



THE

LIVINGSTON SURVEY

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DECEMBER 2023

Forecasters Project Near-Steady Real GDP Growth and a Steady Unemployment Rate for 2024

The 23 participants in the December *Livingston Survey* predict higher output growth for the second half of 2023, compared with their projections in the June 2023 survey. The forecasters, who are surveyed by the Federal Reserve Bank of Philadelphia twice a year, expect 3.1 percent annualized growth in real GDP during the second half of 2023. They project 1.0 percent annualized growth over the first half of 2024. The forecasters predict that real GDP will grow 1.2 percent at an annual rate in the second half of 2024, nearly the same rate they see for the first half of the year.

The forecasters predict a lower unemployment rate compared with their expectations in the June 2023 survey. They now forecast the unemployment rate increasing from 3.9 percent in December 2023 to 4.2 percent in June 2024, both marking downward revisions in comparison with their predictions in our June 2023 survey. The forecasters predict that the unemployment rate will stay steady at 4.2 percent in December 2024.

	<i>Growth Rate of Real GDP (%)</i>			<i>Unemployment Rate (%)</i>	
	<i>Previous</i>	<i>New</i>		<i>Previous</i>	<i>New</i>
<i>Half-year data:</i>					
2023 Q2 to 2023 Q4	-0.7	3.1	December 2023	4.1	3.9
2023 Q4 to 2024 Q2	1.0	1.0	June 2024	4.6	4.2
2024 Q2 to 2024 Q4	N.A.	1.2	December 2024	N.A.	4.2

Forecasters Project Decreasing Year-over-Year CPI Inflation from 2023 to 2025

CPI inflation is projected to be an annual-average rate of 4.1 percent in 2023 and 2.5 percent in 2024, unchanged from the June 2023 survey. The forecasters predict CPI inflation will continue to fall to an annual-average rate of 2.2 percent in 2025. The PPI inflation rate for finished goods is expected to reach an annual-average rate of 1.7 percent this year, a downward revision from 2.3 percent in the previous survey. The forecasters project PPI inflation will reach an annual-average rate of 2.1 percent in 2024 before settling at 1.9 percent in 2025.

	<i>CPI Inflation (%)</i>		<i>PPI Inflation (%)</i>	
	<i>Previous</i>	<i>New</i>	<i>Previous</i>	<i>New</i>
<i>Annual-average data:</i>				
2022 to 2023	4.1	4.1	2.3	1.7
2023 to 2024	2.5	2.5	2.3	2.1
2024 to 2025	N.A.	2.2	N.A.	1.9

RESEARCH DEPARTMENT FEDERAL RESERVE BANK OF PHILADELPHIA

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Forecasters Raise Their Predictions for Short-Term and Long-Term Interest Rates

Although the forecasters continue to predict falling interest rates, they raised their expectations for the rate on three-month Treasury bills and 10-year Treasury bonds over the next year compared with their previous estimates. The forecasters predict the three-month Treasury bill rate will be 5.40 percent at the end of December 2023, 5.08 percent at the end of June 2024, and 4.20 percent at the end of December 2024. At the end of December 2025, the three-month Treasury bill rate is expected to be 3.20 percent.

A downward trend to the predictions for the 10-year Treasury rate accompanies the outlook for the downward trend on the rate for three-month Treasury bills. Forecasters now see the 10-year rate at 4.47 percent at the end of December 2023 and 4.27 percent at the end of June 2024. The forecasters predict the rate will fall to 4.05 percent by the end of December 2024, and that it will continue to fall to 3.84 percent at the end of December 2025.

	<i>3-Month Treasury Bill Interest Rate</i>		<i>10-Year Treasury Bond Interest Rate</i>	
	<i>Previous</i>	<i>New</i>	<i>Previous</i>	<i>New</i>
Dec. 29, 2023	4.80	5.40	3.51	4.47
June 28, 2024	3.05	5.08	3.26	4.27
Dec. 31, 2024	2.95	4.20	3.30	4.05
Dec. 31, 2025	N.A.	3.20	N.A.	3.84

Downward Revisions to Long-Term CPI Inflation but Unchanged Outlook for Long-Term Real GDP Growth

The forecasters expect real GDP to grow at an annual-average rate of 1.90 percent over the next 10 years, the same rate they predicted in the June 2023 survey. Annual-average CPI inflation over the next 10 years is projected to be 2.26 percent, marking a downward revision from 2.40 percent in the June 2023 survey.

Forecasters Raise Their Expectations for Stock Prices

The panel projects that stock prices, as measured by the S&P 500 index, will increase steadily from 2023 to the end of 2025. The panel sees stock prices at 4593.2 at the end of December 2023, 4678.0 at the end of June 2024, and 4833.5 at the end of December 2024. These projections are higher than those of the survey of six months ago. In addition, the panel expects stock prices to reach 5088.2 at the end of 2025.

	<i>Stock Prices (end of period) S&P 500 Index</i>	
	<i>Previous</i>	<i>New</i>
Dec. 29, 2023	4260.4	4593.2
June 28, 2024	4350.9	4678.0
Dec. 31, 2024	4411.0	4833.5
Dec. 31, 2025	N.A.	5088.2

Technical Notes

This news release reports the median value across the 23 forecasters on the survey's panel. All forecasts were submitted before the December 8, 2023, employment report and before the December 12, 2023, CPI report.

The Philadelphia Fed's *Livingston Survey* is the oldest survey of economists' expectations. The survey was started in 1946 by the late columnist Joseph A. Livingston. It summarizes the forecast of economists from industry, government, banking and academia. It is published twice a year, in June and December.

To subscribe to the survey, go to <https://www.philadelphiafed.org/notifications>.

The Federal Reserve Bank of Philadelphia thanks the following forecasters for their participation in recent surveys:

Scott Anderson, BMO Capital Markets; **Paul Ashworth**, Capital Economics; **Michael Brown and Wayne Best**, Visa; **Jay Bryson**, Wells Fargo Securities, LLC; **James Butkiewicz**, University of Delaware; **Robert Chase**, Economic & Policy Resources, Inc.; **Carl Chrappa**, Independent Equipment Company; **Julia Coronado**, MacroPolicy Perspectives, LLC; **Gregory Daco**, EY-Parthenon; **Rajeev Dhawan**, Georgia State University; **Curtis Dubay**, U.S. Chamber of Commerce; **Mike Englund**, Action Economics, LLC; **Brian Horrigan**, Loomis, Sayles & Co.; **Samuel Kahan**, Kahan Consulting Ltd.; **Thomas Lam**, Independent Economist (Singapore); **Matthew Luzzetti**, Deutsche Bank Securities; **Daniil Manaenkov**, RSQE (University of Michigan); **Michael Moran**, Daiwa Capital Markets America; **Satyam Panday**, Standard & Poor's; **Lindsey Piegza**, Stifel; **Nathan Sheets**, Citigroup; **Allen Sinai and Lu Yu**, Decision Economics, Inc.; **James Smith**, Parsec Financial Management, Inc.; **Sean Snaith**, Institute for Economic Forecasting (University of Central Florida); **Stephen Stanley**, Santander U.S. Capital Markets; **Edward Yardeni**, Yardeni Research, Inc; **Mark Zandi**, Moody's Analytics.

This is a partial list of participants. We also thank those who wish to remain anonymous.

TABLE ONE
MAJOR MACROECONOMIC INDICATORS, 2023-2025
MEDIAN OF FORECASTER PREDICTIONS

QUARTERLY INDICATORS	NUMBER OF FORECASTERS	ACTUAL	FORECAST		ACTUAL	FORECAST			
		2023 Q2	2023 Q4	2024 Q2	2024 Q4	2022 ANNUAL	2023 ANNUAL	2024 ANNUAL	2025 ANNUAL
1. Real Gross Domestic Product (billions, chain weighted)	22	22225.4	22567.3	22678.5	22819.6	21822.1	22348.7	22704.0	23028.8
2. Nominal Gross Domestic Product (\$ billions)	19	27063.0	27877.4	28283.6	28757.7	25744.1	27344.4	28366.2	29418.6
3. Nonresidential Fixed Investment (billions, chain weighted)	19	3272.7	3281.8	3294.1	3321.7	3131.6	3261.1	3297.7	3360.0
4. Corporate Profits After Taxes (\$ billions)	13	2601.8	2647.5	2661.7	2670.6	2666.3	2615.1	2679.5	2775.2
MONTHLY INDICATORS		2023 Jun	2023 Dec	2024 Jun	2024 Dec	2022 ANNUAL	2023 ANNUAL	2024 ANNUAL	2025 ANNUAL
5. Industrial Production (2017=100)	13	102.3	103.0	103.3	103.4	102.6	102.9	103.5	104.9
6. Total Private Housing Starts (annual rate, millions)	15	1.418	1.355	1.343	1.386	1.551	1.390	1.358	1.415
7. Producer Prices - Finished Goods (index level)	10	251.2	256.2	260.0	262.9	250.8	255.0	260.3	265.3
8. Consumer Price Index (CPI-U) (index level)	17	303.8	308.5	311.7	315.8	292.6	304.7	312.4	319.4
9. Unemployment Rate (percent)	21	3.6	3.9	4.2	4.2	3.6	3.7	4.2	4.4
10. Average Weekly Earnings in Mfg. (\$)	6	1071.2	1099.9	1112.6	1137.5	1028.0	1073.5	1119.5	1162.5
11. Retail Trade (\$ billions)	10	690.5	706.9	709.5	719.2	672.6	695.5	711.8	732.3
12. Automobile Sales (incl. foreign) (annual rate, millions)	11	3.1	3.1	3.1	3.1	2.9	3.1	3.2	3.3
INTEREST RATES & STOCK PRICES (end of period)		2023 Jun	2023 Dec	2024 Jun	2024 Dec	2025 Dec			
13. Prime Interest Rate (percent)	16	8.25	8.50	8.30	7.45	6.25			
14. 10-Year Treasury Note Yield (percent)	20	3.81	4.47	4.27	4.05	3.84			
15. 3-Month Treasury Bill Rate (percent)	17	5.17	5.40	5.08	4.20	3.20			
16. Stock Prices (S&P500) (index level)	13	4450.4	4593.2	4678.0	4833.5	5088.2			

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Tables

Note: Data in these tables listed as “actual” are the data that were available to the forecasters when they were sent the survey questionnaire on November 17; the tables do not reflect subsequent revisions to the data. All forecasts were received on or before November 29.

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MAJOR MACROECONOMIC INDICATORS, 2023-2025
MEDIAN OF FORECASTER PREDICTIONS

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4. Corporate Profits After Taxes (\$ billions)	13	2601.8	2647.5	2661.7	2670.6	2666.3	2615.1	2679.5	2775.2
MONTHLY INDICATORS		2023 Jun	2023 Dec	2024 Jun	2024 Dec	2022 ANNUAL	2023 ANNUAL	2024 ANNUAL	2025 ANNUAL
5. Industrial Production (2017=100)	13	102.3	103.0	103.3	103.4	102.6	102.9	103.5	104.9
6. Total Private Housing Starts (annual rate, millions)	15	1.418	1.355	1.343	1.386	1.551	1.390	1.358	1.415
7. Producer Prices - Finished Goods (index level)	10	251.2	256.2	260.0	262.9	250.8	255.0	260.3	265.3
8. Consumer Price Index (CPI-U) (index level)	17	303.8	308.5	311.7	315.8	292.6	304.7	312.4	319.4
9. Unemployment Rate (percent)	21	3.6	3.9	4.2	4.2	3.6	3.7	4.2	4.4
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12. Automobile Sales (incl. foreign) (annual rate, millions)	11	3.1	3.1	3.1	3.1	2.9	3.1	3.2	3.3
INTEREST RATES & STOCK PRICES (end of period)		2023 Jun	2023 Dec	2024 Jun	2024 Dec	2025 Dec			
13. Prime Interest Rate (percent)	16	8.25	8.50	8.30	7.45	6.25			
14. 10-Year Treasury Note Yield (percent)	20	3.81	4.47	4.27	4.05	3.84			
15. 3-Month Treasury Bill Rate (percent)	17	5.17	5.40	5.08	4.20	3.20			
16. Stock Prices (S&P500) (index level)	13	4450.4	4593.2	4678.0	4833.5	5088.2			

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2023.

TABLE TWO
MAJOR MACROECONOMIC INDICATORS, 2023-2025
PERCENTAGE CHANGES AT ANNUAL RATES

QUARTERLY INDICATORS	NUMBER OF FORECASTERS	Q2 2023 TO Q4 2023	Q4 2023 TO Q2 2024	Q2 2024 TO Q4 2024	2022 TO 2023	2023 TO 2024	2024 TO 2025
1. Real Gross Domestic Product	22	3.1	1.0	1.2	2.4	1.6	1.4
2. Nominal Gross Domestic Product	19	6.1	2.9	3.4	6.2	3.7	3.7
3. Nonresidential Fixed Investment	19	0.6	0.8	1.7	4.1	1.1	1.9
4. Corporate Profits After Taxes	13	3.5	1.1	0.7	-1.9	2.5	3.6
MONTHLY INDICATORS		JUN 2023 TO DEC 2023	DEC 2023 TO JUN 2024	JUN 2024 TO DEC 2024	2022 TO 2023	2023 TO 2024	2024 TO 2025
5. Industrial Production	13	1.4	0.6	0.2	0.3	0.5	1.4
6. Total Private Housing Starts	15	-0.063	-0.012	0.043	-0.161	-0.032	0.057
7. Producer Prices - Finished Goods	10	4.1	2.9	2.3	1.7	2.1	1.9
8. Consumer Price Index (CPI-U)	17	3.1	2.1	2.6	4.1	2.5	2.2
9. Unemployment Rate	21	0.3	0.3	0.1	0.0	0.5	0.1
10. Average Weekly Earnings in Mfg.	6	5.4	2.3	4.5	4.4	4.3	3.8
11. Retail Trade	10	4.8	0.8	2.7	3.4	2.3	2.9
12. Automobile Sales (incl. foreign)	11	-0.0	0.0	-0.0	0.3	0.1	0.1
INTEREST RATES & STOCK PRICES		JUN 2023 TO DEC 2023	DEC 2023 TO JUN 2024	JUN 2024 TO DEC 2024	DEC 2024 TO DEC 2025		
13. Prime Interest Rate	16	0.25	-0.20	-0.85	-1.20		
14. 10-Year Treasury Note Yield	20	0.66	-0.20	-0.22	-0.21		
15. 3-Month Treasury Bill Rate	17	0.23	-0.32	-0.88	-1.00		
16. Stock Prices (S&P500)	13	6.5	3.7	6.8	5.3		

Note: Figures for housing starts, unemployment rate, auto sales, prime interest rate, 10-year Treasury bond, and 90-day Treasury bill are changes in levels. All others are percentage changes at annual rates.

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2023.

TABLE THREE
LONG-TERM (10 YEAR) FORECASTS

SERIES: Real GDP

Statistic	
Minimum	1.50
Lower Quartile	1.80
Median	1.90
Upper Quartile	2.10
Maximum	3.00
Mean	2.00
Std. Deviation	0.37
N	21
Missing	2

SERIES: CPI Inflation Rate

Statistic	
Minimum	1.80
Lower Quartile	2.20
Median	2.26
Upper Quartile	2.40
Maximum	3.50
Mean	2.30
Std. Deviation	0.34
N	21
Missing	2

Source: Research Department, Federal Reserve Bank of Philadelphia, Livingston Survey, December 2023.