Survey of
PROFESSIONAL
FORECASTERS

Federal Reserve Bank
of Philadelphia

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THIRD QUARTER 1999

Forecasters Boost Estimates for Second-Half Growth; Expectations for Inflation Remain Subdued

Prospects for growth in real GDP over the second half of 1999 look stronger now than they did just three months ago, according to 37 forecasters surveyed by the Federal Reserve Bank of Philadelphia. Following surprisingly weak second-quarter growth of 2.3 percent, as revealed in the BEA's preliminary report for the second quarter, the forecasters now expect third-quarter growth at an annual rate of 3.3 percent, up from 2.8 percent previously, and 3.0 percent in the fourth quarter, up from their previous estimate of 2.7 percent. For the year as a whole, growth is expected to average 3.8 percent, down only slightly from 3.9 percent in the last survey, a reflection of unexpectedly weak growth in the second quarter. As they did in the past survey, the forecasters expect a noticeable slowdown in the first quarter of 2000, to 1.9 percent, reflecting the possibility of a year-2000 effect. Indeed, as shown below, the forecasters are assigning a one-in-four chance to the possibility of negative growth in the quarter. However, for the year as a whole, they expect growth to average 2.6 percent, up from the previous forecast of 2.3 percent.

Although expectations for inflation over the next two years are a bit higher now than they were in the last survey, they remain at relatively low levels and reflect, in part, unexpectedly high CPI inflation in April caused by increases in energy prices. Measured by the CPI, inflation is expected to average 2.3 percent in 1999, up from 2.1 percent previously. In the last survey, the forecasters underestimated second-quarter CPI inflation by 0.8 percentage points, and this likely accounts for the 0.2 percentage-point runup in the current 1999 forecast. Moreover, on the basis of their current estimate of 2.4 percent for CPI inflation in 2000, the forecasters expect little acceleration in inflation. Measured by the GDP price index, inflation is expected to average 1.4 percent in 1999, up from 1.2 percent previously, and 1.8 percent in 2000, up from 1.7 percent.

The outlook for unemployment is about the same now as it was in the previous survey. The forecasters continue to expect the rate of unemployment to average 4.3 percent in 1999. They now expect the unemployment rate to average 4.4 percent in 2000, down from 4.5 percent previously.

The following table compares forecasts for selected variables from the current survey with those from three months ago.

	Real GDP (%)		*CPI Inflation (%)*		*GDP Inflation (%)*	
	Previous	*New*	*Previous*	*New*	*Previous*	*New*
Quarterly data:						
1999: Q3	2.8	3.3	2.2	2.2	1.5	1.6
Q4	2.7	3.0	2.2	2.3	1.9	1.6
2000: Q1	1.8	1.9	2.2	2.3	1.8	2.1
Q2	3.0	2.8	2.2	2.4	1.7	1.8
Q3	N.A.	2.5	N.A.	2.5	N.A.	2.0
Annual average data:						
1999	3.9	3.8	2.1	2.3	1.2	1.4
2000	2.3	2.6	2.3	2.4	1.7	1.8

Short-Term Rates Are Seen Rising in the Second Half

The forecasters are incorporating into their projections a rise in short-term interest rates, as measured by the rate on three-month Treasury bills, in the third and fourth quarters of this year. The three-month rate will rise from its second-quarter average of 4.45 percent to 4.7 percent in the third quarter and to 4.9 percent in the fourth quarter. The rate is expected to hold steady at 4.9 percent over the four quarters of 2000. Long-term rates, as measured by the rate on 10-year Treasury bonds, will rise from their second-quarter average of 5.54 percent to 5.9 percent in the third quarter and hold steady at that rate through the first quarter of 2000, as the following table shows.

	3-Month Treasury Rate (%)		*10-Year Treasury Rate (%)*	
	Previous Survey	*New Survey*	*Previous Survey*	*New Survey*
Quarterly data:				
1999: Q3	4.5	4.7	5.3	5.9
Q4	4.5	4.9	5.3	5.9
2000: Q1	4.6	4.9	5.4	5.9
Q2	4.6	4.9	5.4	5.8
Q3	N.A.	4.9	N.A.	5.8
Annual average data				
1999	4.5	4.6	5.3	5.6
2000	4.6	4.9	5.4	5.8

Long-Term Inflation Expectations Hold Steady

The forecasters are holding steady their expectations for long-term inflation, as measured by the 10-year average rate of growth in the CPI, at 2.50 percent, the same rate expected in the last survey. The middle range of forecasts calls for long-term inflation of 2.30 percent to 2.60 percent.

Forecasters See One-in-Four Chance of a Negative 2000Q1

The chance of a negative quarter of real growth in the second half of 1999 is lower now than it was in the previous survey. Currently, the forecasters are assigning a mere 3 percent chance to a negative third quarter and a 7 percent chance to a negative fourth quarter, down from 6 percent and 9 percent, respectively, in the last survey. The odds of a negative quarter in the first quarter of 2000 rise appreciably, to one in four, about the same chance the forecasters assigned in the previous survey. The following table compares the risks in the current survey with those of three months ago.

	Risk of a Negative Quarter (%)	
	Previous Survey	*New Survey*
Quarterly data:		
1999: Q3	6	3
Q4	9	7
2000: Q1	26	25
Q2	20	18
Q3	N.A.	17

Forecasters' Estimate of the Natural Rate Continues to Slide

In third-quarter surveys, participants are asked about their use of the natural rate of unemployment—the rate of unemployment that occurs when the economy reaches equilibrium—in generating their forecasts. In the current survey, 15 of the 35 forecasters, or 43 percent, who answered the question indicate that they use the natural-rate concept in their models. Among those who use the concept in their forecasts, the median estimate of the natural rate stands at 5.00 percent, down from 5.30 percent in last year's third-quarter survey. For the same group, the estimates run from a low of 4.13 percent to a high of 5.60 percent, though the middle range of estimates is 4.70 percent to 5.40 percent. As the following table shows, among those forecasters who use the natural rate, the median estimate has fallen from 5.65 percent in the third-quarter 1996 survey to 5.00 percent at present. The percentage of forecasters who report using the natural rate has also fallen, from 62 percent to 43 percent, over the same period.

Survey Date	*96Q3*	*97Q3*	*98Q3*	*99Q3*
Median Estimate of Natural Rate (%)	5.65	5.25	5.30	5.00
Percentage Who Use Natural Rate (%)	62	59	47	43

The Philadelphia Fed's Survey of Professional Forecasters was formerly conducted by the American Statistical Association (ASA) and the National Bureau of Economic Research (NBER) and was known as the ASA/NBER survey. The survey, which began in 1968, is conducted each quarter. The Federal Reserve Bank of Philadelphia, in cooperation with the NBER, assumed responsibility for the survey in June 1990.

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To subscribe to the survey, contact the Research Department's Publications Desk at (215) 574-6428. This writeup contains partial results of the survey. More detailed tables are available. These tables can be accessed on the Internet at: http://www.phil.frb.org/econ/spf/spfpage.html.

SURVEY OF PROFESSIONAL FORECASTERS
MAJOR MACROECONOMIC INDICATORS, 1999-2000

	1999 Q3	Q4	2000 Q1	Q2	Q3	ANNUAL AVERAGE 1999	ANNUAL AVERAGE 2000
	FORECAST						
PERCENT GROWTH AT ANNUAL RATES							
1. REAL GDP (BILLIONS, CHAIN WEIGHTED)	3.3	3.0	1.9	2.8	2.5	3.8	2.6
2. GDP PRICE INDEX (1992=100)	1.6	1.6	2.1	1.8	2.0	1.4	1.8
3. GROSS DOMESTIC PRODUCT (GDP) ($ BILLIONS)	4.9	5.1	3.7	4.4	4.7	5.2	4.5
4. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	2.2	2.3	2.3	2.4	2.5	2.3	2.4
VARIABLES IN LEVELS							
5. UNEMPLOYMENT RATE (PERCENT)	4.3	4.3	4.4	4.4	4.4	4.3	4.4
6. 3-MONTH TREASURY BILL RATE (PERCENT)	4.7	4.9	4.9	4.9	4.9	4.6	4.9
7. 10-YEAR TREASURY BOND YIELD (PERCENT)	5.9	5.9	5.9	5.8	5.8	5.6	5.8

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, THIRD QUARTER 1999.

NOTES: THE FIGURES ON EACH LINE ARE MEDIANS OF 37 INDIVIDUAL FORECASTS. NA = NOT APPLICABLE.

SURVEY OF PROFESSIONAL FORECASTERS

Third Quarter 1999

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 July 30; the tables do not reflect subsequent revisions to the data. All forecasts were received on or before August 14.

TABLE ONE

MAJOR MACROECONOMIC INDICATORS, 1999-2000
MEDIANS OF FORECASTER PREDICTIONS

	NUMBER OF FORE-CASTERS	ACTUAL 1999 Q2	FORECASTS 1999 Q3	1999 Q4	2000 Q1	2000 Q2	2000 Q3	ACTUAL 1998	FORECAST 1999	FORECAST 2000
1. GROSS DOMESTIC PRODUCT (GDP) ($ BILLIONS)	35	8893.3	8999.6	9111.5	9195.0	9294.8	9402.7	8511.0	8955.0	9356.6
2. GDP PRICE INDEX (1992=100)	37	113.98	114.43	114.90	115.49	116.00	116.57	112.71	114.25	116.35
3. CORPORATE PROFITS AFTER TAXES ($ BILLIONS)	29	N.A.	512.0	511.0	508.4	511.5	520.7	477.7	509.5	517.6
4. UNEMPLOYMENT RATE (PERCENT)	37	4.3	4.3	4.3	4.4	4.4	4.4	4.5	4.3	4.4
5. INDUSTRIAL PRODUCTION (1992=100)	36	134.0	135.0	136.1	136.7	137.4	138.4	131.4	134.6	137.9
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	36	1.60	1.60	1.58	1.54	1.51	1.50	1.62	1.63	1.51
7. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	36	3.5	2.2	2.3	2.3	2.4	2.5	1.5	2.3	2.4
8. 3-MONTH TREASURY BILL RATE (PERCENT)	36	4.45	4.71	4.90	4.90	4.90	4.93	4.78	4.61	4.93
9. AAA CORPORATE BOND YIELD (PERCENT)	31	6.93	7.25	7.26	7.25	7.20	7.17	6.53	6.97	7.10
10. 10-YEAR TREASURY BOND YIELD (PERCENT)	35	5.54	5.90	5.90	5.87	5.80	5.85	5.26	5.59	5.85

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, THIRD QUARTER 1999.

TABLE ONE CONTINUED

MAJOR MACROECONOMIC INDICATORS, 1999-2000
MEDIANS OF FORECASTER PREDICTIONS

	NUMBER OF FORE-CASTERS	ACTUAL 1999 Q2	FORECASTS 1999 Q3	1999 Q4	2000 Q1	2000 Q2	2000 Q3	ACTUAL 1998	FORECAST 1999	FORECAST 2000
11. REAL GDP (BILLIONS, CHAIN WEIGHTED)	37	7803.6	7867.2	7925.6	7963.0	8018.2	8067.8	7551.9	7838.9	8041.3
12. TOTAL CONSUMPTION EXPENDITURES (BILLIONS, CHAIN WEIGHTED)	37	5384.7	5428.6	5467.5	5501.5	5537.5	5573.0	5153.3	5403.0	5554.2
13. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	37	1038.5	1055.4	1069.5	1089.0	1103.7	1110.3	960.7	1044.0	1106.8
14. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	36	340.1	338.5	338.0	335.3	336.0	331.5	312.0	336.9	330.0
15. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	35	454.7	456.4	459.8	460.4	461.0	462.0	453.3	457.6	461.4
16. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	35	865.5	870.0	875.5	880.1	884.9	889.6	843.8	869.1	887.3
17. CHANGE IN BUSINESS INVENTORIES (BILLIONS, CHAIN WEIGHTED)	36	19.4	40.4	52.0	41.5	41.8	39.0	57.4	38.6	40.0
18. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	37	-323.0	-333.4	-338.4	-345.0	-345.8	-338.0	-238.2	-325.0	-341.5

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, THIRD QUARTER 1999.

TABLE TWO

MAJOR MACROECONOMIC INDICATORS, 1999-2000
PERCENTAGE CHANGES AT ANNUAL RATES

	NUMBER OF FORE-CASTERS	Q2 1999 TO Q3 1999	Q3 1999 TO Q4 1999	Q4 1999 TO Q1 2000	Q1 2000 TO Q2 2000	Q2 2000 TO Q3 2000	1998 TO 1999	1999 TO 2000
1. GROSS DOMESTIC PRODUCT (GDP) ($ BILLIONS)	35	4.9	5.1	3.7	4.4	4.7	5.2	4.5
2. GDP PRICE INDEX (1992=100)	37	1.6	1.6	2.1	1.8	2.0	1.4	1.8
3. CORPORATE PROFITS AFTER TAXES ($ BILLIONS)	29	1.5	-0.8	-2.0	2.5	7.3	6.7	1.6
4. UNEMPLOYMENT RATE (PERCENT)	37	0.0	0.0	0.1	0.0	0.0	-0.2	0.1
5. INDUSTRIAL PRODUCTION (1992=100)	36	3.1	3.2	1.7	2.1	3.0	2.4	2.5
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	36	-2.1	-4.7	-10.0	-6.0	-3.1	1.1	-7.8
7. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	36	-1.3	0.1	0.0	0.1	0.1	0.8	0.1
8. 3-MONTH TREASURY BILL RATE (PERCENT)	36	0.26	0.19	0.00	0.00	0.03	-0.17	0.31
9. AAA CORPORATE BOND YIELD (PERCENT)	31	0.32	0.01	-0.01	-0.05	-0.03	0.44	0.13
10. 10-YEAR TREASURY BOND YIELD (PERCENT)	35	0.36	0.00	-0.03	-0.07	0.05	0.33	0.26

NOTE: FIGURES FOR UNEMPLOYMENT RATE, PERCENT CHANGE IN CONSUMER PRICE INDEX, TREASURY BILL RATE, AAA CORPORATE BOND YIELD, AND 10-YEAR TREASURY BOND YIELD ARE CHANGES IN THESE RATES, IN PERCENTAGE POINTS. ALL OTHERS ARE PERCENTAGE CHANGES AT ANNUAL RATES.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, THIRD QUARTER 1999.

TABLE TWO CONTINUED

MAJOR MACROECONOMIC INDICATORS, 1999-2000
PERCENTAGE CHANGES AT ANNUAL RATES

	NUMBER OF FORE-CASTERS	Q2 1999 TO Q3 1999	Q3 1999 TO Q4 1999	Q4 1999 TO Q1 2000	Q1 2000 TO Q2 2000	Q2 2000 TO Q3 2000	1998 TO 1999	1999 TO 2000
11. REAL GDP (BILLIONS, CHAIN WEIGHTED)	37	3.3	3.0	1.9	2.8	2.5	3.8	2.6
12. TOTAL CONSUMPTION EXPENDITURES (BILLIONS, CHAIN WEIGHTED)	37	3.3	2.9	2.5	2.6	2.6	4.8	2.8
13. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	37	6.7	5.5	7.5	5.5	2.4	8.7	6.0
14. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	36	-1.9	-0.6	-3.2	0.8	-5.3	8.0	-2.0
15. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	35	1.5	3.0	0.5	0.5	0.9	0.9	0.8
16. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	35	2.1	2.6	2.1	2.2	2.1	3.0	2.1
17. CHANGE IN BUSINESS INVENTORIES (BILLIONS, CHAIN WEIGHTED)	36	21.0	11.6	-10.5	0.3	-2.8	-18.8	1.4
18. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	37	-10.4	-5.0	-6.6	-0.8	7.8	-86.8	-16.5

NOTE: FIGURES FOR BUSINESS INVENTORIES AND NET EXPORTS ARE CHANGES IN BILLIONS OF CHAIN-WEIGHTED DOLLARS.
ALL OTHERS ARE PERCENTAGE CHANGES AT ANNUAL RATES.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, THIRD QUARTER 1999.

TABLE THREE

ESTIMATED PROBABILITY OF DECLINE IN REAL GDP

ESTIMATED PROBABILITY (CHANCES IN 100)	Q2 1999 TO Q3 1999	Q3 1999 TO Q4 1999	Q4 1999 TO Q1 2000	Q1 2000 TO Q2 2000	Q2 2000 TO Q3 2000
	NUMBER OF FORECASTERS				
10 OR LESS	33	28	10	12	15
11 TO 20	1	4	9	14	9
21 TO 30	0	2	4	4	7
31 TO 40	0	0	4	3	3
41 TO 50	0	0	5	1	0
51 TO 60	0	0	2	0	0
61 TO 70	0	0	0	0	0
71 TO 80	0	0	0	0	0
81 TO 90	0	0	0	0	0
91 AND OVER	0	0	0	0	0
NOT REPORTING	3	3	3	3	3
MEDIAN PROBABILITY	1	5	20	15	16
MEAN PROBABILITY	3	7	25	18	17

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 34.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, THIRD QUARTER 1999.

TABLE FOUR

MEAN PROBABILITY OF CHANGES IN GDP AND PRICES
1998-1999 AND 1999-2000

MEAN PROBABILITY ATTACHED TO POSSIBLE
PERCENT CHANGES IN REAL GDP:

	1998-1999	1999-2000
6.0 OR MORE	0.15	0.21
5.0 TO 5.9	1.67	1.00
4.0 TO 4.9	25.76	6.21
3.0 TO 3.9	58.94	23.32
2.0 TO 2.9	10.12	43.26
1.0 TO 1.9	2.24	16.59
0.0 TO 0.9	0.76	5.70
-1.0 TO -0.1	0.24	2.68
-2.0 TO -1.1	0.06	0.51
LESS THAN -2.0	0.07	0.53

MEAN PROBABILITY ATTACHED TO POSSIBLE
PERCENT CHANGES IN GDP PRICE INDEX:

	1998-1999	1999-2000
8.0 OR MORE	0.03	0.06
7.0 TO 7.9	0.06	0.09
6.0 TO 6.9	0.09	0.15
5.0 TO 5.9	0.16	0.41
4.0 TO 4.9	0.35	1.94
3.0 TO 3.9	2.85	10.15
2.0 TO 2.9	17.56	29.06
1.0 TO 1.9	69.61	48.50
0.0 TO 0.9	8.75	8.76
WILL DECLINE	0.53	0.88

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 34.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, THIRD QUARTER 1999.

TABLE FIVE

LONG-TERM (10 YEAR) FORECASTS

SERIES: CPI INFLATION RATE	
STATISTIC	
MINIMUM	1.200
LOWER QUARTILE	2.300
MEDIAN	2.500
UPPER QUARTILE	2.600
MAXIMUM	3.500
MEAN	2.504
STD. DEV.	0.425
N	35
MISSING	2

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, THIRD QUARTER 1999.