

Survey of

# PROFESSIONAL

FORECASTERS

Federal Reserve Bank  
of Philadelphia

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**SECOND QUARTER 1998**

***Forecasters' Revisions Suggest Higher Growth and Lower Inflation in 1998***

Real GDP will grow at an annual rate of 2.4 percent in the second quarter, up 0.5 percentage points from the previous survey's expectation, according to 29 forecasters surveyed by the Federal Reserve Bank of Philadelphia. The forecasters are also revising upward their estimate of real GDP growth for the year, from 2.8 percent in last quarter's survey to 3.2 percent in the current survey. At the same time, the forecasters are leaving unchanged their expectations for growth in 1999: They continue to expect growth at an annual rate of 2.4 percent in 1999.

Improvement on the inflation front accompanies the prospects for faster growth in 1998. Measured by the rate of change in the Consumer Price Index, inflation is expected to average 1.6 percent in the second quarter, down from the expectation of 2.0 percent in the previous survey, and 1.7 percent in 1998, down from 2.1 percent previously. Similar revisions characterize the forecasts for inflation measured by the chain-weighted GDP price index. The forecasters expect this measure to average 1.5 percent in the second quarter and for the year, down from 2.0 percent and 1.9 percent, respectively, in last quarter's survey.

The forecasters expect the rate of unemployment to average 4.5 percent in the second quarter and to climb gradually to 4.8 percent in the second quarter of 1999. The unemployment rate is expected to average 4.6 percent in 1998 and 4.8 percent in 1999. These forecasts represent downward revisions from 4.7 percent and 5.0 percent, respectively, in the last survey.

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

	Real GDP		CPI Inflation		GDP Price Index Inflation	
	Previous	New	Previous	New	Previous	New
<i>Quarterly data:</i>						
1998: Q2	1.9	2.4	2.0	1.6	2.0	1.5
Q3	2.1	2.1	2.3	2.3	2.0	1.9
Q4	2.5	2.3	2.4	2.4	2.2	2.1
1999: Q1	2.6	2.3	2.3	2.5	2.7	2.1
Q2	N.A.	2.3	N.A.	2.6	N.A.	2.1
<i>Annual average data:</i>						
1998	2.8	3.2	2.1	1.7	1.9	1.5
1999	2.4	2.4	2.3	2.5	2.2	2.1

### **Interest-Rate Outlook Holds Steady**

The forecasters' outlook for interest rates, both short- and long-term, is virtually unchanged from that in last quarter's survey. Currently, they expect short-term rates, as measured by the rate on three-month Treasury bills, to hold steady at 5.1 percent over the middle of the year, just as in the previous survey. Long-term rates, as measured by the rate on 10-year Treasury bonds, will average 5.7 percent in the second quarter and 5.8 percent in the third quarter, also unchanged from the previous survey's expectations. The following table compares this survey's forecasts for interest rates with those from the previous survey:

	3-Month Rate		10-Year Rate	
	Previous	New	Previous	New
<i>Quarterly data:</i>				
1998: Q2	5.1	5.1	5.7	5.7
Q3	5.1	5.1	5.8	5.8
Q4	5.1	5.2	5.8	5.8
1999: Q1	5.1	5.2	5.8	5.9
Q2	N.A.	5.1	N.A.	6.0
<i>Annual average data:</i>				
1998	5.1	5.1	5.7	5.7
1999	5.1	5.1	5.8	6.0

### **Long-Term Expectations for Inflation Edge Downward**

The forecasters are cutting slightly their expectation for long-term inflation. They currently expect inflation, as measured by the Consumer Price Index, to average 2.50 percent over the next 10 years, down from their earlier estimate of 2.60 percent. The current middle range of forecasts is 2.10 percent to 2.50 percent. The Philadelphia Fed's long-term inflation measure has fallen 0.5 percentage points since the third quarter 1997 survey.

### **Lower Chance of a Negative Quarter in 1998**

A lower chance of a negative quarter accompanies the improved outlook for 1998. The forecasters see less of a chance of a negative quarter in 1998 than they saw in the last survey. Currently, they are assigning a 5 percent chance to a negative second quarter, down from 8 percent previously. Similar reductions in the chance of a negative quarter characterize the remainder of 1998, as the following table shows.

	Mean Probability of a Decline in Real GDP	
	Previous	New
1998:Q2	8.0	5.0
:Q3	12.0	8.0
:Q4	14.0	12.0
1999:Q1	15.0	16.0
:Q2	N.A.	18.0

**SURVEY OF PROFESSIONAL FORECASTERS  
MAJOR MACROECONOMIC INDICATORS, 1998-99**

	1998				1999		ANNUAL AVERAGE
	Q2	Q3	Q4	Q1	Q2	1998	
	FORECAST						
<b>PERCENT GROWTH AT ANNUAL RATES</b>							
1. REAL GDP (BILLIONS, CHAIN WEIGHTED)	2.4	2.1	2.3	2.3	2.3	3.2	2.4
2. GDP PRICE INDEX (1992=100)	1.5	1.9	2.1	2.1	2.1	1.5	2.1
3. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	4.0	3.8	4.3	4.7	4.7	4.7	4.4
4. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	1.6	2.3	2.4	2.5	2.6	1.7	2.5
<b>VARIABLES IN LEVELS</b>							
5. UNEMPLOYMENT RATE (PERCENT)	4.5	4.6	4.7	4.7	4.8	4.6	4.8
6. 3-MONTH TREASURY BILL RATE (PERCENT)	5.1	5.1	5.2	5.2	5.1	5.1	5.1
7. 10-YEAR TREASURY BOND YIELD (PERCENT)	5.7	5.8	5.8	5.9	6.0	5.7	6.0

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, SECOND QUARTER 1998.

NOTES: THE FIGURES ON EACH LINE ARE MEDIAN S OF 29 INDIVIDUAL FORECASTS. NA = NOT APPLICABLE.

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 three-page 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>.



FEDERAL  
RESERVE BANK OF  
PHILADELPHIA

TABLE ONE

**MAJOR MACROECONOMIC INDICATORS, 1998-99  
MEDIAN OF FORECASTER PREDICTIONS**

	NUMBER OF FORE- CASTERS	1998				FORECASTS		1999		ACTUAL 1997	FORECAST 1998	FORECAST 1999			
		Q1		Q2		Q3		Q4							
		—	—	—	—	—	—	—	—						
1. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	28	8332.2	8413.7	8492.1	8582.0	8681.0	8781.0	8781.0	879.9	8656.2	8831.9	—			
2. GDP PRICE INDEX (1992=100)	25	113.33	113.75	114.30	114.88	115.48	116.08	116.08	112.45	114.10	116.48	—			
3. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	20	N.A.	484.3	486.5	491.6	502.8	503.8	480.4	488.1	511.1	—	—			
4. UNEMPLOYMENT RATE (PERCENT)	29	4.7	4.5	4.6	4.7	4.7	4.8	4.8	5.0	4.6	4.8	—			
5. INDUSTRIAL PRODUCTION (1987=100)	25	127.6	128.4	129.3	130.1	130.7	131.5	124.4	128.9	132.1	—	—			
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	29	1.59	1.54	1.50	1.49	1.46	1.43	1.43	1.47	1.53	1.44	—			
7. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	28	.5	1.6	2.3	2.4	2.5	2.6	1.9	1.7	2.5	—	—			
8. 3-MONTH TREASURY BILL RATE (PERCENT)	28	5.05	5.07	5.09	5.18	5.18	5.13	5.06	5.09	5.11	—	—			
9. AAA CORPORATE BOND YIELD (PERCENT)	26	6.67	6.70	6.77	6.80	6.84	6.78	7.26	6.74	6.78	—	—			
10. 10-YEAR TREASURY BOND YIELD (PERCENT)	26	5.59	5.70	5.75	5.80	5.90	6.00	6.35	5.71	5.99	—	—			

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, SECOND QUARTER 1998.

TABLE ONE CONTINUED

**MAJOR MACROECONOMIC INDICATORS, 1998-99  
MEDIAN OF FORECASTER PREDICTIONS**

	NUMBER OF FORE- CASTERS	ACTUAL 1998 Q1	FORECASTS				ACTUAL 1997	FORECAST 1998	FORECAST 1999
			1998 Q2	Q3	Q4	1999 Q1			
11. REAL GDP (BILLIONS, CHAIN WEIGHTED)	29	7356.0	7400.4	7439.5	7481.7	7524.1	7566.5	7188.8	7417.9
12. TOTAL CONSUMPTION EXPENDITURES (BILLIONS, CHAIN WEIGHTED)	29	4994.6	5035.9	5077.5	5111.0	5149.2	5178.7	4867.5	5055.5
13. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	29	908.7	931.5	949.2	966.5	979.6	992.0	848.3	939.7
14. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	28	298.2	303.5	303.6	303.1	302.6	301.0	279.5	302.1
15. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	27	446.4	448.2	448.0	447.7	447.0	446.2	457.0	448.0
16. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	27	821.9	826.6	831.5	837.2	840.6	843.8	812.7	829.0
17. CHANGE IN BUSINESS INVENTORIES (BILLIONS, CHAIN WEIGHTED)	27	77.0	60.6	51.0	44.8	43.5	42.4	65.7	58.0
18. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	28	-199.7	-211.1	-219.7	-225.3	-230.1	-236.2	-146.5	-233.1

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, SECOND QUARTER 1998.

**TABLE TWO**  
**MAJOR MACROECONOMIC INDICATORS, 1998-99**  
**PERCENTAGE CHANGES AT ANNUAL RATES**

	Q1 98	Q2 98	Q3 98	Q4 98	Q1 99	1997	1998
	TO 98						
	Q2 98	Q3 98	Q4 98	Q1 99	Q2 99	1998	1999
1. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	28	4.0	3.8	4.3	4.7	4.7	4.4
2. GDP PRICE INDEX (1992=100)	25	1.5	1.9	2.1	2.1	1.5	2.1
3. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	20	-1.0	1.9	4.2	9.4	.8	1.6
4. UNEMPLOYMENT RATE (PERCENT)	29	-.2	.1	.1	.0	.1	-.4
5. INDUSTRIAL PRODUCTION (1987=100)	25	2.4	3.0	2.6	1.8	2.5	3.6
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	29	-12.2	-9.0	-3.9	-7.3	-6.8	3.8
7. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	28	1.1	.7	.1	.1	-.1	-.2
8. 3-MONTH TREASURY BILL RATE (PERCENT)	28	.02	.02	.09	.00	-.05	.03
9. AAA CORPORATE BOND YIELD (PERCENT)	26	.03	.07	.03	.04	-.07	-.52
10. 10-YEAR TREASURY BOND YIELD (PERCENT)	26	.11	.05	.05	.10	.10	-.64

**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.

RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, SECOND QUARTER 1998.

TABLE TWO CONTINUED

**MAJOR MACROECONOMIC INDICATORS, 1998-99**  
**PERCENTAGE CHANGES AT ANNUAL RATES**

	NUMBER OF FORE- CASTERS	q1 98 TO q2 98	q2 98 TO q3 98	q3 98 TO q4 98	q4 98 TO q1 99	q1 99 TO q2 99	q1 99 TO q3 99	1997 TO 1998	1998 TO 1999
11. REAL GDP (BILLIONS, CHAIN WEIGHTED)	29	2.4	2.1	2.3	2.3	2.3	2.3	3.2	2.4
12. TOTAL CONSUMPTION EXPENDITURES (BILLIONS, CHAIN WEIGHTED)	29	3.3	3.3	2.7	3.0	2.3	3.9	2.7	
13. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	29	10.4	7.8	7.5	5.6	5.2	10.8	6.0	
14. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	28	7.3	.2	-.7	-.7	-2.1	8.1	-.4	
15. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	27	1.6	-.2	-.3	-.6	-.8	-2.0	-.4	
16. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	27	2.3	2.4	2.8	1.7	1.5	2.0	2.1	
17. CHANGE IN BUSINESS INVENTORIES (BILLIONS, CHAIN WEIGHTED)	27	-16.4	-9.6	-6.2	-1.3	-1.1	-7.7	-16.9	
18. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	28	-11.4	-8.6	-5.6	-4.9	-6.1	-67.9	-18.8	

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, SECOND QUARTER 1998.

TABLE THREE  
ESTIMATED PROBABILITY OF DECLINE IN REAL GDP

ESTIMATED PROBABILITY (CHANCES IN 100)	NUMBER OF FORECASTERS									
	Q1 TO Q2	98 TO 98	Q2 TO Q3	98 TO 98	Q3 TO Q4	98 TO 98	Q4 TO Q1	98 TO 99	Q1 TO Q2	99 TO 99
10 OR LESS	24		21	18	11		10			
11 TO 20	1		5	5	9		9			
21 TO 30	1		1	4	7		8			
31 TO 40	1		0	0	0		0			
41 TO 50	0		0	0	0		0			
51 TO 60	0		0	0	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	2		2	2	2		2			
MEDIAN PROBABILITY	2		5	10	15		20			
MEAN PROBABILITY	5		8	12	16		18			

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 27.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, SECOND QUARTER 1998.

TABLE FOUR

MEAN PROBABILITY OF CHANGES IN GDP AND PRICES  
1997-98 AND 1998-99

MEAN PROBABILITY ATTACHED TO POSSIBLE  
PERCENT CHANGES IN REAL GDP:

	1997-98	1998-99
6.0 OR MORE	.11	.15
5.0 TO 5.9	.74	1.07
4.0 TO 4.9	.26	3.96
3.0 TO 3.9	50.93	18.41
2.0 TO 2.9	29.52	44.06
1.0 TO 1.9	6.85	21.83
0.0 TO 0.9	2.37	6.56
-1.0 TO -0.1	.93	3.04
-2.0 TO -1.1	.22	.70
LESS THAN -2.0	.07	.22

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

	1997-98	1998-99
8.0 OR MORE	.00	.00
7.0 TO 7.9	.00	.00
6.0 TO 6.9	.00	.15
5.0 TO 5.9	.30	.48
4.0 TO 4.9	1.41	2.33
3.0 TO 3.9	4.22	12.11
2.0 TO 2.9	20.33	44.67
1.0 TO 1.9	61.56	31.41
0.0 TO 0.9	11.74	6.93
WILL DECLINE	.44	1.93

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 27.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, SECOND QUARTER 1998.

TABLE FIVE  
LONG-TERM (10 YEAR) FORECASTS

SERIES: CPI INFLATION RATE	
STATISTIC	
MINIMUM	1.500
LOWER QUARTILE	2.100
MEDIAN	2.500
UPPER QUARTILE	2.500
MAXIMUM	3.250
MEAN	2.435
STD. DEV.	.409
N	27
MISSING	2

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, SECOND QUARTER 1998.