

# Survey of Professional Forecasters

February 28, 1994

## Economic Research Division

### FIRST QUARTER 1994

#### Forecasters See Strong Fourth Quarter Growth Carrying into 1994

The outlook for economic growth through 1994 is stronger than it was three months ago, according to 30 forecasters surveyed by the Federal Reserve Bank of Philadelphia.

Currently, the forecasters see real GDP growth averaging 3.5 percent in 1994, up from the 2.8 percent forecast in the fourth quarter survey. Real output growth in 1995 is expected to average 2.6 percent. The forecasters anticipate a gradual decline in the civilian unemployment rate over the next five quarters. By the first quarter of next year, the unemployment rate is expected to fall to 6.3 percent of the labor force, 0.4 percentage points below the forecast for the first quarter of this year.

Accompanying the stronger growth, the CPI inflation rate is forecast to rise steadily throughout 1994, from 2.9 percent in the first quarter to 3.3 percent in the fourth quarter. In the last survey, forecasters expected inflation to hold steady at 3.0 percent throughout this year. Inflation is expected to average 3.1 percent in 1994 and 3.2 percent in 1995.

Forecasters anticipate rising interest rates as well. The forecasters call for the three-month Treasury bill rate to average 3.5 percent in 1994, up 0.2 percentage points from three months ago, and 3.8 percent in 1995. The 10-year Treasury bond rate will average 5.9 percent in 1994, up 0.2 percentage points from the last survey, and 6.0 percent in 1995.

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

	Real GDP		CPI Inflation		10-yr. T-Bond Yield	
	Previous	New	Previous	New	Previous	New
<b>Quarterly data:</b>						
1994: Q1	2.9	3.2	3.0	2.9	5.6	5.8
Q2	2.5	3.3	3.0	3.1	5.6	5.8
Q3	3.0	2.7	3.0	3.2	5.7	5.9
Q4	2.7	3.1	3.0	3.3	5.8	5.9
1995: Q1	N.A.	2.4	N.A.	3.3	N.A.	5.9
<b>Annual average data:</b>						
1994	2.8	3.5	3.0	3.1	5.7	5.9
1995	N.A.	2.6	N.A.	3.2	N.A.	6.0



### **Long-Term Inflation Expectations Are Stable**

For the third consecutive survey, the inflation rate (based on the Consumer Price Index) for the next 10 years is expected to average 3.45 percent. Half the forecasts are between 3.1 and 3.6 percent.

### **Other Long-Term Forecasts**

The forecasters expect returns on stocks (S&P 500) over the next 10 years to average 10.0 percent, up 1.0 percentage point from a year ago. Returns on long-term government securities, however, are lower than those forecast last year. The return on 10-year Treasury bonds will average 6.1 percent over the next 10 years, down from 7.0 percent in the last survey. The long-term forecast for returns on three-month Treasury bills is holding steady at 4.1 percent.

### **Lower Risk of a Negative Quarter**

Over the next five quarters, the mean probability of a decline in real GDP is expected to rise gradually from 4 percent to 10 percent. These projections are lower than previously forecast, particularly for the first half of 1994. The following table compares the results from the current survey with those from three months ago:

**Mean Probability of a Decline in Real GDP**

	<i>Previous</i>	<i>New</i>
1994: Q1	8.0	4.0
	13.0	4.0
	13.0	7.0
	13.0	7.0
1995: Q1	N.A.	10.0

### **Weather and Earthquake Have Little Effect on Output in 1994**

The severe weather conditions along the East Coast and the earthquake in California are expected to have only minor effects on output in 1994. The forecasters are reducing their real GDP growth projections by 0.2 percentage points for the first quarter. The difference will be offset through the remainder of the year, however.

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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SURVEY OF PROFESSIONAL FORECASTERS  
MAJOR MACROECONOMIC INDICATORS, 1994-95

	q1	q2	1994	q3	q4	1995 q1	ANNUAL AVERAGE							
							1994	1995						
<b>PERCENT GROWTH AT ANNUAL RATES</b>														
<b>1. REAL GDP (BILLIONS OF 1987 DOLLARS)</b>														
2. GDP IMPLICIT PRICE DEFULATOR (1987=100)	2.8	2.7	2.5	2.9	3.0	3.0	2.7	N.A.						
3. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	5.9	6.2	5.4	5.7	5.8	5.8	5.9	5.8						
4. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	2.9	3.1	3.2	3.3	3.3	3.1	3.2							
<b>VARIABLES IN LEVELS</b>														
5. UNEMPLOYMENT RATE (PERCENT)	6.7	6.6	6.4	6.4	6.4	6.3	6.5	6.3						
6. 3-MONTH TREASURY BILL RATE (PERCENT)	3.2	3.4	3.5	3.7	3.7	3.7	3.5	3.8						
7. 10-YEAR TREASURY BOND YIELD (PERCENT)	5.8	5.8	5.9	5.9	5.9	5.9	5.9	6.0						

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 1994.

NOTES: THE FIGURES ON EACH LINE ARE MEDIANS OF 30 INDIVIDUAL FORECASTS. NA = NOT APPLICABLE.  
FOR THE GDP IMPLICIT PRICE DEFULATOR AND CONSUMER PRICE INDEX, THE ANNUAL AVERAGE IS THE PERCENT CHANGE IN THE  
FOURTH QUARTER INDEX LEVEL FROM THE FOURTH QUARTER INDEX LEVEL OF THE PREVIOUS YEAR.

**SURVEY OF PROFESSIONAL FORECASTERS**

**First Quarter 1994**

**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 Feb. 1; the tables do not reflect subsequent revisions to the data. All forecasts were received on or before Feb. 21.

TABLE ONE

**MAJOR MACROECONOMIC INDICATORS, 1994-95  
MEDIAN OF FORECASTER PREDICTIONS**

	NUMBER OF FORE- CASTERS	ACTUAL 1993 Q4	FORECASTS				ACTUAL 1993 Q1	FORECAST 1994 Q1	FORECAST 1995 Q1
			1994	Q1	Q2	Q3			
1. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	29	6510.8	6604.8	6704.6	6793.8	6888.4	6986.5	6374.0	6748.3
2. GDP IMPLICIT PRICE DEFULATOR (1987=100)	29	124.9	125.8	126.6	127.4	128.3	129.2	124.2	127.1
3. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	21	N.A.	293.0	305.0	307.5	312.2	314.1	N.A.	304.8
4. UNEMPLOYMENT RATE (PERCENT)	28	6.5*	6.7	6.6	6.4	6.4	6.3	6.8*	6.5
5. INDUSTRIAL PRODUCTION (1987=100)	25	113.1	114.4	115.4	116.5	117.6	118.4	111.1	116.0
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	28	1.46	1.39	1.44	1.43	1.43	1.41	1.29	1.42
7. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	28	2.9	2.9	3.1	3.2	3.3	3.3	2.7	3.0
8. 3-MONTH TREASURY BILL RATE (PERCENT)	28	3.06	3.20	3.40	3.55	3.69	3.70	3.00	3.48
9. AAA CORPORATE BOND YIELD (PERCENT)	24	6.84	6.93	6.99	7.00	7.00	7.10	7.22	7.00
10. 10-YEAR TREASURY BOND YIELD (PERCENT)	24	5.61	5.80	5.80	5.90	5.90	5.90	5.87	5.85
									6.03

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 1994.

\* The unemployment rate is the old series for 1993 and the new series beginning in 1994q1.

TABLE ONE CONTINUED

**MAJOR MACROECONOMIC INDICATORS, 1994-95  
MEDIAN OF FORECASTER PREDICTIONS**

NUMBER OF FORE- CASTERS	ACTUAL 1993 Q4	FORECASTS				ACTUAL 1993	FORECAST 1994	FORECAST 1995	
		1994	Q1	Q2	Q3	Q4			
11. REAL GDP (BILLIONS OF 1987 DOLLARS)	30	5212.1	5253.5	5295.8	5330.5	5370.8	5402.9	5132.7	5312.3
12. TOTAL CONSUMPTION EXPENDITURES (BILLIONS OF 1987 DOLLARS)	29	3503.9	3529.0	3551.0	3577.9	3601.1	3620.4	3452.5	3564.8
13. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1987 DOLLARS)	29	623.8	635.4	645.5	657.9	666.8	675.8	591.3	650.7
14. RESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1987 DOLLARS)	29	227.2	232.0	236.8	240.1	241.8	240.8	214.2	237.8
15. FEDERAL GOVERNMENT PURCHASES (BILLIONS OF 1987 DOLLARS)	28	349.8	348.4	347.3	346.5	345.0	345.8	355.1	346.9
16. STATE AND LOCAL GOVT PURCHASES (BILLIONS OF 1987 DOLLARS)	28	590.4	593.4	597.2	600.4	603.4	605.9	583.4	598.8
17. CHANGE IN BUSINESS INVENTORIES (BILLIONS OF 1987 DOLLARS)	28	12.7	17.0	18.5	19.1	20.6	20.7	15.4	18.5
18. NET EXPORTS (BILLIONS OF 1987 DOLLARS)	29	-95.6	-100.6	-102.2	-100.7	-103.1	-99.0	-79.3	-101.1
									-99.0

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 1994.

TABLE TWO

**MAJOR MACROECONOMIC INDICATORS, 1994-95**  
**PERCENTAGE CHANGES AT ANNUAL RATES**

	NUMBER OF FORE- CASTERS	Q4 T0 Q1	93 T0 Q2	Q1 94 Q4	Q2 T0 Q3	94 T0 Q4	Q3 T0 Q4	94 T0 Q1	94 T0 Q5	1993 TO 1994	1994 TO 1995
1. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	29	5.9	6.2	5.4	5.7	5.8	5.9	5.9	5.8		
2. GDP IMPLICIT PRICE DEFULATOR (1987=100)	29	2.8	2.7	2.5	2.9	3.0	2.3	2.3	2.7		
3. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	21	2.2	17.4	3.3	6.3	2.5	11.1	4.7			
4. UNEMPLOYMENT RATE (PERCENT)	28	.2*	-.1	-.2	.0	-.1	-.3*	-.2			
5. INDUSTRIAL PRODUCTION (1987=100)	25	4.7	3.5	3.9	3.7	2.8	4.4	3.0			
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	28	-17.5	15.8	-3.6	1.0	-5.2	10.4	-1.4			
7. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	28	.0	.2	.1	.1	.0	.3	.2			
8. 3-MONTH TREASURY BILL RATE (PERCENT)	28	.14	.20	.15	.14	.01	.48	.32			
9. AAA CORPORATE BOND YIELD (PERCENT)	24	.09	.07	.01	.00	.10	-.22	.10			
10. 10-YEAR TREASURY BOND YIELD (PERCENT)	24	.19	.00	.10	.00	.00	-.02	.18			

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, FIRST QUARTER 1994.  
 \* The unemployment rate series is the old series for 1993 and the new series beginning in 1994q1.

TABLE TWO CONTINUED

**MAJOR MACROECONOMIC INDICATORS, 1994-95  
PERCENTAGE CHANGES AT ANNUAL RATES**

	NUMBER OF FORE- CASTERS	Q4 TO Q1	93 94	Q1 TO Q2	94 94	Q2 TO Q3	94 94	Q3 TO Q4	94 94	Q4 TO Q1	94 95	1993 TO 1994
11. REAL GDP (BILLIONS OF 1987 DOLLARS)	30	3.2	3.3	2.7		3.1		2.4		3.5		2.6
12. TOTAL CONSUMPTION EXPENDITURES (BILLIONS OF 1987 DOLLARS)	29	2.9	2.5	3.1		2.6		2.2		3.3		2.4
13. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1987 DOLLARS)	29	7.6	6.5	7.9		5.5		5.5		10.0		4.7
14. RESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1987 DOLLARS)	29	8.7	8.5	5.7		2.9		-1.7		11.0		1.9
15. FEDERAL GOVERNMENT PURCHASES (BILLIONS OF 1987 DOLLARS)	28	-1.6	-1.3	-.9		-1.6		.9		-2.3		-.5
16. STATE AND LOCAL GOVT PURCHASES (BILLIONS OF 1987 DOLLARS)	28	2.0	2.6	2.1		2.0		1.6		2.6		2.4
17. CHANGE IN BUSINESS INVENTORIES (BILLIONS OF 1987 DOLLARS)	28	4.3	1.5	.6		1.5		.1		3.1		2.5
18. NET EXPORTS (BILLIONS OF 1987 DOLLARS)	29	-5.0	-1.6	1.5		-2.4		4.1		-21.8		2.1

NOTE: FIGURES FOR BUSINESS INVENTORIES AND NET EXPORTS ARE CHANGES IN BILLIONS OF 1987 DOLLARS.  
ALL OTHERS ARE PERCENTAGE CHANGES AT ANNUAL RATES.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 1994.

TABLE THREE  
ESTIMATED PROBABILITY OF DECLINE IN REAL GDP

ESTIMATED PROBABILITY (CHANCES IN 100)	NUMBER OF FORECASTERS									
	Q4 TO Q1	93 94	Q1 TO Q2	94 94	Q2 TO Q3	94 94	Q3 TO Q4	94 94	Q4 TO Q1	94 95
10 OR LESS	25		25		23		20		16	
11 TO 20	2		2		4		7		8	
21 TO 30	0		0		0		0		3	
31 TO 40	0		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	3		3		3		3		3	
MEDIAN PROBABILITY	5		1		5		5		5	
MEAN PROBABILITY	4		4		7		7		10	

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 27.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 1994.

TABLE FOUR

**MEAN PROBABILITY OF CHANGES IN GDP AND PRICES  
1993-94 AND 1994-95**

**MEAN PROBABILITY ATTACHED TO POSSIBLE  
PERCENT CHANGES IN REAL GDP:**

	1993-94	1994-95
6.0 OR MORE	.30	.27
5.0 TO 5.9	2.96	2.27
4.0 TO 4.9	16.00	10.31
3.0 TO 3.9	50.30	29.73
2.0 TO 2.9	23.93	40.85
1.0 TO 1.9	4.74	12.42
0.0 TO 0.9	1.11	3.12
-1.0 TO -0.1	.44	.81
-2.0 TO -1.1	.19	.15
LESS THAN -2.0	.04	.08

**MEAN PROBABILITY ATTACHED TO POSSIBLE  
PERCENT CHANGES IN GDP IMPLICIT PRICE DEFULATOR:**

	1993-94	1994-95
8.0 OR MORE	.00	.00
7.0 TO 7.9	.00	.04
6.0 TO 6.9	.23	.48
5.0 TO 5.9	.38	1.72
4.0 TO 4.9	4.42	8.40
3.0 TO 3.9	22.92	39.68
2.0 TO 2.9	55.42	39.20
1.0 TO 1.9	14.96	9.8
0.0 TO 0.9	1.46	1.00
WILL DECLINE	.19	.00

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 27.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 1994.

TABLE FIVE  
LONG-TERM (10 YEAR) FORECASTS

SERIES: CPI INFLATION RATE		SERIES: REAL GDP GROWTH RATE		SERIES: PRODUCTIVITY GROWTH	
STATISTIC		STATISTIC		STATISTIC	
MINIMUM	2.500	MINIMUM	.900	MINIMUM	.900
LOWER QUARTILE	3.075	LOWER QUARTILE	1.250	LOWER QUARTILE	1.250
MEDIAN	3.450	MEDIAN	1.500	MEDIAN	1.500
UPPER QUARTILE	3.550	UPPER QUARTILE	2.000	UPPER QUARTILE	2.000
MAXIMUM	4.000	MAXIMUM	3.500	MAXIMUM	3.500
MEAN	3.335	MEAN	1.724	MEAN	1.724
STD. DEV.	.415	STD. DEV.	.346	STD. DEV.	.709
N	26	N	26	N	23
MISSING	4	MISSING	4	MISSING	7
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SERIES: STOCK RETURNS (S&P 500)		SERIES: BOND RETURNS (10-YEAR)		SERIES: BILL RETURNS (3-MONTH)	
STATISTIC		STATISTIC		STATISTIC	
MINIMUM	6.500	MINIMUM	5.300	MINIMUM	2.500
LOWER QUARTILE	8.000	LOWER QUARTILE	5.887	LOWER QUARTILE	3.500
MEDIAN	10.000	MEDIAN	6.090	MEDIAN	4.125
UPPER QUARTILE	10.500	UPPER QUARTILE	6.938	UPPER QUARTILE	4.613
MAXIMUM	11.000	MAXIMUM	8.000	MAXIMUM	5.500
MEAN	9.263	MEAN	6.387	MEAN	4.077
STD. DEV.	1.468	STD. DEV.	.802	STD. DEV.	.748
N	15	N	24	N	24
MISSING	15	MISSING	6	MISSING	6
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SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 1994.