



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

August 15, 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 (1), on or before August 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 a budget planning report. The planning report shall contain:

- ❑ A baseline analysis and projections of economic conditions;
- ❑ Any potential consequences of the analysis for the Commonwealth's fiscal condition;
- ❑ The revenue estimates and implications for the General Fund and Road Fund for the current fiscal year and next four (4) fiscal years; and
- ❑ Projections of personal income, employment, and economic indicators that reflect economic conditions.

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 four 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 August 9, 2019, to discuss tax reform, 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 supporting documentation 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 June 2019 control scenario of IHS Markit Economics (formally 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.

Tariffs and worsened financial conditions slow growth

- *Despite quite solid 3.1 percent (annualized) GDP growth in the first quarter, growth over 2019 is now projected at just 2.0 percent (Q4 over Q4).¹ This is four-tenths below last month's projection, as worsened financial conditions, tariff increases, and greater uncertainty around additional tariffs are expected to combine to slow growth of consumer and business spending more than previously expected. Investor concerns over the impact on earnings of another round of US and retaliatory tariffs, along with rising risks of a downturn after 2019, continue to weigh on financial conditions. Although helped by a dovish pivot in Fed policy, financial conditions will remain volatile as uncertainty over tariffs rises and falls.*
- *The unemployment rate is expected to reach a cycle low of roughly 3½ percent this summer, where it will linger before starting a gradual rise once GDP growth drops below trend. After a soft start to the year, inflation is expected to pick up, with core PCE inflation projected to run above a 2 percent annualized pace in the second half. Nevertheless, we removed the Fed tightening in December from the forecast.*
- *Risks of a downturn rise as US growth slows from above-trend in 2018-19 to trend growth or lower in 2020-2021.*

Second was the pessimistic economy, or estimates based on the June 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.

In the pessimistic scenario, a broad loss in confidence and growing aversion to risk lead to declines in a wide range of investment and consumer spending categories to end the expansion in its 131st month, a new record.

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 in line with 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 9.8 percent in 2020, not recovering to the baseline levels until 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 second quarter of calendar year 2020.***

Third was the optimistic economy, or estimates based on the June 2019, optimistic scenario of IHS Markit Economics. Optimistic estimates were given a 10 percent probability of outcome according 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 FY 2020 budget was predicated. Planning estimates extend out to FY24 in order to give agencies of government a basis for long-term decisions. Pursuant to KRS 48.120, the CFG will meet on or before October 15 to issue preliminary estimates and then again (usually in December) to issue the official estimates that will be used in the 2020-2022 Budget of the Commonwealth.

	General Fund	Road Fund	Tobacco MSA
FY20	\$11,563,600,000	\$1,552,500,000	\$111,300,000
FY21	\$11,817,300,000	\$1,561,600,000	\$107,200,000
FY22	\$12,057,200,000	\$1,582,500,000	\$103,600,000
FY23	\$12,302,200,000	\$1,606,000,000	\$100,800,000
FY24	\$12,576,400,000	\$1,620,100,000	\$98,100,000

Potential consequences of the analysis for the Commonwealth's fiscal condition are mixed. For the General Fund, adopting the blended revenue projections translates into an anticipated FY20 revenue surplus of \$101.5 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 \$42.7 million vis-à-vis relative to the official budgeted revenues. Finally, regarding the MSA Tobacco Fund, the preliminary revenue estimate for FY20 of \$111.3 million is \$6.8 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

Please feel free to contact my office if you have any questions regarding the material included in this packet.

Cordially,



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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Director

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Joni L. Jenkins
Minority Whip

August 14, 2019

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

Dear Mr. Chilton:

Pursuant to KRS 48.120, this memo contains the budget planning revenue estimates for the General Fund, Road Fund, and Master Settlement Agreement (MSA) for the FY 2020 – FY 2024 period. The planning estimates were developed by the Consensus Forecasting Group (CFG) in conjunction with the Office of the State Budget Director in accordance with KRS 48.120(1) and were adopted at the CFG meeting held on August 9, 2019.

The budget planning revenue estimates for the current fiscal year (FY 2020) and the next four fiscal years (2021 – 2024) are listed below.

Fiscal Year	General Fund	Road Fund	MSA
FY 2020	\$11,563,600,000	\$1,552,500,000	\$111,300,000
FY 2021	\$11,817,300,000	\$1,561,600,000	\$107,200,000
FY 2022	\$12,057,200,000	\$1,582,500,000	\$103,600,000
FY 2023	\$12,302,200,000	\$1,606,000,000	\$100,800,000
FY 2024	\$12,576,400,000	\$1,620,100,000	\$98,100,000

By October 15, 2019, the Consensus Forecasting Group, in accordance with their statutory responsibilities, will adopt the preliminary revenue estimates for the current fiscal year and the upcoming biennium. On or before the fifteenth legislative day of the upcoming 2020 Regular Session of the General Assembly, the Consensus Forecasting Group will adopt the final detailed revenue estimates for the General Fund, the Road Fund, and the MSA for the current and next two fiscal years.

Inherent in any revenue forecast is the risk that actual receipts may differ from their forecasted values. The Kentucky economic and revenue forecasts adopted by the CFG are directly linked to the national forecast provided by IHS Markit and represent an agreement as to the most likely outcome for revenues for the current fiscal year and the next two bienniums, given the information available on August 9, 2019.

Sincerely,

A handwritten signature in black ink that reads "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 - FY24
(Millions of Dollars)
August 2019

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

<u>Blended Estimate</u>	<u>FY19</u>		<u>FY20</u>		<u>FY21</u>		<u>FY22</u>		<u>FY23</u>		<u>FY24</u>	
	Actual	%Chg	Estimate	%Chg								
Individual Income	4,544.7	-1.3	4,656.5	2.5	4,801.2	3.1	4,965.2	3.4	5,087.1	2.5	5,237.2	3.0
Sales & Use	3,937.6	9.2	4,119.0	4.6	4,198.7	1.9	4,296.4	2.3	4,375.6	1.8	4,476.7	2.3
Corp. Inc. & LLET	762.7	1.8	684.7	-10.2	698.1	2.0	781.4	11.9	818.2	4.7	816.6	-0.2
Property	647.0	4.1	657.1	1.6	671.7	2.2	695.0	3.5	708.8	2.0	729.5	2.9
Lottery	263.9	4.3	271.0	2.7	277.0	2.2	283.0	2.2	289.0	2.1	295.0	2.1
Cigarettes	353.5	66.9	339.5	-4.0	328.7	-3.2	318.7	-3.0	302.6	-5.1	293.6	-3.0
Coal Severance	92.9	3.6	99.6	7.2	88.7	-10.9	75.9	-14.4	67.5	-11.1	56.4	-16.4
Other	790.4	12.3	736.2	-6.9	753.2	2.3	641.5	-14.8	653.4	1.9	671.4	2.7
Total General Fund	11,392.7	5.1	11,563.6	1.5	11,817.3	2.2	12,057.2	2.0	12,302.2	2.0	12,576.4	2.2
New Money	554.5		170.9		253.8		239.9		245.0		274.2	

<u>CFG Official Estimate</u>	<u>FY19</u>		<u>FY20</u>	
	Estimate	%Chg	Estimate	%Chg
Individual Income	4,531.2		4,661.2	
Sales & Use	3,907.6		4,056.0	
Corp. Inc. & LLET	773.2		767.6	
Property	620.7		635.1	
Lottery	249.0		256.0	
Cigarettes	337.9		312.0	
Coal Severance	77.9		65.1	
Other	700.7		709.0	
Total General Fund	11,198.2		11,462.0	

<u>Difference</u>	<u>FY19</u>	<u>FY20</u>
Individual Income	13.5	(4.7)
Sales & Use	30.0	62.9
Corp. Inc. & LLET	(10.5)	(82.9)
Property	26.3	22.0
Lottery	14.9	15.0
Cigarettes	15.6	27.5
Coal Severance	15.0	34.5
Other	89.7	27.2
Total General Fund	194.5	101.5

Road Fund
GOEA Blend Forecast FY20 - FY24
(Millions of Dollars)
August 2019

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

Blend Forecast	FY19		FY20		FY21		FY22		FY23		FY24	
	Actual	%Chg	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg	Estimate	%Chg
Motor Fuels	773.2	1.1	778.9	0.7	781.0	0.3	781.8	0.1	783.6	0.2	786.0	0.3
Motor Vehicle Usage	514.5	4.3	502.5	-2.3	498.2	-0.9	514.7	3.3	531.5	3.3	543.0	2.2
Motor Vehicle License	120.9	7.1	118.2	-2.2	122.3	3.4	127.4	4.2	129.4	1.6	131.7	1.8
Motor Vehicle Operators	16.6	-1.0	18.4	10.6	23.9	29.9	25.2	5.4	25.3	0.4	25.4	0.4
Weight Distance	83.7	2.5	83.8	0.1	83.8	0.0	84.6	1.0	85.4	1.0	86.2	0.9
Investment	11.9	320.2	10.0	-16.1	8.0	-20.0	6.0	-25.0	5.0	-16.7	4.0	-20.0
Other	45.1	16.5	40.7	-9.8	44.5	9.3	42.8	-3.8	45.8	7.0	43.8	-4.4
Total Road Fund	1,566.1	3.6	1,552.5	-0.9	1,561.6	0.6	1,582.5	1.3	1,606.0	1.5	1,620.1	0.9

Compared To	Official
Motor Fuels	761.2
Motor Vehicle Usage	492.6
Motor Vehicle License	116.3
Motor Vehicle Operators	16.8
Weight Distance	83.2
Investment	3.3
Other	35.1
Total Road Fund	1,509.8

Difference
Motor Fuels
Motor Vehicle Usage
Motor Vehicle License
Motor Vehicle Operators
Weight Distance
Investment
Other
Total Road Fund

17.7
9.9
1.9
1.6
0.6
6.7
5.6
42.7

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

	FY18	FY19	FY20	FY21	FY22	FY23	FY24
OUTPUT							
US Real GDP (Bil 2012\$)	18,295 2.6%	18,829 2.9%	19,079 1.3%	18,850 -1.2%	19,185 1.8%	19,502 1.7%	19,875 1.9%
Industrial Production Index, Total	3.2%	3.3%	0.3%	-2.0%	1.5%	1.5%	1.0%
Industrial Production Index, Durables	2.1%	1.1%	0.3%	-1.7%	1.1%	0.8%	1.0%
INCOME							
KY Personal Income (Mil\$)	183,761 3.3%	190,615 3.7%	197,999 3.9%	201,656 1.8%	207,892 3.1%	214,650 3.3%	222,627 3.7%
KY Wage & Salary Income (Mil\$)	91,336 2.4%	94,436 3.4%	97,105 2.8%	97,450 0.4%	100,059 2.7%	102,698 2.6%	106,160 3.4%
KY Supplements to W&S (Mil\$)	22,668 2.5%	23,129 2.0%	24,114 4.3%	25,046 3.9%	25,989 3.8%	27,068 4.2%	28,181 4.1%
KY Proprietors' Income (Mil\$)	12,159 5.9%	12,635 3.9%	12,811 1.4%	12,984 1.3%	13,513 4.1%	13,541 0.2%	13,440 -0.7%
KY Dividend, Interest, & Rent (Mil\$)	30,005 4.0%	30,955 3.2%	31,968 3.3%	31,785 -0.6%	31,836 0.2%	32,944 3.5%	34,239 3.9%
KY Transfer Payments (Mil\$)	44,707 4.1%	47,026 5.2%	50,107 6.6%	52,677 5.1%	55,282 4.9%	57,856 4.7%	60,727 5.0%
KY Social Insurance (Mil\$)	15,004 2.5%	15,510 3.4%	16,063 3.6%	16,269 1.3%	16,797 3.2%	17,493 4.1%	18,182 3.9%
US Personal Income (Bil\$)	17,196 4.5%	17,906 4.1%	18,569 3.7%	18,900 1.8%	19,506 3.2%	20,282 4.0%	21,079 3.9%

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

	FY18	FY19	FY20	FY21	FY22	FY23	FY24
EMPLOYMENT							
KY Nonfarm Employment (Thous)	1,926.3 0.5%	1,941.9 0.8%	1,951.4 0.5%	1,931.5 -1.0%	1,932.4 0.0%	1,940.9 0.4%	1,951.2 0.5%
US Nonfarm Employment (Mil)	147.8 1.5%	150.4 1.8%	151.6 0.8%	149.9 -1.1%	150.2 0.2%	151.4 0.8%	152.6 0.8%
KY Manufacturing Employment (Thou)	250.9 0.3%	253.3 1.0%	254.0 0.3%	246.7 -2.9%	244.5 -0.9%	248.6 1.7%	251.3 1.1%
US Manufacturing Employment (Mil)	12.6 1.5%	12.8 1.9%	12.8 0.2%	12.4 -3.5%	12.2 -1.0%	12.5 2.0%	12.6 0.8%
OTHER KEY MEASURES							
Consumer Sentiment Index (Michigan)	97.7	96.1	83.9	75.2	76.7	80.6	84.1
Rate of Inflation (%)	2.2%	2.1%	2.0%	1.7%	2.1%	2.1%	2.1%
US Retail Sales (%)	5.1%	3.6%	2.1%	-0.9%	2.5%	2.9%	3.4%
US Corporate Profits(%)	3.3%	5.0%	0.3%	-2.8%	9.6%	2.7%	4.9%
Three-month Treasury Bills (%)	155.7%	62.0%	-15.5%	-94.8%	42.0%	467.1%	105.2%
Oil Price, West Texas (\$/barrel)	58.56	62.17	61.83	53.34	60.55	62.57	64.35

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

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

	FY18	FY19	FY20	FY21	FY22	FY23	FY24
OUTPUT							
US Real GDP (Bil 2012\$)	18,295 2.6%	18,829 2.9%	19,191 1.9%	19,529 1.8%	19,870 1.7%	20,210 1.7%	20,554 1.7%
Industrial Production Index, Total	3.2%	3.3%	0.6%	1.1%	1.0%	1.0%	1.0%
Industrial Production Index, Durables	2.1%	1.1%	0.8%	1.1%	1.4%	1.2%	1.0%
INCOME							
KY Personal Income (Mil\$)	183,761 3.3%	190,617 3.7%	199,149 4.5%	207,393 4.1%	215,536 3.9%	223,587 3.7%	231,809 3.7%
KY Wage & Salary Income (Mil\$)	91,336 2.4%	94,444 3.4%	98,198 4.0%	101,296 3.2%	104,508 3.2%	107,587 2.9%	110,628 2.8%
KY Supplements to W&S (Mil\$)	22,668 2.5%	23,119 2.0%	24,154 4.5%	25,366 5.0%	26,599 4.9%	27,838 4.7%	29,090 4.5%
KY Proprietors' Income (Mil\$)	12,159 5.9%	12,638 3.9%	12,770 1.1%	13,018 1.9%	13,195 1.4%	13,353 1.2%	13,523 1.3%
KY Dividend, Interest, & Rent (Mil\$)	30,005 4.0%	30,956 3.2%	32,137 3.8%	33,807 5.2%	35,288 4.4%	36,710 4.0%	38,026 3.6%
KY Transfer Payments (Mil\$)	44,707 4.1%	47,032 5.2%	50,145 6.6%	52,758 5.2%	55,451 5.1%	58,292 5.1%	61,449 5.4%
KY Social Insurance (Mil\$)	15,004 2.5%	15,516 3.4%	16,213 4.5%	16,836 3.8%	17,515 4.0%	18,230 4.1%	18,969 4.1%
US Personal Income (Bil\$)	17,196 4.5%	17,909 4.1%	18,668 4.2%	19,523 4.6%	20,383 4.4%	21,259 4.3%	22,162 4.2%

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

	FY18	FY19	FY20	FY21	FY22	FY23	FY24
EMPLOYMENT							
KY Nonfarm Employment (Thous)	1,926.3 0.5%	1,941.9 0.8%	1,960.1 0.9%	1,969.5 0.5%	1,975.4 0.3%	1,979.4 0.2%	1,981.7 0.1%
US Nonfarm Employment (Mil)	147.8 1.5%	150.4 1.8%	152.4 1.4%	153.5 0.7%	154.4 0.6%	155.2 0.5%	155.7 0.3%
KY Manufacturing Employment (Thou)	250.9 0.3%	253.3 0.9%	254.4 0.5%	252.9 -0.6%	251.2 -0.7%	250.1 -0.4%	249.6 -0.2%
US Manufacturing Employment (Mil)	12.6 1.5%	12.8 1.9%	12.8 0.4%	12.7 -1.4%	12.6 -0.9%	12.5 -0.6%	12.4 -0.5%
OTHER KEY MEASURES							
Consumer Sentiment Index (Michigan)	97.7	97.2	96.2	95.2	93.9	93.3	93.2
Rate of Inflation (%)	2.2%	2.1%	2.3%	1.9%	2.1%	2.2%	2.2%
US Retail Sales (%)	5.1%	3.7%	3.3%	2.9%	3.5%	3.4%	3.4%
US Corporate Profits(%)	3.3%	4.9%	2.6%	2.4%	4.0%	4.8%	5.9%
Three-month Treasury Bills (%)	155.7%	61.4%	0.5%	-4.7%	-1.3%	4.8%	4.7%
Oil Price, West Texas (\$/barrel)	58.62	60.98	64.39	61.43	63.37	65.68	67.71

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 2.0% in 2019 amid slowing global growth, fading fiscal stimulus, and weaker stock price growth, followed by 1.8% in 2020	GDP growth slips below baseline to 1.8% in 2019; GDP contracts 1.6% in 2020, with a recession running from second-quarter 2020 to fourth-quarter 2020	Growth chugs along at 2.4% in 2019 as productivity picks up; growth remains roughly 1.0 percentage point higher than baseline over forecast interval
Consumer spending	Growth cools to 2.0% in 2019 before firming to 2.3% in 2020	Rises 1.5% in 2019, slows to 0.2% growth in 2020 amid a broad-based loss of confidence before bouncing back to 1.5% in 2021	Growth expands 2.4% in 2019 then rises to 3.4% in 2020 thanks to faster real income growth
Business investment	Growth is projected to ease to 1.5% in 2019 as nonfarm business sector output slows, then registers 2.2% in 2020	Slows to 1.0% growth in 2019, and then drops 6.4% in 2020 as businesses trim capex in the face of falling demand, recovering to 3.9% in 2021	Cools to 1.9% growth in 2019, before swelling to 5.2% growth in 2020
Housing	Gradual improvement, reaching over 1.25 million starts by end-2021	Housing starts drop below their baseline levels in 2019 and never surpass 1.10 million units after first quarter 2020	Young adults form households in greater numbers due to a strengthening economy, resulting in 1.35 million starts by 2024
Exports	Rise 1.9% in 2019 and 3.1% in 2020	Jump to 2.1% growth in 2019, helped by a lower dollar, before falling to 0.9% growth in 2020, rising to 2.3% growth in 2021	Rise 2.1% in 2019 and 3.3% 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	Federal Reserve hikes the federal funds rate once in 2023, bringing the upper end of the target range to 2.75%	Fed lowers the federal funds rate from third quarter 2019 to third quarter 2020, reaching the zero bound	The federal funds rate eventually rises to 3.25-3.50%, 0.50-0.75 percentage point higher than the baseline
Credit conditions	Gradually easing	Lending standards remain high	Rapidly easing
Productivity growth	Averages 1.3% from 2019 through 2022	Averages 1.0% during 2019-22, 0.3 percentage point below the baseline	Averages 2.1% during 2019-22, 0.8 percentage point above the baseline
Consumer confidence	Declines steadily before leveling out in first quarter 2023	Drops from second quarter 2019 to a low in fourth quarter 2020; 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 \$69 in 2019 and \$67 in 2020	Modestly lower than the baseline over the forecast interval starting fourth quarter 2019	Modestly higher than the baseline over the forecast interval
Stock markets	The S&P 500 recovers some of its recent losses, gaining 15.2% over 2019 (Dec. to Dec.)	The S&P 500 increases by 17.2% in 2019 before declining 9.8% in 2020 (Dec. to Dec.)	The S&P 500 climbs 15.4% in 2019 and rises 5.1% in 2020 (Dec. to Dec.)
Inflation (PCE)	Core personal consumption expenditures (PCE) price index rises 1.8% in 2019, then grows at 2.0% in 2020 and 2021	Core PCE inflation falls below baseline levels and remains there throughout the forecast	Core PCE inflation is lower than the baseline from 2019 through 2029 due to the lower natural rate of unemployment
Foreign growth	In 2019, Eurozone growth cools to 1.2%, 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 appreciates until the end of 2023, then depreciates through the end of the forecast	Depreciates quickly over recession period due to falling US rates	Eventually depreciates further than baseline due to wider comparative current account deficit

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