



THE

LIVINGSTON SURVEY

Release Date: June 16, 2023

JUNE 2023

Forecasters Strengthen Their Projections for Real GDP Growth and Lower Their Predictions for Unemployment Rate

The 15 participants in the June *Livingston Survey* predict higher output growth for the first half of 2023 than they predicted in the December 2022 survey. The forecasters, who are surveyed by the Federal Reserve Bank of Philadelphia twice a year, now project that the economy's output (real GDP) will grow at an annual rate of 1.1 percent during the first half of 2023. They expect weaker conditions in the second half of 2023, when growth is expected to be at an annual rate of -0.7 percent. Both projections represent upward revisions from those of the December 2022 survey. Growth is expected to average an annual rate of 1.0 percent in the first half of 2024.

The forecasters see a lower unemployment rate in June 2023 and December 2023 than they predicted previously. The forecasters now predict that the unemployment rate will be 3.6 percent in June 2023 and 4.1 percent in December 2023. The unemployment rate is expected to reach 4.6 percent in June 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>					
2022 Q4 to 2023 Q2	0.4	1.1	June 2023	4.2	3.6
2023 Q2 to 2023 Q4	-1.0	-0.7	December 2023	4.9	4.1
2023 Q4 to 2024 Q2	N.A.	1.0	June 2024	N.A.	4.6

Forecasters Reduce Their Projections for Inflation in 2023

On an annual-average over annual-average basis, CPI inflation is expected to be 4.1 percent in 2023 and 2.5 percent in 2024. Both projections are revised downward from the forecasts in the December 2022 survey. PPI inflation for finished goods is expected to be 2.3 percent this year, a slight downward revision from 2.4 percent in the previous survey. The forecasters predict PPI inflation to stay steady at 2.3 percent in 2024.

	<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	4.4	4.1	2.4	2.3
2023 to 2024	2.6	2.5	1.6	2.3

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Forecasters Predict Falling Short-Term and Long-Term Interest Rates in 2023

The panelists continue to predict falling interest rates on three-month Treasury bills. The interest rate on three-month Treasury bills is now predicted to be 5.25 percent at the end of June 2023, an upward revision from 5.05 percent in the previous survey. The forecasters predict the three-month rate will fall to 4.80 percent at the end of December 2023 and 3.05 percent at the end of June 2024. The panelists see the rate at 2.95 percent at the end of December 2024.

A downward trend to the predictions for the 10-year Treasury rate accompanies the outlook for the rate on three-month Treasury bills. The interest rate on 10-year Treasury bonds is predicted to be 3.68 percent at the end of June 2023, down from 4.23 percent in the December survey. The forecasters predict the 10-year rate will fall to 3.51 percent at the end of December 2023 and 3.26 percent at the end of June 2024. The 10-year Treasury bond interest rate is expected to reach 3.30 percent at the end of December 2024.

	<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>
June 30, 2023	5.05	5.25	4.23	3.68
Dec. 29, 2023	4.90	4.80	3.82	3.51
June 28, 2024	N.A.	3.05	N.A.	3.26
Dec. 31, 2024	3.20	2.95	3.40	3.30

Slight Downward Revisions to Long-Term Inflation and Long-Term Growth

The forecasters now predict that inflation (measured by the CPI) will be 2.40 percent annually over the next 10 years, marking a downward revision from 2.50 percent in the December 2022 survey. The forecasters see real GDP growing 1.90 percent annually over the next 10 years, a slight downward revision from 1.93 percent in the December 2022 survey.

Forecasters Raise Their Predictions for Stock Prices

The panelists predict the S&P 500 index will finish the first half of 2023 at a level of 4200.0, marking an upward revision from their previous prediction of 3927.4. Stock prices are expected to rise to 4260.4 at the end of 2023 and continue to rise to 4350.9 at the end of June 2024. The index is predicted to reach 4411.0 by the end of 2024. All forecasts for stock prices mark upward revisions from those of the December 2022 survey.

	<i>Stock Prices S&P 500 Index</i>	
	<i>Previous</i>	<i>New</i>
June 30, 2023	3927.4	4200.0
Dec. 29, 2023	4170.0	4260.4
June 28, 2024	N.A.	4350.9
Dec. 31, 2024	4321.8	4411.0

Technical Notes

This survey reports the median values across the 15 forecasters who responded to the June 2023 survey. All forecasts were submitted before the June 2, 2023, employment 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 table below shows the participants in recent surveys.

Livingston Survey Participants			
S. Anderson	Bank of the West	B. Horrigan	Loomis, Sayles & Co.
B. Bovino/S.Panday	Standard & Poor’s	S. Kahan	Kahan Consulting Ltd.
M. Brown/W.West	Visa	T. Lam	Sim Kee Boon Institute, Singapore
J. Bryson	Wells Fargo Securities, LLC	D. Manaenkov	RSQE (University of Michigan)
J. Butkiewicz	University of Delaware	G. Mokrzan	Huntington National Bank
R. Chase	Economic & Policy Resources, Inc.	M. Moran	Daiwa Capital Markets America
C. Chrappa	Independent Equipment Company	A. Sinai/L. Yu	Decision Economics, Inc.
R. Dhawan	Georgia State University	J. Smith	Parsec Financial Management, Inc.
M. Englund	Action Economics, LLC	S. Stanley	Amherst Pierpont Securities
M. Luzzetti/B. Ryan	Deutsche Bank Securities	M. Zandi	Moody’s Analytics

Livingston Survey Summary Table
MAJOR MACROECONOMIC INDICATORS, 2023-2024

QUARTERLY INDICATORS (percentage changes at annual rates)	Q4 2022 TO Q2 2023	Q2 2023 TO Q4 2023	Q4 2023 TO Q2 2024	2022 TO 2023	2023 TO 2024
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Real Gross Domestic Product	1.1	-0.7	1.0	1.3	0.6
Nominal Gross Domestic Product	4.9	2.4	3.1	5.3	3.0
Nonresidential Fixed Investment	1.0	-2.3	-0.3	1.6	-0.4
Corporate Profits After Taxes	-6.9	-5.8	7.3	-4.4	2.5

MONTHLY INDICATORS (percentage changes at annual rates)	DEC 2022 TO JUN 2023	JUN 2023 TO DEC 2023	DEC 2023 TO JUN 2024	2022 TO 2023	2023 TO 2024
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Industrial Production	2.5	-1.2	0.0	-0.4	0.2
Producer Prices - Finished Goods	1.3	1.3	2.9	2.3	2.3
Consumer Price Index (CPI-U)	3.4	2.3	2.6	4.1	2.5
Average Weekly Earnings in Mfg.	3.8	4.0	3.7	4.0	4.0
Retail Trade	4.3	0.7	1.8	2.2	2.2

(levels of variables)	JUN 2023	DEC 2023	JUN 2024	2023	2024
Total Private Housing Starts (annual rate, millions)	1.361	1.276	1.335	1.300	1.311
Unemployment Rate (percent)	3.6	4.1	4.6	3.7	4.5
Automobile Sales (incl. foreign) (annual rate, millions)	3.1	3.1	3.2	3.1	3.2

FINANCIAL INDICATORS (levels of variables at end of month)	JUN 2023	DEC 2023	JUN 2024	DEC 2024
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Prime Interest Rate	8.25	8.25	6.88	6.68
10-Year Treasury Note Yield	3.68	3.51	3.26	3.30
3-Month Treasury Bill Rate	5.25	4.80	3.05	2.95
Stock Prices (S&P500)	4200.0	4260.4	4350.9	4411.0

LONG-TERM OUTLOOK
Average Annual Growth Rate for the Next Ten Years

Real GDP	1.90
Consumer Price Index	2.40

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

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June 2023

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 May 18; the tables do not reflect subsequent revisions to the data. All forecasts were received on or before May 31.

TABLE ONE
MAJOR MACROECONOMIC INDICATORS, 2023-2024
MEDIANS OF FORECASTER PREDICTIONS

QUARTERLY INDICATORS	NUMBER OF FORECASTERS	ACTUAL	FORECAST		ACTUAL	FORECAST		
		2022 Q4	2023 Q2	2023 Q4	2024 Q2	2022 ANNUAL	2023 ANNUAL	2024 ANNUAL
1. Real Gross Domestic Product (billions, chain weighted)	15	20182.5	20296.9	20220.7	20319.5	20014.2	20269.5	20387.7
2. Nominal Gross Domestic Product (\$ billions)	15	26138.0	26764.5	27079.9	27490.6	25462.7	26810.4	27612.3
3. Nonresidential Fixed Investment (billions, chain weighted)	14	2988.8	3003.8	2969.7	2965.5	2944.8	2992.6	2979.8
4. Corporate Profits After Taxes (\$ billions)	12	2475.2	2388.2	2318.1	2401.3	2478.9	2370.7	2429.7
MONTHLY INDICATORS		2022 Dec	2023 Jun	2023 Dec	2024 Jun	2022 ANNUAL	2023 ANNUAL	2024 ANNUAL
5. Industrial Production (2017=100)	11	101.5	102.7	102.1	102.1	102.6	102.2	102.5
6. Total Private Housing Starts (annual rate, millions)	12	1.357	1.361	1.276	1.335	1.551	1.300	1.311
7. Producer Prices - Finished Goods (index level)	7	254.0	255.7	257.4	261.1	250.8	256.7	262.5
8. Consumer Price Index (CPI-U) (index level)	14	299.0	304.0	307.5	311.5	292.6	304.6	312.3
9. Unemployment Rate (percent)	14	3.5	3.6	4.1	4.6	3.6	3.7	4.5
10. Average Weekly Earnings in Mfg. (\$)	3	1049.4	1068.9	1090.3	1110.0	1028.0	1069.2	1111.9
11. Retail Trade (\$ billions)	7	673.6	688.0	690.6	696.8	672.6	687.2	702.1
12. Automobile Sales (incl. foreign) (annual rate, millions)	9	2.8	3.1	3.1	3.2	2.9	3.1	3.2
INTEREST RATES & STOCK PRICES (end of period)		2022 Dec	2023 Jun	2023 Dec	2024 Jun	2024 Dec		
13. Prime Interest Rate (percent)	12	7.50	8.25	8.25	6.88	6.68		
14. 10-Year Treasury Note Yield (percent)	12	3.88	3.68	3.51	3.26	3.30		
15. 3-Month Treasury Bill Rate (percent)	13	4.30	5.25	4.80	3.05	2.95		
16. Stock Prices (S&P500) (index level)	8	3839.5	4200.0	4260.4	4350.9	4411.0		

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

TABLE TWO
 MAJOR MACROECONOMIC INDICATORS, 2023-2024
 PERCENTAGE CHANGES AT ANNUAL RATES

QUARTERLY INDICATORS	NUMBER OF FORECASTERS	Q4 2022 TO Q2 2023	Q2 2023 TO Q4 2023	Q4 2023 TO Q2 2024	2022 TO 2023	2023 TO 2024
1. Real Gross Domestic Product	15	1.1	-0.7	1.0	1.3	0.6
2. Nominal Gross Domestic Product	15	4.9	2.4	3.1	5.3	3.0
3. Nonresidential Fixed Investment	14	1.0	-2.3	-0.3	1.6	-0.4
4. Corporate Profits After Taxes	12	-6.9	-5.8	7.3	-4.4	2.5
MONTHLY INDICATORS		DEC 2022 TO JUN 2023	JUN 2023 TO DEC 2023	DEC 2023 TO JUN 2024	2022 TO 2023	2023 TO 2024
5. Industrial Production	11	2.5	-1.2	0.0	-0.4	0.2
6. Total Private Housing Starts	12	0.004	-0.085	0.059	-0.251	0.011
7. Producer Prices - Finished Goods	7	1.3	1.3	2.9	2.3	2.3
8. Consumer Price Index (CPI-U)	14	3.4	2.3	2.6	4.1	2.5
9. Unemployment Rate	14	0.1	0.5	0.5	0.1	0.8
10. Average Weekly Earnings in Mfg.	3	3.8	4.0	3.7	4.0	4.0
11. Retail Trade	7	4.3	0.7	1.8	2.2	2.2
12. Automobile Sales (incl. foreign)	9	0.3	-0.0	0.2	0.2	0.2
INTEREST RATES & STOCK PRICES		DEC 2022 TO JUN 2023	JUN 2023 TO DEC 2023	DEC 2023 TO JUN 2024	JUN 2024 TO DEC 2024	
13. Prime Interest Rate	12	0.75	0.00	-1.38	-0.20	
14. 10-Year Treasury Note Yield	12	-0.21	-0.16	-0.25	0.04	
15. 3-Month Treasury Bill Rate	13	0.95	-0.45	-1.75	-0.10	
16. Stock Prices (S&P500)	8	19.7	2.9	4.3	2.8	

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, June 2023.

TABLE THREE
LONG-TERM (10 YEAR) FORECASTS

SERIES: Real GDP

Statistic	
Minimum	1.60
Lower Quartile	1.80
Median	1.90
Upper Quartile	2.10
Maximum	2.50
Mean	1.95
Std. Deviation	0.24
N	15
Missing	0

SERIES: CPI Inflation Rate

Statistic	
Minimum	2.00
Lower Quartile	2.20
Median	2.40
Upper Quartile	2.50
Maximum	3.50
Mean	2.42
Std. Deviation	0.36
N	15
Missing	0

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