



Office of State Budget Director

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John E. Chilton
State Budget Director

Governor's Office for Policy and Management
Governor's Office for Economic Analysis
Governor's Office for Policy Research

October 16, 2019

Mr. Scott Brinkman
Secretary of the Executive Cabinet
Office of the Governor
Frankfort, Kentucky 40601

Mr. Jay Hartz
Director
Legislative Research Commission
Room 300, State Capitol
Frankfort, Kentucky 40601

Ms. Laurie Dudgeon
Administrative Office of the Courts
1001 Vandalay Drive
Frankfort, Kentucky 40601

Dear Mr. Brinkman, Mr. Hartz and Ms. Dudgeon:

Pursuant to Kentucky Revised Statutes 48.120 (2), on or before October 15 of each odd-numbered year, the Office of State Budget Director (OSBD), in conjunction with the Consensus Forecasting Group (CFG or Group), shall provide to each branch of government preliminary revenue estimates for the current fiscal year and the upcoming two fiscal years. The preliminary estimates shall contain:

- The forecast and prior two years of historical receipts for the General Fund, Road Fund, and Master Settlement Agreement tobacco revenues;
- Any relevant explanatory statements.

The General Fund, Road Fund, and MSA Tobacco Fund estimates were prepared in cooperation with the CFG, and represent an agreement by the Group as to the most likely outcome for revenues in the current fiscal year and the upcoming two years. The CFG consists of individuals knowledgeable about the state and national economies and the revenue and financial conditions of the Commonwealth. Appointed jointly by State Budget Director and the Legislative Research Commission, the members are: Dr. Frank O'Connor (Chair), Dr. Alan Bartley, Dr. Christopher Bollinger, Dr. Cathy Carey, Dr. Jose Fernandez, Ms. Janet Harrah, Dr. Bruce Johnson, Dr. John Perry, Mr. David Sinclair, and Dr. Eugenia Toma. Major assistance was provided by the Office of State Budget Director: Gregory Harkenrider, Gene Zaparanick-Brown, Thomas Jones, and Michael Jones.

The CFG met on October 15, 2019, to discuss year-to-date revenue performance and forecasts for the National economy, Kentucky economy, and state revenues. The documents that accompany this certification include both the approved General Fund and Road Fund revenue estimates in detail, as well as explanatory statements from OSBD.

In the development of the projections for the underlying economic forecast, OSBD staff presented the CFG three options to consider. First was the control economy, or estimates based on the September 2019 control scenario of IHS Markit Economics (formerly known as Global Insight). Control estimates represent the most likely outcome according to IHS and were given a 55 percent probability of outcome by IHS. Excerpts from the control forecast are outlined below.

Real GDP growth transitions to below-trend in 2021

- *GDP growth is projected at 2.1% through 2020, modestly above our estimate of potential growth. The year 2021 sees a transition to below-trend growth that persists through 2024, allowing the unemployment rate to drift up to "full employment," approximately 4.5%. Several factors support above-trend growth through 2020: (1) this year, the 2017 Tax Act is still supporting private demand, while the Bipartisan Budget Act of 2018 is still supporting government spending; next year there is additional fiscal stimulus from the Bipartisan Budget Act of 2019 and a small lift from the 2020 census; (2) interest rates are low; (3) recent gains in wealth, employment, and compensation, along with elevated consumer confidence, support growth of personal consumption expenditures; (4) foreign growth, while slowing in 2019, rebounds in 2020 to support US exports; and (5) strong increases in US production of crude oil.*

- *The slowdown after 2020 arises from: (1) waning fiscal stimulus (see Fiscal Policy); (2) lagged effects of recent tariff increases; (3) a reversal of monetary easing starting in late 2020 (4) an upward drift in long-term interest rates as the term premium in Treasury yields gradually normalizes; (5) proximity to full employment that limits growth of labor income; and (6) a projected deceleration in household wealth as equity values flatten and house-price appreciation slows. As GDP growth slows after 2020, a small positive output gap is gradually eliminated.*

Second was the pessimistic economy, or estimates based on the September 2019 pessimistic scenario of IHS Markit Economics. Pessimistic estimates were given a 35 percent probability of outcome according to IHS. Excerpts from the pessimistic forecast follow.

Broad-based loss of confidence and risk aversion result in a three-quarter recession

In the pessimistic scenario, a broad loss in confidence and growing aversion to risk lead to drops in a wide range of investment and consumer spending categories to end the expansion in its 135th month, a new record. In this simulation, business fixed investment is weaker than in the baseline. Potential growth as a result is also lower. With demand weak, inflation, as measured by the core consumer price index, has four-quarter growth drop from around 2.7% in the second quarter of 2020 to 2.2% in the second quarter of 2021.

The economy starts out growing only modestly slower than in the baseline. Yet rising prices have left the real estate market vulnerable, and this market's growth has been slowing. The slowdown turns into a decline, as real estate prices correct and confidence plunges. The financial sector shows initial strength, with equity values moving close to the baseline through 2019. However, a growing sense of unease marked by declines in consumer confidence and an inverted yield curve spooks capital markets, resulting in sharp declines in asset values and broad-based declines in business fixed investment. The S&P 500 plummets 7.3% in 2020, not recovering to the baseline levels until late 2024.

Negative wealth effects and employment declines lead households to sharply curtail their spending in early 2020. Foreign growth also slows. The result is a three quarter recession starting in the third quarter of 2020.

Third was the optimistic economy, or estimates based on the September 2019, optimistic scenario of IHS Markit Economics. Optimistic estimates were given a 10 percent probability of outcome according to IHS. No excerpts from the optimistic forecast are included because the CFG did not base any of the revenue projections from the optimistic scenario.

All three scenarios from IHS Markit were used as inputs in the OSBD's MAK model, an analytical model that takes US trends in employment and income as predetermined variables in order to estimate Kentucky-specific forecasts for employment and personal income. Of highest importance is the Kentucky wages and salary forecast, which has a direct impact on the Kentucky individual income tax projections and the sales tax estimates.

After a lengthy and productive discussion, the CFG adopted a blended forecast (30 percent pessimistic, 70 percent control) as the most likely outcome for the US and Kentucky economies and for purposes of the General Fund revenue models. The OSBD staff prepared all three scenarios for consideration by the CFG, so the General Fund revenue numbers were reviewed, debated, and a firm consensus was reached regarding the blended forecast.

With regard to the Road Fund, CFG members debated between the control and pessimistic forecasts. Ultimately, the CFG members reached a consensus with the same blend as was used in the General Fund: 30 percent pessimistic and 70 percent control.

The estimates provided below were adopted by the CFG. It is important to note that, per statute, these estimates do not constitute a revision to the official revenue estimates on which the FY20 budget was predicated. Pursuant to KRS 48.120 (3), the CFG will meet one more time to issue official estimates that will be used in the 2020-2022 Budget of the Commonwealth.

	General Fund	Road Fund	Tobacco MSA
FY20	\$11,488,700,000	\$1,562,500,000	\$111,100,000
FY21	\$11,716,200,000	\$1,569,500,000	\$106,900,000
FY22	\$11,909,700,000	\$1,588,300,000	\$103,100,000

For the General Fund, adopting the blended revenue projections translates into an anticipated FY20 revenue surplus of \$26.7 million vis-à-vis the revenue enacted in the budget. As to the Road Fund, adopting the blended revenue projections translates into an anticipated FY20 revenue surplus of \$52.7 million vis-à-vis relative to the official budgeted revenues. Finally, regarding the MSA Tobacco Fund, the preliminary revenue estimate for FY20 of \$111.1 million is \$7.0 million below the official estimate of \$118.1 million.

- Attachment 1: Letter from the CFG
- Attachment 2: General Fund estimates in detail
- Attachment 3: Road Fund estimates in detail
- Attachment 4: Pessimistic Forecast – employment, income, and key economic indicators
- Attachment 5: Control Forecast – employment, income, and key economic indicators
- Attachment 6: IHS Global Insight Forecast comparison

Mr. Brinkman, Mr. Hartz, Ms. Dudgeon
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Please feel free to contact my office if you have any questions regarding the material included in this packet.

Cordially,

A handwritten signature in black ink, appearing to read "John E. Chilton". The signature is fluid and cursive, with the first name "John" being the most prominent.

John E. Chilton
State Budget Director

Copy with attachments to:

Senator Robert Stivers, Senate President
Representative David Osborne, Speaker of the House
Senator Chris McDaniel, Chair A&R Committee
Representative Steven Rudy, Chair A&R Committee

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Jay D. Hartz

Director

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Majority Whip

Joni L. Jenkins
Minority Whip

October 15, 2019

John E. Chilton
State Budget Director
Office of the State Budget Director
Room 284, Capitol Annex
Frankfort, Kentucky 40601

Dear Mr. Chilton:

In accordance with KRS 48.120 and 48.115, the Consensus Forecasting Group (CFG) met on October 15, 2019 to adopt the preliminary revenue estimates for FY 2020, FY 2021, and FY 2022. The preliminary General Fund and Road Fund estimates adopted by the CFG during the October 15, 2019 meeting are contained in the table below.

<u>Fiscal Year</u>	<u>General Fund</u>	<u>Road Fund</u>
2020	\$11,488,700,000	\$1,562,500,000
2021	\$11,716,200,000	\$1,569,500,000
2022	\$11,909,700,000	\$1,588,300,000

In addition to providing estimates for the General Fund and the Road Fund, the Consensus Forecasting Group provides estimates of the receipts the Commonwealth may receive from the Phase I Tobacco Master Settlement Agreement (MSA). The estimates below represent the MSA revenue estimates adopted by the CFG at the October 15, 2019 meeting and are not included in the General Fund totals.

<u>Fiscal Year</u>	<u>MSA Revenue</u>
2020	\$111,100,000
2021	\$106,900,000
2022	\$103,100,000

In summary, the General Fund, Road Fund, and MSA revenue estimates adopted by the Consensus Forecasting Group represent an agreement as to the most likely outcome for revenues for the current fiscal year and the upcoming biennium, given the information available on October 15, 2019. On or before the fifteenth legislative day of the 2020 Regular Session, the CFG will re-examine the General Fund, Road Fund, and MSA estimates, and will provide your office with the official revenue estimates for the current fiscal year and the upcoming biennium.

Sincerely,

A handwritten signature in dark ink, appearing to read "Frank O'Connor". The signature is written in a cursive, flowing style.

Frank O'Connor
Chairman, Consensus Forecasting Group
Professor Emeritus of Economics
Eastern Kentucky University

General Fund
GOEA Blend Forecast FY20 - FY22
(Millions of Dollars)
October 2019

Control Weight:	70%
Optimistic Weight	0%
Pessimistic Weight:	30%

<u>Blended Estimate</u>	<u>FY18</u>		<u>FY19</u>		<u>FY20</u>		<u>FY21</u>		<u>FY22</u>	
	Actual	%Chg	Actual	%Chg	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg
Individual Income	4,603.6	4.8	4,544.7	-1.3	4,646.5	2.2	4,762.2	2.5	4,883.8	2.6
Sales & Use	3,605.7	3.5	3,937.6	9.2	4,158.5	5.6	4,236.4	1.9	4,339.4	2.4
Corp. Inc. & LLET	749.5	0.9	762.7	1.8	610.5	-20.0	627.4	2.8	701.3	11.8
Property	621.3	3.2	647.0	4.1	657.1	1.6	671.7	2.2	695.0	3.5
Lottery	253.0	4.7	263.9	4.3	271.0	2.7	277.0	2.2	283.0	2.2
Cigarettes	211.8	-4.3	353.5	66.9	345.6	-2.2	337.3	-2.4	329.5	-2.3
Coal Severance	89.6	-10.8	92.9	3.6	66.3	-28.6	56.7	-14.5	43.1	-23.9
Other	703.7	2.0	790.4	12.3	733.2	-7.2	747.5	2.0	634.6	-15.1
Total General Fund	10,838.2	3.4	11,392.7	5.1	11,488.7	0.8	11,716.2	2.0	11,909.7	1.7

<u>CFG August Estimate 70:30</u>	<u>FY18</u>		<u>FY19</u>		<u>FY20</u>		<u>FY21</u>		<u>FY22</u>	
	Actual	%Chg	Actual	%Chg	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg
Individual Income	4,603.6	4.8	4,544.7	-1.3	4,656.5	2.5	4,801.2	3.1	4,965.2	3.4
Sales & Use	3,605.7	3.5	3,937.6	9.2	4,119.0	4.6	4,198.7	1.9	4,296.4	2.3
Corp. Inc. & LLET	749.5	0.9	762.7	1.8	684.7	-10.2	698.1	2.0	781.4	11.9
Property	621.3	3.2	647.0	4.1	657.1	1.6	671.7	2.2	695.0	3.5
Lottery	253.0	4.7	263.9	4.3	271.0	2.7	277.0	2.2	283.0	2.2
Cigarettes	211.8	-4.3	353.5	66.9	339.5	-4.0	328.7	-3.2	318.7	-3.0
Coal Severance	89.6	-10.8	92.9	3.6	99.6	7.2	88.7	-10.9	75.9	-14.4
Other	703.7	2.0	790.4	12.3	736.2	-6.9	753.2	2.3	641.5	-14.8
Total General Fund	10,838.2	3.4	11,392.7	5.1	11,563.6	1.5	11,817.3	2.2	12,057.2	2.0

<u>Difference</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>
Individual Income	-	-	(10.0)	(39.0)	(81.3)
Sales & Use	-	-	39.5	37.7	43.0
Corp. Inc. & LLET	-	-	(74.2)	(70.8)	(80.2)
Property	-	-	-	-	-
Lottery	-	-	-	-	-
Cigarettes	-	-	6.1	8.6	10.8
Coal Severance	-	-	(33.3)	(32.0)	(32.8)
Other	-	-	(3.0)	(5.7)	(6.9)
Total General Fund	-	-	(74.9)	(101.2)	(147.5)

Road Fund
GOEA Blend Forecast FY20 - FY22
(Millions of Dollars)
October 2019

Control Weight: 70%
Optimistic Weight 0%
Pessimistic Weight: 30%

Blend Forecast	FY18		FY19		FY20		FY21		FY22	
	Actual	%Chg	Actual	%Chg	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg
Motor Fuels	764.9	0.6	773.2	1.1	777.6	0.6	783.3	0.7	784.2	0.1
Motor Vehicle Usage	493.1	-1.3	514.5	4.3	521.5	1.3	516.6	-0.9	527.1	2.0
Motor Vehicle License	112.9	0.8	120.9	7.1	118.0	-2.4	121.0	2.6	124.8	3.1
Motor Vehicle Operators	16.8	4.2	16.6	-1.0	17.4	4.6	19.9	14.4	23.2	16.6
Weight Distance	81.7	-1.4	83.7	2.5	84.2	0.6	83.7	-0.6	84.1	0.4
Investment	2.8	79.4	11.9	320.3	3.7	-69.0	2.4	-35.1	2.3	-4.2
Other	38.7	10.3	45.1	16.5	40.1	-11.2	42.6	6.2	42.7	0.2
Total Road Fund	1,511.0	0.2	1,566.1	3.6	1,562.5	-0.2	1,569.5	0.4	1,588.3	1.2

August Blend

Motor Fuels	778.9	781.0	781.8
Motor Vehicle Usage	502.5	498.2	514.7
Motor Vehicle License	118.2	122.3	127.4
Motor Vehicle Operators	18.4	23.9	25.2
Weight Distance	83.8	83.8	84.6
Investment	10.0	8.0	6.0
Other	40.7	44.5	42.8
Total Road Fund	1,552.5	1,561.6	1,582.5

Difference

Motor Fuels	(1.3)	2.2	2.4
Motor Vehicle Usage	19.0	18.4	12.3
Motor Vehicle License	(0.3)	(1.2)	(2.6)
Motor Vehicle Operators	(1.0)	(4.0)	(2.0)
Weight Distance	0.5	(0.1)	(0.6)
Investment	(6.3)	(5.6)	(3.7)
Other	(0.6)	(1.9)	(0.1)
Total Road Fund	10.0	7.8	5.8

Difference from Official

52.7

Selected U.S. and Kentucky Economic Indicators
Global Insight: Pessimistic Scenario
September 2019

	FY18	FY19	FY20	FY21	FY22
OUTPUT					
US Real GDP (Bil 2012\$)	18,381 2.8%	18,867 2.6%	19,205 1.8%	18,998 -1.1%	19,373 2.0%
Industrial Production Index, Total	3.2%	3.2%	-0.9%	-3.8%	1.5%
Industrial Production Index, Durables	2.1%	0.8%	-1.1%	-1.8%	1.5%
INCOME					
KY Personal Income (Mil\$)	183,751 3.3%	190,466 3.7%	199,762 4.9%	204,348 2.3%	209,855 2.7%
KY Wage & Salary Income (Mil\$)	91,326 2.3%	94,434 3.4%	98,666 4.5%	100,566 1.9%	102,169 1.6%
KY Supplements to W&S (Mil\$)	22,667 2.5%	23,172 2.2%	24,425 5.4%	25,390 3.9%	26,130 2.9%
KY Proprietors' Income (Mil\$)	12,159 5.9%	12,595 3.6%	13,001 3.2%	12,251 -5.8%	12,966 5.8%
KY Dividend, Interest, & Rent (Mil\$)	30,005 4.0%	31,052 3.5%	32,049 3.2%	32,296 0.8%	32,517 0.7%
KY Transfer Payments (Mil\$)	44,707 4.1%	46,887 4.9%	50,070 6.8%	52,656 5.2%	55,220 4.9%
KY Social Insurance (Mil\$)	15,003 2.5%	15,558 3.7%	16,407 5.5%	16,794 2.4%	17,157 2.2%
US Personal Income (Bil\$)	17,357 5.4%	18,242 5.1%	19,059 4.5%	19,394 1.8%	19,956 2.9%

Selected U.S. and Kentucky Economic Indicators
Global Insight: Pessimistic Scenario
September 2019

	FY18	FY19	FY20	FY21	FY22
EMPLOYMENT					
KY Nonfarm Employment (Thous)	1,926.3 0.5%	1,942.5 0.8%	1,956.7 0.7%	1,945.7 -0.6%	1,934.3 -0.6%
US Nonfarm Employment (Mil)	147.8 1.5%	150.3 1.7%	152.2 1.2%	151.4 -0.5%	150.5 -0.6%
KY Manufacturing Employment (Thou)	250.9 0.3%	253.7 1.1%	253.3 -0.2%	246.5 -2.7%	238.8 -3.1%
US Manufacturing Employment (Mil)	12.6 1.5%	12.8 1.9%	12.8 0.3%	12.5 -2.3%	12.0 -4.1%
OTHER KEY MEASURES					
Consumer Sentiment Index (Michigan)	97.7	97.3	99.8	100.5	99.5
Rate of Inflation (%)	2.2%	2.1%	2.1%	2.0%	2.2%
US Retail Sales (%)	5.0%	3.8%	4.0%	1.0%	1.7%
US Corporate Profits(%)	-0.1%	2.0%	2.6%	-8.0%	10.5%
Three-month Treasury Bills (%)	155.7%	60.2%	-26.1%	-82.6%	-43.2%
Oil Price, West Texas (\$/barrel)	58.56	62.33	59.49	54.61	57.97

MAK: Macromodel of Kentucky
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Selected U.S. and Kentucky Economic Indicators
Global Insight: Control Scenario
September 2019

	FY18	FY19	FY20	FY21	FY22
OUTPUT					
US Real GDP (Bil 2012\$)	18,381 2.8%	18,867 2.6%	19,265 2.1%	19,677 2.1%	20,013 1.7%
Industrial Production Index, Total	3.2%	3.2%	-0.5%	1.3%	1.0%
Industrial Production Index, Durables	2.1%	0.8%	-0.7%	1.6%	1.3%
INCOME					
KY Personal Income (Mil\$)	183,751 3.3%	190,466 3.7%	199,808 4.9%	208,105 4.2%	216,136 3.9%
KY Wage & Salary Income (Mil\$)	91,326 2.3%	94,433 3.4%	98,741 4.6%	102,353 3.7%	105,604 3.2%
KY Supplements to W&S (Mil\$)	22,667 2.5%	23,167 2.2%	24,418 5.4%	25,779 5.6%	27,078 5.0%
KY Proprietors' Income (Mil\$)	12,159 5.9%	12,594 3.6%	13,051 3.6%	13,079 0.2%	13,179 0.8%
KY Dividend, Interest, & Rent (Mil\$)	30,005 4.0%	31,048 3.5%	32,053 3.2%	33,469 4.4%	34,845 4.1%
KY Transfer Payments (Mil\$)	44,707 4.1%	46,878 4.9%	50,035 6.7%	52,609 5.1%	55,303 5.1%
KY Social Insurance (Mil\$)	15,003 2.5%	15,558 3.7%	16,448 5.7%	17,168 4.4%	17,881 4.2%
US Personal Income (Bil\$)	17,357 5.4%	18,242 5.1%	19,101 4.7%	19,972 4.6%	20,852 4.4%

Selected U.S. and Kentucky Economic Indicators
Global Insight: Control Scenario
September 2019

	FY18	FY19	FY20	FY21	FY22
EMPLOYMENT					
KY Nonfarm Employment (Thous)	1,926.3 0.5%	1,942.5 0.8%	1,958.4 0.8%	1,971.3 0.7%	1,978.4 0.4%
US Nonfarm Employment (Mil)	147.8 1.5%	150.3 1.7%	152.3 1.3%	153.8 1.0%	154.8 0.6%
KY Manufacturing Employment (Thou)	250.9 0.3%	253.7 1.1%	253.5 -0.1%	250.9 -1.0%	249.9 -0.4%
US Manufacturing Employment (Mil)	12.6 1.5%	12.8 1.9%	12.8 0.2%	12.6 -2.0%	12.5 -0.3%
OTHER KEY MEASURES					
Consumer Sentiment Index (Michigan)	97.7	97.3	95.4	96.3	95.5
Rate of Inflation (%)	2.2%	2.1%	2.2%	2.2%	2.4%
US Retail Sales (%)	5.0%	3.8%	4.4%	3.4%	3.3%
US Corporate Profits(%)	-0.1%	2.0%	4.2%	4.4%	3.4%
Three-month Treasury Bills (%)	155.7%	60.2%	-20.0%	-8.6%	24.4%
Oil Price, West Texas (\$/barrel)	58.62	60.82	59.84	58.43	60.65

MAK: Macromodel of Kentucky
Governor's Office for Economic Analysis
Office of State Budget Director

	Baseline (55%)	Pessimistic (35%)	Optimistic (10%)
GDP growth	Growth slows to 2.3% in 2019 amid slowing global growth and weaker stock price growth, followed by 2.2% in 2020	Growth slows to of 2.1% in 2019 and then contracts 1.1% in 2020; a four-quarter recession begins in the third quarter of 2020	Growth attains 2.4% in 2019 as productivity picks up, then improves to roughly 0.8 percentage point higher than baseline over forecast interval
Consumer spending	Growth rises to 3.0% in 2019 then slows to 2.6% in 2020	Rises 2.9% in 2019, slows to 1.3% growth in 2020, followed by 1.2% in 2021 amid a broad-based loss of confidence	Growth expands 3.2% in 2019 then jumps to 3.3% in 2020 thanks to faster real income growth
Business fixed investment	Growth is projected to cool to 1.5% in 2019 as nonfarm business sector output slows, then registers 2.9% in 2020	Slows to 1.3% growth in 2019, then drops 7.2% in 2020 as businesses trim capex due to falling demand, recovering 1.4% in 2021	Grows 1.6% in 2019 before swelling to 4.8% growth in 2020
Housing	Gradual improvement, with housing starts rising from 1.19 million in fourth quarter 2018 to above 1.25 million after the end of 2021	Housing starts drop below their baseline levels in 2019 and never surpass 1.1 million units thereafter	Young adults form households in greater numbers, resulting in 1.37 million starts annually by 2028
Exports	Rise 0.1% in 2019 and 4.7% in 2020	Rise 0.1% in 2019 before falling 2.4% in 2020, then rebounding 6.3% in 2021	Rise 0.1% in 2019 and then rise 6.6% in 2020
Fiscal policy	Personal tax cuts extended, while entitlement spending will follow current program guidelines	Same assumptions as in baseline	Same assumptions as in baseline
Monetary policy	The Fed cuts rates twice by early 2020, bringing the upper end of the target range to 1.75%	Fed continues to lower the federal funds rate over the next year, keeping it stable through 2021 before increasing it in 2022	The Fed is not compelled to cut rates further. It begins raising rates in summer 2020. The fed funds rate settles in the range of 3.25-3.50%
Credit conditions	Gradually easing	Lending standards remain high	Rapidly easing
Productivity growth	Averages 1.5% from 2019 through 2022	Averages 1.3% during 2019–22, 0.2 percentage point below the baseline	Averages 2.3% during 2019–22, 0.8 percentage point above the baseline
Consumer confidence	Rises through mid-2020 after a sharp drop in the third quarter of 2019, before trending down over the remainder of the forecast	Drops early in the forecast; recovers steadily thereafter but remains below baseline throughout forecast interval	Outperforms baseline over the entire forecast interval
Oil prices (Dollars/barrel)	Brent crude oil averages \$65 in 2019 and \$64 in 2020	Modestly lower than the baseline over the forecast interval starting in the fourth quarter of 2019	Averages \$10/barrel higher than the baseline over the forecast interval
Stock markets	The S&P 500 recovers some of its recent losses, gaining 17.9% over 2019 (Dec. to Dec.)	The S&P 500 increases by 17.9% in 2019 before declining 7.3% in 2020 (Dec. to Dec.)	The S&P 500 climbs 20.6% in 2019 and rises 4.1% in 2020 (Dec. to Dec.)
Inflation (PCE)	Core personal consumption (PCE) price inflation rises 1.9% in 2019, then grows at 2.3% in 2020 and 2.1% in 2021	Core PCE inflation is the same as baseline levels till 2021, after which it remains below the baseline through the end of forecast	Despite stronger economic growth, core PCE inflation remains at the baseline throughout the forecast due to the lower natural rate of unemployment
Foreign growth	In 2019, Eurozone growth cools to 1.1%, while China's growth eases to 6.2%	Foreign growth slows during US recession period	Foreign growth improves thanks to a rebound in productivity growth
US dollar	The real dollar strengthens until 2023 before slowly depreciating through the end of the forecast	Appreciates over recession period due to tariffs	Strengthens initially, then depreciates due to wider comparative current account deficit

*Annual percent changes are fourth-quarter over fourth-quarter