

Survey of

# PROFESSIONAL FORECASTERS

Federal Reserve Bank  
of Philadelphia

Release Date: February 22, 2000

## FIRST QUARTER 2000

### ***Stronger Growth Seen in 2000; Expectations for Inflation Hold Steady***

Continuing a recent trend of upward revisions to their forecasts for growth in real GDP, the forecasters are revising upward their outlook for growth in 2000, even as they leave their short-term expectations for inflation roughly unchanged. The 36 forecasters surveyed by the Federal Reserve Bank of Philadelphia expect real GDP to grow at an annual rate of 3.8 percent in 2000, up from their previous estimate of 3.1 percent in last year's fourth-quarter survey. Current-quarter growth will average 3.2 percent, up substantially from the previous estimate of 2.3 percent. The forecasters see economic growth slowing somewhat in 2001, to an annual rate of 2.9 percent.

A downward revision to the forecast for the unemployment rate accompanies the outlook for economic growth. The forecasters now expect the rate of unemployment to average 4.0 percent in 2000, down from their previous estimate of 4.3 percent, registered in the last survey. The rate is expected to hold steady at 4.0 percent through the first three quarters of 2000 before climbing gradually to 4.3 percent in the first quarter of 2001. The forecasters see the rate holding constant at 4.3 percent throughout 2001.

Forecast revisions to output growth and the rate of unemployment are accompanied by an unchanged outlook for short-term inflation: The forecasters see little reason to adjust their expectations for inflation over the next year. On a fourth-quarter-over-fourth-quarter basis, CPI inflation is expected to average 2.5 percent in 2000, the same rate expected in the previous survey. And the current survey shows little risk that inflation will accelerate, as the forecasters expect CPI inflation to average 2.6 percent in 2001, up just 0.1 percentage points from their 2000 forecast. Measured on a year-over-year basis, inflation in the GDP price index is expected to average 1.8 percent in 2000, up from 1.7 percent in the previous survey, and 2.0 percent in 2001.

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

	Real GDP (%)		CPI Inflation (%)		Unemployment (%)	
	Previous	New	Previous	New	Previous	New
<i>Quarterly data:</i>						
2000: Q1	2.3	3.2	2.5	2.5	4.2	4.0
Q2	3.0	3.1	2.5	2.5	4.2	4.0
Q3	3.0	3.3	2.5	2.4	4.2	4.0
Q4	3.4	2.9	2.6	2.5	4.3	4.2
2001: Q1	N.A.	2.8	N.A.	2.5	N.A.	4.3
<i>Annual average data:</i>						
2000	3.1	3.8	2.5	2.5	4.3	4.0
2001	N.A.	2.9	N.A.	2.6	N.A.	4.3

### ***Faster Long-Term Growth in Output and Productivity Is Expected***

In first-quarter surveys, the forecasters are asked to provide long-term predictions for an expanded set of variables, including output and productivity growth and returns to various financial assets. The Philadelphia Fed has been tracking these expectations since 1992.

In the current survey, the long-term forecasts for output growth and productivity growth have been revised upward by substantial amounts and now stand at survey highs. The forecasters expect output to grow at an annual rate of 3.05 percent over the next 10 years, an increase of 0.55 percentage points over last year's first-quarter estimate of 2.50 percent. Growth in productivity, defined as the rate of growth in output per hour, is now expected to average 2.40 percent, up from 1.55 percent previously.

As the following table shows, these revisions are large by survey standards and yield forecasts that stand at their highest levels since we began to track these expectations.

#### *Long-Term Expectations for Growth in Output and Productivity (%)*

	<i>Output Growth</i>	<i>Productivity Growth</i>
<i>Survey Date:</i>		
1992: Q1	2.50	1.50
1993: Q1	2.70	1.50
1994: Q1	2.65	1.50
1995: Q1	2.70	1.50
1996: Q1	2.30	1.50
1997: Q1	2.50	1.27
1998: Q1	2.50	1.50
1999: Q1	2.50	1.55
2000: Q1 (current)	3.05	2.40

The forecasters' expectations for 10-year average returns to financial assets are about the same as those expected one year ago. The return to equities, as measured by the S&P 500 index, is expected to be 8.0 percent over the next 10 years, unchanged from last year's expectation. Ten-year Treasury bonds will average 6.0 percent over the same period, up from 5.5 percent previously, while three-month Treasury bills will return 5.0 percent, up from 4.5 percent in the last survey.

### ***Interest-Rate Projections Boosted***

Over the next year, the forecasters see a higher level and steeper trajectory for short-term interest rates than they did in the last survey. Currently, the forecasters see the rate on three-month Treasury bills averaging 5.5 percent in the first quarter, rising to 5.8 percent in the third quarter, and averaging 5.7 percent for the year. In last year's fourth-quarter survey, the rate was expected to hold steady at 5.1 percent over the same period. Long-term rates, as measured by the rate on 10-year Treasury bonds, will average 6.5 percent in 2000, up from the previous forecast of 6.1 percent, and fall to 6.3 percent in 2001.

### ***Downward Revisions to the Risk of a Negative Quarter***

With little evidence of substantial economic effects stemming from the year-2000 conversion, the forecasters have cut their estimate of the risk of a negative first quarter. That estimate stands at 5 percent in the current survey, down from 18 percent previously. Downward revisions also characterize the remaining quarters of 2000, although these revisions are less pronounced than the revision for the first quarter, as the following table shows.

	<i>Risk of a Negative Quarter (%)</i>	
	<i>Previous Survey</i>	<i>New Survey</i>
<i>Quarterly data:</i>		
2000: Q1	18	5
Q2	14	7
Q3	14	10
Q4	16	13
2001: Q1	N.A.	17

### ***Unchanged Expectations for Long-Term Inflation***

Expectations for long-term inflation, measured as the 10-year annual average rate of change in the CPI, are unchanged in the current survey. The forecasters see that rate averaging 2.50 percent, the same rate expected in the previous survey. The middle range of forecasts is 2.25 percent to 2.65 percent.

### ***Budget Surpluses Seen at Levels Lower Than Those Predicted by the CBO***

In answer to a special question about future federal government budget surpluses, the forecasters are predicting surpluses at levels lower than those predicted by the Congressional Budget Office (CBO). The following table shows the latest CBO baseline forecasts published on January 26 in "The Budget and Economic Outlook: Fiscal Years 2001-2010." These baseline forecasts, which are in billions of dollars and on a fiscal year basis, assume a continuation of current law and, thus, incorporate no changes in taxes and spending that are not already part of the budget. In contrast, the survey panelists were permitted to make their own assumptions about taxes and spending. Both forecasts show rising surpluses over the next six years, but the survey panelists see the surpluses rising at a much slower rate.

### ***Federal Government Budget Surplus Projections Fiscal Years, Billions of Dollars***

	2000	2001	2002	2003	2004	2005
CBO Baseline	176	235	294	321	345	376
Survey of Professional Forecasters	172	198	218	229	238	244

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.

For further information about the Survey of Professional Forecasters, contact:  
 Dean Croushore, Assistant Vice President and Economist, Federal Reserve Bank of Philadelphia,  
 Ten Independence Mall, Philadelphia, PA 19106 (215) 574-3809 email: dean.croushore@phil.frb.org

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/page.asp?page=profforecasting>.

**SURVEY OF PROFESSIONAL FORECASTERS**  
**MAJOR MACROECONOMIC INDICATORS, 2000-2001**

	2000				2001		ANNUAL AVERAGE	
	q1	q2	q3	q4	q1	FORECAST	2000	2001
<b>PERCENT GROWTH AT ANNUAL RATES</b>								
1. REAL GDP (BILLIONS, CHAIN WEIGHTED)	3.2	3.1	3.3	2.9	2.8	3.8	3.8	2.9
2. GDP PRICE INDEX (1996=100)	1.8	1.7	2.2	2.0	2.1	1.8	1.8	2.0
3. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	5.1	5.0	5.1	4.9	5.0	5.6	5.6	5.1
4. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	2.5	2.5	2.4	2.5	2.5	2.5	2.5	2.6
<b>VARIABLES IN LEVELS</b>								
5. UNEMPLOYMENT RATE (PERCENT)	4.0	4.0	4.0	4.2	4.3	4.0	4.3	4.3
6. 3-MONTH TREASURY BILL RATE (PERCENT)	5.5	5.7	5.8	5.8	5.7	5.7	5.7	5.6
7. 10-YEAR TREASURY BOND YIELD (PERCENT)	6.6	6.6	6.5	6.4	6.3	6.5	6.3	6.3

SOURCE : RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2000.

NOTES: THE FIGURES ON EACH LINE ARE MEDIANs OF 36 INDIVIDUAL FORECASTS. NA = NOT APPLICABLE.

**SURVEY OF PROFESSIONAL FORECASTERS**

**First Quarter 2000**

**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 January 31; the tables do not reflect subsequent revisions to the data. All forecasts were received on or before February 12.

TABLE ONE

	NUMBER OF FORE- CASTERS	ACTUAL 1999 Q4	FORECASTS				ACTUAL 1999	FORECAST 2000	FORECAST 2001
			Q1	Q2	Q3	Q4			
1. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	32	9477.1	9595.1	9714.0	9835.3	9952.8	10075.3	9248.4	9767.7
2. GDP PRICE INDEX (1996=100)	30	104.94	105.40	105.85	106.42	106.95	107.50	104.32	106.20
3. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	22	N.A.	615.6	615.6	616.1	614.4	624.1	N.A.	612.0
4. UNEMPLOYMENT RATE (PERCENT)	36	4.1	4.0	4.0	4.0	4.2	4.3	4.2	4.0
5. INDUSTRIAL PRODUCTION (1992=100)	33	139.9	141.2	142.2	143.3	144.1	145.0	137.1	142.6
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	35	1.65	1.61	1.58	1.56	1.52	1.52	1.66	1.57
7. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	34	2.9	2.5	2.4	2.5	2.5	2.5	2.6	2.6
8. 3-MONTH TREASURY BILL RATE (PERCENT)	34	5.04	5.50	5.72	5.80	5.80	5.73	4.64	5.71
9. AAA CORPORATE BOND YIELD (PERCENT)	29	7.49	7.75	7.85	7.74	7.62	7.61	7.04	7.72
10. 10-YEAR TREASURY BOND YIELD (PERCENT)	32	6.14	6.60	6.57	6.50	6.43	6.30	5.64	6.53

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2000.

TABLE ONE CONTINUED

	NUMBER OF FORE- CASTERS	ACTUAL 1999 Q4	FORECASTS				ACTUAL 1999	FORECAST 2000	FORECAST 2001	
			2000	Q1	Q2	Q3	Q4	Q1	Q1	
11. REAL GDP (BILLIONS, CHAIN WEIGHTED)	36	9026.9	9097.4	9167.3	9241.3	9307.5	9373.2	8861.0	9197.9	9468.8
12. TOTAL CONSUMPTION EXPENDITURES (BILLIONS, CHAIN WEIGHTED)	35	6111.2	6174.4	6222.6	6275.0	6314.0	6345.0	5998.7	6248.9	6412.3
13. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	34	1241.9	1271.4	1295.7	1321.7	1343.0	1366.3	1215.4	1306.9	1392.6
14. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	34	374.0	373.3	370.1	367.7	364.7	366.2	375.4	368.5	365.4
15. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	33	560.1	556.2	558.0	559.0	563.0	563.2	541.3	558.0	562.3
16. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	32	1007.5	1014.7	1021.5	1028.8	1035.4	1040.3	993.0	1025.1	1048.6
17. CHANGE IN PRIVATE INVENTORIES (BILLIONS, CHAIN WEIGHTED)	33	65.4	50.0	45.3	45.0	42.8	42.0	41.9	46.5	43.6
18. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	34	-356.1	-362.3	-369.8	-375.0	-377.0	-367.0	-324.5	-372.0	-366.2

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2000.

TABLE TWO

**MAJOR MACROECONOMIC INDICATORS, 2000-2001  
PERCENTAGE CHANGES AT ANNUAL RATES**

NUMBER OF FORE- CASTERS	Q4 TO Q1	1999	Q1 2000	Q2 TO Q2	2000	Q3 TO Q3	2000	Q4 TO Q4	2000	Q1 TO Q1	2001	1999 TO 2000	2000 TO 2001
	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2001	2000	2001
1. GROSS DOMESTIC PRODUCT (GDP) (\$ BILLIONS)	32	5.1	5.0	5.1	4.9	5.0	5.0	5.6	5.6	5.1			
2. GDP PRICE INDEX (1996=100)	30	1.8	1.7	2.2	2.0	2.1	1.8	2.0					
3. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	22	3.4	0.0	0.3	-1.1	6.5	3.9	2.6					
4. UNEMPLOYMENT RATE (PERCENT)	36	-0.1	0.0	0.0	0.2	0.1	-0.2	0.3					
5. INDUSTRIAL PRODUCTION (1992=100)	33	3.8	2.9	3.3	2.1	2.5	4.0	2.6					
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	35	-8.9	-7.9	-5.9	-9.4	0.0	-5.7	-4.3					
7. CONSUMER PRICE INDEX (CPI-U) (ANNUAL RATE)	34	-0.4	0.0	0.0	0.1	0.0	-0.1	0.1					
8. 3-MONTH TREASURY BILL RATE (PERCENT)	34	0.46	0.22	0.08	0.00	-0.07	1.07	-0.11					
9. AAA CORPORATE BOND YIELD (PERCENT)	29	0.26	0.10	-0.11	-0.12	-0.01	0.68	-0.19					
10. 10-YEAR TREASURY BOND YIELD (PERCENT)	32	0.46	-0.03	-0.07	-0.07	-0.13	0.89	-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, FIRST QUARTER 2000.

TABLE TWO CONTINUED

**MAJOR MACROECONOMIC INDICATORS, 2000-2001  
PERCENTAGE CHANGES AT ANNUAL RATES**

	NUMBER OF FORE- CASTERS	Q4 1999 TO Q1 2000	Q1 2000 TO Q2 2000	Q2 2000 TO Q3 2000	Q3 2000 TO Q4 2000	Q4 2000 TO Q1 2001	1999 TO 2000	2000 TO 2001
11. REAL GDP (BILLIONS, CHAIN WEIGHTED)	36	3.2	3.1	3.3	2.9	2.8	3.8	2.9
12. TOTAL CONSUMPTION EXPENDITURES (BILLIONS, CHAIN WEIGHTED)	35	4.2	3.2	3.4	2.5	2.0	4.2	2.6
13. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	34	9.8	7.9	8.3	6.6	7.1	7.5	6.6
14. RESIDENTIAL FIXED INVESTMENT (BILLIONS, CHAIN WEIGHTED)	34	-0.8	-3.3	-2.6	-3.2	1.6	-1.8	-0.8
15. FEDERAL GOVERNMENT C & I (BILLIONS, CHAIN WEIGHTED)	33	-2.8	1.3	0.7	2.9	0.1	3.1	0.8
16. STATE AND LOCAL GOVT C & I (BILLIONS, CHAIN WEIGHTED)	32	2.9	2.7	2.9	2.6	1.9	3.2	2.3
17. CHANGE IN PRIVATE INVENTORIES (BILLIONS, CHAIN WEIGHTED)	33	-15.4	-4.7	-0.3	-2.2	-0.8	4.6	-2.9
18. NET EXPORTS (BILLIONS, CHAIN WEIGHTED)	34	-6.2	-7.5	-5.3	-2.0	10.1	-47.5	5.8

NOTE: FIGURES FOR PRIVATE 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, FIRST QUARTER 2000.

TABLE THREE  
ESTIMATED PROBABILITY OF DECLINE IN REAL GDP

ESTIMATED PROBABILITY (CHANCES IN 100)	NUMBER OF FORECASTERS					
	Q4 1999 TO Q1 2000	Q1 2000 TO Q2 2000	Q2 2000 TO Q3 2000	Q3 2000 TO Q4 2000	Q4 2000 TO Q1 2001	
10 OR LESS	27	28	22	16	9	
11 TO 20	4	4	8	12	15	
21 TO 30	1	1	3	5	7	
31 TO 40	1	0	0	0	2	
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	0	5	10	15	15	
MEAN PROBABILITY	5	7	10	13	17	

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 33.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2000.

TABLE FOUR

MEAN PROBABILITY OF CHANGES IN GDP AND PRICES  
1999-2000 AND 2000-2001

MEAN PROBABILITY ATTACHED TO POSSIBLE  
PERCENT CHANGES IN REAL GDP:

	1999-2000	2000-2001
6.0 OR MORE	0.58	0.42
5.0 TO 5.9	4.94	3.27
4.0 TO 4.9	30.91	12.97
3.0 TO 3.9	43.94	31.12
2.0 TO 2.9	13.73	32.21
1.0 TO 1.9	3.48	12.97
0.0 TO 0.9	1.21	4.18
-1.0 TO -0.1	0.82	1.97
-2.0 TO -1.1	0.21	0.64
LESS THAN -2.0	0.18	0.24

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

	1999-2000	2000-2001
8.0 OR MORE	0.03	0.03
7.0 TO 7.9	0.06	0.06
6.0 TO 6.9	0.09	0.09
5.0 TO 5.9	0.18	0.55
4.0 TO 4.9	1.00	2.15
3.0 TO 3.9	7.64	11.00
2.0 TO 2.9	36.88	44.55
1.0 TO 1.9	46.75	35.12
0.0 TO 0.9	6.70	5.85
WILL DECLINE	0.70	0.61

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 33.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2000.

TABLE FIVE  
LONG-TERM (10 YEAR) FORECASTS

SERIES: CPI INFLATION RATE		SERIES: REAL GDP GROWTH RATE		SERIES: PRODUCTIVITY GROWTH	
STATISTIC		STATISTIC		STATISTIC	
MINIMUM	1.200	MINIMUM	1.500	MINIMUM	1.500
LOWER QUARTILE	2.250	LOWER QUARTILE	2.975	LOWER QUARTILE	2.000
MEDIAN	2.500	MEDIAN	3.050	MEDIAN	2.400
UPPER QUARTILE	2.650	UPPER QUARTILE	3.500	UPPER QUARTILE	2.575
MAXIMUM	3.500	MAXIMUM	3.500	MAXIMUM	3.500
MEAN	2.506	MEAN	3.097	MEAN	2.374
STD. DEV.	0.453	STD. DEV.	0.400	STD. DEV.	0.478
N	34	N	34	N	34
MISSING	2	MISSING	2	MISSING	2
<hr/>					
SERIES: STOCK RETURNS (S&P 500)		SERIES: BOND RETURNS (10-YEAR)		SERIES: BILL RETURNS (3-MONTH)	
STATISTIC		STATISTIC		STATISTIC	
MINIMUM	1.700	MINIMUM	4.500	MINIMUM	3.000
LOWER QUARTILE	6.625	LOWER QUARTILE	5.500	LOWER QUARTILE	4.500
MEDIAN	8.000	MEDIAN	6.000	MEDIAN	5.000
UPPER QUARTILE	10.750	UPPER QUARTILE	6.300	UPPER QUARTILE	5.250
MAXIMUM	20.000	MAXIMUM	11.000	MAXIMUM	6.500
MEAN	9.125	MEAN	6.158	MEAN	4.808
STD. DEV.	3.993	STD. DEV.	1.276	STD. DEV.	0.671
N	28	N	28	N	31
MISSING	8	MISSING	8	MISSING	5
<hr/>					

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, SURVEY OF PROFESSIONAL FORECASTERS, FIRST QUARTER 2000.