

ECONOMIC OUTLOOK SURVEY

FOURTH QUARTER 1990

EXECUTIVE SUMMARY

Forecasters See Increased Chance of Recession

November 28, 1990

The probability of a near-term recession has increased significantly, according to a survey formerly conducted by the National Bureau of Economic Research and now being continued by two economists at the Federal Reserve Bank of Philadelphia. Most of the economists who participated in the survey see a recession beginning in the fourth quarter of 1990 and ending mid-way through the second quarter of 1991.

The results are based on a median forecast of 30 professional forecasters, who work in academic institutions, professional associations, and such sectors as financial services, manufacturing, transportation, and energy.

The forecasters see real GNP declining at annual rates of about 1.3 percent in the fourth quarter and 0.9 percent in the first quarter, according to Dean Croushore and Leonard Mills, the Philadelphia Fed economists who took over the survey after the NBER decided to discontinue it. Most of the survey participants look for growth to resume by the second quarter of next year, rising a slight 0.1 percent, and to increase gradually, to 1.3 percent in the third quarter and 2.5 percent in the fourth.

Besides limiting the participants to professional forecasters only, Croushore and Mills asked the individuals for their forecasts on interest rates and the components of GNP, including consumption and investment. Most of the forecasters expect the following:

- o Three-month Treasury bill rates to fall from 7.1 percent (discount basis) in the final quarter of 1990 to 6.6 percent by the second quarter of 1991.
- o Long-term corporate bond yields to decline 40 basis points over the same period.
- o The federal funds rate to slip to 7 percent or lower by mid-1991.
- o Oil prices to edge down to the mid-\$20s by mid-1991.
- o An inflation rate, as measured by the Consumer Price Index, of 7.7 percent in the final quarter of this year. Inflation falls to 5.4 percent in the first quarter of 1991 and to about 4-1/4 percent in the remaining three quarters.
- o Declines in consumer spending, business investment, residential investment, and inventory accumulation through mid-1991.

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**Dean Croushore and Leonard Mills
Federal Reserve Bank of Philadelphia**

The chances of a recession have increased substantially, according to the December survey of 30 professional forecasters. The odds of real GNP declining in 1990:Q4 and 1991:Q1 are about 3 to 1. The median forecast is for a decline of about 1 percent in each quarter, with recovery beginning during the second quarter of 1991. Inflation and interest rates are expected to fall as the economy contracts.

High Probability of a Mild Contraction

Real GNP is projected to decline 1.3 percent at an annual rate in 1990:Q4 and 0.9 percent in 1991:Q1. Recovery begins in the second quarter as real GNP increases 0.1 percent. Growth rates thereafter are expected to be 1.3 percent in 1991:Q3 and 2.5 percent in 1991:Q4. Civilian unemployment rises to around 6-1/2 percent by mid-1991.

Average real GNP in 1991 is expected to be flat compared to 1990. The forecasters' uncertainty around this forecast is symmetrical. The mean probabilities attached to changes in real GNP are as follows:

<i>Change in Real GNP</i>	<i>1989-90</i>	<i>1990-91</i>
4 percent or more	0	1
2.0 to 3.9 percent	8	9
0.0 to 1.9 percent	86	43
-2.0 to -0.1 percent	6	38
less than -2.0 percent	0	8

The forecasters also assessed the probability of a decline in real GNP for the next five quarters. For 1990:Q4, the mean probability of a decline is 71 percent. However, the chances of a decline in real GNP fall gradually as 1991 progresses. Still, they have almost doubled since the September survey.

<i>Mean Probability of a Decline in Real GNP</i>	<i>June 1990 Survey</i>	<i>September 1990 Survey</i>	<i>December 1990 Survey</i>
1990:Q4	30	41	71
1991:Q1	26	36	70
1991:Q2	20	30	54
1991:Q3	n.a.	22	34
1991:Q4	n.a.	n.a.	21

Expected Declines in Inflation and Interest Rates

The median forecast is for 7.7 percent CPI inflation in 1990:Q4, falling to 5.4 percent in 1991:Q1 and to about 4-1/4 percent for the remainder of 1991. Inflation in the implicit price deflator is expected to fall from a current rate of about 4-3/4 percent to 4 percent in the second half of 1990.

Interest rates follow a similar quarterly pattern. Three-month Treasury bill rates fall from 7.1 percent (discount basis) in the fourth quarter to 6.6 percent by 1991:Q2. Long-term corporate bond yields decline 40 basis points over this period.

The Contraction Is Spread Across Most Sectors

Real personal consumption expenditures, nonresidential investment, residential investment, and business inventory accumulation all decline through mid-1991. All these sectors recover in the second half of 1991.

Net exports are a modest source of growth throughout 1991. Overall, government purchases are expected to be flat; federal purchases decline, while state and local purchases grow modestly.

Major Assumptions

Most forecasters see the federal funds rate declining to 7 percent or lower by mid-1991. A few respondents also expect a cut in the discount rate. Oil prices are assumed to decline to the mid-\$20s per barrel by mid-1991. The dollar is expected to bottom out by early 1991, and some respondents see it appreciating later in the year.

This survey is a continuation of the survey formerly conducted by the National Bureau of Economic Research and the American Statistical Association. The survey began in 1968 and is taken quarterly. After consulting with the NBER, Dean Croushore and Leonard Mills took over the survey beginning in June 1990. Continuation of this survey would not have been possible without the support of Robert Allison of NBER and Victor Zarnowitz of the University of Chicago.

Historical data on past surveys is available from the National Bureau of Economic Research. For further information about the survey, please contact:

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PROJECTIONS OF GNP AND OTHER ECONOMIC INDICATORS, 1990-91

	ANNUAL				PERCENT CHANGE	
	1989 ACTUAL	1990 FORECAST	1991 FORECAST	TO 1990	1989 TO 1990	1990 TO 1991
1. GROSS NATIONAL PRODUCT (\$ BILLIONS)	5200.8	5474.0	5714.5	5.3	4.4	
2. GNP IMPLICIT PRICE DEFOLATOR (1982=100)	126.3	131.6	137.2	4.2	4.3	
3. GNP IN CONSTANT DOLLARS (BILLIONS OF 1982 DOLLARS)	4117.7	4160.0	4166.0	1.0	.1	
4. UNEMPLOYMENT RATE (PERCENT)	5.3	5.5	6.5	.2	1.0 ¹	
5. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	172.6	167.0	166.1	-3.2	-.5	
6. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1982 DOLLARS)	506.1	513.0	501.1	1.4	-2.3	
7. NEW PRIVATE HOUSING UNITS STARTED (ANNUAL RATE, MILLIONS)	1.4	1.2	1.1	-11.3	-8.2	
8. CHANGE IN BUSINESS INVENTORIES (BILLIONS OF 1982 DOLLARS)	23.8	6.9	4.0	-16.9	-2.9 ²	
9. TREASURY BILL RATE (3-MONTH, PERCENT)	8.1	7.5	6.7	-.6	-.8 ¹	
10. CONSUMER PRICE INDEX (ANNUAL RATE)	4.8	5.5	5.3	.7	-.3 ¹	

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, ECONOMIC OUTLOOK SURVEY, DECEMBER 1990.

THE FIGURES ON EACH LINE ARE MEDIANS OF 30 INDIVIDUAL FORECASTS.

¹CHANGE IN RATE, IN PERCENTAGE POINTS.

²CHANGE IN BILLIONS OF DOLLARS.

PROJECTIONS OF GNP AND OTHER ECONOMIC INDICATORS, 1990-91

	QUARTERLY								PERCENT CHANGE	
	1990		q4 q3		q1 q2		1991			
	ACTUAL	FORECAST					q4 q3	90 TO 91		
1. GROSS NATIONAL PRODUCT (\$ BILLIONS)	5514.4	5563.0	5612.5	5668.0	5746.5	5837.0	4.2	4.9		
2. GNP IMPLICIT PRICE DEFULATOR (1982=100)	132.1	133.6	135.2	136.6	138.0	139.4	4.5	4.3		
3. GNP IN CONSTANT DOLLARS (BILLIONS OF 1982 DOLLARS)	4173.6	4159.5	4150.0	4151.5	4165.0	4190.5	-.2	.7		
4. UNEMPLOYMENT RATE (PERCENT)	5.6	5.9	6.3	6.4	6.7	6.6	1.1	.7 ¹		
5. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	n.a.	168.0	163.6	164.0	165.9	170.0	-.1	1.2		
6. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1982 DOLLARS)	517.6	510.0	507.0	503.0	501.0	505.0	-3.2	-1.0		
7. NEW PRIVATE HOUSING UNITS STARTED (ANNUAL RATE, MILLIONS)	1.1	1.1	1.1	1.1	1.1	1.2	.6	11.3		
8. CHANGE IN BUSINESS INVENTORIES (BILLIONS OF 1982 DOLLARS)	7.8	9.4	4.0	4.0	4.0	8.0	-3.8	-1.4 ²		
9. TREASURY BILL RATE (3-MONTH, PERCENT)	7.5	7.1	6.8	6.6	6.6	6.8	-.9	-.3 ¹		
10. CONSUMER PRICE INDEX (ANNUAL RATE)	6.4	7.7	5.4	4.2	4.1	4.3	-2.3	-3.3 ¹		

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, ECONOMIC OUTLOOK SURVEY, DECEMBER 1990.
THE FIGURES ON EACH LINE ARE MEDIANS OF 30 INDIVIDUAL FORECASTS.

¹CHANGE IN RATE, IN PERCENTAGE POINTS.
²CHANGE IN BILLIONS OF DOLLARS.

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TABLES

TABLE ONE

PROJECTIONS OF GNP AND OTHER ECONOMIC INDICATORS, 1990-91
MEDIAN OF FORECASTER PREDICTIONS

	NUMBER OF FORE- CASTERS	ACTUAL 1990 Q3	1990 Q4	FORECASTS 1991				ACTUAL 1989	FORECAST 1990	FORECAST 1991
				Q1	Q2	Q3	Q4			
1. GROSS NATIONAL PRODUCT (\$ BILLIONS)	30	5514.4	5563.0	5612.5	5668.0	5746.5	5837.0	5200.8	5474.0	5714.5
2. GNP IMPLICIT PRICE DEFULATOR (1982=100)	30	132.1	133.6	135.2	136.6	138.0	139.4	126.3	131.6	137.2
3. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	29	166.1	168.0	163.6	164.0	165.9	170.0	172.6	167.0	166.1
4. UNEMPLOYMENT RATE (PERCENT)	30	5.6	5.9	6.3	6.4	6.7	6.6	5.3	5.5	6.5
5. INDUSTRIAL PRODUCTION (1987=100)	29	110.5	109.5	108.9	108.7	109.2	110.2	108.1	109.4	109.4
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	29	1.14	1.08	1.06	1.10	1.15	1.20	1.38	1.22	1.12
7. CONSUMER PRICE INDEX (ANNUAL RATE)	30	6.4	7.7	5.4	4.2	4.1	4.3	4.8	5.5	5.3
8. TREASURY BILL RATE (3-MONTH)	30	7.49	7.10	6.80	6.60	6.62	6.77	8.12	7.51	6.68
9. NEW HIGH-GRADE CORPORATE BOND YIELD	27	9.40	9.40	9.20	9.00	9.00	9.00	9.26	9.35	9.10
10. GNP IN CONSTANT DOLLARS (BILLIONS OF 1982 DOLLARS)	30	4173.6	4159.5	4150.0	4151.5	4165.0	4190.5	4117.7	4160.0	4166.0

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, ECONOMIC OUTLOOK SURVEY, DECEMBER 1990.

TABLE ONE CONTINUED

PROJECTIONS OF GNP AND OTHER ECONOMIC INDICATORS, 1990-91
MEDIAN OF FORECASTER PREDICTIONS

NUMBER OF FORE- CASTERS	ACTUAL 1990 Q3	FORECASTS 1991	FORECAST 1991				
			Q4	Q1	Q2	Q3	
11. TOTAL CONSUMPTION EXPENDITURES (BILLIONS OF 1982 DOLLARS)	29	2702.7	2694.6	2690.0	2696.0	2707.0	2719.0
12. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1982 DOLLARS)	29	517.6	510.0	507.0	503.0	501.0	505.0
13. RESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1982 DOLLARS)	29	175.3	169.0	166.0	165.0	167.0	169.0
14. FEDERAL GOVERNMENT PURCHASES (BILLIONS OF 1982 DOLLARS)	28	345.6	347.0	345.0	343.5	343.5	341.5
15. STATE AND LOCAL GOVERNMENT PURCHASES (BILLIONS OF 1982 DOLLARS)	28	477.2	479.0	480.3	482.4	484.4	486.3
16. CHANGE IN BUSINESS INVENTORIES (BILLIONS OF 1982 DOLLARS)	29	7.8	9.4	4.0	4.0	8.0	23.8
17. NET EXPORTS OF GOODS AND SERVICES (BILLIONS OF 1982 DOLLARS)	29	-52.5	-47.0	-44.5	-40.0	-37.3	-36.8
						-54.1	-44.9
						-44.9	-39.6

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, ECONOMIC OUTLOOK SURVEY, DECEMBER 1990.

TABLE TWO

	PROJECTED PERCENTAGE CHANGES IN GNP AND OTHER ECONOMIC INDICATORS, 1990-91							
	NUMBER OF FORE- CASTERS	Q3 1990 TO Q4 1990	Q4 1990 TO Q1 1991	Q1 1990 TO Q2 1991	Q2 1990 TO Q3 1991	Q3 1990 TO Q4 1991	Q4 1990 TO Q1 1991	1989 1990 1991
1. GROSS NATIONAL PRODUCT (\$ BILLIONS)	30	3.6	3.6	4.0	5.7	6.4	5.3	4.4
2. GNP IMPLICIT PRICE DEFULATOR (1982=100)	30	4.8	4.7	4.4	4.0	4.0	4.2	4.3
3. CORPORATE PROFITS AFTER TAXES (\$ BILLIONS)	29	4.7	-10.1	1.0	4.7	10.3	-3.2	-5
4. UNEMPLOYMENT RATE (PERCENT)	30	.3	.4	.1	.3	-.1	.2	1.0
5. INDUSTRIAL PRODUCTION (1987=100)	29	-3.6	-2.2	-.7	1.9	3.7	1.2	.0
6. NEW PRIVATE HOUSING STARTS (ANNUAL RATE, MILLIONS)	29	-20.9	-6.5	16.0	19.5	18.6	-11.3	-8.2
7. CONSUMER PRICE INDEX (ANNUAL RATE)	30	1.3	-2.3	-1.2	-.1	.2	.7	-.3
8. TREASURY BILL RATE (3-MONTH)	30	-.39	-.30	-.20	.02	.15	-.61	-.84
9. NEW HIGH-GRADE CORPORATE BOND YIELD	27	.00	-.20	-.20	.00	.00	.09	-.25
10. GNP IN CONSTANT DOLLARS (\$BILLIONS OF 1982 DOLLARS)	30	-1.3	-.9	.1	1.3	2.5	1.0	.1

NOTE: FIGURES FOR UNEMPLOYMENT RATE, PERCENT CHANGE IN CONSUMER PRICE INDEX, TREASURY BILL RATE, AND CORPORATE 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, ECONOMIC OUTLOOK SURVEY, DECEMBER 1990.

TABLE TWO CONTINUED

PROJECTED PERCENTAGE CHANGES IN GNP AND OTHER ECONOMIC INDICATORS, 1990-91

	NUMBER OF FORE- CASTERS	Q3 1990 TO Q4 1990	Q4 1990 TO Q1 1991	Q1 1991 TO Q2 1991	Q2 1991 TO Q3 1991	Q3 1991 TO Q4 1991	Q4 1991 TO 1990	1989 TO 1991
11. TOTAL CONSUMPTION EXPENDITURES (BILLIONS OF 1982 DOLLARS)	29	-1.2	-.7	.9	1.6	1.8	1.2	.7
12. NONRESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1982 DOLLARS)	29	-5.7	-2.3	-3.1	-1.6	3.2	1.4	-2.3
13. RESIDENTIAL FIXED INVESTMENT (BILLIONS OF 1982 DOLLARS)	29	-13.6	-6.9	-2.4	4.9	4.9	-4.3	-6.7
14. FEDERAL GOVERNMENT PURCHASES (BILLIONS OF 1982 DOLLARS)	28	1.6	-2.2	-1.8	.1	-2.3	2.4	.3
15. STATE AND LOCAL GOVERNMENT PURCHASES (BILLIONS OF 1982 DOLLARS)	28	1.5	1.1	1.7	1.7	1.6	2.8	1.6
16. CHANGE IN BUSINESS INVENTORIES (BILLIONS OF 1982 DOLLARS)	29	1.6	-5.4	.0	.0	4.0	-16.9	-2.9
17. NET EXPORTS OF GOODS AND SERVICES (BILLIONS OF 1982 DOLLARS)	29	5.5	2.5	4.5	2.7	.5	9.2	5.3

NOTE: FIGURES FOR BUSINESS INVENTORIES AND NET EXPORTS ARE CHANGES IN BILLIONS OF DOLLARS.

ALL OTHERS ARE PERCENTAGE CHANGES AT ANNUAL RATES.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, ECONOMIC OUTLOOK SURVEY, DECEMBER 1990.

TABLE THREE
ESTIMATED PROBABILITY OF DECLINE IN GNP IN CONSTANT DOLLARS

ESTIMATED PROBABILITY (CHANCES IN 100)	NUMBER OF FORECASTERS						Q3 90 TO Q4 90	Q1 90 TO Q1 91	Q2 90 TO Q2 91	Q3 91 TO Q3 91	Q2 91 TO Q4 91	Q3 91 TO Q4 91	
	10 OR LESS	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60							
10 OR LESS	2	1	2	5	14								
11 TO 20	0	1	1	3	2								
21 TO 30	1	1	2	5	9								
31 TO 40	1	0	2	8	1								
41 TO 50	3	2	6	6	4								
51 TO 60	3	3	5	2	0								
61 TO 70	1	4	5	0	0								
71 TO 80	9	11	7	1	0								
81 TO 90	4	4	0	0	0								
91 AND OVER	6	3	0	0	0								
NOT REPORTING	0	0	0	0	0								
MEDIAN PROBABILITY	80	75	60	40	20								
MEAN PROBABILITY	71	70	54	34	21								

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 30.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA
ECONOMIC OUTLOOK SURVEY, DECEMBER 1990.

TABLE FOUR

**MEAN PROBABILITY OF CHANGES IN GNP AND PRICES
1989-90 AND 1990-91**

**MEAN PROBABILITY ATTACHED TO POSSIBLE
PERCENT CHANGES IN GNP IN 1982 DOLLARS:**

	1989-90	1990-91
6.0 OR MORE	.07	1.00
4.0 TO 5.9	.37	.47
2.0 TO 3.9	7.87	8.90
0.0 TO 1.9	85.75	42.97
-2.0 TO -0.1	5.90	38.47
LESS THAN -2.0	.07	8.20

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

	1989-90	1990-91
10.0 OR MORE	.03	.37
8.0 TO 9.9	.20	1.03
6.0 TO 7.9	5.20	6.00
4.0 TO 5.9	78.20	57.83
2.0 TO 3.9	15.90	30.23
LESS THAN 2.0	.47	4.53

NOTE: TOTAL NUMBER OF FORECASTERS REPORTING IS 30.

SOURCE: RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA, ECONOMIC OUTLOOK SURVEY, DECEMBER 1990.