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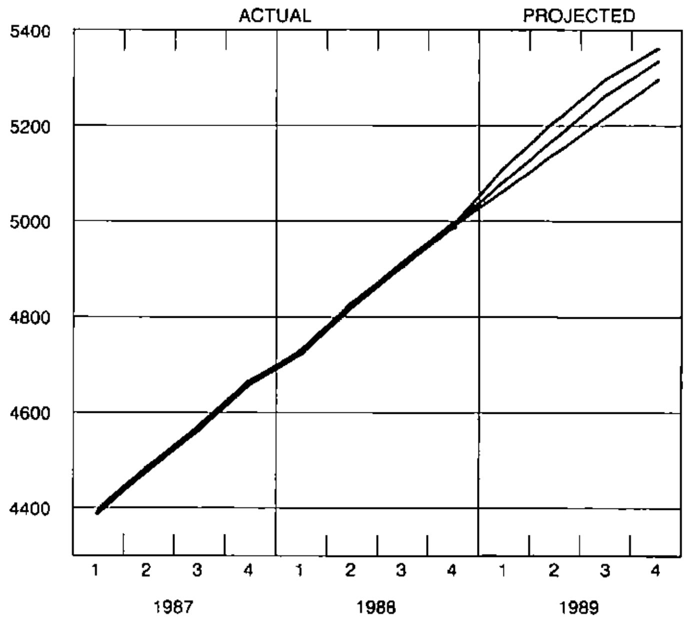
GROSS NATIONAL PRODUCT

IN CURRENT DOLLARS
Billions of Dollars



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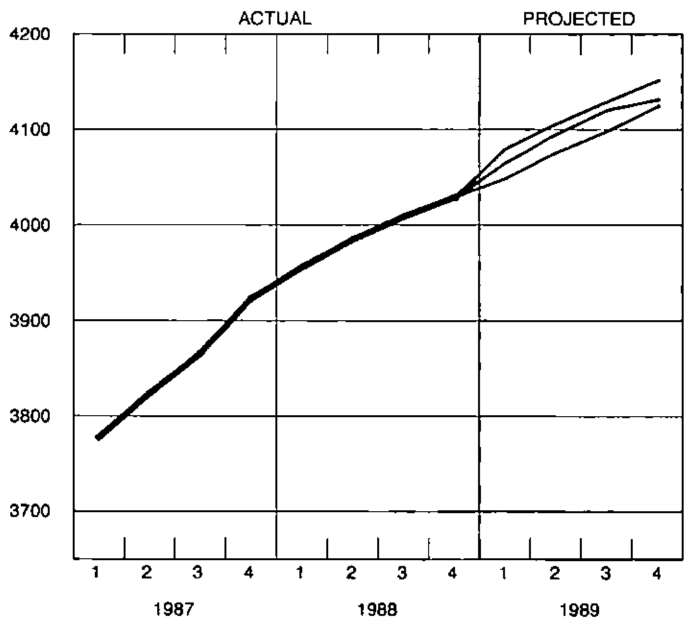
GROSS NATIONAL PRODUCT

IN CONSTANT 1982 DOLLARS
Billions of Dollars



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The U.S. Economic Outlook for 1989–90*

Saul H. Hymans and Janet C. Wolfe
Research Seminar in Quantitative Economics
The University of Michigan

Review of Last Year's Forecast

At the time of last year's Economic Outlook Conference we had just suffered one momentous economic shock and were monitoring the news wires to see whether we might avoid the next one that seemed to be looming on the horizon. The one just suffered, of course, was the stock market crash on the 19th of October 1987, an event common to most of the major securities markets around the world. There was no lack of economists, forecasters, analysts, observers, and pundits of note who were vociferously certain that so close a replay of the dimensions of the stock market crash of 1929 had to result in a severe downturn — maybe even a depression — in 1988. Anyone who might have thought that daily, weekly, or even monthly movements in the securities markets were so dominated by efficient reactions to real economic fundamentals as to be highly predictive of the same, should by now have learned better. The near-term fortunes of the stock market and the economy are connected by a long rope, not a tow bar.

As to the news we were anxiously awaiting, it was whether the budget summit then in progress would break the fiscal deadlock between the White House and the Congress. That is, would the summit find a way to cut about $23 billion out of a projected $67 billion increase in federal spending so as to be Gramm-Rudman-Hollings (GRH) legal for fiscal '88? Many, we included, thought that a negative answer at a time of precedent-setting turmoil in the international financial markets would have left the economy open to substantial risk of serious monetary disturbance. On November 20th the budgeters at the summit announced an agreement. Whether because of that outcome or not, the economy has not been impacted by any serious monetary disturbance during the ensuing year. And the federal budget deficit for fiscal '88 is approximately on target.

Correctly rejecting a mechanistic projection from the stock market to the economy, and correctly assuming that there would be a budget agreement and no monetary disaster, may have been necessary conditions for an accurate forecast of GNP for 1988, but they were hardly sufficient.

We are now estimating that 1988 will register an increase in real GNP of 146.7 billion 1982 dollars — a rate of growth amounting to 3.8 percent. The forecast we presented a year ago projected an increase of only $109.6 billion, or 2.9 percent. This implies a forecast error of about $37 billion, or 9/10 of one percentage point, which is one of the bigger Outlook Conference forecast errors. As usual, there is much to be learned from studying our errors; but first let us enjoy the small comfort of knowing that we were more accurate than most, at least in terms of the single dimension of real GNP.

To provide a perspective which makes the point, Table 1 summarizes certain aspects of the forecasts which appeared in the well-known *Blue Chip Economic Indicators* published November 10, 1987. These were all early November forecasts and included an RSQE figure of 2.8 percent real growth based on a preliminary version of what became our Outlook Conference forecast. If the Blue Chip regulars can be regarded as representative of the community of serious professional economic forecasters, then about 70 percent of that community were less accurate, and nearly half a great deal less accurate, than we were a year ago. On the other side of the distribution, nearly 25 percent were more accurate, but only one of these was a class apart from us in accuracy.

But to provide a more inclusive basis for evaluating the forecast we made a year ago we need to focus on the dynamic and substantive details in the message we were presenting. Let's first consider the quarterly path in our forecast of real final sales, i.e., the effective demand for final goods and services. A year ago we were forecasting that final sales growth would drop sharply in the closing

TABLE 1.
"Blue Chip" Forecasts of Percent Change in Real GNP, 1987–88, as of November 1987†

Forecasters	Low	High	Average	Estimated Error (Billions of '82 Dollars)‡
Highest Forecast	—	3.9	3.9	−3
Next 11	2.9	3.3	3.1	27
Next 3 (Includes RSQE)	**2.8**	**2.8**	**2.8**	**39**
Next 12	2.3	2.6	2.5	51
Next 12	1.2	2.2	1.6	85
Lowest 10	−2.0	1.1	−0.2	154
Blue Chip Consensus	−2.0	3.9	1.9	74

†Data in first three columns calculated by RSQE from Robert J. Eggert, editor, *Blue Chip Economic Indicators*, November 10, 1987, page 3.

‡Based on current RSQE forecast of real GNP at 3993.7 billion 1982 dollars for 1988.

*This article is adapted from Dr. Hymans' presentation to the 36th annual Conference on the Economic Outlook at the University of Michigan in November 1988. The editor wishes to thank RSQE associates Morag Nairn and Michael R. Donihue for their technical assistance in presenting the article here.

quarter of 1987 and then bounce back up in the first quarter of '88. That was the kind of post-crash reaction we were anticipating, and it's exactly what happened. Indeed, our only serious error in forecasting the pattern of real final sales came in the second quarter. Final sales growth continued up sharply in the second quarter, before returning to a more sustainable pace in 1988:3, a quarter later than we had forecast.

While we may have anticipated much of the basic pattern and magnitude of final demand for the half-year following the stock market crash, we certainly missed in dramatic fashion in our forecast of inventory investment. Inventory stocks accumulated at twice the rate we expected in the last quarter of '87 and at three times the rate we expected in 1988:1. We were much closer in the middle two quarters of the year but missed the drop now anticipated for the current quarter, much of which is due to the summer drought. Despite the bearishness that dominated the financial and general news media for months after the crash, producers just kept filling the shelves. Part of what we had missed was the existence of a relatively low stock/sales ratio outside of the automobile sector in mid-1987. This might have provided the incentive to take advantage of the stall in demand to build some desired stock on the very presumption that the stall in demand would only be temporary.

Combining the dynamics of forecast and error in final demand and inventories provides the perspective of localizing most of our forecast error into 1987:4. By missing on inventory accumulation in the last quarter of '87, we started 1988 from far too low a level of output. And our overpredictions for the second half of '88 — much the result of the unanticipated drought effects — weren't nearly large enough to compensate. In effect, we had a poor forecast of the year-over-year change in real GNP precisely because we followed a big start-up error with a relatively accurate forecast of the subsequent within-year pattern.

In general, inflation seems to have been held more in check than we had expected a year ago — even if, as will be noted below, it appears to be high enough to have generated some concerns at the Federal Reserve Board — and that's the case despite the price effects of the drought. One source of the error in our inflation forecast is the fact that, throughout the year, the U.S. dollar has been stronger than we had expected.

We expected the dollar to weaken over the year, which it did, but we missed the mid-year run-up in value, which ended in late summer. The dollar's climb in the spring and summer followed the Fed's decision to switch to credit tightening in the spring. This appears to have been precipitated by the conclusion at that time that the crash was not being followed by a recession and that, indeed, a possible renewal of inflationary pressures seemed much the more likely problem for the monetary authorities to be concerned about. If right, this implied a switch to tighter credit and higher interest rates. If our major trading partners let our rates rise in relative terms — and the evidence is that they did — this would imply upward pressure on the value of the dollar, an anti-inflationary bonus but a road-block on the way to continuing progress on improving our real trade balance. There is evidence that both the good and the bad effects of a stronger dollar are indeed being realized: the inflation rate hardly seems to be on a tear, while imports do seem to have spurted up a bit most recently.

In view of all that has already been noted in reviewing last year's forecast, we limit our remarks in connection with the data in Table 2 to a very few. Our underprediction of the level of consumption (and most of its components) is very much the consequence of starting the forecast off at too low a level of output, hence employment, income payments, and consumer purchasing power. We committed serious, though approximately offsetting, errors in forecasting real net exports and investment in producers' durable equipment. We expected a bigger improvement of our real trade balance than has materialized. Real exports grew by more than we had forecast, but so too did imports, and by an even greater margin. The sharp growth of investment in production equipment and other forms of producers' durables, including computers and related equipment, is a welcome sign after several years of generally lackluster investment activity of the kind needed to enhance our productive capacity and international competitiveness. Finally, note that the federal deficit is almost $20 billion lower than we had forecast. Our forecast was accurate to within $2 billion on the expenditure side of the budget, but our underprediction of incomes left us with a substantial corresponding underprediction of revenues.

The Economy in Late 1988

As already noted, important aspects of a dynamic forecast can be thrown permanently off if the forecast begins on the wrong trajectory. Understanding the current state of the economy, and successfully communicating that understanding through the inputs of our econometric model, is thus a critically important first step in generating our economic forecast.

We expect real GNP growth at just under 2 percent for the current quarter, and at just over 3½ percent for the first quarter of next year. In a literal sense, this means that the growth retardation evidenced in the third quarter of this year is projected to continue in the fourth quarter, but to reverse itself right after the first of the year. That, however, would substantially misrepresent the difference between these two quarters. A better sense of what we are forecasting can be seen by considering the predicted path of real final sales (excluding sales of agricultural stocks by the Commodity Credit Corporation, CCC): namely, an annualized growth rate of 2.8 percent in *each* of 1988:4 and 1989:1. In effect, then, the growth of final demand is seen to have dropped from a 5.5–6 percent pace during the first half of this year to a pace in the 2–3 percent range for the second half of this year and early next year. The GNP gyration in our forecast is basically a reflection of the effects of last summer's drought. We expect the fourth quarter to show the year's biggest drop in real farm inventories — even with CCC sales continuing at a relatively high level — which produces an artificially low growth of GNP for this quarter. The lower pace of liquidation of farm inventories expected for 1989:1 then produces the reverse, an artificially high growth rate at the start of next year.

TABLE 2. Review of RSQE Forecast For 1988

Economic Indicators	1986–87 Actual	1987–88 Predicted	1987–88 Current Estimate	1987–88 Forecast Error
CHANGES				
Real GNP & Components (Billions of 1982 $s)				
GNP	125.3	109.6	146.7	37.1
Personal Consumption Expenditures	65.8	50.0	68.2	18.2
Durable Goods	5.9	7.1	18.3	11.2
Nondurables	11.0	6.9	7.3	0.4
Services	48.8	36.0	42.6	6.6
Producers Durable Equipment	15.8	7.1	45.7	38.6
Nonresidential Construction	−3.8	2.0	−0.4	−2.4
Residential Construction	0.2	−3.8	−5.2	−1.4
Inventory Investment	19.0	−6.5	5.2	11.7
Net Exports	8.6	55.8	31.1	−24.7
Exports	49.4	40.1	72.9	32.8
Imports	40.8	−15.8	41.8	57.6
Government Purchases	19.7	4.9	2.3	−2.6
Prices and Incomes (Percent Changes)				
Private Nonfarm Sector				
Hourly Compensation	3.8	4.6	4.6	0.0
Unit Labor Cost	3.1	3.3	3.3	0.0
Price Deflator	2.9	3.9	2.7	−1.2
Personal Consumption Deflator	4.5	5.1	4.1	−1.0
Exchange Value of U.S. Dollar	−13.7	−10.5	−4.2	6.3
Real Disposable Income	1.7	1.9	3.6	1.7
Corporate Profits (with IVA and CCA)	3.8	2.5	5.6	3.0
LEVELS IN TERMINAL YEAR				
Civilian Unemployment Rate (Percent)	6.2	6.0	5.5	−0.5
3-Month Treasury Bill Rate (Percent)	5.8	5.6	6.6	1.0
Corporate Aaa Rate (Percent)	9.4	9.9	9.7	−0.2
FHA Mortgage Rate (Percent)	10.2	10.2	10.4	0.2
Personal Saving Rate (Percent)	3.2	3.5	4.1	0.6
Auto Sales (Millions of units)	10.3	10.2	10.7	0.5
Import Share (Percent)	31.1	32.0	29.0	−3.0
Federal Deficit (Billions of Dollars, Fiscal Year)	163.5	167.8	149.0	−18.7

The continued and steady growth of final demand which we are forecasting for this quarter and next is paced by:

- Continued strength in business capital purchases, up at an annual rate of 5⅓ percent.
- A modest strengthening of residential construction activity in response to the recent drop in mortgage rates.
- A renewed improvement in our real net export position late this year and early next year, following the stall which developed along with the sharp turnaround in interest rates and the value of the dollar in the spring and summer.

Consumer purchasing activity is expected to follow along, not to lead the expansion of demand over the coming half year — car sales are forecast to be edging down a bit, and the personal saving rate moves slightly upward. The overall growth of economic activity which this implies holds the unemployment rate at just about 5½ percent through the first quarter of next year.

Clearly, at this stage of our economic expansion, with aggregate unemployment near 5½ percent and capacity utilization at about 84 percent, we would hardly look for final demand growth to continue at a rate above three percent. The 2.8 percent turn-of-the-year demand growth in our forecast is probably close to the peak rate that our capacity growth can service, especially if we expect it to be accompanied by improvements in real net exports. A sustained attempt to exceed such a growth rate would surely produce increasing inflationary pressures.

Inputs to the Forecast

Fiscal Policy. The Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 set revised deficit targets for fiscal years 1988 through 1993 and amended the sequester procedures of the Balanced Budget Act (Gramm-Rudman-Hollings) of 1985. The deficit targets are $136 billion for fiscal 1989 and $100 billion for fiscal '90. The Office of Management and Budget has estimated that the fiscal '89 budget deficit will be just under $146 billion, which falls within the $10 billion margin of error allowed by the GRH Reaffirmation Act. Hence, no cuts are required for the current fiscal year.

For fiscal 1990, our federal budget projections include budget action to reduce the deficit by $25 billion. Without such action, a business-as-usual budget (allowing for inflation and program participation changes) would, in the context of our forecast, produce a $132 billion (NIPA basis) deficit. The deficit reduction in our control forecast is accomplished with a combination of spending reductions totaling $17.5 billion for fiscal '90 and a $10 billion increase in personal taxes starting in January 1990. The expenditure reductions include a $1.6 billion reduction in nondefense purchases, a $5.5 billion reduction in subsidies, an $8.1 billion reduction in grants-in-aid to state and local governments, and a $2.3 billion reduction in federal government transfer payments. Note that these are all reductions *relative* to the increases that would otherwise occur "naturally."

We are assuming that the personal tax increase can be accomplished through changes that can fairly be characterized as technical corrections to the Tax Reform Act of 1986. The most substantial change involves amending the technical error which allows families with taxable incomes above $200,000 (or individuals with taxable incomes above $105,000) to pay taxes at a marginal rate of 28 percent while those with *lower* incomes of $75,000–$200,000 ($45,000–$105,000 for individuals) pay at the *higher* 33 percent marginal rate. This change raises taxes compared to current law only for families with incomes in excess of $200,000 (and individuals with incomes in excess of $105,000), and the Congressional Budget Office estimates that it would yield $6 billion in additional revenue in calendar 1990.

Our budget assumptions on expenditures — including the $17.5 billion "cut" for FY '90 — are summarized in Table 3. Defense spending, which increased by $15 billion (5.4 percent) in fiscal '87 but by only $8 billion (2.6 percent) in fiscal '88, is projected to increase by $7 billion (2.3 percent) in fiscal '89 and by $12 billion (4 percent) in fiscal '90.

Nondefense purchases, excluding the Commodity Credit Corporation (CCC) inventory change, increased by $3½ billion in fiscal year 1987 and by $10 billion (11.7 percent) in fiscal '88. We are projecting an increase of $6 billion (6.1 percent) in fiscal '89 and $4 billion (3.8 percent) in fiscal '90. The 1990 path holds spending flat at the level of the final quarter of fiscal 1989 except for a projected 3 percent pay increase for civilian government workers and the projected costs of additional government employment during the 1990 census effort.

TABLE 3. Federal Government Expenditures in the National Income and Product Accounts (Billions of Dollars)

	Actual	RSQE Projections	
Totals and Components	Fiscal 1988*	Fiscal 1989†	Fiscal 1990†
Federal Expenditures	1113.2	1163.9	1222.2
(Percent Change)	(5.2)	(4.6)	(5.0)
Purchases of Goods and Services	381.2	401.9	428.2
National Defense	297.6	304.6	316.9
Nondefense	83.6	97.3	111.3
CCC Inventory Change	−13.8	−6.0	4.0
Other Nondefense	97.4	103.3	107.3
Transfer Payments	433.7	458.7	490.8
Unempl. Benefits	13.6	14.3	16.0
Grants-in-Aid to State and Local Governments	108.1	113.6	112.1
Net Interest Paid	151.1	159.2	168.7
Subsidies Less Current Surplus of Gov't. Enterprises	39.2‡	30.4	22.5
Federal Receipts	964.2‡	1022.8	1111.2
Deficit (−)	−149.0‡	−141.0	−111.1

*Data for fiscal 1988 are from the *Survey of Current Business*, October 1988.

†RSQE projections and Control Forecast for fiscal years 1989 and 1990.

‡The subsidies less current surplus of government enterprises, receipts, and deficit components for 1988:3 are RSQE projections.

The 1988 drought will continue to affect federal expenditures through CCC activity, price support programs, and disaster relief. CCC inventories, which declined by $13.8 billion during fiscal 1988, are projected to decline by $6 billion during fiscal '89, and then to increase by $4 billion in fiscal '90. While these swings in CCC inventories result in abnormal movements in total government purchases, they do not affect GNP because they are offset by opposite changes in farm inventories (relative to levels determined by farm production and consumption). Subsidies less the current surplus of government enterprises, which reflect drought relief payments during the current quarter, are projected to total $30.4 billion in fiscal '89 and $22.5 billion in fiscal '90.

Federal transfer payments to persons, which increased by $23 billion in fiscal 1988, are projected to increase by $25 billion in fiscal '89 and by $32 billion in fiscal '90. These estimates include outlays for the early stages of catastrophic health insurance. The fiscal 1990 projection also includes $3 billion in program cuts in calendar 1990. Grants-in-aid to state and local governments, which increased by $5 billion in fiscal '88, are projected to increase by $5½ billion in fiscal '89, but to decline by $1½ billion in fiscal '90 as a result of budget cutting efforts mandated by the revised deficit reduction targets.

Taken together, our fiscal assumptions hold total federal expenditures to increases of 4.6 percent and 5 percent for fiscal years '89 and '90, respectively — about "flexible freeze" proportions. The bottom line for the federal budget implied by our forecast — including higher taxes and expenditure restraint — is a federal deficit which declines from an estimated $149 billion in fiscal '88 to $141 billion in fiscal '89 and $111 billion in fiscal '90.

We are projecting that state and local government purchases will increase at a 7.5 percent annual rate during fiscal '89, and that, on a business-as-usual path of federal grants, state and local government purchases would increase at a 7 percent annual rate in fiscal '90. However, our budget reduction assumptions reduce federal grants by $8 billion. We assume that state and local governments will protect their own budgets through a combination of lower purchases and transfer payments during fiscal '90.

Monetary Policy. The Fed's concern in recent months has centered on the risk of inflationary pressures in the U.S. economy resulting from rising levels of capacity utilization and continuing low levels of unemployment. As a result, the Fed began to push up short-term interest rates in March and raised the discount rate from 6 to 6.5 percent in early August. We anticipate that the Fed's continuing concerns about inflationary pressures will result in another increase in the discount rate to 7 percent in the middle of the first quarter of 1989.

The rate of growth of the monetary base declined from 8.6 percent at annual rate during the first quarter of 1988 to 6.3 percent at annual rate during the third quarter. We expect that the Fed will allow the monetary base to grow at a 5 percent annual rate throughout the forecast horizon.

We further project that the Fed will act to offset the fiscal tightening that is projected to begin in the fourth quarter of 1989 by bringing the discount rate back down to 6.5 percent. As in the earlier projected increase in the discount rate, we are assuming that the U.S. will act alone in nudging interest rates back down at the start of fiscal year 1990. Consequently, by mid-1990 U.S. short term interest rates will have depreciated relative to foreign rates, thus returning approximately to their current relative position.

Non-oil Prices. We are expecting the foreign-currency prices of our non-oil imports to fall during the current quarter in response to the recent decline in the value of the dollar, but to be rising at a 4 percent annual rate by late 1989. With the trade weighted value of the dollar forecast to decline during the next two years, the dollar price of non-oil imports will be contributing an upward push to U.S. inflation rates.

Oil Prices. Most OPEC members have been producing more oil than is specified in their quotas. The current quotas, totaling 17.5 million barrels per day, were set up in December 1986 with a target price of $18 per barrel. Recent production has exceeded 20 million barrels per day. OPEC's overproduction, combined with high levels of non-OPEC oil production, has resulted in a world crude oil glut. Consequently, oil prices, which averaged $16 to $17 per barrel during the first half of 1988, are now in the $13 to $14 per barrel range. Failure of OPEC members to reach a new agreement to limit production could result in oil prices falling even further.

The October OPEC strategy session in Madrid did not produce a new production cutting accord, but the oil ministers there did at least pursue the general outline of a plan to reduce production, and Iran and Iraq appeared to adopt a more conciliatory attitude toward each other. We expect continuing efforts by OPEC members to resolve pricing and output strategy differences and, hence, we are assuming that oil prices will firm in the $15 per barrel range in early 1989. With a somewhat higher, but more sustainable OPEC quota level, oil prices are projected to rise at 2–3 percent annual rates during most of 1989 and then to rise at a 4 percent annual rate during 1990.

The Drought and Farm Prices. The U.S. suffered its most severe drought in half a century this past summer. The corn and soybean crops were severely affected, and the spring wheat crop was reduced as well. Year-end stocks of these crops are expected to be severely depleted. A record 78.4 million acres of farmland were removed from production in 1988 under government set-aside, Conservation Reserve, and other land-idling programs. Land-idling programs are expected to be substantially reduced in 1989 to allow farmers to plant increased acreage. Even with a substantial increase in acres planted and assuming normal weather conditions, year-end stocks are expected to remain at very low levels at the end of the 1989 harvest year.

Farm prices, as measured by the implicit price deflator for gross farm product, increased at nearly a 50 percent annual rate from the first to the third quarter of 1988. We expect farm prices to remain level during the current quarter, to decline a bit in the first quarter of 1989, and then to rebound to current levels during the second and third quarters of 1989 largely due to higher meat prices reflecting the higher slaughter rates during the summer drought. Thereafter, we expect farm prices to be increasing at a 4 percent annual rate.

We now turn to the forecast for 1989–90 which results from the combination of our input assumptions, recent economic conditions, and our econometric model.

Overview of the Control Forecast

Our Control Forecast for 1989–90 is summarized on a calendar year basis in Table 4. The first line of the table indicates that 1989 and 1990 are forecast to be years seven

TABLE 4. Overview of RSQE Control Forecast for 1989–90

Economic Indicators	1988	1989	1990
Percent or Percent Change			
Growth of Real GNP (1982 Dollars)	3.8	2.9	2.4
Civilian Unemployment Rate	5.5	5.5	5.6
Rate of Inflation (Consumption Deflator)	4.1	4.8	5.5
3-Month Treasury Bill Rate	6.6	7.1	6.4
Growth of Real Disposable Income (1982 Dollars)	3.6	2.3	0.7
Profits* as a Percent of GNP	6.8	6.2	6.1
Automobile Sales (Millions of Units)	10.7	10.4	10.6
Import Share of Auto Sales (Percent)	29.0	28.8	29.9
Increase in Real Business Fixed Investment (Billions of 1982 Dollars)	45	27	19
Percent Decline in Exchange Value of U.S. Dollar	4.2	0.8	2.5
Increase in Real Net Exports (Billions of 1982 Dollars)	31	12	19

*Includes IVA and CCA.

and eight of the post-1982 economic expansion. Compared to the 3.8 percent growth of real GNP now estimated for this year, however, we are forecasting considerably slower growth for the next two years: 2.9 percent for next year, and only 2.4 percent for 1990. The latter, if realized, would mark 1990 as the slowest growth year of the entire expansion. As shown in the second line of the table, output growth of a little under 3 percent holds the unemployment rate steady, while output growth of a little under 2½ percent is accompanied by a rising unemployment rate, though the extent of the rise in unemployment forecast for calendar 1990 is minimal.

Along with the continued economic expansion, we are anticipating somewhat higher rates of inflation over the next two years. As measured by the implicit price deflator for consumer goods and services, we are forecasting inflation rates of 4.8 and 5.5 percent for calendar '89 and '90, respectively, up from 4.1 percent for this year. With three straight years of unemployment at just about 5½ percent, a 1988 drought affecting food prices well into 1989, oil prices assumed to begin rising again, and the prices of most imported consumer goods rising at above average rates as the U.S. dollar continues to depreciate, the step-up in the rates of increase of average consumer prices forecast for 1989 and '90 should come as no surprise. We put off just until the next section any discussion of whether our forecast should be interpreted to mean that an "inflation problem" is on the horizon.

Continuing with the overview in Table 4, we see the interest rate pattern dominated by our monetary policy assumptions. The treasury bill rate is forecast to average 7.1 percent in 1989, but to be down to an average of 6.4 percent the year after. The growth of real disposable income is forecast to be down to 2.3 percent next year, compared with 3.6 percent estimated for this year, and to be down to only 7/10 of one percent for 1990, due to the combination of a slower growth economy and the higher personal taxes which are part of the assumed fiscal '90 budget package. Corporate profits (including inventory valuation and capital consumption adjustments) are projected at a bit over 6 percent of GNP for each of the next two years.

Additional detail regarding some of the more important output-related variables in the Control Forecast is shown in the bottom section of Table 4. Auto sales are forecast to slip from 10.7 million units this year to 10.4 million units next year, reflecting, in part, the sensitivity of auto sales to higher interest rates. Car sales edge back up to 10.6 million units for calendar 1990 as lower interest rates take hold. The import share of car sales is forecast to stay at about 29 percent again for 1989, but to edge up to nearly 30 percent for 1990 as the price of foreign relative to domestic cars begins to stabilize.

Continued increases in real business capital spending are forecast over the next two years, but by far smaller amounts than during this year, which witnessed an especially big increase in business computers and related equipment. It should be noted that the huge jump in capital purchases this year brought real business fixed investment up to 12.3 percent of real GNP from 11.6 percent in each of 1986 and 1987. The continued investment increases shown in Table 4 raise the investment/GNP ratio to 12.6 percent next year and 12¾ percent the year after — ratios which are quite high by historical standards. Finally, although the U.S. dollar is forecast to continue to depreciate in 1989, the year-over-year change is small as the higher level of interest rates forecast for the first half of next year slows down the rate of dollar depreciation. A higher rate of depreciation is posted for calendar 1990 as the Fed's assumed response to fiscal tightening permits interest rates to move down. Consistent with this pattern of dollar depreciation, we forecast a far smaller improvement in real net exports in 1989 than occurred this year, but a larger gain in 1990 than in 1989.

The overview that is based on calendar year data raises several important questions. Among them: is the expansion stalling out by 1990, is inflation behaving in such a way as to represent an increasingly serious problem, are we getting close to an international balance, and so on? These and other matters are better addressed by considering the quarterly path of the Control Forecast, to which we now turn.

The Quarterly Path in the Control Forecast

A number of the more important dynamic aspects of the Control Forecast are summarized in Charts 1-6. We begin with Chart 1, which plots the forecast paths for the growth rates of real GNP and real Final Sales (excluding CCC activity). We are forecasting near-term growth of final demand at an annual rate of 2.8 percent, well below the 5.5-6 percent rates of the first half of this year. Beyond the near term we are forecasting another small step downward, with final demand growth generally in the range of 2 to 2½ percent after the first quarter of next year and averaging 2¼ percent over the seven quarter period 1989:2-1990:4. Once the gyrations due to the drought and its inventory implications have worked themselves out, it becomes clear that real GNP growth is also forecast to move into the 2 to 2½ percent range.

There is no paucity of ways to evaluate the desirability of any contemplated path of output growth, including that shown in Chart 1. A way that comes quickly to mind, of course, is to ask "What does it mean for unemployment and inflation?" Chart 2 deals precisely with that question. For most of the forecast horizon the civilian unemployment rate remains in the narrow range of 5.4-5.5 percent. By the second half of 1990, however, the unemployment rate begins to drift upward in response to output growth pegged at less than 2½ percent. By the closing quarter of 1990, we have unemployment averaging 5.7 percent.

Corresponding to this stable-to-slightly-up path of unemployment is a forecast inflation path which goes from about 3½ percent currently, to a little over 4 percent by early 1990, and then appears to top out at just under 4.4 percent for the balance of 1990. There is nothing peculiar in the internals of the forecast which imply that the inflation behavior shown for the final three quarters of 1990 should be regarded as a temporary lull. Inflation is *not* forecast to be accelerating during 1990. Indeed, the combination of a bit of upward drift in unemployment, and a rate of capacity utilization in manufacturing which we forecast to be stable at just over 85 percent throughout 1990, imply that *no more* than the late '90 inflation rate would carry into early 1991.

The inflation rate featured in Chart 2 is that pertaining to the private nonfarm sector of the economy — essentially the core industrial inflation rate. This, rather than consumer price inflation, is the most appropriate for considering the question of the degree of inflationary momentum in the system. Consumer price inflation will be running at a higher rate, of course — about 5½ percent in the second half of 1990 — but it too will have begun to stabilize.

Charts 3 and 4 focus on the dynamics of the foreign sector. As shown in Chart 3, the dollar will keep declining in value as part of the process of continuing to shrink our trade deficit. The *rate* of decline stalls a bit in response to the assumed rise in U.S. interest rates relative to foreign rates early next year, but it picks up again when interest rates come back down a year from now. The dollar is forecast to be declining at a rate of nearly 3 percent during most of 1990. The other two prices shown in Chart 3 are the dollar price of non-oil imports and the foreign currency price of U.S. exports. The price we will have to pay to

CHART 1. Annual Rate of Growth of Real GNP and Real Final Sales (Excluding CCC)

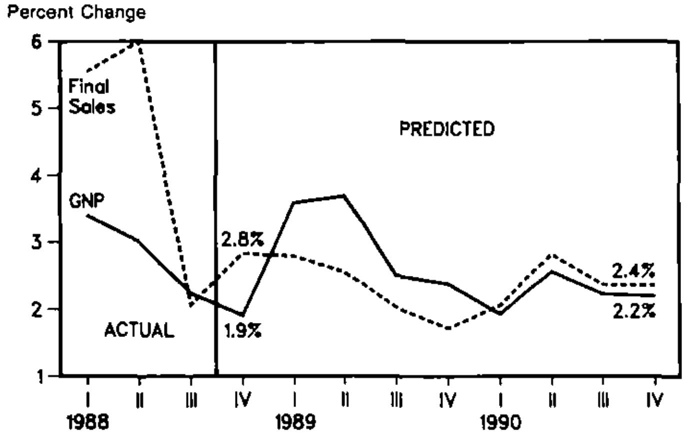


CHART 2. Civilian Unemployment Rate and Inflation Rate (Private Nonfarm Sector)

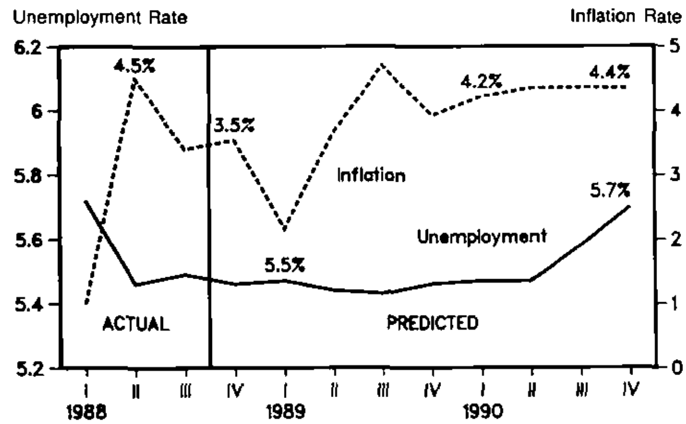
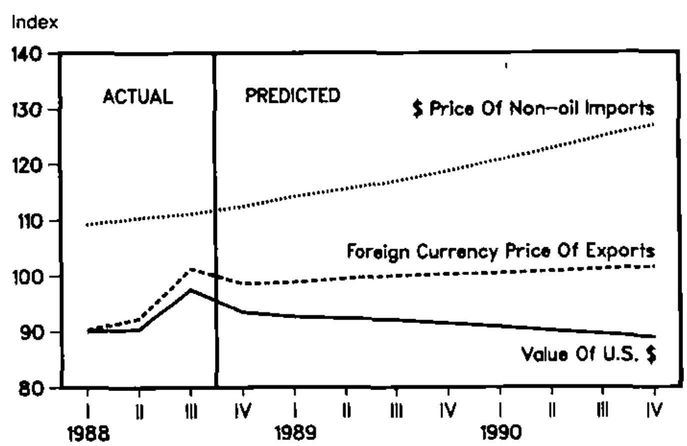


CHART 3. Foreign Sector: Prices



import is clearly inflating a good deal more than the price our trading partners will have to pay to import from us. That, of course, is the effect of the depreciating dollar, and it is a prime factor in the outlook for continued improvement in our real trade balance, which is shown in Chart 4. The deficit of 55 billion 1982 dollars (annual rate) which we are forecasting for the end of 1990 represents but half the size of the real trade deficit at the start of 1988. Real exports grew by 13 percent in calendar 1987, and they'll be up about 17 percent this year. That pace can't continue, but it doesn't have to as long as import growth continues to moderate. In the Control Forecast, real export growth averages 7½ percent at annual rate between 1988:4 and 1990:4. Real imports, on the other hand, increase by 4.3 percent during 1989, and by only 2.2 percent during 1990, under the combined effects of faster dollar depreciation and slower domestic growth. Although not shown on the chart, the nominal trade deficit improves over the forecast horizon as well, but only *very* slowly. We estimate a $91 billion nominal trade deficit for 1988, and a drop only to $81 billion for 1990.

The dynamics of interest rates in our Control Forecast are shown in Chart 5. Three-month treasury bill rates, which we believe would have been edging down throughout 1989:1 but for the assumption of mid-quarter tightening by the Fed, move up to a 7½ percent average for the quarter. The bill rate eases off in the late spring and summer — averaging just over 7 percent for the summer quarter of '89 — and then drops to about 6.3 percent a year from now as the Fed eases monetary conditions in response to the fiscal tightening required to meet the deficit reduction target for fiscal 1990. Long-term interest rates, both corporate and mortgage rates, are already declining, and we expect that to continue until the Fed tightens early next year. We expect most long rates to be up a bit in response to the tighter Fed policy, with mortgage rates up about 30–35 basis points over the first half of next year. This will be temporary, however, and mortgage rates are forecast to be back down to their current levels about a year from now. This pattern of rates implies, for example, that residential building activity will continue its current slow recovery pace through the first quarter of next year, stall again for most of the rest of the year with housing starts ending 1989 at just over 1.4 million units (annual rate), and then begin to recover again at the turn of the year.

Chart 6 provides two views of the federal budget deficit. The budget deficit, currently in the range of $140–150 billion (annual rate, NIPA basis), is forecast to be down to an annual rate of about $130 billion a year from now. With our fiscal policy assumptions the federal government is GRH-legal for fiscal 1990, with the deficit falling to an annual rate below $90 billion two years from now. It is useful to remember that the social insurance account in the federal budget is currently running an annual surplus of about $50 billion, and will be up to about $65 billion two years from now, so that our structural budget deficit will still be close to $155 billion even in fiscal 1990.

What if we didn't take a $25 billion fiscal "hit" in 1990? Wouldn't we just have a stronger economy? Is it really worthwhile to close the budget gap? We consider these questions in the next section.

CHART 4. Foreign Sector: Trade Flows

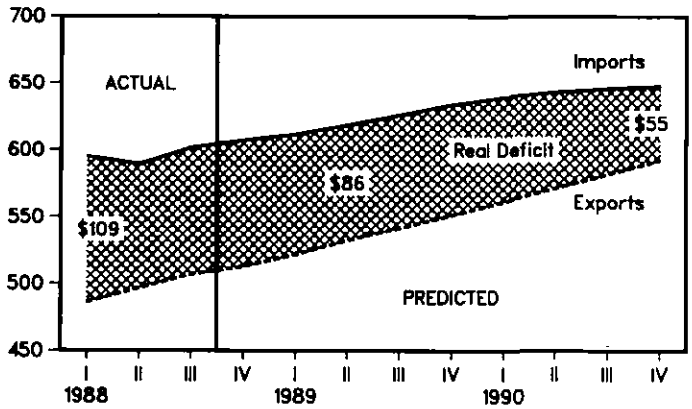


CHART 5. Interest Rates

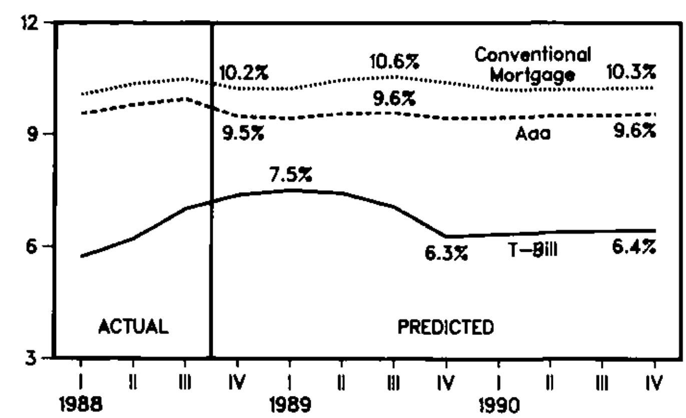
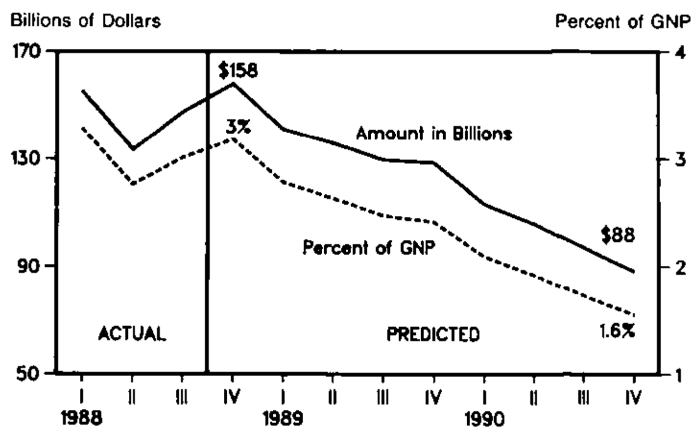


CHART 6. Federal Government Deficit (NIPA Basis): Amount and Percent of GNP



The Cost of Fiscal Tightening in 1990

As explained in the discussion of the inputs to our Control Forecast, we have assumed implementation of federal spending cuts and a personal tax increase in fiscal year 1990. We have made these spending cuts relative to projected spending levels that include increases for inflation and scheduled program participation in currently legislated federal programs. In the absence of fiscal tightening in 1990, we would assume that the Fed would find little reason to lower interest rates — the discount rate would

CHART 7. Federal Government Deficit

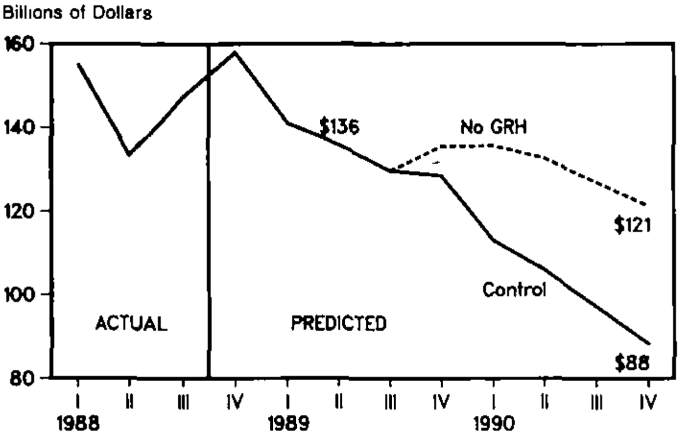


CHART 8. Annual Rate of Growth of Real GNP

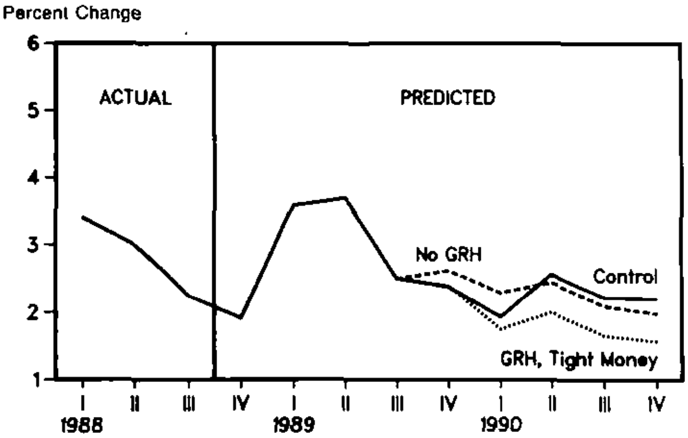
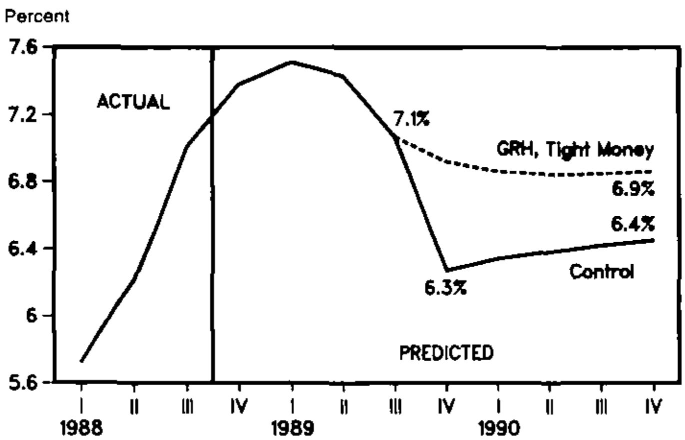
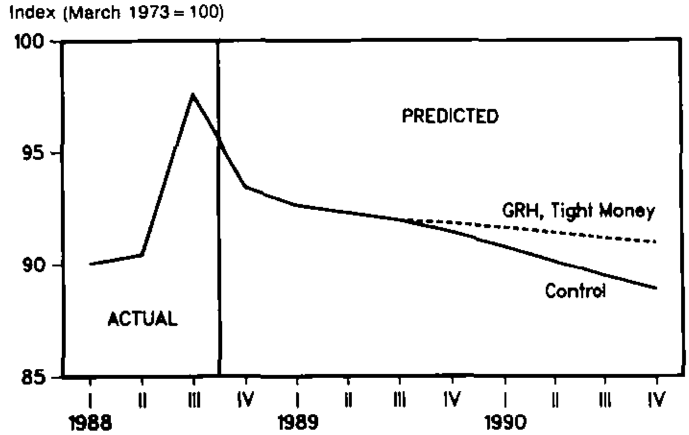


CHART 9. Three-Month Treasury Bill Rate



remain at 7 percent — and the appreciation of U.S. interest rates relative to foreign rates would thereby be maintained. Chart 7 compares the projected federal deficit in our Control Forecast to the deficit that would occur, in the context of our other input assumptions, if the GRH federal deficit target for 1990 were ignored. The federal deficit

CHART 10. Exchange Value of the U.S. Dollar



is reduced by $21.5 billion for fiscal year 1990 as a result of the assumed new policy mix with tighter fiscal and easier credit conditions, and the deficit at the beginning of fiscal year 1991, at $88 billion, is lower by $33 billion than would be the case without the fiscal tightening. With the fiscal '91 GRH target at $64 billion, still more fiscal moves might be required for FY '91.

What does it cost to comply with the GRH federal deficit target in fiscal '90? Chart 8 compares the growth path of real GNP in our Control Forecast to the growth path of real GNP implied in our alternative forecast assuming a business-as-usual federal budget that ignores the GRH target. The fiscal-tightening-with-monetary-easing policy of our Control Forecast reduces real GNP growth in the final quarter of '89 and the first quarter of '90 relative to real GNP growth in the "no GRH" forecast. By the second quarter of 1990, however, the policy mix in our Control Forecast results in a higher real GNP growth rate, and the growth rate remains higher through the end of 1990. The level of real GNP at the end of 1990 is virtually the same in our Control Forecast as in the "no GRH" alternative.

How important is the easier monetary policy that we have assumed accompanies the fiscal tightening in 1990 in our Control Forecast? Chart 8 shows that in an alternative forecast with the same fiscal tightening, but without the accompanying monetary ease assumed in our Control Forecast, the real GNP growth rate would remain lower *throughout* the forecast horizon. The cost is nearly $11 billion in the level of real GNP for calendar 1990, with the level of real GNP lower by $20 billion at the end of 1990 in the "tight money" alternative. The unemployment rate, over 5.8 percent compared to 5.7 percent in our Control Forecast at the end of 1990, is correspondingly higher as well.

Charts 9 and 10 compare interest rates and the value of the dollar in our Control Forecast and in the "tight money" alternative. Short-term interest rates, as measured by the 3-month treasury bill rate, are 45 basis points higher in calendar '90 in the "tight money" alternative than in our Control Forecast. The trade weighted value of the dollar falls by only 9/10 of one percent during 1990 in the "tight money" alternative compared to a 2.8

percent decline in our Control Forecast. The higher value of the dollar in the "tight money" alternative results in higher real imports, but (temporarily) in a lower nominal import bill.

Charts 11 and 12 compare the real and nominal trade deficits in our Control Forecast and in the "tight money" alternative. The real trade deficit is smaller in our Control Forecast, declining from $82½ billion in the fourth quarter of '89 to $55 billion in the closing quarter of 1990. In the "tight money" alternative, the real trade deficit is $10 billion higher at the end of 1990. The *nominal* trade deficit, however, is initially lower in the "tight money" alternative. The difference reaches $3 billion in the first quarter of 1990, but has virtually disappeared by the end of 1990 — the familiar J—curve effect of a change in prices or exchange rates.

CHART 11. Real Trade Deficit

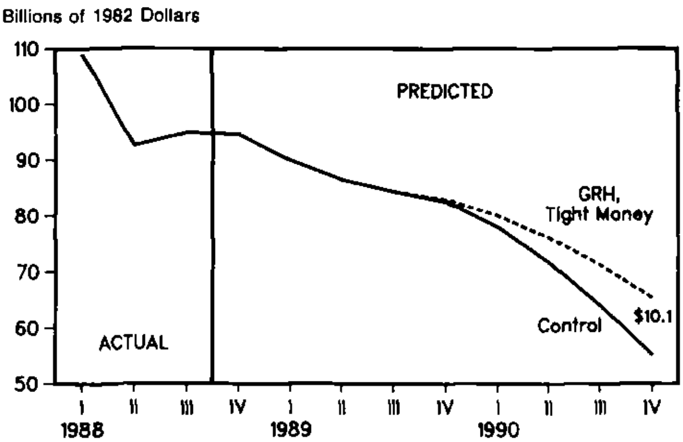
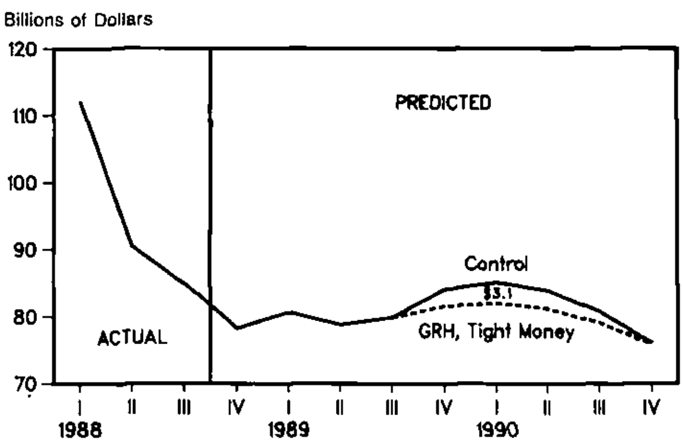


CHART 12. Nominal Trade Deficit



Final Thoughts

America will soon inaugurate its 41st president. We last changed regimes eight years ago, when President Reagan came on like gang-busters with a huge change in federal fiscal policy, just as he had promised. We took a look back at the Proceedings of the November 1980 Outlook Conference to see how well, or badly, we had anticipated Reaganomics. We had assumed fairly quick passage of a 10 percent personal income tax cut to become effective after the middle of 1981. We were close on the timing of the tax bill's passage, but way low on the magnitude of the cut; and we missed, of course, on the three-step phase-in. In the same analysis we said in regard to any tax cut package aggregating significantly more than 10 percent, "...we assume that a series of tax cuts, unaccompanied by expenditure reductions is unlikely to be forthcoming,..." and was that ever wrong! A year later, when we knew lots more about the dimensions of Reaganomics, we discussed the fiscal policy debate then in progress, in these words, as reported in the Proceedings of the November 1981 Outlook Conference,

> "The partisan ... debate centers on whether the expansionary impact derived from the supply-side effects on income will be so enormous as to offset the policy-induced swing toward larger deficits and in fact produce shrinking deficits. For a brief period of time, the pushers of this fanciful notion won over some converts in high places. The fad does appear to be petering out, but it has already had a mischievous effect on economic policy...."

The analysis continued on to worry about the high interest rates that would inevitably result, and predicted a fiscal 1982 budget deficit of $102 billion, compared with OMB's $41 billion and the $113 billion which materialized.

We were right in 1981, and so was George Bush the year before when he spoke disparagingly of "voodoo economics." If we do care about the standard of living which future generations will be able to afford, if we do care about who will own and shape the resources of tomorrow's America, then it's none too soon to make the restoration of fiscal sanity — which has indeed characterized most of our history — priority number one.

We're all able to hear the defense establishment; it will protect itself, and presumably us, as it should. But someone has to hear the little people, the quiet voices. And if they too are to be protected — and better than they have been recently — then there's no way that fiscal responsibility can be attained through realistic policies restricted to the expenditure side of the federal budget.

We need the leadership which can make that case with credibility, so that the Congress can legislate it, and the people with the capacity to be taxed a bit more each can support it. That's George Bush's crowd; he has the credibility, and perhaps he'll even use it for the benefit of our and his grandchildren.

TABLE 5. Selected Economic Indicators as Forecast by RSQE, November 1988

Seasonally adjusted data, billions of current dollars unless otherwise indicated

	QUARTERLY DATA										ANNUAL DATA			
	Actual	Projected									Projected			
													% Changes	
ECONOMIC INDICATORS	88:3	88:4	89:1	89:2	89:3	89:4	90:1	90:2	90:3	90:4	1989	1990	88-89	89-90
GROSS NATIONAL PRODUCT	4,900	4,969	5,060	5,155	5,243	5,328	5,416	5,513	5,607	5,703	5,197	5,560	7.05	6.99
PERSONAL CONSUMPTION EXPENDITURES	3,258	3,305	3,364	3,421	3,479	3,540	3,601	3,670	3,739	3,808	3,451	3,705	7.13	7.35
DURABLE GOODS	453.6	460.1	463.2	467.5	471.4	476.5	482.0	491.6	499.3	507.2	469.7	495.0	4.29	5.40
AUTOMOBILES and PARTS	211.0	213.8	213.7	215.2	216.5	219.1	222.1	228.8	233.5	238.7	216.1	230.8	3.43	6.81
FURNITURE and H.H. EQUIPMENT	159.5	162.7	165.3	167.5	169.6	171.4	173.3	175.4	177.4	179.1	168.5	176.3	5.89	4.62
OTHER DURABLES	83.1	83.6	84.2	84.8	85.3	86.0	86.6	87.5	88.4	89.3	85.1	87.9	3.37	3.37
NONDURABLE GOODS	1,058	1,063	1,081	1,097	1,114	1,130	1,146	1,164	1,182	1,200	1,106	1,173	5.99	6.07
SERVICES	1,746	1,783	1,819	1,856	1,894	1,933	1,973	2,015	2,058	2,101	1,876	2,037	8.55	8.59
GROSS PRIVATE DOMESTIC INVESTMENT	764.4	755.1	767.3	784.2	796.3	809.4	821.4	833.9	847.2	859.4	789.3	840.5	3.82	6.48
NONRESIDENTIAL	493.9	501.5	508.1	515.3	524.5	532.4	540.6	548.7	556.9	565.3	520.1	552.9	6.43	6.30
RESIDENTIAL STRUCTURES	227.6	228.7	230.1	231.5	233.1	234.8	239.3	246.1	252.2	257.2	232.4	248.7	2.21	7.03
CHANGE in BUSINESS INVENTORIES	42.9	24.9	29.1	37.4	38.7	42.2	41.4	39.2	38.1	36.8	36.8	38.9	–	–
NET EXPORTS	-84.9	-78.3	-80.7	-78.8	-79.9	-84.1	-85.1	-83.9	-80.8	-76.1	-80.9	-81.5	–	–
EXPORTS	526.3	541.4	557.4	574.2	589.4	604.6	621.6	639.5	658.0	677.2	581.4	649.1	12.75	11.64
IMPORTS	611.2	619.7	638.1	653.0	669.3	688.7	706.7	723.4	738.9	753.3	662.2	730.5	9.09	10.31
GOVERNMENT PURCHASES	962.4	986.8	1,010	1,029	1,047	1,062	1,079	1,092	1,102	1,112	1,037	1,096	7.59	5.69
FEDERAL	373.4	387.0	399.2	407.2	414.3	420.3	427.7	432.0	432.6	433.0	410.3	431.3	7.94	5.14
NATIONAL DEFENSE	294.1	298.0	304.0	307.0	309.3	311.5	316.2	318.7	321.0	323.0	308.0	319.7	3.57	3.82
NONDEFENSE	79.3	89.0	95.2	100.2	105.0	108.8	111.5	113.3	111.6	110.0	102.3	111.6	23.63	9.09
STATE and LOCAL	589.0	599.8	610.7	621.8	633.2	642.0	651.0	660.1	669.5	679.1	626.9	664.9	7.37	6.06
GROSS NATIONAL PRODUCT DEFLATOR, 1982=100	122.3	123.4	124.6	125.8	127.1	128.4	129.9	131.4	132.9	134.5	126.5	132.2	4.06	4.52
REAL GROSS NATIONAL PRODUCT (billions of 1982 dollars)	4,007	4,026	4,062	4,099	4,124	4,149	4,169	4,195	4,218	4,241	4,108	4,206	2.87	2.37
CIVILIAN UNEMPLOYMENT RATE (percent)	5.49	5.46	5.47	5.44	5.43	5.46	5.47	5.47	5.58	5.70	5.45	5.55	–	–
CORPORATE PROFITS plus IVA and CCA	340.0	329.0	315.0	323.6	323.9	333.4	335.8	339.7	342.7	346.6	324.0	341.2	-1.20	5.31
3-MONTH TREASURY BILL RATE (%)	7.01	7.38	7.51	7.43	7.07	6.27	6.34	6.38	6.42	6.45	7.07	6.40	–	–
REAL DISPOSABLE PERSONAL INCOME (billions of 1982 dollars)	2,794	2,819	2,834	2,847	2,854	2,859	2,857	2,865	2,871	2,877	2,849	2,867	2.31	0.66
PERSONAL SAVING RATE (percent of disposable income)	4.00	4.31	4.39	4.37	4.20	4.00	3.57	3.32	3.11	2.88	4.24	3.22	–	–

Sources: Projections by Research Seminar in Quantitative *Economics*, University of Michigan; actual data from Departments of Commerce and Labor, Board of Governors of the Federal Reserve System.

December Update of the Forecast

The December update of the RSQE forecast recognized the increase in interest rates which has occurred since the above forecast was prepared, and predicted that credit conditions would remain somewhat tighter through 1989–90 than was anticipated in November. As a result, interest-sensitive sectors of the economy (housing activity, auto sales, other big-ticket purchases) were expected to lag a bit below the levels forecast in November.

But the bottom line was pretty much unchanged: for both 1989 and 1990, predicted annual rates of real GNP growth, overall inflation (GNP deflator), and unemployment were all within a tenth of a percentage point of their November forecast values.

The Channel Narrows

Paul W. McCracken
Edmund Ezra Day Distinguished University Professor Emeritus
of Business Administration, Economics, and Public Policy
The University of Michigan

Optimism Rules the Forecasts

In these early weeks of 1989 optimism has been the mood of the day. Even an unexpectedly bad trade statistic in January, which not so long ago would have caused interest rates to jump and the dollar to fall, was greeted by further gains in the stock market.

While few things can generate optimism like optimism itself, in fact, no evidence has yet emerged indicating that the long expansion, beginning in 1982, is about to reverse itself. Indeed, as the new year drew closer, business analysts seemed to become even more optimistic about our prospects. The stable of economists reporting to *Blue Chip Economic Indicators* is now projecting a 2.7 percent rate of growth in output, on the average, up discernibly from the 2.4 percent average projected at mid-1988 (see Table 1). And the Organization for Economic Cooperation and Development, an international association of industrial countries, in its year-end projections forecasts a 3 percent growth in 1989 for the U.S. economy, up from their 2½ percent projection of six months earlier. Since the capacity of the economy to enlarge production is actually expanding at somewhat less than 3 percent per year, these projected rates of increase in our production of goods and services in 1989 would, if realized, mean another year at full employment for the U.S. economy.

TABLE 1. Projected Increases in Real GNP and Consumer Prices, 1988 to 1989

Date of Projection	Real GNP	Consumer Prices
June 1988	2.1%	4.8%
September 1988	2.4	5.0
January 1989	2.7	4.7

Source: *Blue Chip Economic Indicators*, various issues.

This sanguine projection of our prospects seems to be consistent with the absence of some things that are often visible as a downturn in business activity approaches. "Leading indicators" are not wilting. Among purchasing executives the proportion reporting an increase in new orders exceeds the number reporting a decline — though the margin of difference has narrowed in recent months. New orders for machinery and equipment, acutely needed to expand capacity and improve our competitive position, are continuing to enlarge, and the backlog is growing. While our trade figures wobble around from month to month, and the November bounce of the ball went the wrong way, there was a clear trend downward during much of 1988 in our merchandise trade deficit at about a 35 percent per year rate. Further improvement in 1989 — and further improvement is clearly needed — will be limited more by the inability of U.S. industry rapidly to enlarge foreign deliveries further than by our competitive position with foreign companies.

But There Are Worries

Yet there are worries as we move into 1989. There is, of course, a wide measure of agreement that the budget deficit is too large for comfort, and the political outlook is not encouraging about our ability to bring it down to a less troublesome zone in a reasonable time (see Table 2). The president's January Budget Message does project a further decline to a small surplus by FY 1993, but that is on the basis of spending discipline that would be uncharacteristic of Washington. The Congressional Budget Office projects a FY 1993 deficit of $129 billion, on the basis of current programs, and that is closer to the track we seem now to be on. Indeed, if we were simply to rock along with the budget, doing our best in a politics-as-usual way, the FY 1993 deficit would be well above $129 billion.

This much borrowing by the U.S. Treasury plus the private requirements for credit would be a larger borrowing demand than the flow of domestic saving could cover, requiring a continuing net inflow of savings from abroad. And this would, of course, mean a continuing deficit in our balance of payments on current account.

The main source of unease at this juncture, however, is another question. In 1989, will we begin to see the conjuncture, the coming together, of developments that could produce another cyclical reversal? This, after being dormant for years, is once again a lively question.

For all practical purposes the U.S. economy is now operating at full employment. We opened 1989 with the unem-

TABLE 2. U.S. Budget Surplus, 1969–1989

Fiscal Year	Amount in Billions	Percent of GNP
1969	$ 3.2	0.3%
1973	−14.9	−1.2
1977	−53.6	−2.8
1981	−78.9	−2.6
1985	−212.3	−5.4
1989*	−161.5	−3.2

*Projected.

Source: Budget of the United States Government, FY 1990, pp. 10–38.

ployment rate at just over 5 percent, and our own historical experience suggests that at this rate we have a pretty fully employed economy. Those still unemployed represent mismatches in skills required, jobs in one area of the country and those looking for jobs living in another, and people taking longer to search for new employment since we have programs to cushion the effects of interrupted earnings.

This is true in an economy whose basic capacity to produce goods and services is expanding at less than a 3 percent per year rate. By pushing it, of course, we can extract a somewhat larger increase. Output last year did increase almost 4 percent, but with an unemployment rate just under 6 percent at the start of 1988 we still had some elbow room for extra expansion.

With people increasing their spending on output at a 7 percent per year rate, in a quite fully employed economy whose basic capacity to produce is enlarging at less than 3 percent per year, the result is rising order backlogs, lengthening delivery schedules, and more upward pressures on prices. And that is what we have been seeing. Manufacturers' order backlogs are rising. In their January report, *N.A.P.M. Insight*, the National Association of Purchasing Management (a group with fingers sensitively attuned to the pulse of business) reports a wide range of lengthening delivery schedules.

And the safety valve on the price level does seem to be sputtering. The rise in consumer prices during 1988 of 4.6 percent was not, of course, a crisis. To many countries this performance would be indistinguishable from price stability. For several reasons, however, the behavior of the price level has again become worrisome. During the first two-thirds of this century consumer prices rose at the average rate of 2.1 percent per year, about the same rate as during the two decades following World War II. Thus we are not doing well even now relative to our history. And this is a major reason for interest rate levels that are persistently high relative to our history.

Moreover, and this is even more worrisome, the rate of inflation seems again to be accelerating (see Table 3). The nation emerged from the 1970s with two clear lessons about dealing with inflation. First, inflations do not die a natural death. If not countered, they will continue to pick up speed. The 4.9 percent for 1976 was perhaps tolerable, but it was followed by successively higher rates. By 1979 and 1980 we had arrived at double-digit rates, and in the early months of 1980 consumer prices were rising at a 19 percent per year pace.

Second, the only effective weapon to counter inflation is restrictive monetary policy — Federal Reserve policy. And the longer such therapy is delayed, the more severe the reaction is apt to be. In the 1970s we delayed and postponed, with the inevitable result that re-stabilization forced us to go through the severe 1981–82 recession.

There is another reason for a somewhat less expansive monetary policy in 1989. That has to do with our trade deficit. After about mid-1988 the rate of improvement in our trade deficit clearly moderated, and the final quarter of the year may have produced an actual widening of the deficit. The overly strong domestic demand for output is now playing an increasing role in our trade deficit problem, and cooling down the economy a bit is part of the needed therapy here. With demand here at home not quite so strong, imports would moderate and there would be more pressure on U.S. businesses to go after export orders with less lush domestic markets. The fundamental competitive position of the American economy is now back in line. What we now need is macroeconomic conditions which leave U.S. businesses hungrier for export orders.

The margin for error in the management of our economic policies is now narrow. There are conditions making for vulnerability on the down side. The wobbly condition of thrift institutions is an uneasy reminder of a half-century ago. Then the near-collapse of the banking system (largely the result of egregiously inept Federal Reserve policies) converted a conventional, short recession beginning in 1929 into a four-year Great Depression. The economy today is more highly leveraged. Businesses generally have higher debts, and at higher interest rates, relative to sales and profits than has been traditional in our economy. Some of these businesses would be hard-pressed to stay current with their obligations if they experienced a sharp decline in cash flow. Those managing economic policy, which means fundamentally Federal Reserve policy, cannot dismiss the possibility that what was intended to be a light touch on the brake pedal to produce a reduced rate of expansion could set in motion a cumulative contraction.

At the same time they cannot ignore the evidence that the rate of inflation is accelerating, and that domestic demand is too strong to achieve needed further large improvements in our trade balance. And procrastination, as we found a decade ago, may be a sure way to give us first unacceptable inflation and trade deficits, and then a sharp and possibly cumulative recedence in business activity.

Just because the channel has narrowed does not mean it cannot be navigated at all. Probably a year from now we shall look back on further good but not dramatic gains in employment and income and a price level behaving not too badly. The managers of economic policy, however, will have some anxious thoughts in the dark of the night, wondering where their policies are leading us.

TABLE 3. Rise in Consumer Prices

During 1970s		During 1980s	
Year	Rise	Year	Rise
1976	4.9%	1986	1.1%
1977	6.7	1987	4.4
1978	9.0	1988	4.6
1979	13.3	1989	??
1980	12.5	1990	??

Source: *Economic Report of the President*, January 1989, p. 377. The figures measure the rise during the year.

Prosperity and Remembrance: The Virtues of Economic Stability*

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The University of Michigan

Consumer Sentiment

Following the stock market crash in late 1987, widespread uncertainty was expressed about the outlook for the economy during 1988. As we now know, the fear and panic expressed on Wall Street did not spread to Main Street. The Surveys of Consumers indicate that consumer confidence quickly regained its pre-crash level, and has since then remained at very positive levels (see the chart below). In the fourth quarter 1988 survey, the Index of Consumer Sentiment was 93.0, down from the post-crash high of 96.0 recorded in the third quarter.

The events of this past year do not mark the first time in this long expansion that the persistent strength in consumer confidence has confounded the pessimists. For the past six years, consumer sentiment has been more favorable than anytime since the mid-1960s.

To be sure, this long expansion has been marked by divergent trends in consumer attitudes and expectations. The Index components that reflect expected improvement have gradually weakened since reaching a cyclical peak at the start of 1984, while the components that reflect assessments of current economic conditions have generally strengthened (see the top chart on page 22). At present, it is not so much that further improvement is expected, but that consumers expect the gains won over the long expansion to be maintained during the year ahead.

*This article is adapted from Dr. Curtin's presentation to the 36th annual Conference on the Economic Outlook in November 1988.

It has been suggested that the very favorable levels of consumer sentiment recorded during the past few years have exceeded the strength of the underlying economic factors. To address this issue, this presentation includes data that compare the consumer's subjective and qualitative assessments of economic conditions with the more objective and quantitative measures from the National Income and Product Accounts and other sources. As we shall see, there indeed has been some unwarranted persistence of favorable assessments, but for the most part consumer attitudes and expectations have closely mirrored objective measures. Of course, for many pundits it will come as a surprise that consumer attitudes and expectations could demonstrate any coherent relationship with the prevailing macroeconomic conditions.

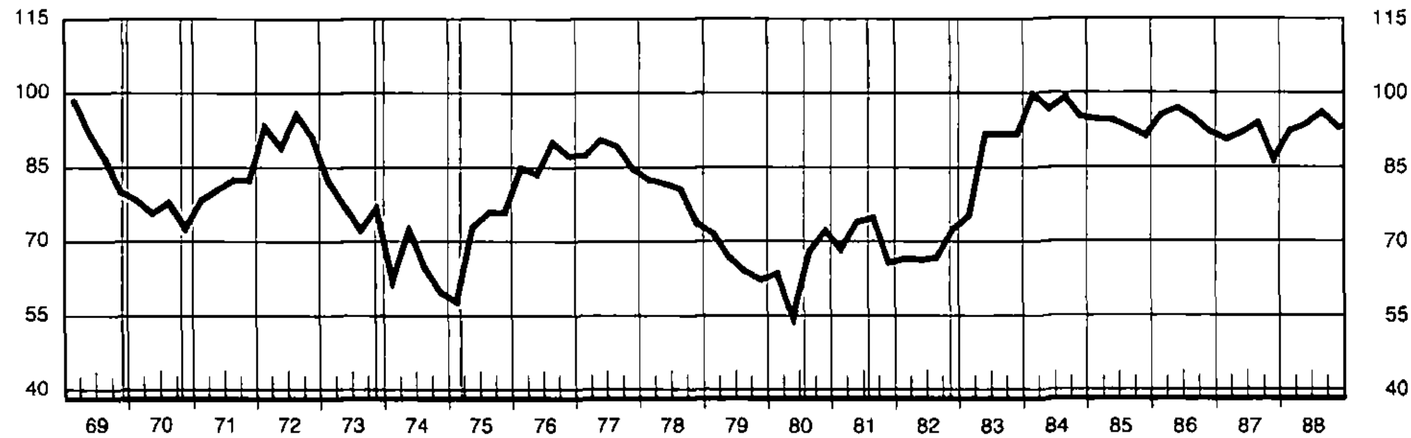
Personal Financial Evaluations

Of all the components of consumer sentiment, none has posted a more consistent favorable pattern during the current expansion than personal financial evaluations. In support of these very favorable assessments, consumers more frequently reported increases in family incomes during the current expansion than anytime in the past decade.

Importantly, inflation has thus far not posed a problem for consumers, as only 13 percent singled out recent price increases as the cause of a worsened financial situation. These favorable evaluations have been due more to low and stable inflation rates than to gains in nominal incomes. Only in the early 1960s did fewer families com-

INDEX OF CONSUMER SENTIMENT

February 1966 = 100

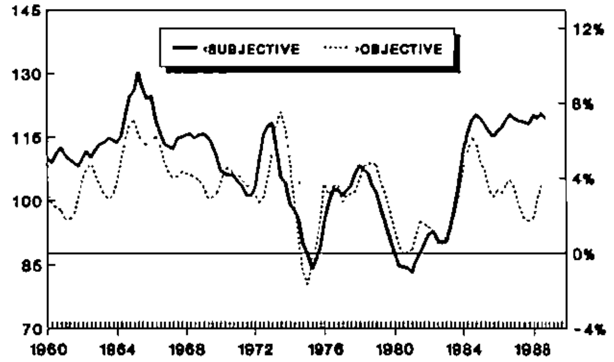


Note: Shaded areas indicate recession periods as designated by the National Bureau of Economic Research, Inc.

plain about rising prices as the cause of a worsening financial situation.

How do these subjective assessments made by consumers of their personal financial situation compare with the actual changes in their incomes? Chart 1 shows the trends in real personal disposable income and consumer assessments. For the series on real personal disposable income, the four quarter moving average of the annual percentage change is used; the attitude series is also shown as a four quarter moving average. The correspondence between the subjective and objective measures has been quite close in the past, but during the current expansion they have shown an uncharacteristic divergence. The simple time series correlation between the two series from 1960 to present was 0.70. For the more recent period from 1972 through 1984, the correlation was 0.88; when this time period is extended to include up to the third quarter of 1988 the correlation falls to 0.66. While measured real income change has slowed considerably as the expansion has lengthened, subjective assessments have remained at high levels.

CHART 1
PERSONAL FINANCIAL ASSESSMENTS AND CHANGE IN REAL DISPOSABLE INCOME



In each survey, consumers are also asked to give an overall assessment of change in business conditions in the economy as a whole. In the fourth quarter 1988 survey, half of all consumers reported that they thought that the economy had improved during the past year, a significant increase over the reading earlier in the year, but still well below the reading at the start of the current expansion.

Not surprisingly, in the fourth quarter 1988 survey much of the weakness recorded was concentrated in these personal financial evaluations. The proportion of families that reported an improved financial situation fell from 48 percent in the third quarter to 41 percent in the fourth quarter.

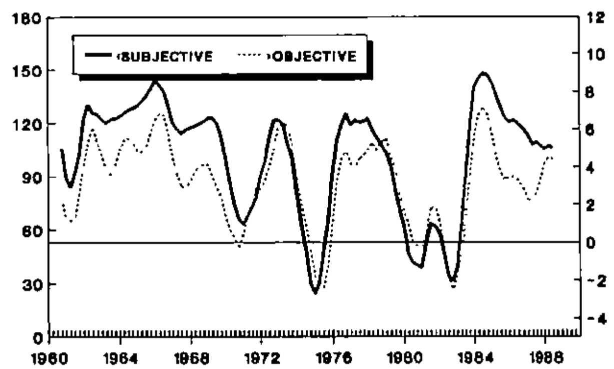
While it can be expected, based on these past trends, that the recent divergence will narrow even further, the closing of this gap may depend more on trends in inflation than nominal incomes. At the current time, however, consumers continue to hold favorable prospects for their own financial situation during the year ahead. In the fourth quarter 1988 survey, half of all consumers expected their financial situation to remain unchanged, considering expected changes in both incomes and prices, during the year ahead. Among the other half of consumers, more families expected their financial situation to improve rather than worsen, by a three-to-one margin (37 versus 11 percent). Overall, this is a quite favorable outlook.

When these subjective assessments of the national economy are compared with actual changes in the Gross National Product, a remarkably close correspondence emerges. Chart 2 shows the four quarter moving average of the annual percentage changes in real GNP and the four quarter moving average of the consumers' assessments of change in the economy. The time series correlation of the two series from 1960 to present was 0.90. These data indicate that the subjective assessments are in line with the historical pattern, although they do show a small divergence during the current expansion. For the period from 1972 through 1984, the time series correlation was 0.92, which falls only modestly to 0.89 when the time period is extended through the third quarter of 1988.

Opinions about the Economy

Despite these favorable views of their own economic situation, there has been no lack of negative information reaching consumers on the general economy. When respondents were asked whether they had heard of any recent changes in business conditions, the content of the news they heard and could recall has grown increasingly negative since the recovery began. Although favorable content of the news heard by consumers has fully recovered from the sharp drop caused by last year's stock market crash, there has still been an overall downward pattern over the course of the expansion. While the economic news reaching consumers has grown more negative, consumers' assessments of economic conditions for the country as a whole have not suffered as much, indicating the unevenness of the current expansion across different regions and industries.

CHART 2
ASSESSMENTS OF BUSINESS CONDITIONS AND PERCENTAGE CHANGE IN REAL GNP



Consumers' evaluations of prospects for the national economy have posted a strong recovery from the low levels recorded following the stock market crash. In the fourth quarter 1988 survey, half of all consumers (53 percent) expected good times financially in the country as a whole during the year ahead. Although this recovered the entire loss due to the stock market crash, it nonetheless returns these expectations to the slowly declining path that has been underway since the start of the expansion.

Longer-term prospects for the national economy have also improved, with as many families expecting good as bad times financially over the next five years. Indeed, during the last half of 1988, the surveys recorded the most optimistic readings in more than two years. Nonetheless, more than any other facet of consumer sentiment, long-term economic prospects have been the most troublesome to consumers. In the current expansion, the proportion of families that expected the reoccurrence of a recession over a five year horizon has never fallen below 33 percent. In comparison, during the 1960s as few as 11 percent of all families expected a recession over the longer term. The optimism of the 1980s has always been tempered by the realization that significant economic challenges remain on the horizon.

Unemployment Expectations

The major concern about the long-term vitality of the economy has been employment prospects. The recent gains in the international competitiveness of U.S. products, due to the decline in the value of the dollar, have improved prospects for employment. In the fourth quarter 1988 survey, the majority of families (57 percent) expected the unemployment rate to remain unchanged at its current ten year low during the year ahead. As the expansion has lengthened and the unemployment rate has fallen, fewer and fewer consumers have expected further declines. Importantly, few consumers expect renewed increases from the current low level. For the consumer, these favorable prospects represent the primary source of the current strength in the national economy.

The expected change in the national unemployment rate is compared with actual changes in Chart 3. Since consumers are asked about the direction of expected change in the unemployment rate, not its level, the annual percentage point change in the national unemployment rate was used as the objective measure. Both consumers' expectations and the percentage point change in the unemployment rate are shown as four quarter moving averages. As can be seen from the chart, the unemployment expectations series foreshadows actual changes in the unemployment rate to a high degree. Consumer expectations changed three quarters in advance of the actual change in the unemployment rate, demonstrating a time series correlation of 0.78 with this lead. Moreover, there has been little change in this relationship during the current expansion.

Interest Rate Expectations

Interest rates were expected to increase by 66 percent of all families in the fourth quarter 1988 survey. This represents a sharp rise from the post-crash low of 49 percent and returns interest rate expectations to the very unfavorable levels recorded in the second and third quarters of 1987. Indeed, they are now as unfavorable as at any prior time.

To assess the accuracy of the interest rate expectations series, the annual percentage point change in the prime rate was used so as to be consistent with the survey question, which focuses only on the direction of the expected change. Both series are shown as four quarter moving averages in Chart 4. Consumer expectations changed, on average, two quarters in advance of the change in the prime rate, achieving a time series correlation of 0.78 with that two quarter lead.

Inflation Expectations

In the fourth quarter 1988 survey, the average annual rate of inflation expected by consumers during the year ahead was 5.2%, up from 4.1% one year earlier. Consumer price

CHART 3
UNEMPLOYMENT EXPECTATIONS & PERCENTAGE POINT CHANGE IN THE UNEMPLOYMENT RATE

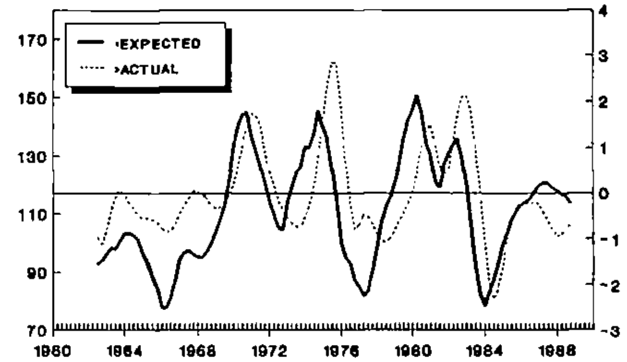
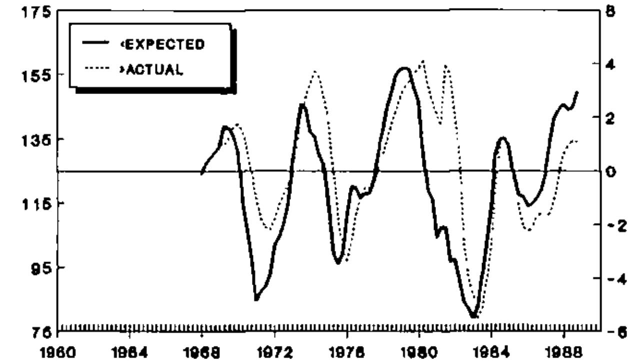


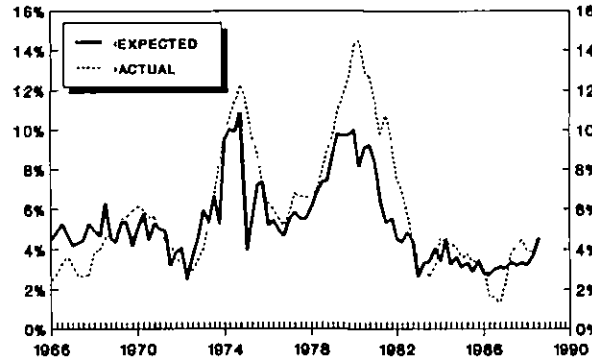
CHART 4
INTEREST RATE EXPECTATIONS & PERCENTAGE POINT CHANGES IN THE PRIME RATE



expectations rose sharply during the second quarter of 1988, as the extensive media coverage given to the drought heightened fears of potential increases in food prices, and remained largely unchanged at that higher level in the third quarter. In the fourth quarter survey, the expected inflation rate fell by 3/10 of a percentage point from the third quarter reading. Overall, the 1988 surveys recorded the highest rate of inflation expected by consumers in more than four years (see the bottom chart on page 22).

The change consumers expect in the annual inflation rate and the actual annual rate of change in the CPI-u is shown in Chart 5. For the expectations series, the median expected price increase was used — which yields lower estimates of expected inflation than the mean of the same series. As can be seen from this chart, the peak inflation rates in past years have been underestimated, but during the current expansion the relationship has been quite close. Changes in price expectations, on average, preceded changes in the CPI by one quarter. From 1966 to present, a time series correlation of 0.90 was achieved when the expectations series was led one quarter.

CHART 5
MEDIAN PRICE EXPECTATIONS AND CHANGE IN CONSUMER PRICE INDEX



Buying Attitudes

Attitudes toward buying conditions for homes, vehicles, appliances, furniture, and home electronics have remained at favorable levels in the fourth quarter 1988 survey.

Household Durables. Favorable attitudes toward buying conditions for appliances, furniture, and home electronics were held by 72 percent of all families in the fourth quarter. This reading was slightly above the 68 percent recorded a year earlier, and just below the all-time peak of 78 percent recorded at the start of 1986.

The importance of very favorable perceptions of market prices for these goods must be emphasized. The availability of low and discounted prices has dominated consumer views in recent years as never before. Consumers have come to expect, indeed demand, price discounting. Moreover, even the rising concern with inflation has not resulted in a change in this attitude. Few consumers now cite the once common appeal of buying-in-advance of rising prices. For consumers, the inflation issue is largely confined to food, and therefore offers little incentive to change their attitudes toward other purchases.

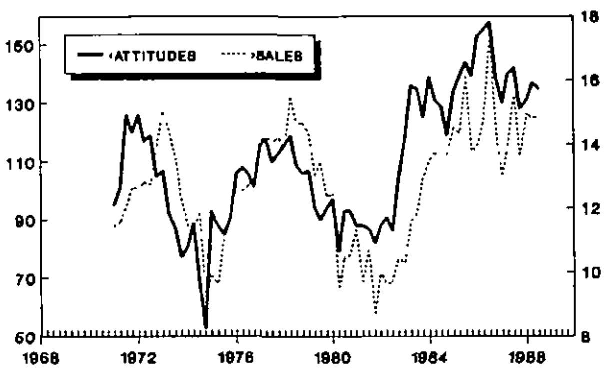
Vehicles. Favorable vehicle-buying attitudes were held by 61 percent of all families in the fourth quarter of 1988. Although this is nearly identical to the year-earlier figure, it is significantly below the all-time peak of 76 percent recorded two years earlier (see the second chart on page 22). Favorable perceptions of market prices for vehicles have played an important role in the current expansion. In sharp contrast to the so-called "sticker shock" of the 1970s, the expansion of the 1980s has been accompanied by more frequent reference by consumers to the availability of price discounts and rebates making current prices attractive, and by less frequent reference to high prices. And the once potent rationale of buying-in-advance of rising vehicle prices has only resurfaced to a very limited extent — mainly surrounding imported vehicles and model year changeovers.

Much more important in the current recovery has been attitudes toward interest rates on vehicle purchases. Very favorable perceptions of manufacturer-sponsored interest rate reductions on new vehicle loans were responsible for the earlier peaks in favorable buying attitudes. During the past year, however, these favorable perceptions of interest rates on vehicle loans have declined sharply.

Chart 6 shows the correspondence of vehicle-buying attitudes with sales of new cars and light trucks in millions of units at annual rates. On average, changes in buying attitudes preceded changes in sales by two quarters. A time series correlation of 0.75 was achieved when the attitude series was led two quarters, although it was nearly as high with a lead of up to four quarters.

Homes. Favorable attitudes toward buying conditions for homes were held by 65 percent of all families in the fourth quarter 1988 survey, somewhat below the third quarter reading and substantially below the cyclical peak recorded in 1986 (see the third chart on page 22). Despite the overall decline in favorable home-buying attitudes, they still remain above the peak levels recorded prior to 1980.

CHART 6
BUYING CONDITIONS FOR CARS AND TOTAL VEHICLE SALES IN MILLIONS



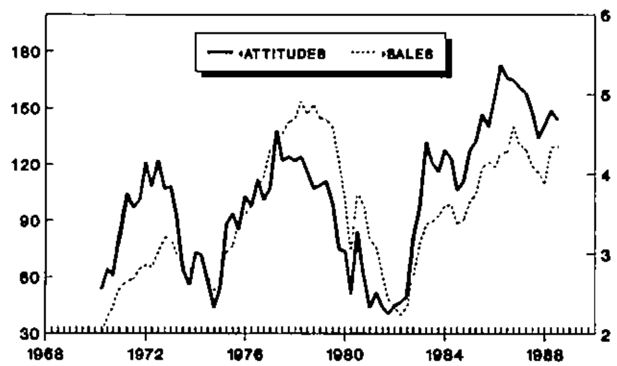
Much of the strength in attitudes toward buying conditions for homes during this expansion has been due to favorable perceptions of prices. For the first time since the 1960s, more families when asked to explain their views favorably referred to current home prices during the current expansion than complained about high home prices. In the third quarter 1988 survey, nearly twice as many families favorably mentioned current home prices as complained about high prices. The small fourth quarter decline in favorable home-buying attitudes can be traced to a decline in these favorable perceptions of home prices.

Although favorable perceptions of home prices weakened in the fourth quarter survey, there was no rise in the proportion of families that found appeal in buying-in-advance of rising home prices. Whereas in the 1970s this rationale was widespread, in the current expansion very few families expressed this motivation. Indeed, rather than buying-in-advance of rising prices, consumers were more likely to report the advantage of *borrowing*-in-advance of rising interest rates. For home buyers the 1980s has meant greater uncertainty about future mortgage rates than future home prices. And at present it is more likely that consumers hold favorable home-buying attitudes because they fear increases in mortgage rates rather than increases in home prices.

While it has long been true that declines in favorable home-buying attitudes have been dominated by rising mortgage rates, the sharp increases in favorable home-buying attitudes recorded during the current expansion was the first to be dominated by the appeal of declining interest rates. During the past year, however, the appeal of lower mortgage rates has greatly lessened, weakening overall home-buying attitudes.

Chart 7 shows the trends in home-buying attitudes and sales of new and existing single family homes in millions of units at annual rates. Changes in home-buying attitudes preceded changes in sales on average by two quarters. A time series correlation of 0.75 was found when the attitude series was led by two quarters.

CHART 7
HOME BUYING ATTITUDES AND SALES OF SINGLE FAMILY HOMES IN MILLIONS



Summary Outlook

The dominant finding from the recent Surveys of Consumers is twofold: First, consumer sentiment remains at very favorable levels, marking the most extended period of consumer confidence recorded in more than twenty years. Second, although remaining at favorable levels, at the margin consumer sentiment trends now exhibit more potential weakness than strength. While the declines have thus far been modest and have proceeded at a very slow pace, they signal greater downside risk than prospects for renewed upward momentum. The most favorable prospects for consumer spending are attained when attitudes and expectations are favorable and improving. Nonetheless, the data do indicate a positive outlook for consumer sales. There are, however, several concerns.

First, consumers have become increasingly concerned with rising inflation rates and with rising interest rates. Both of these concerns strike at the core of the remaining strength in consumer confidence and represent a serious threat to its continued maintenance at high levels.

Although at present consumers continue to favorably view income and employment prospects for the year ahead, rising inflation rates could quickly erode these positive attitudes, especially since these favorable assessments have outdistanced actual developments in incomes. Indeed, one of the interesting results from the comparisons between consumers' subjective assessments and actual economic changes is that the largest gap in the otherwise close correspondence was for assessments of personal finances. Most observers would suggest that since consumers possess more information about their own financial situation than about any other aspect of the economy these assessments would provide a more accurate reflection of actual conditions. Given the results on the inflation expectations comparisons, the answer does not lie in consumers' underestimation of inflation, but it is possible that consumers have overestimated the growth in their nominal incomes.

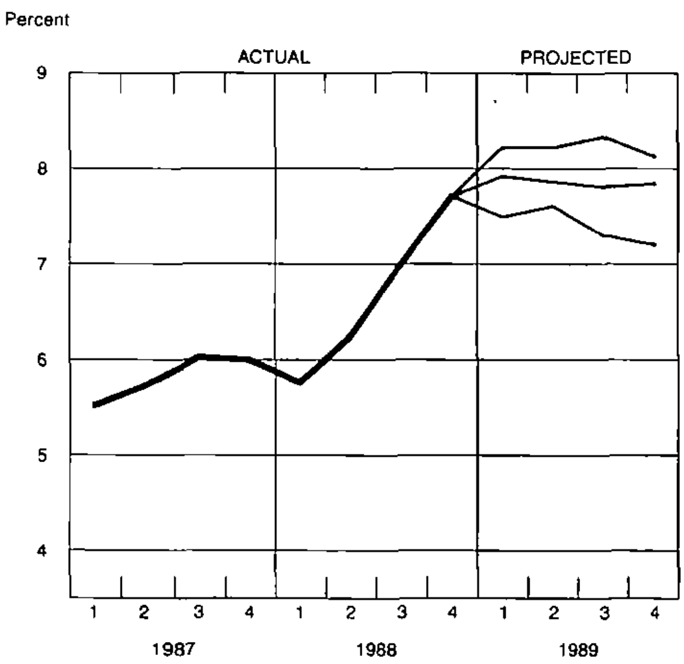
Perhaps a more plausible explanation is that it has been the relative stability of inflation that has enhanced consumers' assessments of their economic situation. The uncertainty caused by the inflation of the 1970s led to a pervasive sense of economic insecurity and an inability to plan ahead. The lower and more stable inflation rates that have prevailed since then have given consumers a new sense of confidence in their ability to make financial plans and to provide for future financial needs. It is this renewed sense of financial stability that has made the gap between subjective assessments and actual developments persist. And it is a resurgence in inflation that could cause this gap to close quickly.

During the past five years the quarterly movements in the Index of Consumer Sentiment as well as price expectations have exhibited the lowest standard deviations recorded in more than twenty years. In addition, the decline in the variance of the Index of Consumer Sentiment was preceded by the decline in the variance of price expectations.

The second potential threat involves interest rates. Decisions on the timing of major purchases have become increasingly dependent on interest rate trends, and increases in interest rates during the year ahead would diminish the remaining strength in these attitudes. As we have seen, the recent increases in interest rates have meant that consumers no longer view their current level as a positive appeal, but interest rates have not yet increased to the point at which consumers view them as a cause for postponement.

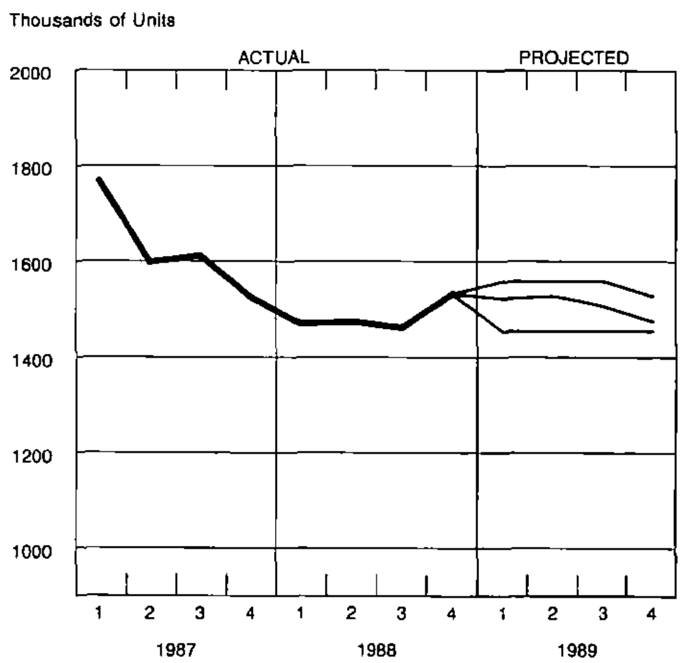
Overall, these data indicate that consumer purchases of homes, vehicles, and household durables will post modest declines from their current levels during the year ahead. Yet, despite these weakening prospects, this is a very positive outlook, extending the already record length of the current expansion. Following the troubled and turbulent 1970s, the 1980s will certainly be remembered for the persistence of this economic expansion. To be sure, it has not been the best of times, but it is far from the worst. And it is the memory of these past problems that makes current economic conditions appear so favorable.

3-MONTH TREASURY BILL RATE



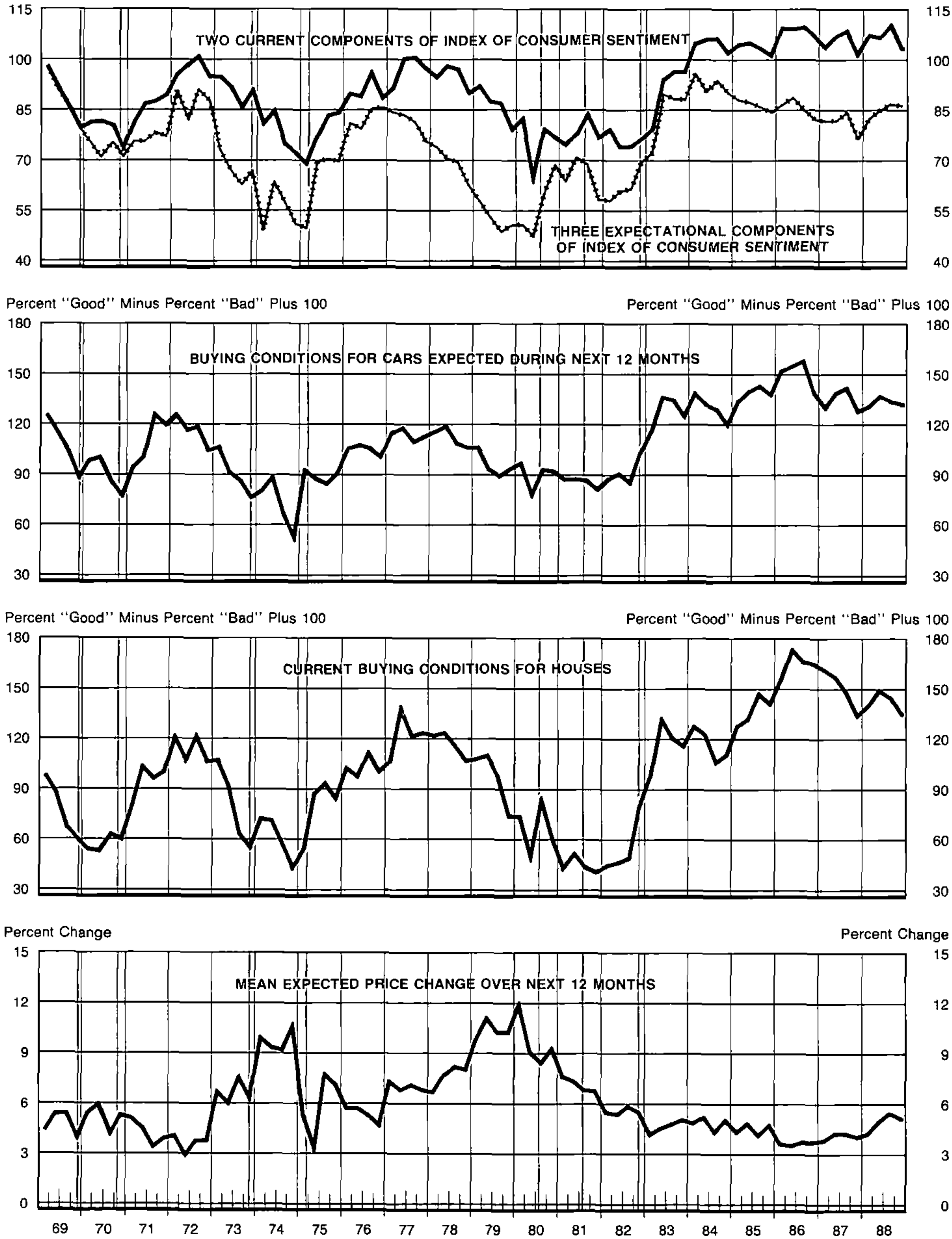
Sources: Actual data are from U.S. Department of Commerce; projected data are from ASA-NBER Panel of Forecasters, revised when necessary to be consistent with latest actual data. The 3 lines display 3rd, 2nd (median), and 1st quartile values from the array of forecasts.

NEW PRIVATE HOUSING UNITS STARTED



Sources: Actual data are from U.S. Department of Commerce; projected data are from ASA-NBER Panel of Forecasters, revised when necessary to be consistent with latest actual data. The 3 lines display 3rd, 2nd (median), and 1st quartile values from the array of forecasts

SRC MEASURES OF CONSUMER ATTITUDES



Note: Shaded areas indicate recession periods as designated by the National Bureau of Economic Research, Inc.

Actual and Projected Economic Indicators

seasonally adjusted

SERIES FORECAST BY THE ASA-NBER PANEL													
ECONOMIC INDICATOR	Quarterly Data										Annual Data		
	Actual					Projected					Actual		Proj.
	1987:4	1988.1	1988:2	1988:3	1988:4	1988 4	1989:1	1989:2	1989:3	1989:4	1987	1988	1989
GROSS NATIONAL PRODUCT	4,662.8	4,724.5	4,823.8	4,909.0	4,989.9	4,982.0	5,075.0	5,165.0	5,256.0	5,323.8	4,526.7	4,861.8	5,207.0
GNP IMPLICIT PRICE DEFLATOR (index, 1982 = 100)	118.9	119 4	121.0	122.4	123.8	123.6	125.0	126.4	127.9	129.0	117 7	121.7	126.9
CORPORATE PROFITS AFTER TAXES	145 7	149.4	162.7	169.1	NA	169.8	171.5	173.5	172.5	171.5	142.9	NA	175.5
UNEMPLOYMENT RATE (percent)	5.90	5 70	5.50	5.47	5.33	5.40	5.40	5.50	5.50	5.50	6.19	5.50	5.50
INDUSTRIAL PRODUCTION (index, 1977 = 100)	133.2	134.5	136.0	138.4	139.8	140.0	141.0	142.0	143.0	143.0	129.8	137.2	142.0
NEW PRIVATE HOUSING UNITS STARTED (millions)	1.533	1.477	1.481	1.468	1.538	1.475	1.465	1.470	1.450	1.420	1.634	1.491	1.460
CONSUMER PRICE INDEX (annualized percent change from prior quarter or year)	3.59	3.40	4 79	4 73	4.33	5.00	4.85	4.85	4.90	5.00	3.70	4.08	5.00
3-MONTH TREASURY BILL RATE (%)	6.00	5.76	6.23	6.99	7 70	7.50	7.70	7.65	7.60	7.63	5.83	6.67	7.55
NEW HIGH-GRADE CORPORATE BOND YIELD (percent)	10.37	9.64	10.08	10.14	NA	10.20	10.40	10.50	10.50	10.30	9.69	NA	10.60
GNP IN 1982 DOLLARS	3,923.0	3,956.1	3,985.2	4,009.4	4,029 2	4,033.0	4,069 0	4,098.6	4,123.4	4,134.5	3,847.0	3,995.0	4,110.1
PERSONAL CONSUMPTION EXPENDITURES (1982 dollars)	2,531.7	2,559.8	2,579.0	2,603.8	2,621.9	2,616.0	2,631.0	2,646.0	2,661.0	2,673.0	2,520.9	2,591.1	2,652.0
NONRESIDENTIAL FIXED INVESTMENT (1982 dollars)	464.8	473.4	490.2	495.0	490.4	502.0	509.0	515.0	520.0	524.0	445.2	487.3	518.0
RESIDENTIAL FIXED INVESTMENT (1982 dollars)	192.7	189.5	189.6	191.6	197.4	190.0	190.0	188.8	188.0	189.0	195.2	192.0	189.0
CHANGE IN BUSINESS INVENTORIES (1982 dollars)	67.1	66.0	35.3	39.5	29.2	29.0	34.0	33.3	32.0	30.0	34.4	42.5	32.2
NET EXPORTS (1982 dollars)	-126.0	-109.0	-92.6	-93.9	-100.7	-91 2	-87 7	-83.5	-83.0	-76.4	-128.9	-99.0	-82.4
FEDERAL GOVERNMENT PURCHASES (1982 dollars)	347.7	327.8	331.6	320.1	332.9	331.5	330.0	330.0	330.0	335.0	339.0	328.1	332.0
STATE AND LOCAL GOVERNMENT PURCHASES (1982 dollars)	444.9	448.7	452.2	453.4	458.0	457.7	460.0	463.0	465.0	468.0	441.2	453.1	464.0

SERIES FROM THE CURRENT-DOLLAR GNP ACCOUNTS													
ECONOMIC INDICATOR	Quarterly Data										Annual Data		
	1986:3	1986:4	1987:1	1987:2	1987.3	1987:4	1988:1	1988:2	1988:3	1988:4	1986	1987	1988
GROSS NATIONAL PRODUCT	4,268.4	4,304.6	4,391.8	4,484.2	4,568.0	4,662.8	4,724.5	4,823.8	4,909.0	4,989.9	4,240.3	4,526.7	4,861.8
PERSONAL CONSUMPTION EXPENDITURES	2,842.8	2,876.0	2,921.7	2,992.2	3,058.2	3,076.3	3,128.1	3,194.6	3,261.2	3,320.1	2,807.5	3,012.1	3,226.0
GROSS PRIVATE DOMESTIC INVESTMENT	653.0	656.4	685.5	698.5	702.8	764.9	763.4	758.1	772.5	767.9	666.0	712 9	765.5
NET EXPORTS	-109.1	-114.3	-119.1	-122.2	-125.2	-125.7	-112.1	-90.4	-80.0	-90.3	-104.4	-123.0	-93.2
GOVERNMENT PURCHASES	881.8	886.5	903.8	915.7	932.2	947 3	945.2	961.6	955.3	992.2	871.2	924.8	963.6
DISPOSABLE PERSONAL INCOME	3,032.4	3,064.7	3,143.9	3,154.1	3,224.9	3,315.8	3,375.6	3,421.5	3,507.5	3,587.1	3,019 6	3,209.7	3,472.9
PERSONAL SAVING RATE (percent of disposable income)	3.3	3.2	4.2	2.2	2.3	4.3	4.4	3.7	4.2	4.6	4.0	3.3	4 2

Note: (1) All data are at annual rates and in billions of current dollars unless otherwise indicated. (2) To facilitate comparison and evaluation of forecasts, both actual data, released in January, and projected data, released by ASA-NBER in December, are displayed for fourth quarter 1988.

Sources: Projections: American Statistical Association—National Bureau of Economic Research panel of forecasters.
Actual Data: U.S. Departments of Commerce and Labor, Board of Governors of the Federal Reserve System.

*Substantial revision of the data for series marked with an asterisk has occurred since the last printing.

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