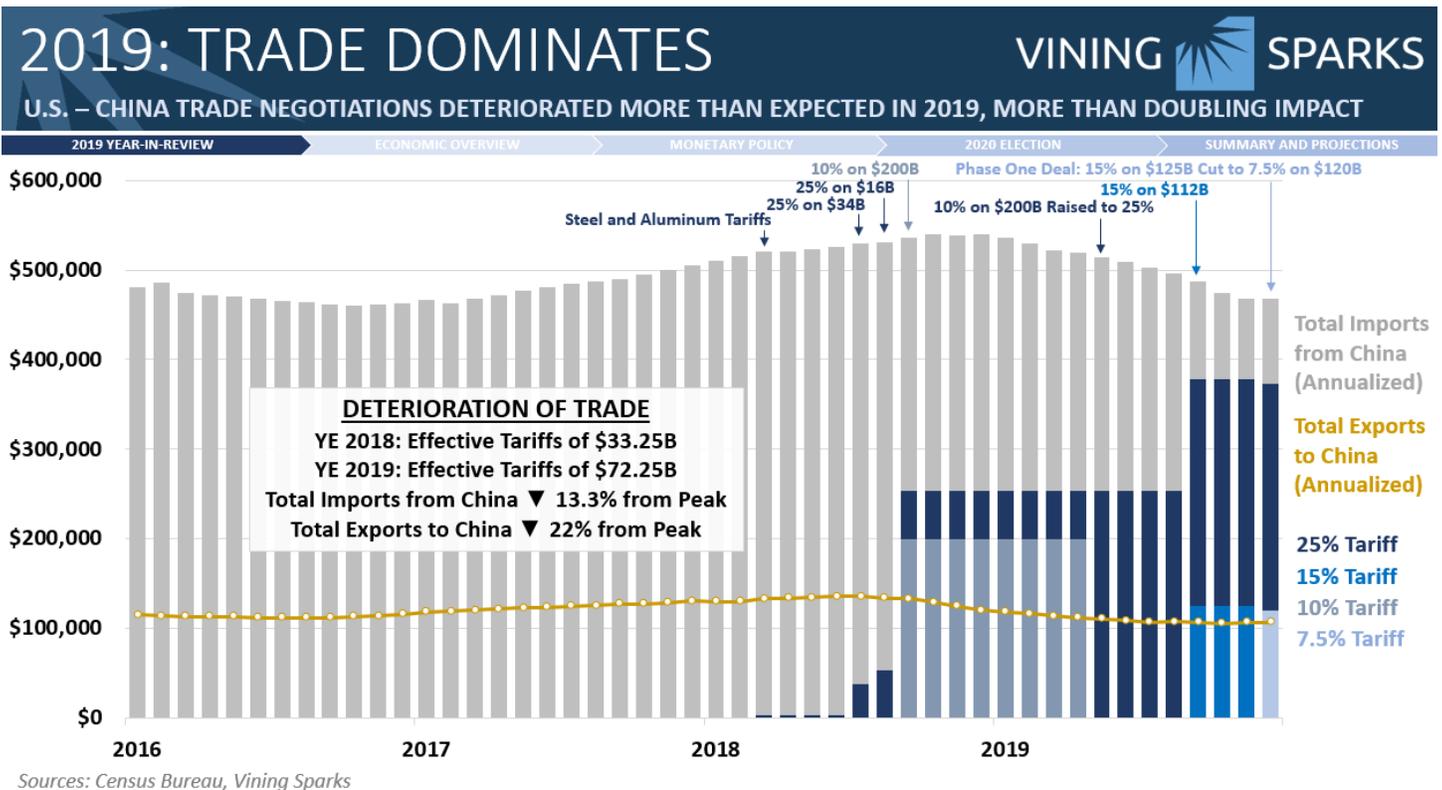


January 2020

Vining Sparks' 2020 Forecast—Late-Cycle Growth Expected to Slow but Continue in 2020

The predominant themes of 2019 were trade uncertainty and the resulting transition from monetary tightening to easing. Coming into the year, the consensus view was that the trade tensions between the U.S. and China would ease, setting up an environment conducive to economic growth. At the time, the U.S. had placed tariffs of 10% on \$200 billion in Chinese imports and 25% on approximately \$53 billion of imports. The effective amount of the tariffs was \$33.2 billion (annualized). Rather than tensions easing, they escalated resulting in additional tariffs on Chinese imports. By the end of 2019, the effective tariff amount had increased to \$72.2 billion. In the midst of the escalating trade war, global economic data remained weak and U.S. activity slowed from 2018's pace. With uncertainty weighing heavily, the Treasury curve inverted further with the 3-month/10-year spread inverting in March followed by the 2-year/10-year spread inverting in August. As the most accurate leading indicator of a pending recession, the inverted yield curve caused investors to become increasingly anxious. Additionally, inflation continued to run below the Fed's 2.0% target. The FOMC, which had projected two more rate hikes in 2019, quickly put rate hikes on hold before eventually cutting rates three times. The rate cuts brought short yields lower and un-inverted the yield curve. By the fourth quarter, expectations for a broad trade deal were reduced to hopes for a smaller deal. In December, U.S. and Chinese officials agreed on terms of the first phase of a broader trade arrangement. The economy, led by a stable consumer, proved to be sufficiently resilient despite the overhang of uncertainty that defined most of 2019. The current expansion became the longest on U.S. record in July.

Heading into 2020, trade remains front-and-center. Expectations are, once again, that there will not be a marked increase in trade barriers; but, rather, a small decrease in the barriers erected over the last two years. However, given the unexpected turn negotiations took in 2019, there is less confidence attending any future policy projections. The November elections are yet another source of uncertainty in 2020. Both trade and the elections are most likely to affect business investment more than any other aspect of growth. Despite expectations for soft investment, the record-long expansion is expected to slow but continue on strength from the consumer and tailwinds from government spending and a reinvigorated housing market.



Business Investment

After peaking in the first half of 2018, business investment has steadily slowed as trade uncertainty and weak global growth have continued to negatively affect investment decisions. Fixed private investment was expanding at over a 7.0% year-over-year rate in

mid-2018 but has since slowed to just 1.4%, including back-to-back quarters of actual contraction in 2Q19 and 3Q19. Going forward, investment is expected to be more stable but fall short of a v-shaped rebound. While trade uncertainty appears to have peaked, investment decisions will be plagued by election uncertainty in 2020. Even more of a concern, there is a looming cyclical challenge which is likely to soon have an impact on investment. As the economic cycle has progressed, the labor market has tightened to the point that labor costs are now rising at a faster rate than output prices. Over the past sixteen quarters, unit labor costs are growing at a 2.6% annualized rate while output prices are rising just 1.5%. Businesses have not yet had the pricing power to raise prices in tandem with their growing labor costs. This is reflective of profit margin challenges like those seen in the later stages of previous expansions. In fact, every time since 1960 that unit labor costs have exceeded output prices, business investment has eventually contracted and a recession has ensued. While trade uncertainty likely distorted some of the cyclical trends in 2019, we expect 2020 to remain a challenging environment for investment.

LABOR COSTS START TO BITE

LABOR COSTS HAVE BEEN RISING AT A FASTER PACE THAN BUSINESSES HAVE BEEN ABLE TO RAISE THEIR SELLING PRICES

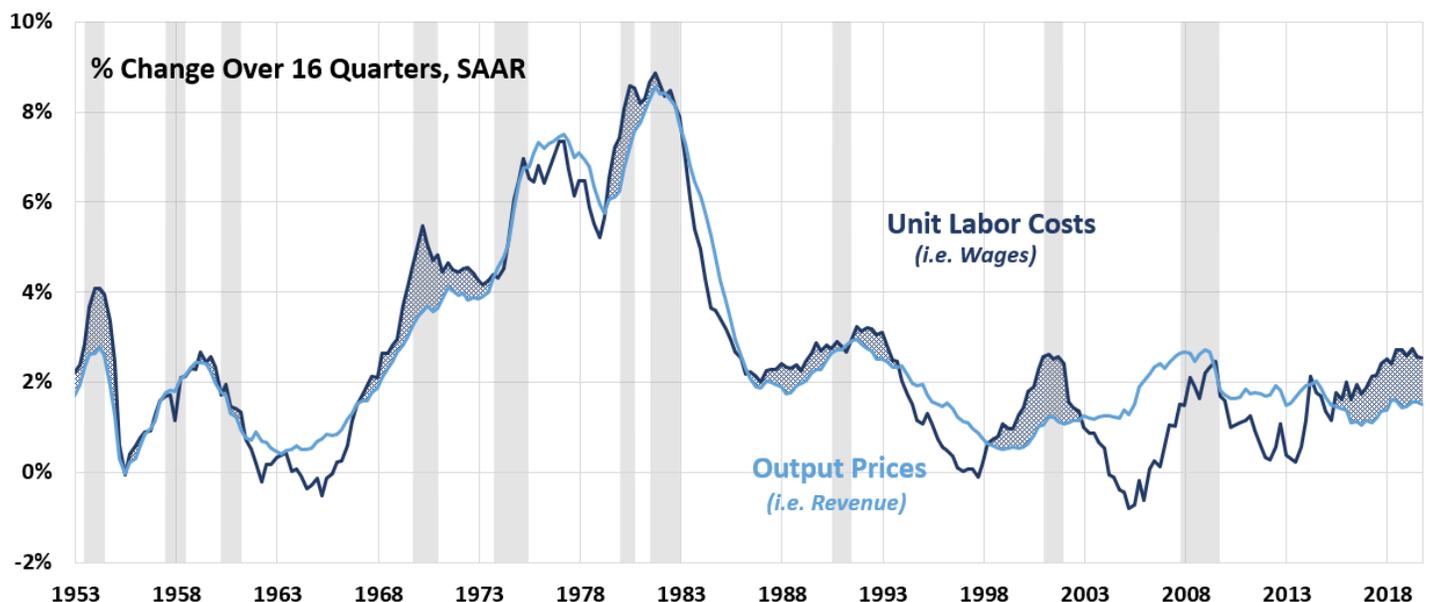
2019 YEAR-IN-REVIEW

ECONOMIC OVERVIEW

MONETARY POLICY

2020 ELECTION

SUMMARY AND PROJECTIONS



Sources: BLS, Vining Sparks

Personal Consumption

Heading into 2019, consumers were undisputedly poised to be the engine of growth for the economy. Going into 2020, we would remove the undisputed modifier. Notwithstanding, the consumer does remain in a strong position. The unemployment rate has fallen to a new cycle-low 3.50%. African American and Hispanic unemployment reached their lowest levels on record in 2019 while female unemployment dropped to its lowest rate since 1953. Average hourly earnings continue to expand near 3.0% year-over-year. The Dow Jones Industrial Average, S&P 500, and NASDAQ hit 88 record highs in 2019, collectively. The S&P 500 managed to gain 29% on the year. Gasoline prices averaged a tame \$2.60 per gallon (AAA, national average) last year and 30-year mortgage rates pulled back from 4.94% in November 2018 to 3.74% by YE2019 (Freddie Mac U.S. Mortgage Market Survey). While dinged by some of the events in 2019, consumer confidence remained high as the year evolved. However, job openings pulled back from 7.63 million in January to 7.03 million by September, a sign that the labor market is likely slowing from its unsustainably hot pace. Average hourly earnings growth peaked in February at 3.4% year-over-year and has since pulled back to 2.9%. Hours worked have also dipped. While the consumer is still expected to be an engine of growth in 2020, there are more areas of vulnerability evident than there were twelve months ago.

Government Spending

Government spending has now been accretive to growth for over two years after the self-imposed spending caps for fiscal years

2020 Forecast

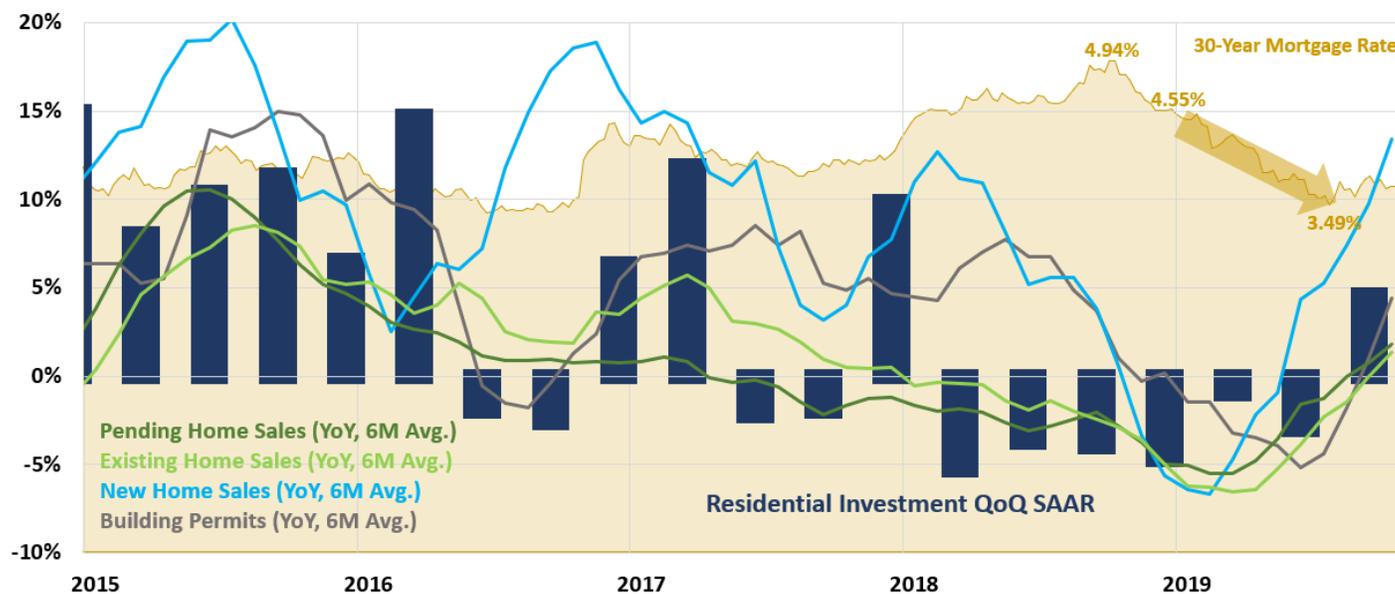
2018 and 2019 were lifted. In fact, it now appears the 2019 calendar year will see the largest contribution to economic growth from federal spending since 2009. State and local spending was also positive in 2019. Going forward, government spending should continue to be a tailwind for the economy. Congress somewhat surprisingly averted a fiscal cliff in 2020 by lifting their fiscal years 2020 and 2021 caps by \$322 billion cumulatively. The increases will only have a moderate impact, though, as the spending limits were raised fractionally over the 2019 limit. Regardless, government spending is not expected to contract dramatically as could have been the case had the caps not been lifted. There is, however, a price to the spending increases. The trailing-twelve-month federal deficit has now ballooned from \$683 billion at the end of 2017 to over \$1 trillion at the end of 2019. Even with the economy continuing to expand, the deficit has grown from 3.4% of total GDP to 4.7% over that same period.

Housing

The biggest turnaround for an economic sector in 2019 was seen in the housing market. After floundering under the pressure of declining affordability, mortgage rates dropped sharply in 2019 which reinvigorated housing activity. The 30-year mortgage rate dropped from 4.94% in November 2018 to 3.74% by YE2019 (Freddie Mac U.S. Mortgage Market Survey), averaging 61 basis points lower than the average rate during 2018. The decline in financing costs resulted in a complete turnaround for almost every housing metric. Homebuilder confidence was declining but ended 2019 up 20% for the year. New housing starts were down more than 5% year-over-year but were up almost 14% by November 2019. New home sales declined 14% in 2018 but were up 17% year-over-year by November 2019. Residential investment had dragged on overall economic growth for six consecutive quarters as affordability declined. However, 3Q19 saw residential investment add 2.9% to GDP growth. Looking ahead, continued consumer strength coupled with still-low mortgage rates sets a positive tone for the housing market in 2020. This environment can, however, change quickly. Given our expectation for interest rates to remain range-bound in 2020, we expect housing will continue to perform well, adding another engine to economic growth.

HOUSING ACTIVITY REBOUNDED

MORTGAGE RATES CONTINUED TO DROP LIFTING RESIDENTIAL INVESTMENT FROM CONTRACTION TO EXPANSION



Sources: Census Bureau, NAR, Freddie Mac, Vining Sparks

Forecast Implications

GDP Growth

The U.S. economy is expected to expand at a rate of 1.9% in 2020, down from 2.1% in 2019. The consumer is positioned well to continue driving growth, although the pace of consumption is unlikely to accelerate from 2019 given the late-cycle challenges evi-

dent in earnings growth. Further, the risks to consumer stability have increased. Business investment is poised to fare better than in 2019, but fall short of a v-shaped rebound given the uncertainty of the election, the remaining trade policy challenges, and the lack of pricing power. Fortunately, housing and government spending are both expected to be tailwinds to the consumer-driven growth, although the housing outlook is contingent on interest rates remaining low. Unlike the beginning of 2019, monetary policy does not appear to be restrictive after three rate cuts in 2019. As was the case in 2019, the risks to growth appear fractionally tilted to the downside.

Interest Rates

After cutting rates three times in 2019, we expect the Fed to keep its target rate range at 1.50-1.75% throughout 2020. Policymakers are currently engaged in a wholesale review of their monetary policy framework, reviewing the effectiveness of their policy tools in achieving their dual mandate of maximum employment and stable inflation. In the process of their framework review, we expect the outcome to be a greater tolerance for allowing inflation to run above 2%, particularly in the aftermath of a period in which inflation has run below a 2% growth rate. If they do, in fact, adopt a greater tolerance for above-target inflation, the market reaction function to indicators of inflation (both higher and lower) is likely to change. With this as the backdrop and with inflation currently running persistently below the Fed's target growth rate, the risk to our outlook for Fed Funds is likely to the downside.

Risks to Forecast - Tilted to Downside with Short-Term Upside Risks

Late-Cycle Profit - Wage Tension

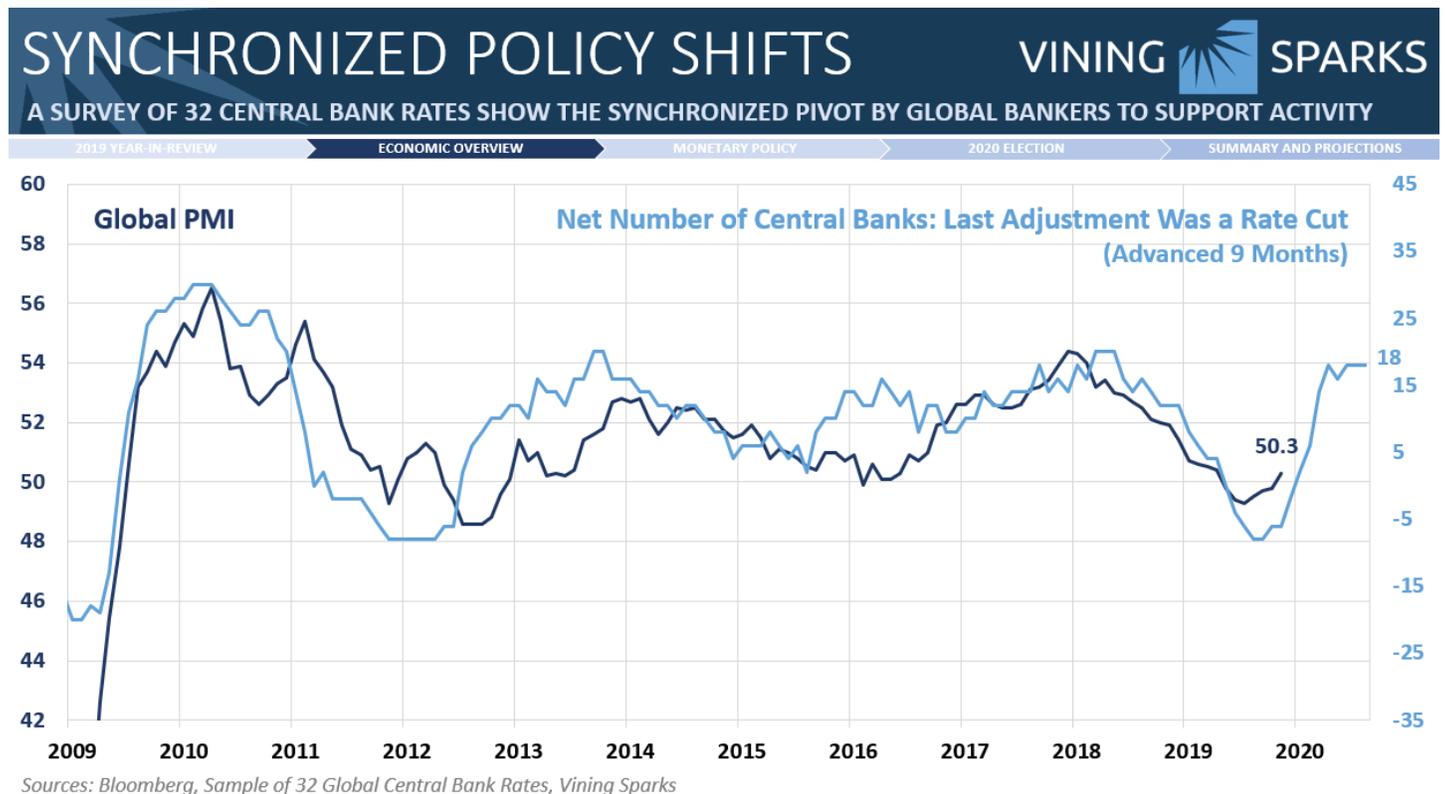
Risks to stable economic growth have grown as the expansion has continued and remain tilted slightly to the downside in 2020. There are nascent signs of the labor market hitting a ceiling with job and earnings growth expected to be tempered in 2020. Historically, this environment has been consistent with more volatility in business investment and greater risks to economic expansion.

Election uncertainty

The election outcome, itself, presents a risk to our expectations for business investment. Uncertainty is the enemy of investment and, as already discussed, is likely to weigh on businesses' decisions throughout the year. Moreover, any perception of increased uncertainty could weigh further on investment decisions.

Presumption of Global Stabilization Yet to Be Seen

While there is optimism about the global environment, the evidence of stronger growth has yet to be seen. Sentiment for global



growth has improved based upon easier financial conditions and less negative economic indicators. However, those less negative indicators have not yet translated to improvement in real economic activity. Global activity not stabilizing poses a downside risk.

Rising Debt Levels; Uncharted Territories for Monetary Policies; Possible Lack of Central Bank Potency

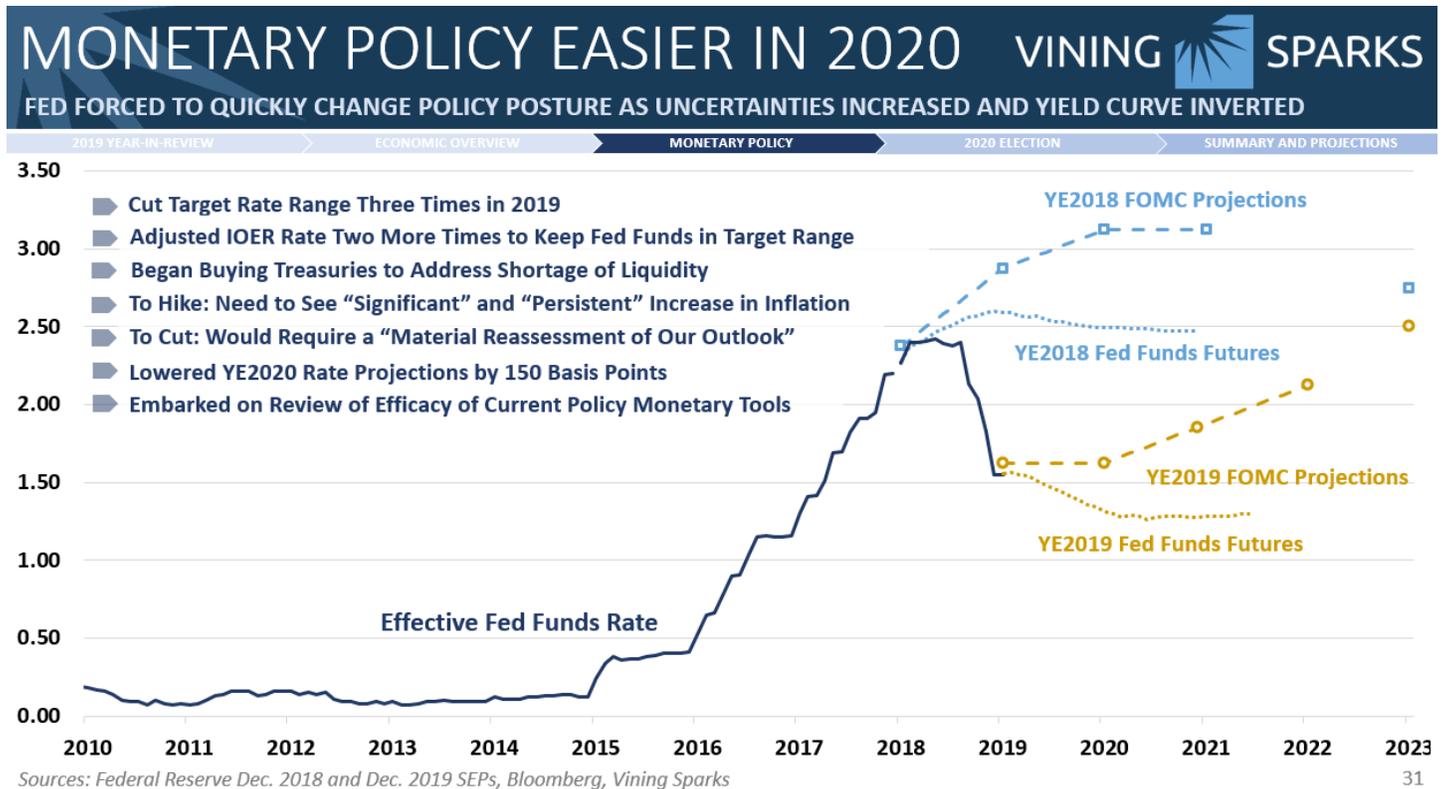
There remain several longer-term risks to global and U.S. economic stability. A massive build-up of debt has occurred globally and on U.S. corporate balance sheets, among other places. The U.S.'s federal debt remains on an unsustainable path. Central banks have tried untested policy tools, including negative yields, which create a source of broad financial market uncertainty. And plenty of questions remains about the potency of central bank tools with interest rates remaining so low, not just in the U.S. but globally.

Détente in Trade Tensions

While we perceive the economic risks to be tilted to the downside this year, there are potential upside risks in the short term. Given the looming elections, it is logical to expect trade barriers will not be increased in 2020 the way they were in 2019. In fact, intuition says the existing barriers are likely to be eased, if anything, to boost consumer sentiment by further supporting the markets. Incremental reductions of tariffs, or other trade barriers, could result in an improved business outlook and fractionally better growth. A phase-two trade deal could provide an upside risk to the outlook for 1.9% growth. Conversely, deterioration in trade negotiations would pose a downside risk to the outlook. The post-2020 outlook for trade policy will be dictated by the election outcome.

Supportive Financial Conditions

Finally, monetary policy and higher interest rates do not appear to be the headwinds they were coming into 2019. However, equity valuations have rocketed higher with the drop in rates, unsupported by corporate earnings, and are likely now more highly contingent upon the rate environment. Presuming the Fed remains on hold and interest rates do not move materially higher, financial conditions should prove positive to the 2020 environment.

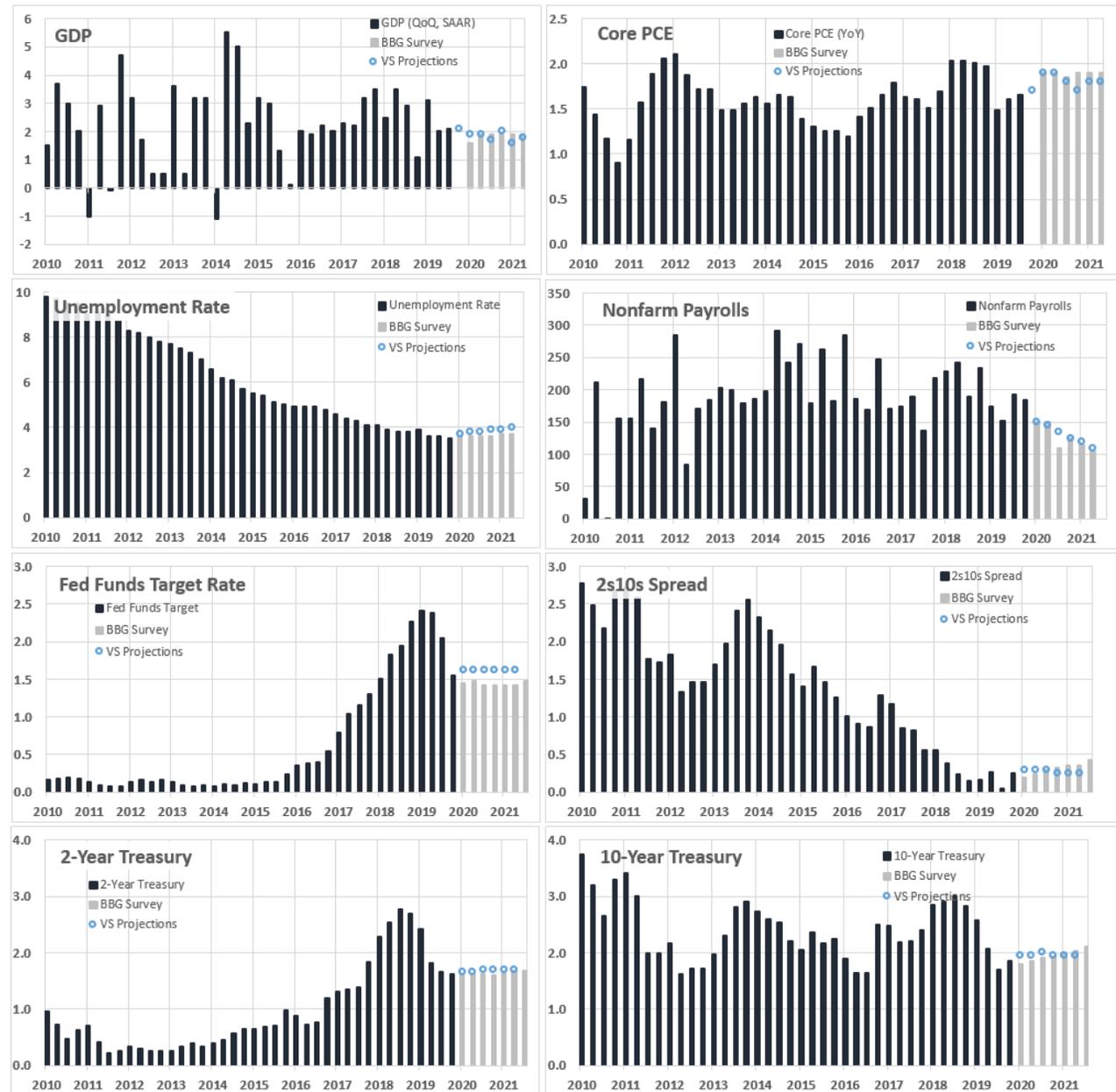


[January 2020 Economic Outlook Presentation - All Slides](#)

	Q120	Q220	Q320	Q420	Q121	Q221	2020	2021
GDP (QoQ, SAAR)	1.9	1.9	1.7	2.0	1.6	1.8	1.9	1.7
Headline CPI (YoY)	2.0	1.9	1.9	2.0	2.0	1.9	2.0	1.8
Core PCE (YoY)	1.9	1.9	1.8	1.7	1.8	1.8	1.7	1.7
Unemployment Rate	3.7	3.8	3.8	3.9	3.9	4.0	3.8	4.2
Nonfarm Payrolls (Monthly)	150	145	135	125	120	110	140	102

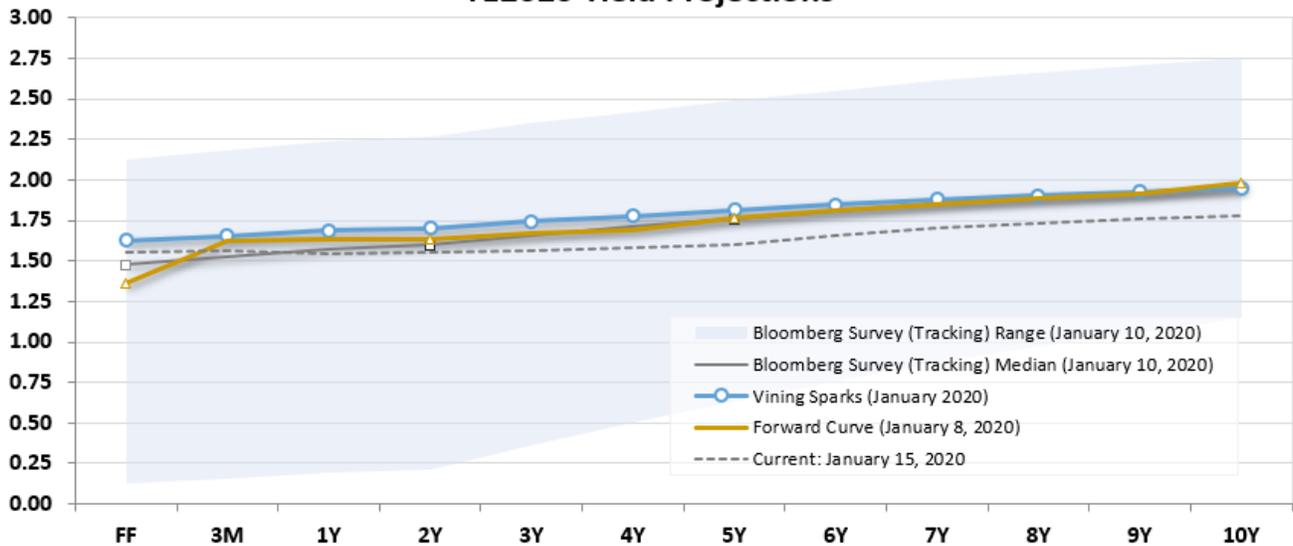
	Q120	Q220	Q320	Q420	Q121	Q221	Q321	Q421
Fed Funds Target	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
2-Year Treasury Yield	1.65	1.65	1.70	1.70	1.70	1.70	1.70	1.70
10-Year Treasury Yield	1.95	1.95	2.00	1.95	1.95	1.95	1.95	1.95
30-Year Treasury Yield	2.55	2.50	2.50	2.37	2.32	2.32	2.32	2.32
Prime Rate	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75
30-Year Mortgage Rate	3.85	3.80	3.80	3.70	3.65	3.65	3.65	3.65

Sources: ¹ Bloomberg Survey of Economists, ² Economists' Real-Time Tracking Updates, Vining Sparks



Sources: ¹ Bloomberg Survey of Economists, ² Economists' Real-Time Tracking Updates, Vining Sparks

YE2020 Yield Projections



Maturities without published projections interpolated based on historical spread differentials

Bloomberg Survey Tracking Index and Vining Projections

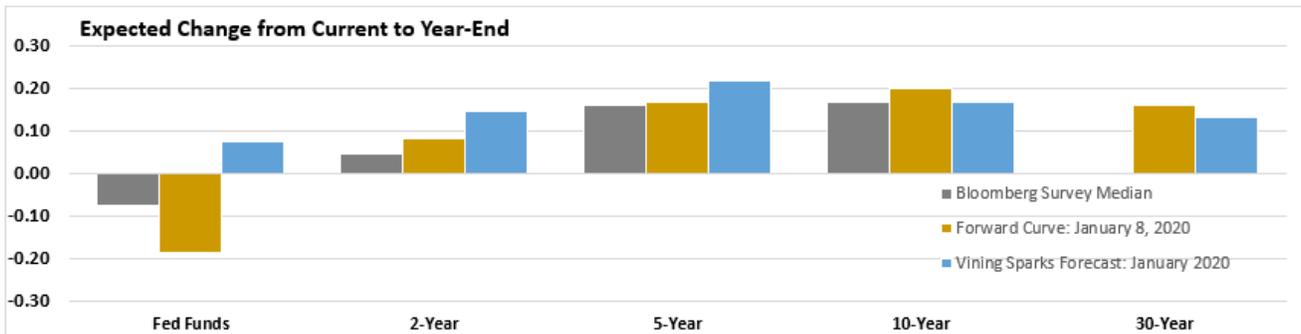
Interest Rate Projections

January 8, 2020

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: January 10, 2020									
Low Forecast	0.13			0.21		0.64		1.15	
Median Forecast	1.48			1.60		1.76		1.95	
High Forecast	2.13			2.27		2.49		2.75	
Forward Curve: January 8, 2020	1.37	1.62	1.63	1.64	1.67	1.76	1.85	1.98	2.40
Vining Sparks Forecast: January 2020	1.63	1.66	1.69	1.70	1.74	1.81	1.88	1.95	2.37
Current: January 15, 2020	1.55	1.56	1.54	1.55	1.56	1.60	1.71	1.78	2.24

Projected Δ by Year-End

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: January 10, 2020									
Low Forecast	-1.43			-1.34		-0.96		-0.63	
Median Forecast	-0.08			0.05		0.16		0.17	
High Forecast	0.58			0.72		0.89		0.97	
Forward Curve: January 8, 2020	-0.19	0.06	0.09	0.08	0.11	0.17	0.15	0.20	0.16
Vining Sparks Forecast: January 2020	0.08	0.10	0.14	0.15	0.18	0.21	0.17	0.17	0.13



Sources: Bloomberg Survey of Economists Real-Time Tracking Index, Vining Sparks

INTENDED FOR INSTITUTIONAL INVESTORS ONLY. The information included herein has been obtained from sources deemed reliable, but it is not in any way guaranteed, and it, together with any opinions expressed, is subject to change at any time. Any and all details offered in this publication are preliminary and are therefore subject to change at any time. This has been prepared for general information purposes only and does not consider the specific investment objectives, financial situation and particular needs of any individual or institution. This information is, by its very nature, incomplete and specifically lacks information critical to making final investment decisions. Investors should seek financial advice as to the appropriateness of investing in any securities or investment strategies mentioned or recommended. The accuracy of the financial projections is dependent on the occurrence of future events which cannot be assured; therefore, the actual results achieved during the projection period may vary from the projections. The firm may have positions, long or short, in any or all securities mentioned. Member FINRA/SIPC.