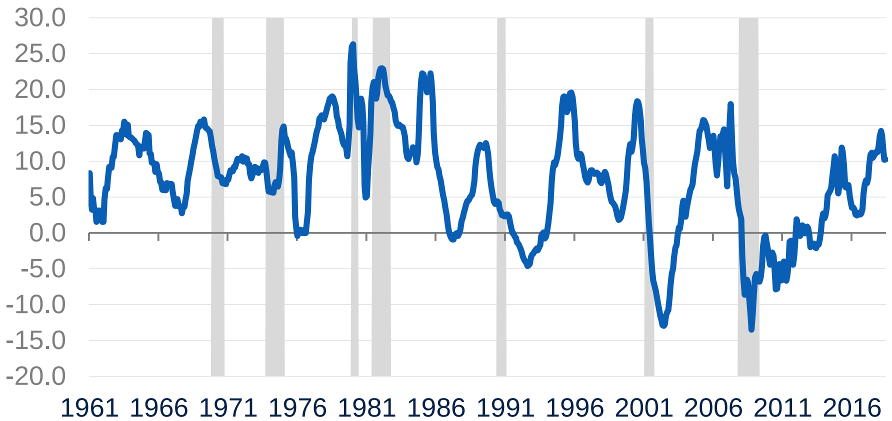


Source: BBVA Research, and ATL & NY Fed

Consumer credit cycle: Lending standards easing for auto and consumer loans, leverage remains low

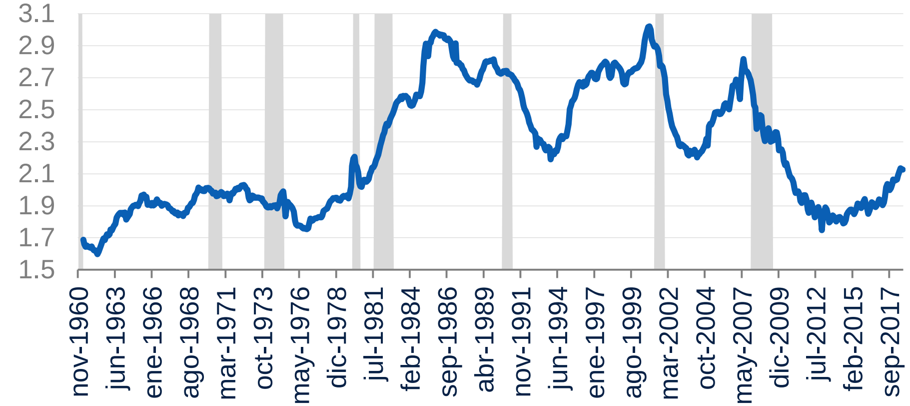
Personal Interest Expense

Year-over-year %



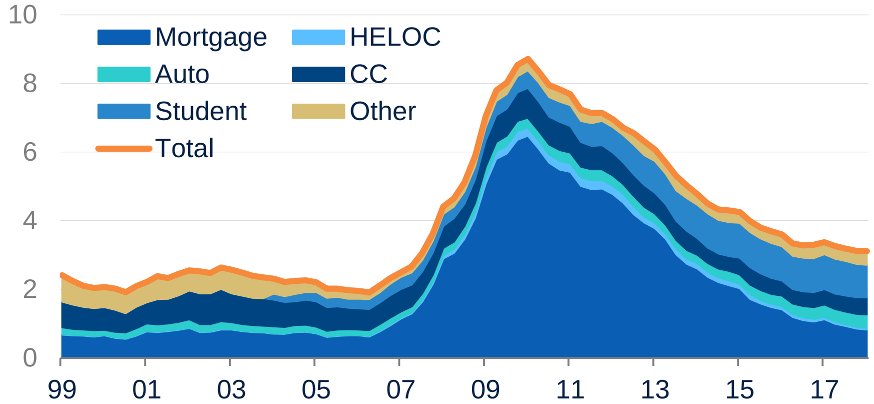
Personal Interest Expense to Disp. Income

Ratio, %



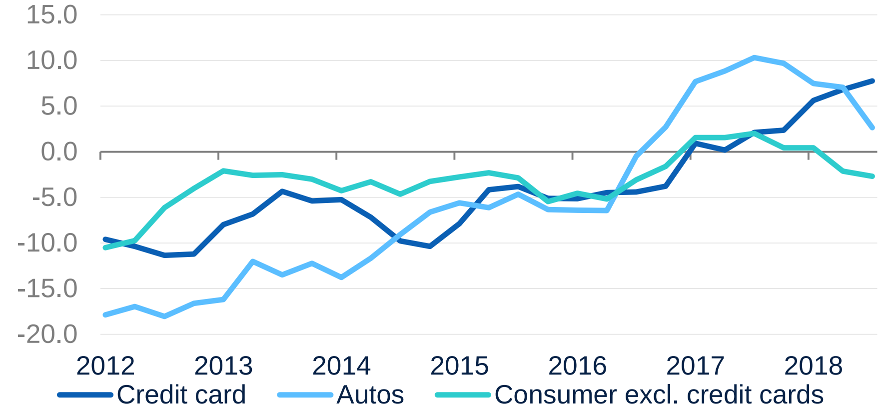
New 30+ Day Consumer Delinquencies Rates

%



Senior Loan Officers Lending Standards

+ tightening / - loosening



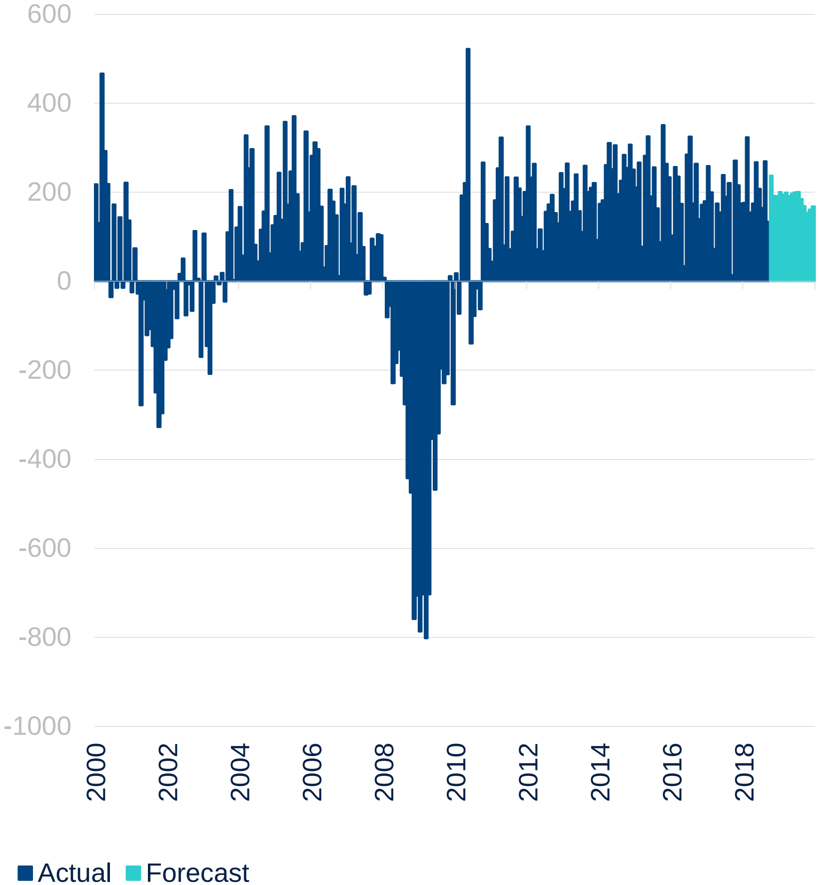
Source: BBVA Research, FRB, NY Fed & BEA

Labor Market

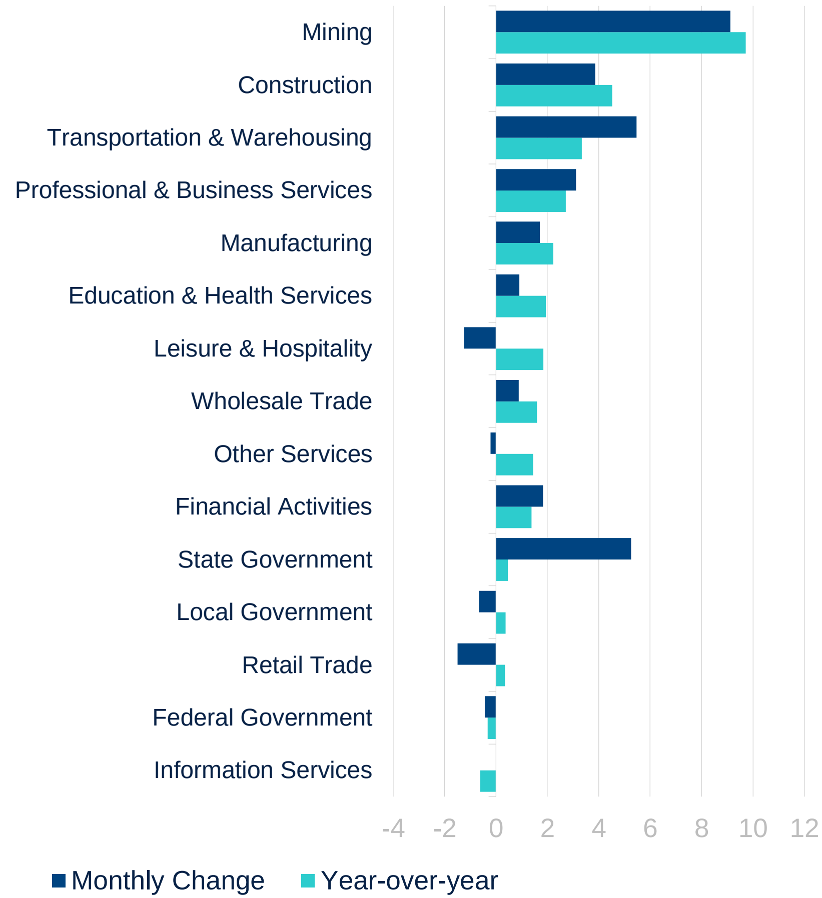
- In September, nonfarm payrolls increased at a slower than average pace (134K) due to the weather related impacts from Hurricane Florence
- In terms of industry trends, the report showed solid gains in professional and business services (54K), health care (26K), construction (23K), transportation and warehousing (24K) and construction (23K)
- The combined revisions for July and August imply 87,000 more job gains than previously reported
- The unemployment rate edged down to 3.7%, which is the lowest rate since December 1969
- The labor force participation rate remained at 62.7% while the employment-population ratio was little changed at 60.4%
- We expect the UR to trend close to its current rate at 3.7% by the end of the year. Monthly job gains to bounce back in 4Q18, as weather related effects fade

Labor market: Hurricane impacts skew employment data in September

Nonfarm Payrolls
(Monthly Change, K)



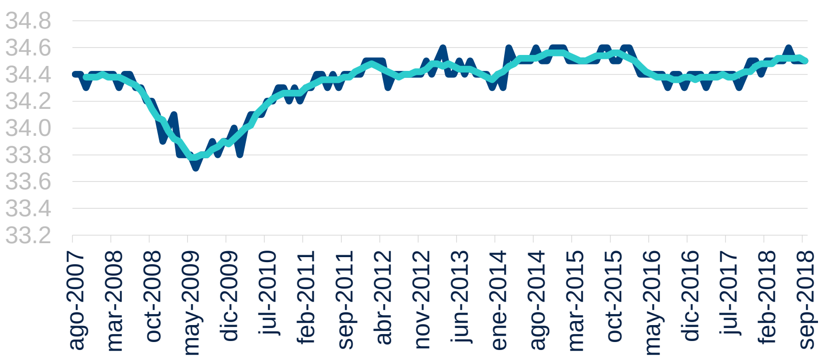
Industry Employment
(Annualized % change)



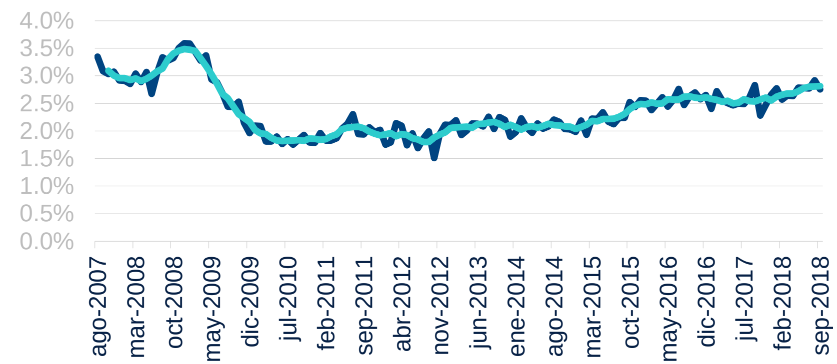
Source: BBVA Research & BLS

Labor market: Higher wages drawing in more prime age workers

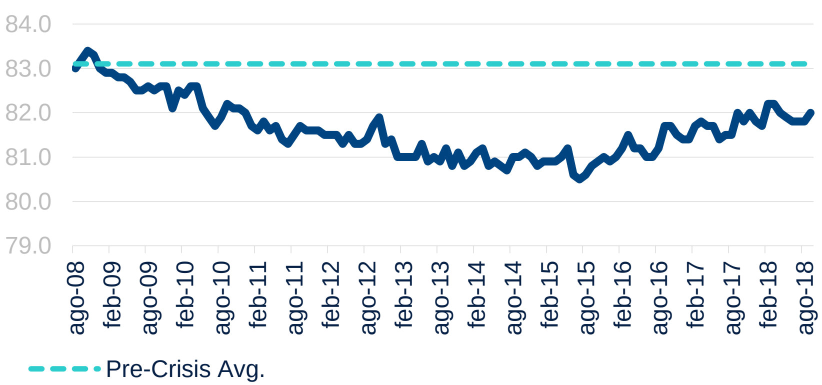
Average Weekly Hours
(number & 5mcma)



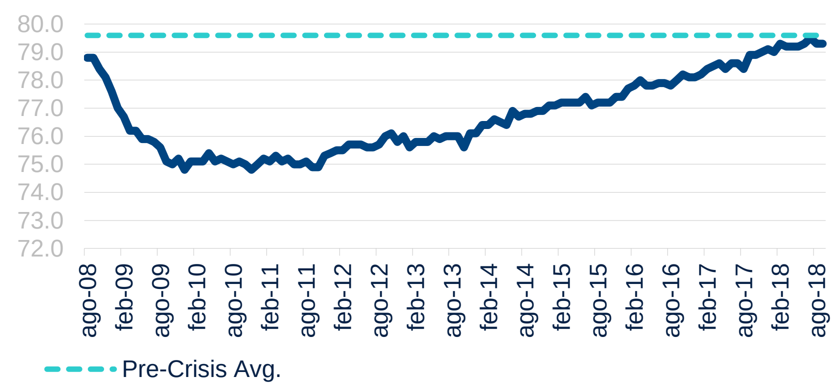
Average Hourly Earnings
(YoY% & 5mcma)



Prime Age Labor Force Participation
(%)



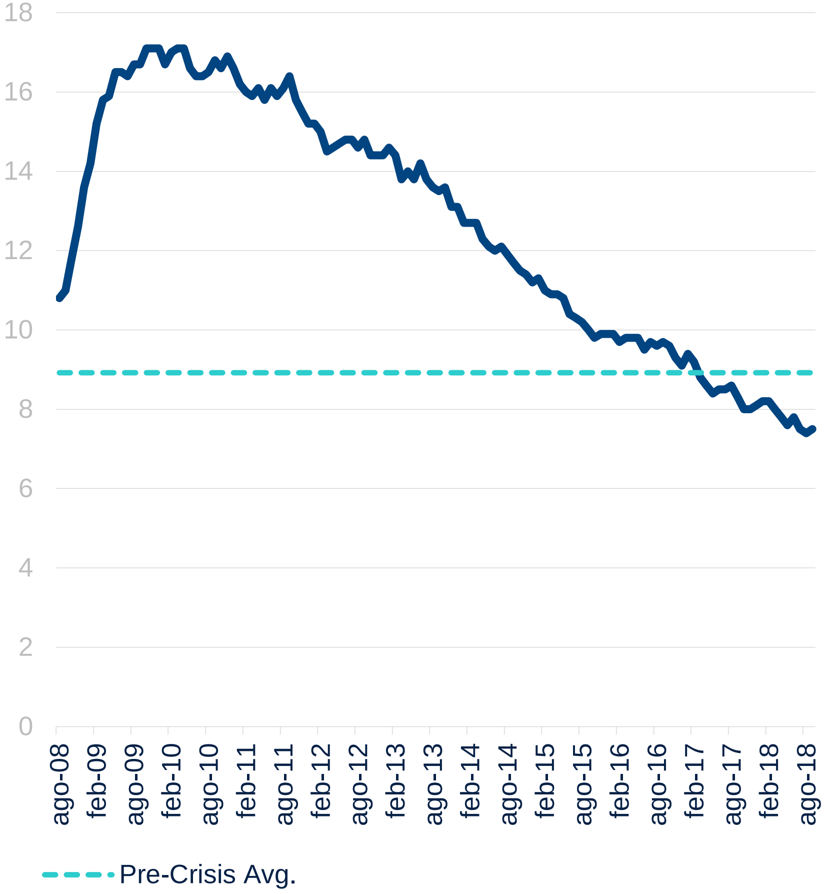
Prime Age Employment-to-Population
(%)



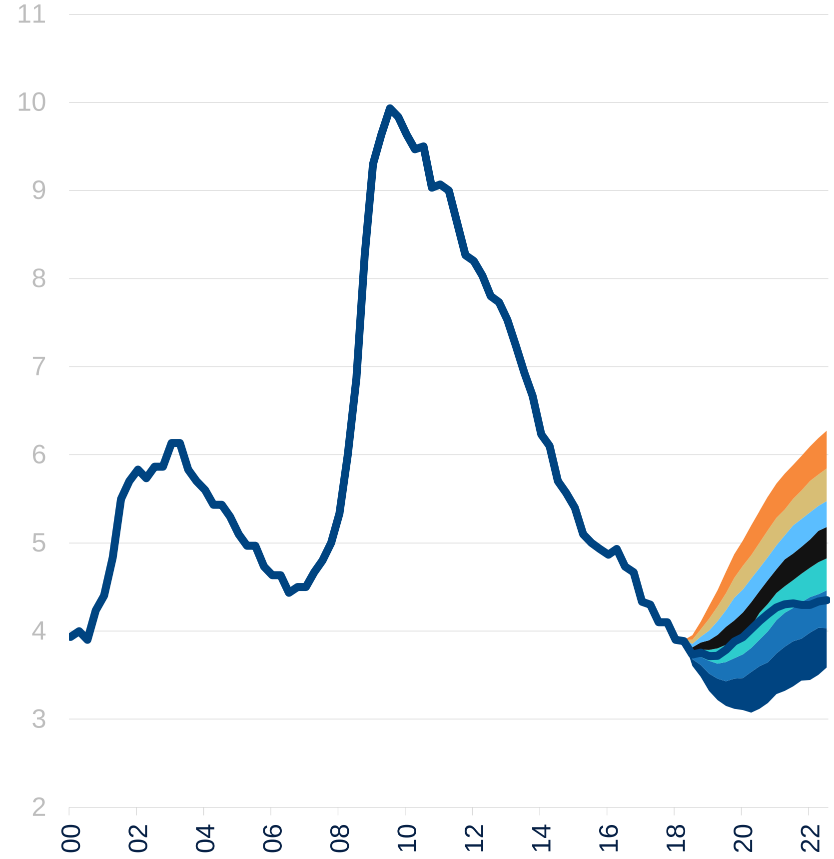
Source: BBVA Research & BLS

Labor market: UR at lowest level since December 1969

U-6
(%)



Unemployment Rate
(%)



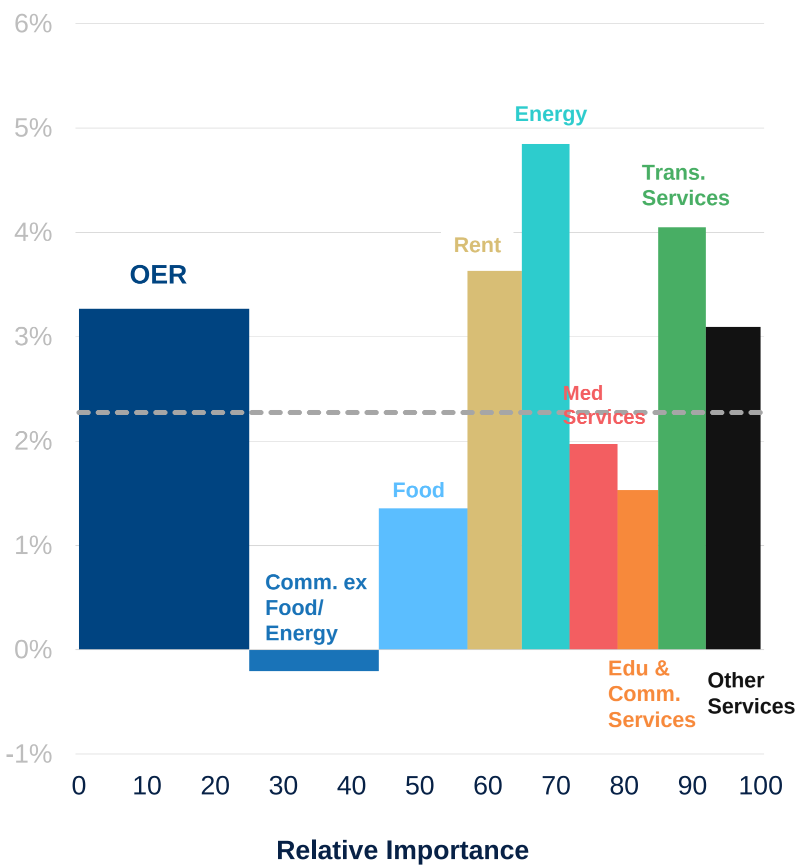
Source: BBVA Research & BLS

Inflation

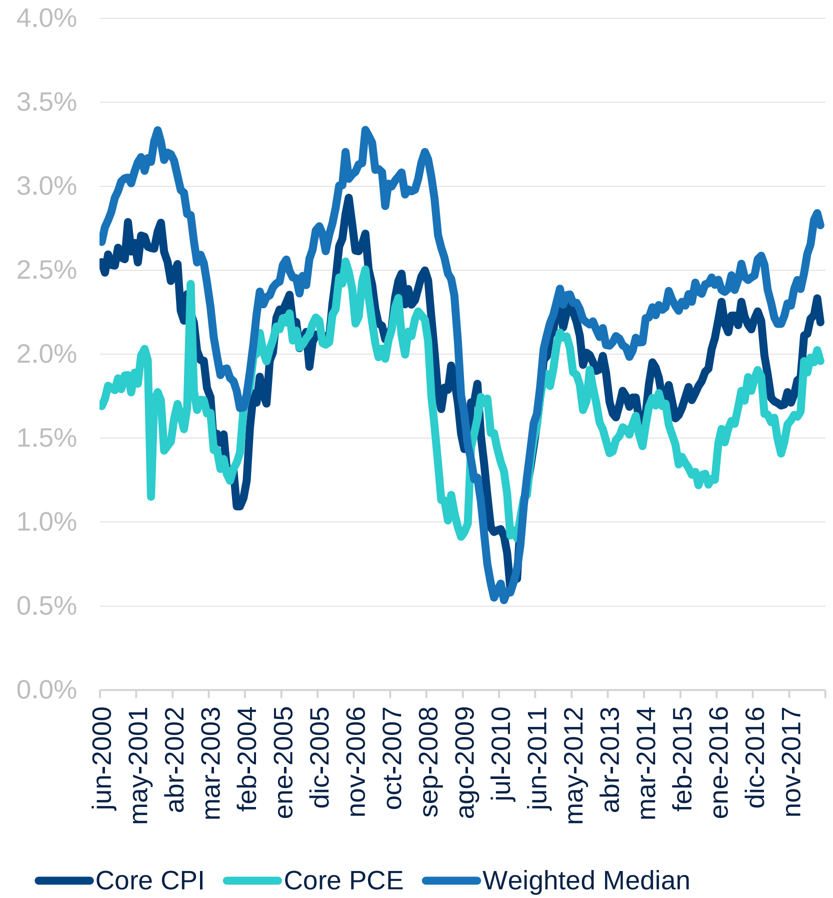
- Headline CPI decelerated to 2.3% while core CPI held steady at 2.2%
- Core PCE growth consistent with the Fed objectives
- In July, probability of entering high-inflation regime was less than 1%
- Inflation expectations trending upwards, but softer inflation data should assuage fears
- Core services remain largest contributor to overall inflation, as food and energy price pressures ease
- With additional tailwinds from an expansionary fiscal policy and tit-for-tat tariffs, core PCE will rise to 2.1% by 2019

Inflation: Deceleration in consumer prices continue, but core prices buoyed by services

Consumer Price Inflation
(12m change)



Core Inflation Measures
(12m change)

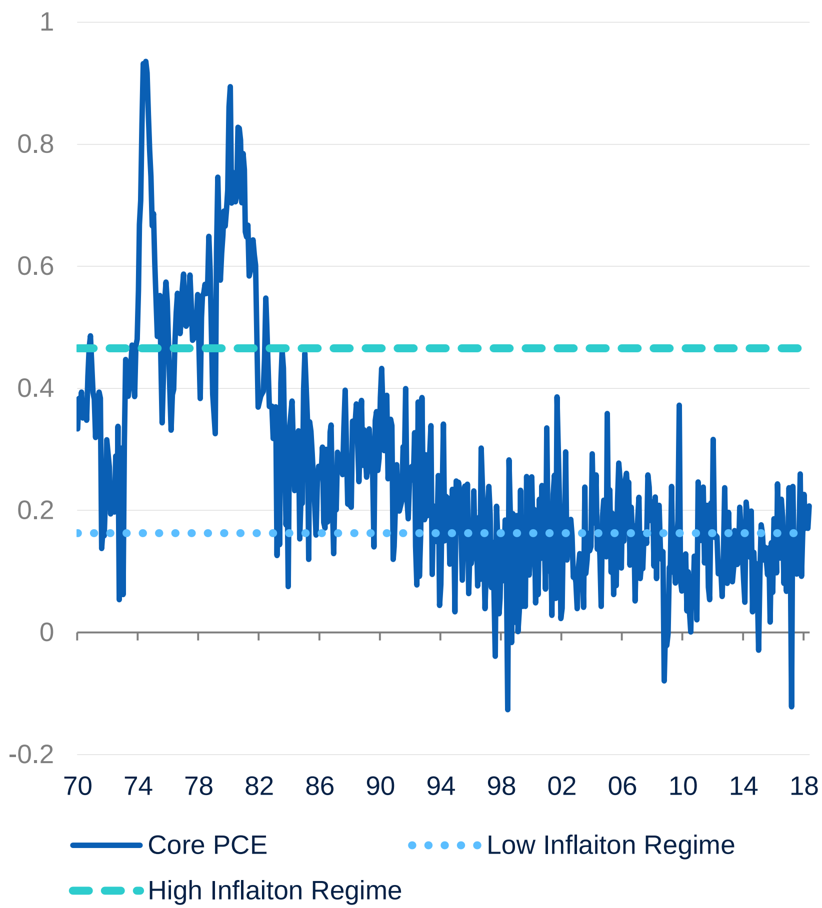


Source: BBVA Research, BLS & BEA

Inflation: Easing inflation pressures lower probability of regime change

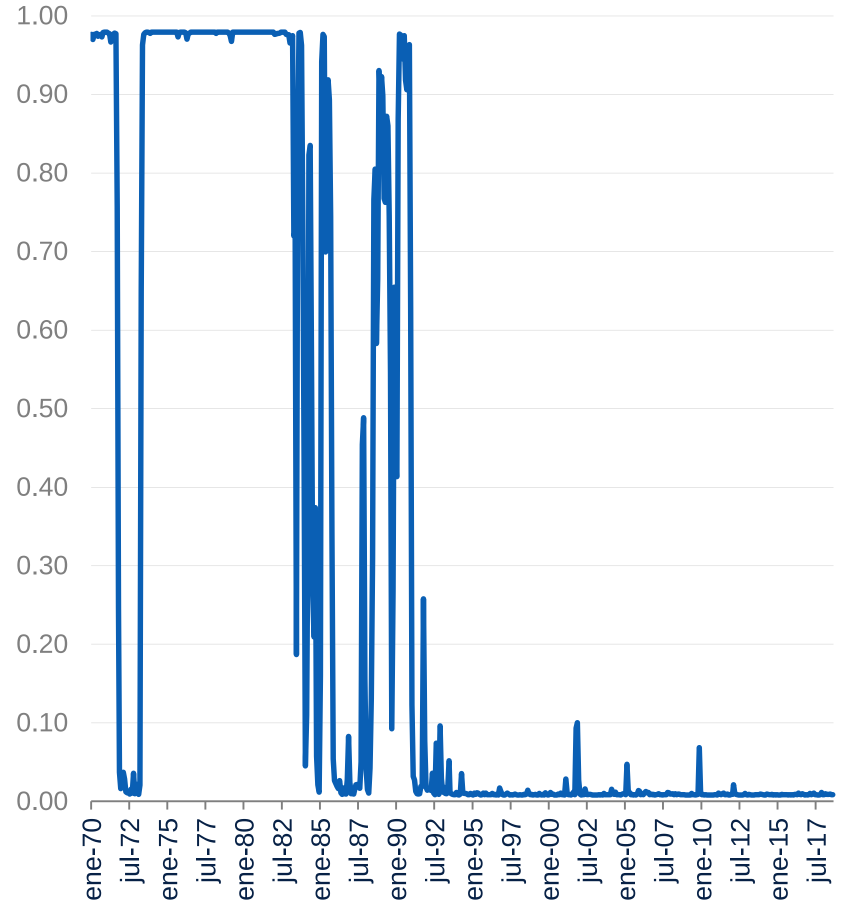
Core PCE Price Index & Inflation Regimes

Month-over-month %



Inflation Regime Change Probability

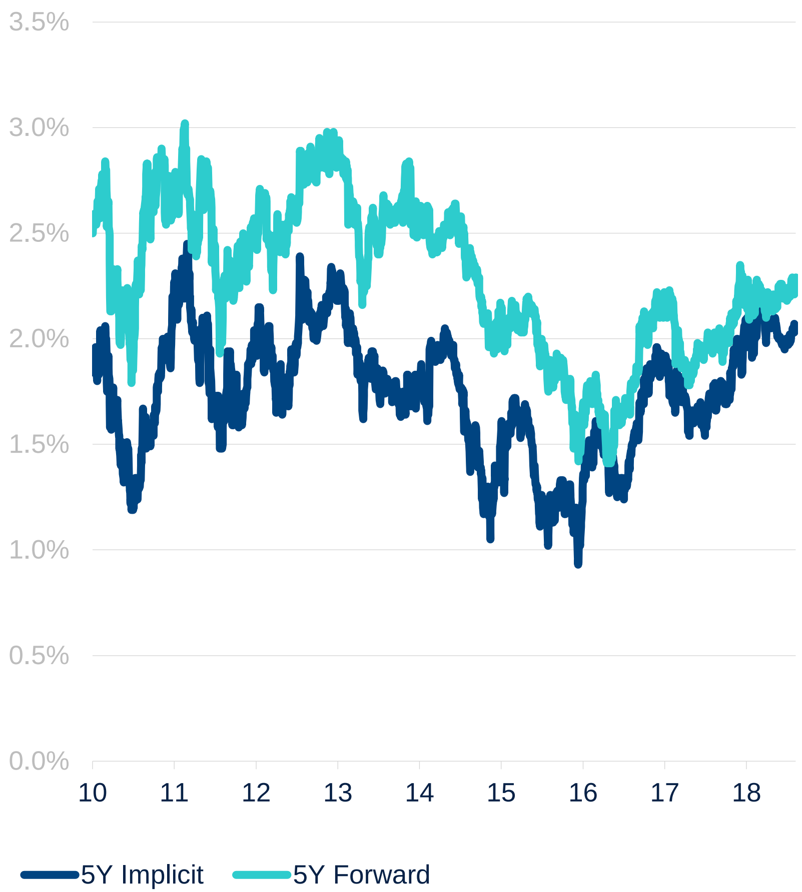
%



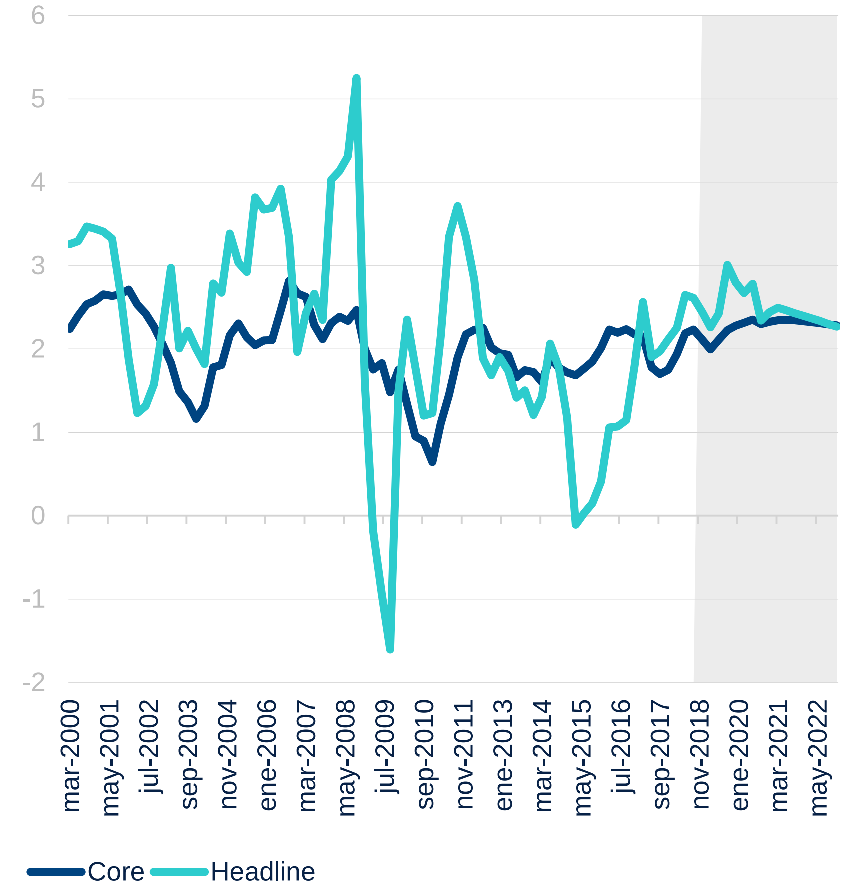
Source: BBVA Research & BLS

Inflation: Inflation expectations edging up, but soft readings on actual inflation should contain any pressures

Inflation Expectations
(%)



Headline & Core CPI
(Year-over-year %)



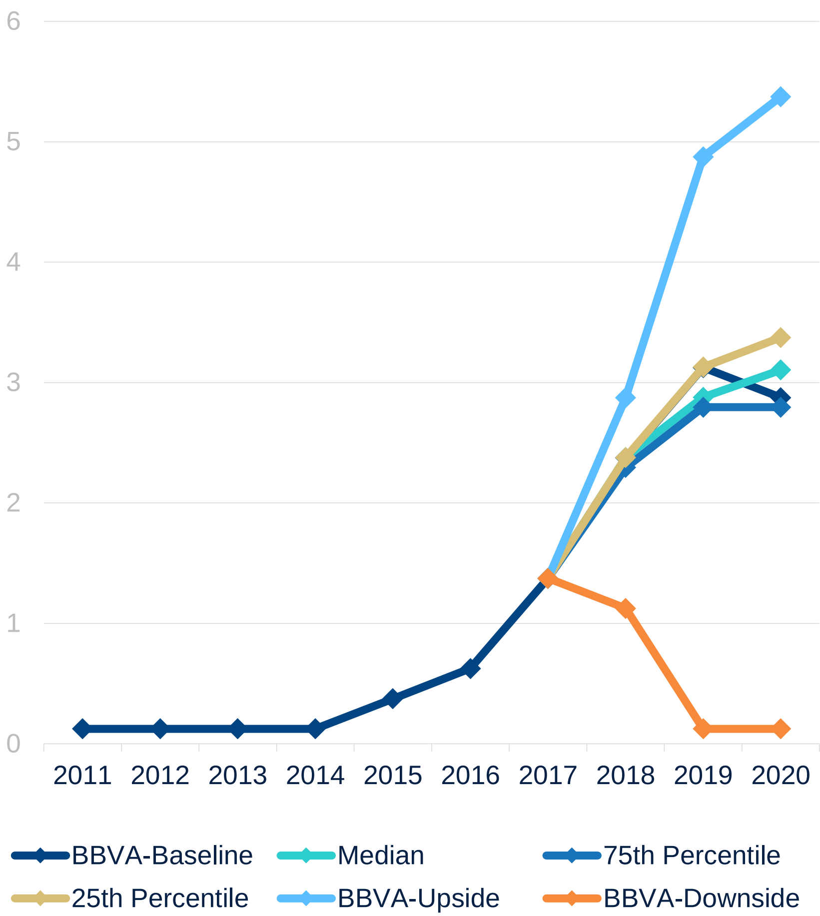
Source: BBVA Research & Haver Analytics

Monetary Policy: Federal Reserve

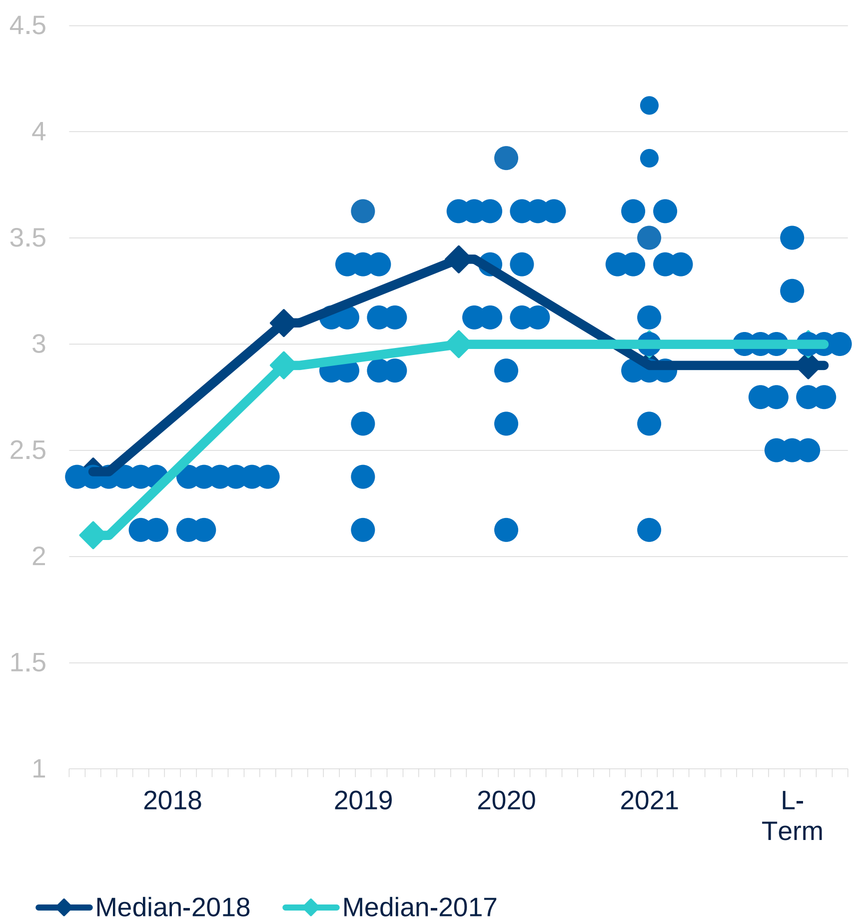
- The FOMC raised the target range of the federal funds to 2.0%-2.25% at their September meeting
- The only significant adjustment to the statement, other than the change in the benchmark rate, was the removal of the Fed's explicit level of accommodation, reflecting that the Fed funds rate is approaching neutral levels
- Markets aligning with 3+ rate hikes in 2019 (~50%)
- Post-meeting market reaction was muted, but pressures on long-term rates and a more hawkish outlook have increased equity volatility
- The Fed's recent revisions put their economic outlook for 2018 and 2019 broadly in line with our baseline
- No changes to our outlook: Fed to raise rates one more time in December and three more times in 2019

Fed: No change to outlook, two rate increases this year and 3 rate increases next

BBVA & Dealers Projections of Fed Funds
(%, Effective)



FOMC Projections of Fed Funds
(Year-over-year %, Mid-point)

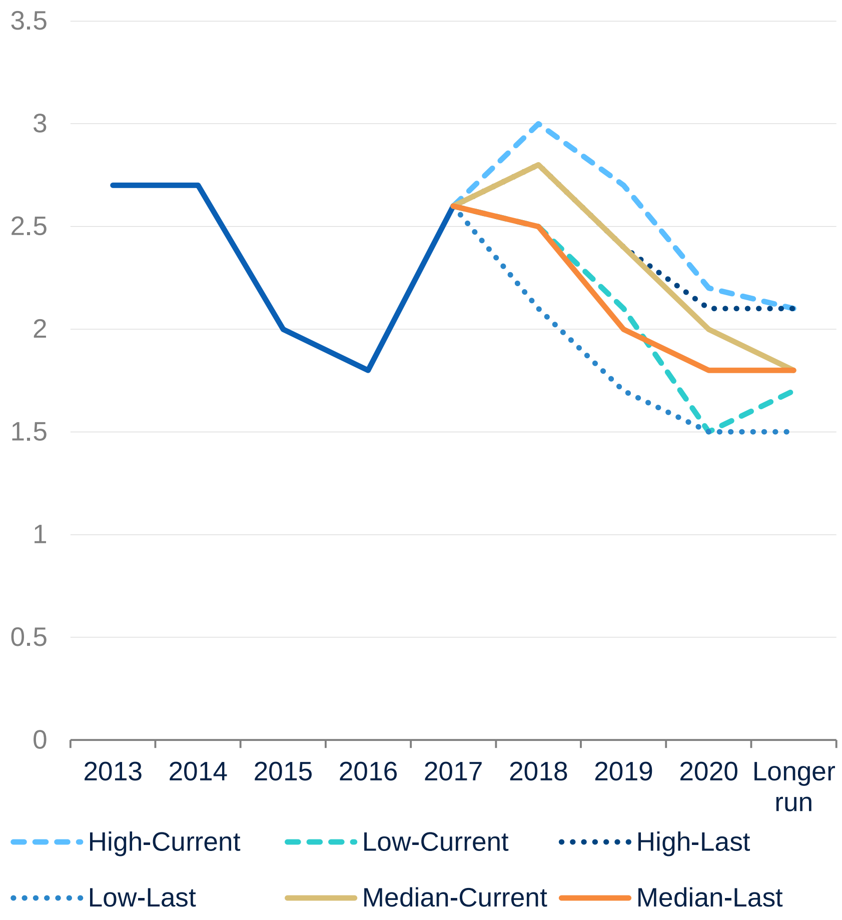


Source: BBVA Research & FRB

Fed: Economic tailwinds and fiscal stimulus shift SEP outlook to the upside in medium-term

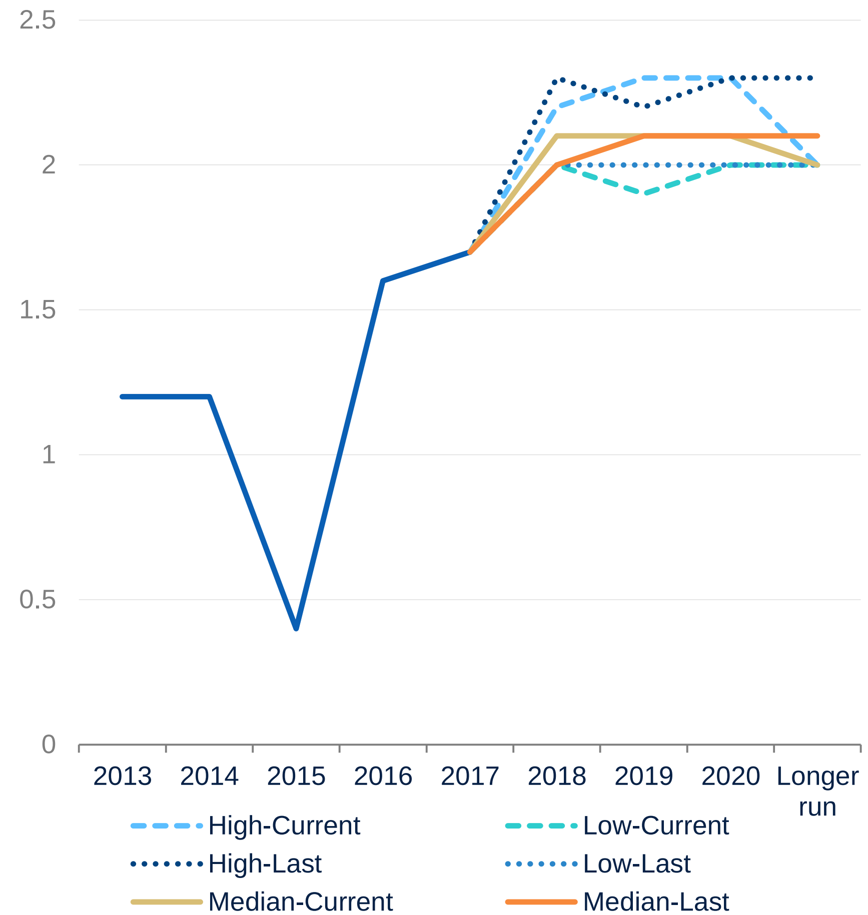
Summary of Economic Projections- GDP

%



Summary of Economic Projections- PCE

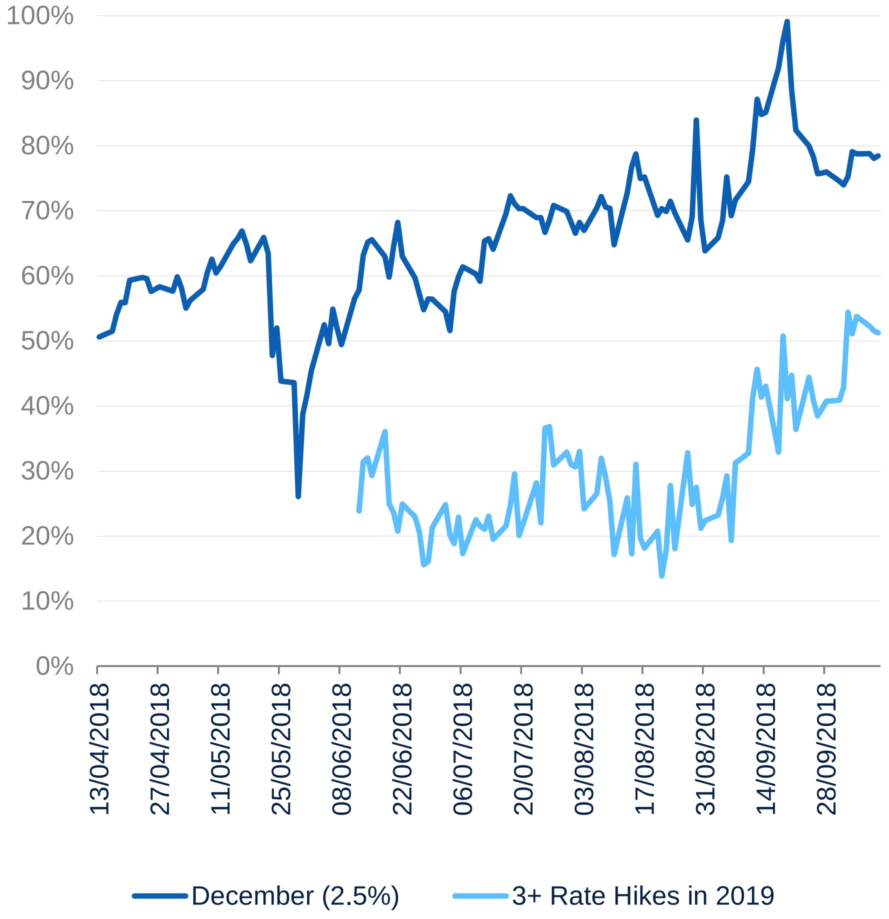
%



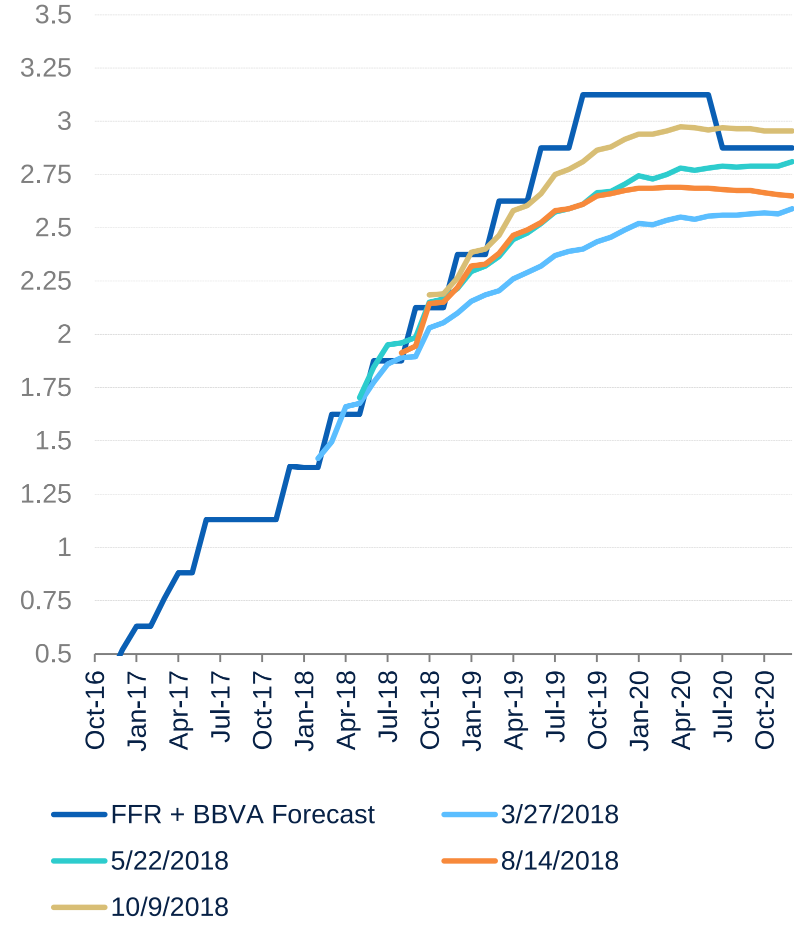
Source: BBVA Research & FRB

Monetary policy: Markets expect 3+ rate increases in 2019; probability of additional increase in Dec at 80%

Fed Funds Implied Probability
(%)



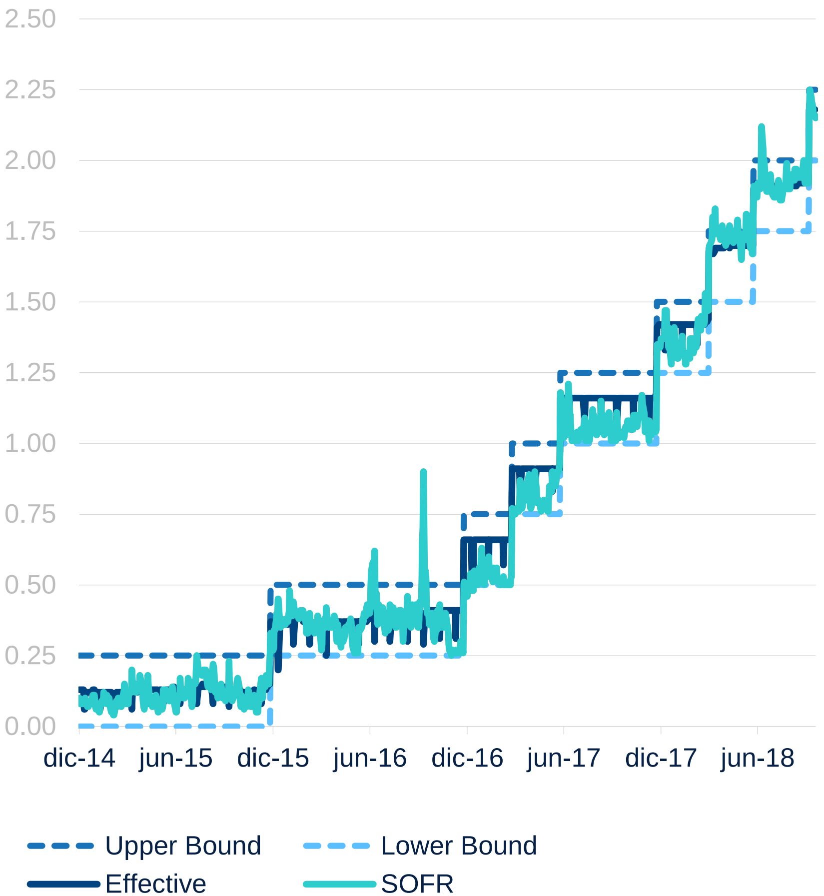
Fed Funds Futures & BBVA Baseline
(%)



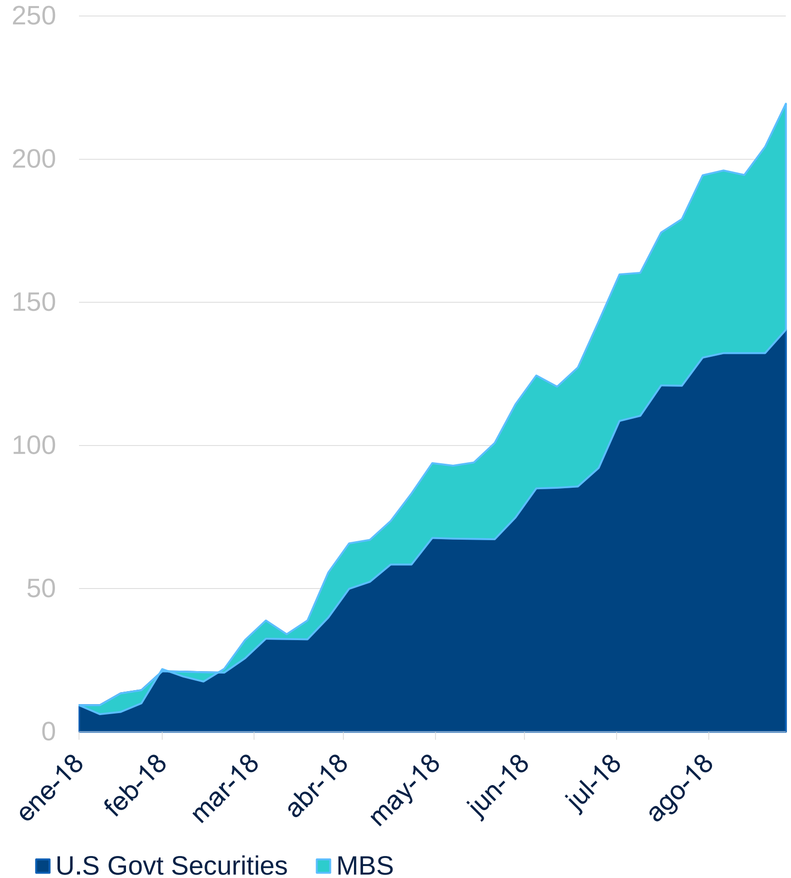
Source: BBVA Research & Bloomberg

Monetary Policy: Balance sheet attrition gaining momentum with over $200B in run-off to date

Fed Funds & Repo Rates
(%)



Balance Sheet Attrition
(US$bn, Cumulative)



Source: BBVA Research & FRB

Interest Rates

- Short end of the yield curve continues to edge upward in response to rising rate environment
- As expected, the 10-yr Treasury trended towards our year-end target of 3.1%, as markets incorporate a more hawkish outlook for the Fed and inflation expectations firm
- Increased political interference and increasing equity volatility could renew pressures on the term-premium
- Baseline assumes 10-year Treasury yield at 3.1% by year-end 2018 and 3.6% by year-end 2019
- Bias tilting slightly to the upside
- Term premium decompression has slowed the yield curve flattening

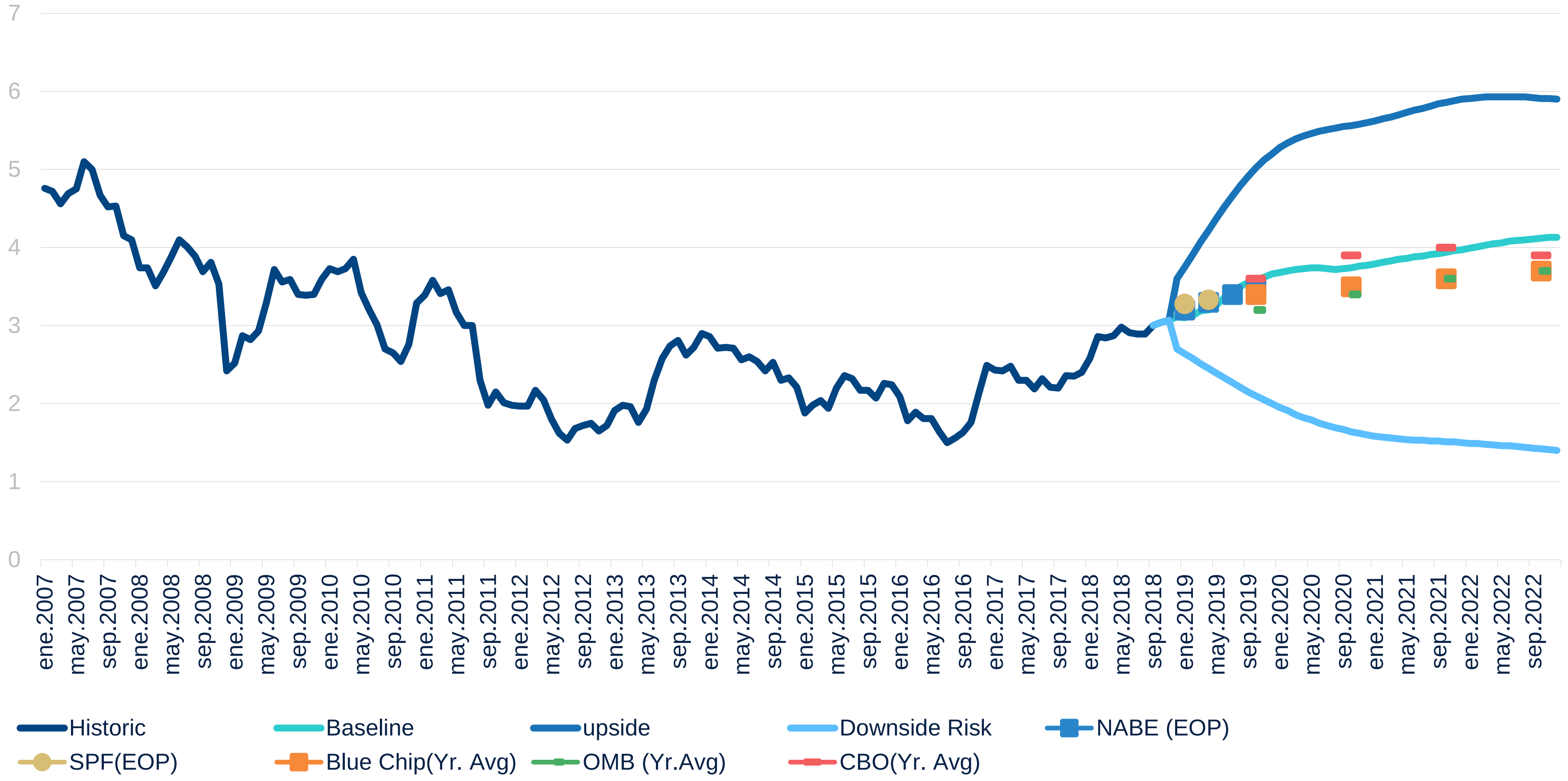
Interest rates: Term premium decompression and inflation expectations pushing 10-year Treasury above 3.0%

10-Year Treasury Yield Decomposition
(%)

Source: BBVA Research, ACM & Haver Analytics

Interest rates: Market uncertainty and volatility should contain any persistent pressures to the upside

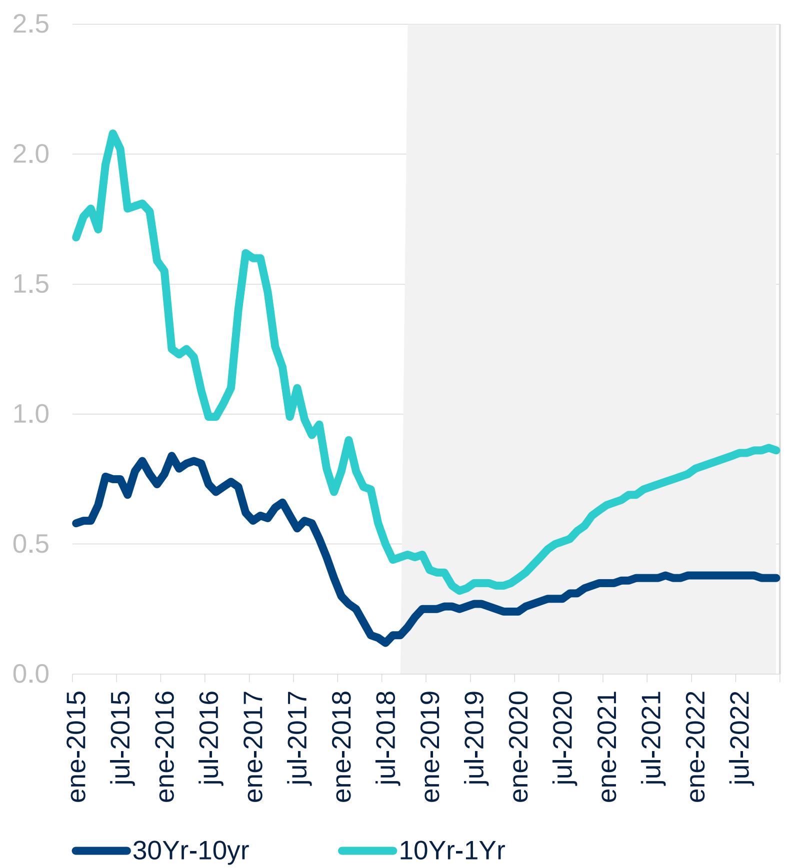
10-Year Treasury Yield
(%)



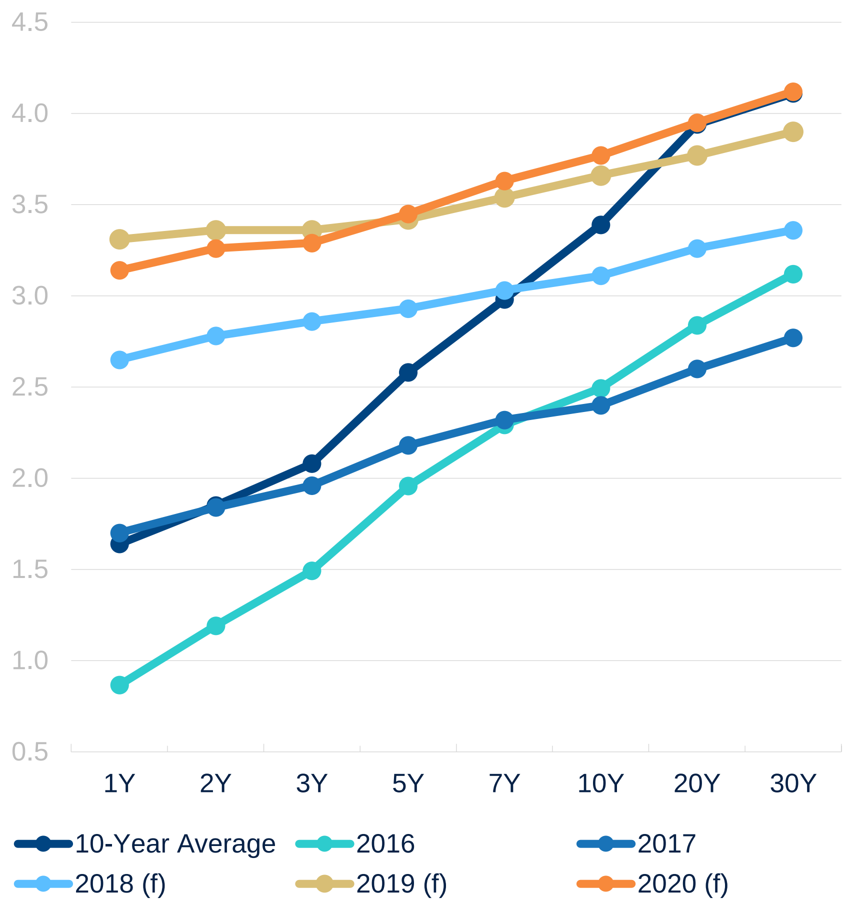
Source: BBVA Research, ACM & Haver Analytics

Interest rates: Slope to continue to flatten, but will remain positive

Yield Curve Slope
(Bp)



Yield Curve
(%, eop)



Source: BBVA Research

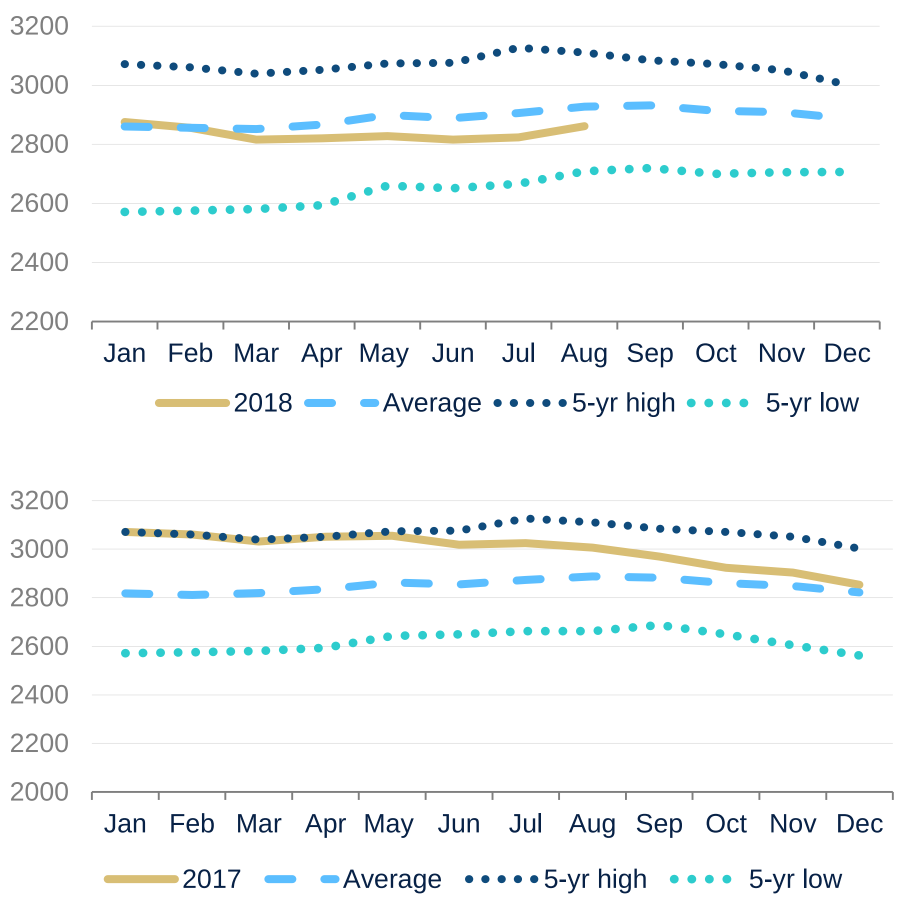
Energy Prices

- U.S. sanctions to Iran, concerns on OPEC spare capacity and the potential impact of trade wars will weigh on oil prices through the rest of the year
- U.S. production remains strong, but transportation challenges have widened the gap between WTI and Brent
- Robust demand supported by China, India and the U.S.
- Markets and analysts expect the end of the "longer-for-longer" paradigm supported by solid demand and negative supply shocks
- Elevated uncertainty around long-term equilibrium: lagged effect of subpar global CAPEX, protectionism, alternative energy sources, EM convergence, EVs, climate change, efficiency and technology

Although markets remain fairly balanced, the reinstatement of sanctions to Iran has triggered a bullish sentiment

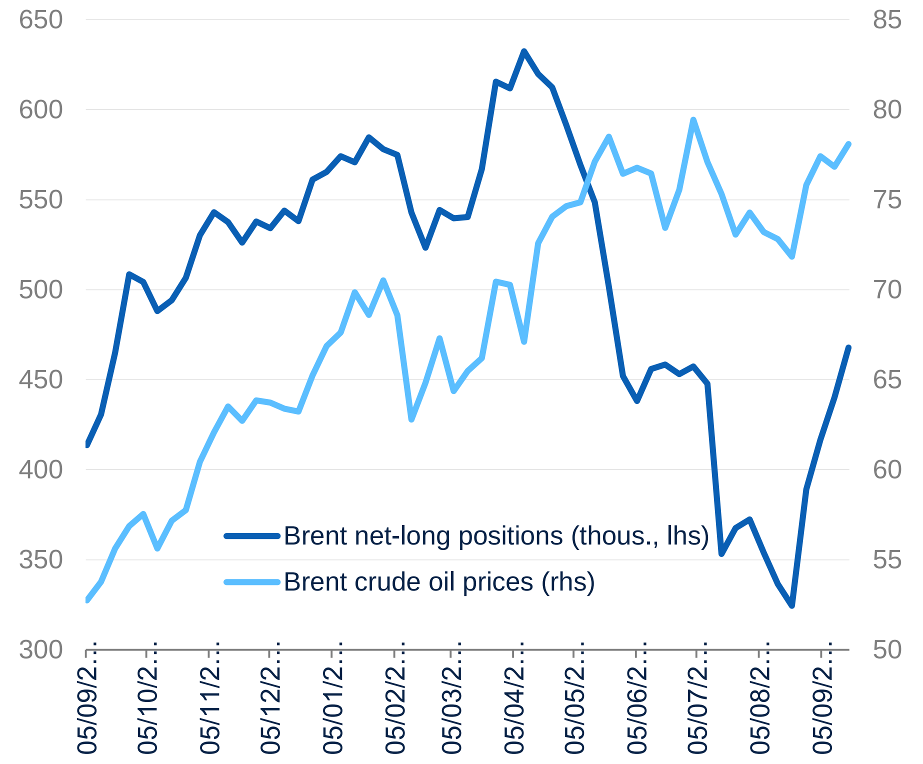
OECD Crude oil inventories

(Million barrels)



Brent and Net long positions

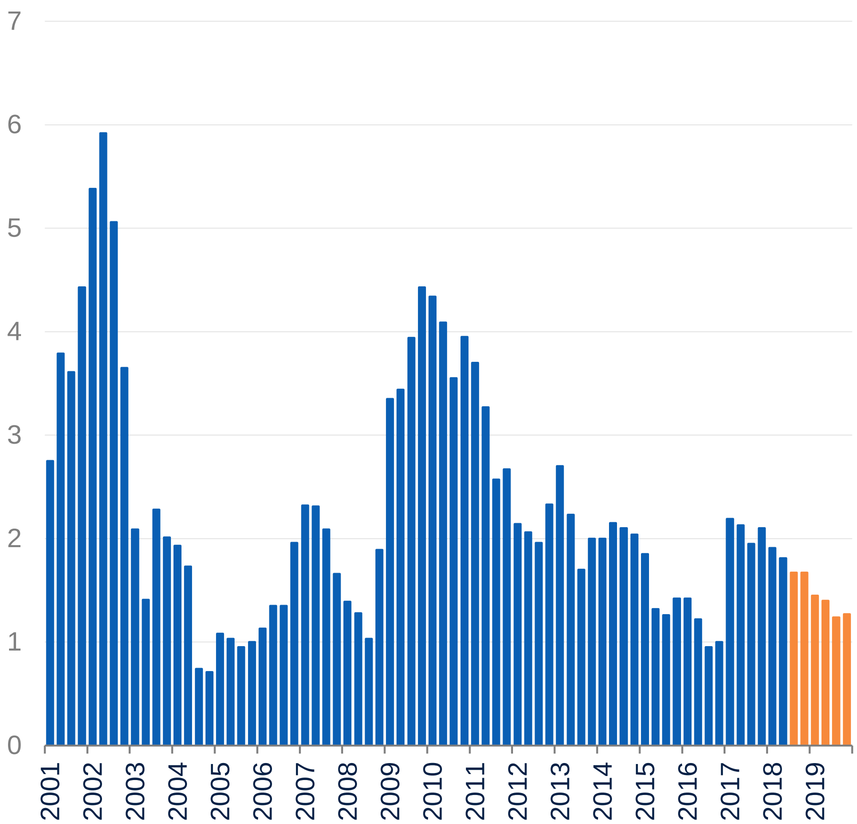
($ per barrel and thousands)



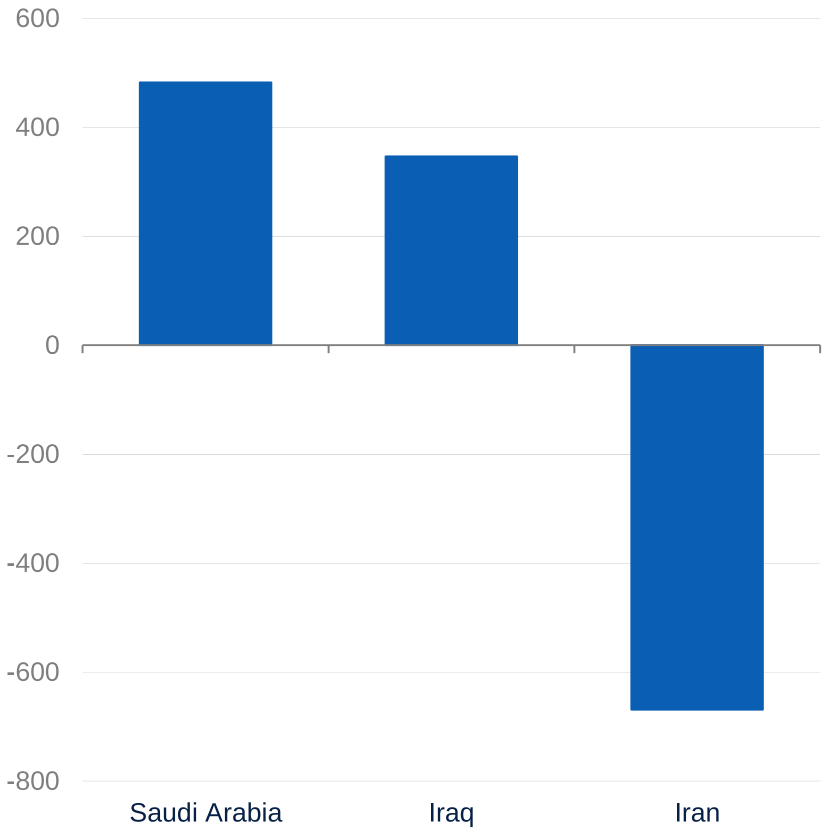
Source: BBVA Research and Bloomberg

The strong correction of Iranian exports leaves OPEC more vulnerable to future supply shocks

OPEC spare production capacity
(Million barrels/day)



Exports of crude oil
(Thousand barrels per day, change since April 2018



Source: BBVA Research and Bloomberg

Short-term risks are tilted to the upside…

>= $80/b

- OPEC+ is perceived incapable to offset the gap left by Iran and Venezuela
- Additional negative supply shocks (e.g. Libya, Nigeria)
- Stronger-than-expected global demand
- Steeper “backwardation” that encourages speculative behavior
- Takeaway issues prevent U.S. crude to reach global markets

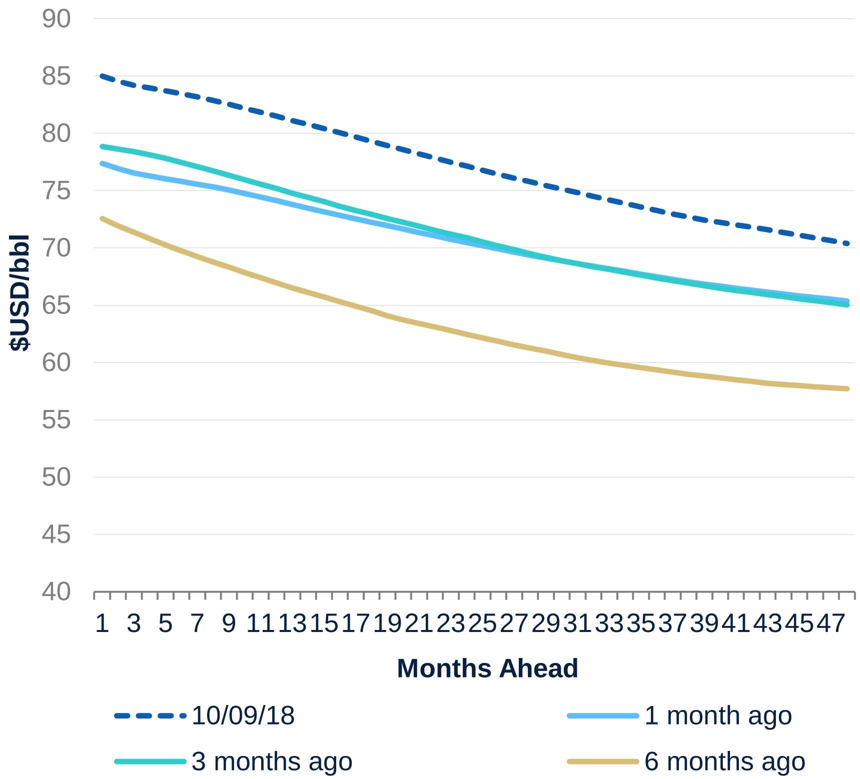
<= $75/b

- Weaker global outlook after turbulence in emerging markets (e.g. Turkey, Argentina)
- Escalation of protectionism
- Dollar appreciation
- Trump’s pressure on OPEC

*Brent Crude prices
Source: BBVA Research

Analysts and futures market's expectations continue moving up due to rising uncertainty

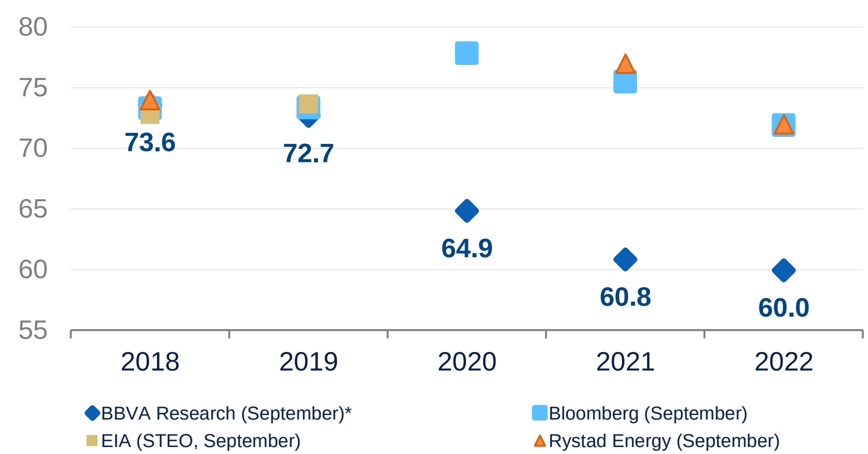
Brent Futures
($ per barrel)



Source: BBVA Research and Bloomberg

Brent oil prices forecast
(Brent, $/b)

	BBVA Research (Sep)*	BBVA Research (Jun)	Bloomberg (Sep)	EIA ESTEO (Sep)	Rystad Energy (Sep)
2017	54.2	54.2	54.2	54.2	54.2
2018	**73.4**	**72.0**	**73.3**	**72.8**	**74.0**
2019	**72.7**	**70.2**	**73.4**	**73.7**	**80.8**
2020	**64.9**	**64.9**	**77.9**		**84.5**
2021	**60.8**	**60.8**	**75.5**		**77.0**
2022	**60.0**	**60.0**	**71.9**		**72.0**



* Preliminary, non-official
Source: BBVA Research and Bloomberg

Macroeconomic Outlook

	2011	2012	2013	2014	2015	2016	2017	2018 (f)	2019 (f)	2020 (f)	2021 (f)	2022 (f)
Real GDP (% SAAR)	1.6	2.2	1.8	2.5	2.9	1.6	2.2	2.8	2.8	2.5	2.3	2.1
Real GDP (Contribution, pp)												
PCE	1.3	1.0	1.0	2.0	2.5	1.9	1.8	1.9	1.8	1.5	1.4	1.4
Gross Investment	0.9	1.6	1.1	0.9	0.8	-0.2	0.8	0.8	1.0	1.0	1.0	0.8
Non Residential	1.0	1.2	0.5	0.9	0.3	0.1	0.7	1.1	1.1	0.9	0.8	0.7
Residential	0.0	0.3	0.3	0.1	0.3	0.2	0.1	0.0	0.1	0.2	0.1	0.1
Exports	0.9	0.5	0.5	0.6	0.1	0.0	0.4	0.6	0.6	0.7	0.7	0.7
Imports	-0.9	-0.5	-0.3	-0.9	-1.0	-0.3	-0.8	-0.7	-0.8	-0.9	-0.9	-0.9
Government	-0.7	-0.4	-0.5	-0.2	0.3	0.3	0.0	0.3	0.3	0.2	0.1	0.1
Unemployment Rate (%, average)	8.9	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.7	4.0	4.3	4.3
Avg. Monthly Nonfarm Payroll (K)	174	179	192	250	226	195	182	208	185	161	122	107
CPI (YoY %)	3.1	2.1	1.5	1.6	0.1	1.3	2.1	2.5	2.6	2.6	2.4	2.3
Core CPI (YoY %)	1.7	2.1	1.8	1.7	1.8	2.2	1.8	2.1	2.2	2.3	2.3	2.3
Fiscal Balance (% GDP, FY)	-8.4	-6.8	-4.1	-2.8	-2.4	-3.2	-3.5	-4.4	-4.6	-4.5	-4.8	-5.2
Current Account (bop, % GDP)	-2.9	-2.6	-2.1	-2.1	-2.2	-2.3	-2.3	-2.3	-2.4	-2.4	-2.5	-2.5
Fed Target Rate (%, eop)	0.25	0.25	0.25	0.25	0.50	0.75	1.50	2.50	3.25	3.00	3.00	3.00
Core Logic National HPI (YoY %)	-2.9	4.0	9.7	6.8	5.3	5.5	5.9	6.0	5.3	5.4	5.6	5.7
10-Yr Treasury (% Yield, eop)	1.98	1.72	2.90	2.21	2.24	2.49	2.40	3.11	3.66	3.77	3.97	4.13
Brent Oil Prices (dpb, average)	111.3	111.7	108.7	99.0	52.4	43.6	54.3	73.9	72.7	64.9	60.9	60.0

Source: BBVA Research
*Forecasts subject to change

Economic Scenarios

Probability (%)	Current	Previous
Upside	**10**	10
Baseline	**70**	75
Downside	**20**	15

Macro Scenarios

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP	1.8	2.5	2.9	1.6	2.2	**2.8**	**2.8**	**2.5**	**2.3**	**2.1**
Upside	1.8	2.5	2.9	1.6	2.2	**3.0**	**4.0**	**3.4**	**3.1**	**2.9**
Downside	1.8	2.5	2.9	1.6	2.2	**2.2**	**-1.5**	**0.1**	**1.2**	**1.8**
UR	7.4	6.2	5.3	4.9	4.4	**3.9**	**3.7**	**4.0**	**4.3**	**4.3**
Upside	7.4	6.2	5.3	4.9	4.4	**3.9**	**3.2**	**2.9**	**3.0**	**3.0**
Downside	7.4	6.2	5.3	4.9	4.4	**4.0**	**4.6**	**6.6**	**7.0**	**5.7**
CPI	1.5	1.6	0.1	1.3	2.1	**2.5**	**2.6**	**2.6**	**2.4**	**2.3**
Upside	1.5	1.6	0.1	1.3	2.1	**2.6**	**3.4**	**3.5**	**3.7**	**3.7**
Downside	1.5	1.6	0.1	1.3	2.1	**2.4**	**1.3**	**1.0**	**0.7**	**0.6**
Fed [eop]	0.25	0.25	0.50	0.75	1.50	**2.50**	**3.25**	**3.00**	**3.00**	**3.00**
Upside	0.25	0.25	0.5	0.75	1.5	**3**	**5**	**5.5**	**5.5**	**5.5**
Downside	0.25	0.25	0.5	0.75	1.5	**1.25**	**0.25**	**0.25**	**0.25**	**0.25**
10-Yr [eop]	2.9	2.21	2.24	2.49	2.4	**3.1**	**3.66**	**3.77**	**3.97**	**4.13**
Upside	2.9	2.21	2.24	2.49	2.4	**3.6**	**5.2**	**5.6**	**5.9**	**5.9**
Downside	2.9	2.21	2.24	2.49	2.4	**2.7**	**2**	**1.6**	**1.5**	**1.4**

Subject to revision without notice

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U.S. Economic Outlook

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Creating Opportunities