Colby Economic Outlook

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This is the fourth year that the senior seminar in economic forecasting at Colby College has provided an assessment of current economic conditions and forecasts of the U.S. and Maine economies. The *Colby Economic Outlook* represents the final product of work by the students of Economics 493, under the direction of Michael Donihue, Assistant Professor of Economics.

Over the past four years, members of this seminar have tried to model and predict the future of the economy while wrestling with such difficult issues as: war in the Persian Gulf; the first recession to hit this economy since they were 13 years old; the lowest interest rates since their parents were 13 years old; and an election year (in which many voted for President for the first time) which saw the economy dominate the outcome in a way unlike any other election in recent history.

In this issue of the *CEO* we examine an economy attempting to lift itself from a growth recession --- an extended period of growth below that consistent with an economy near full employment --- and a Maine economy waiting for the wave of recovery to flow into New England. The forecasts presented in this newsletter are based on results from the Colby Quarterly Econometric Model of the U.S. Economy, a small macroeconometric model constructed and maintained as part of the on-going research activities of the seminar. Some of the new features of this version of the CQEM are highlighted in this newsletter. Also included is a special report on the recovery and a look back at the growth recession of 1991-92.

A New President With Old Problems

In January, President-elect Clinton will bring to Washington a new generation of policy makers with new ideas and, for at least a month or two, the support of most Americans for change in the way government operates and how it affects their lives. Clinton also brings some heavy baggage in the form of campaign promises to spur economic growth and create jobs while facing the burden of a tremendous federal debt which represents a constraint both in terms of prospects for long-term economic growth and the ability of the new administration to do anything about the short-term problems facing the country.

This week's economic summit in Little Rock, Arkansas, showed that the President-elect has an impressive understanding of the complex problems facing this country and the willingness to seek out and listen to the advise of people from just about every segment of the economy. There was virtual agreement among the participants of the summit as to the problems facing this country today, but wide disagreement on the appropriate remedies.

Inside The *CEO*

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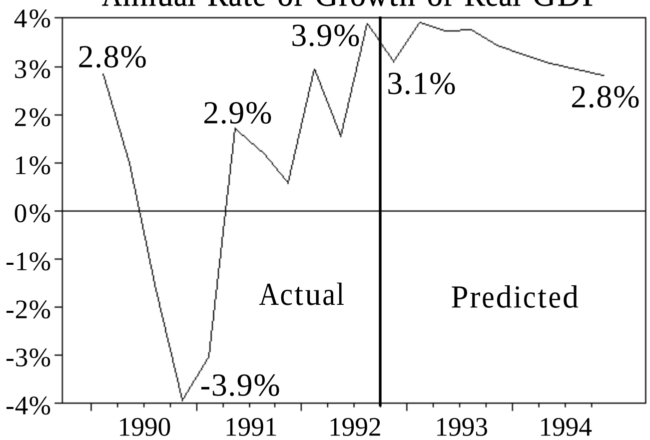
We begin our report with an analysis of the current state of the economy which Bill Clinton inherits from the Bush Administration and then turn to an overview of the Colby Model before looking at our forecast in detail.

Let the Good Times Roll !

There's no shortage of volunteers willing to take credit for the long-awaited recovery which now seems to be taking hold. The Bush Administration believes their steady hand is responsible, while Fed watchers say it was only a matter of time before the historically low interest rates had an impact --- and look ma, no inflation! Clinton supporters say it took the election of a new President, and the resulting jump in consumer confidence, to bring the economy out of the doldrums. Whatever the reason, when Bill Clinton assumes the Presidency in January he will inherit an economy on the rebound.

Annual Rate of Growth of Real GDP



Economic recovery from the 1990-91 recession has been a long time coming. In the past year and a half, growth, while steady, was well below that accompanying past recoveries and signs of economic improvement were hard to come by. Finally, in the third quarter of 1992, there's evidence pointing to a genuine recovery in the making. Gross domestic product rose 3.9% in the third quarter and unemployment continued its string of improvements with a two-tenths percentage point decline in November. New claims for unemployment insurance dropped significantly last month, consumer prices were up by just two-tenths of one percent, housing starts grew by 1.5% in November, business inventories fell in October, industrial production posted it's second consecutive monthly increase in November, and retail sales are on the move. Put these facts together with the dramatic rise in consumer confidence since the election and it's clear that the economy appears poised to return to a stronger growth path as we head into 1993.

After the rebenchmarking of the National Income and Product Accounts at the end of 1991, it is now estimated that real Gross Domestic Product decreased at an annual rate of 3.9% in the fourth quarter of 1990. The recession of 1990-91 was more severe than the initial data suggested, and it has taken nearly two years for the nation to fully recover. The revised estimate for real GDP growth in the third quarter of this year is a positive 3.9% --- higher than just about everyone expected. Some of the surprise can be attributed to higher than anticipated increases in real exports and government spending --- increases which we don't think will be sustained in the current quarter. As a result we begin our forecast horizon with an estimate of 3.1% growth in real output in the fourth quarter of 1992, which translates into predicted growth of 1.97% for the year as a whole. 1993 is predicted to be somewhat better, with real GDP growing by 3.54%. Output growth then slows a bit to 3.29% in the final year of our forecast horizon.

Consumption accounts for the largest share of economic growth in each year, but Investment is predicted to contribute nearly as much in 1993. The trade deficit will continue to be a drag on economic growth in 1993 according to our predictions. However, our forecast is that the trade deficit will shrink by 26% in 1994 which contributes positively to economic growth in that year. Real government spending is forecast to grow by 1.9% in both 1993 and 1994 which accounts for just over one-third of total output growth in both years according to our projections.

Contributions To Real GDP Growth

	1992	1993	1994
Gross Domestic Product	1.97%	3.54%	3.29%
Consumption Expenditures	1.45%	1.84%	1.60%
Durable Goods	0.45%	0.58%	0.43%
Nondurable Goods	0.18%	0.38%	0.39%
Services	0.78%	0.88%	0.78%
Investment	1.09%	1.58%	1.06%
Fixed Investment	0.74%	1.39%	1.05%
Nonresidential	0.28%	0.73%	0.61%
Residential	0.46%	0.66%	0.44%
Chg. in Bus. Inventories	0.35%	0.19%	0.01%
Government Purchases	-0.02%	0.36%	0.35%
Net Exports	-0.51%	-0.24%	0.27%
Exports	0.68%	0.64%	0.69%
Imports	-1.19%	-0.89%	-0.42%

In preparing the forecasts for this issue of the *CEO* we assumed that some form of fiscal stimulus package will be in the offering early next year and as a result we predict that the Federal Deficit will rise by 8.6% this fiscal year but there will be no progress in terms of deficit reduction for fiscal '94. The Fed will maintain a wait-and-see attitude until at least the third quarter of 1993, when we predict a slight rise in the discount rate will occur, and the Fed Funds rate will be allowed to drift slowly upward as the Board of Governors seeks to keep inflation in check.

We now review the forecasts made last December and then take a brief look at some of the new features in this year's version of the Colby Quarterly Econometric Model of the U.S. Economy before discussing our forecasts in detail.

Forecast Accuracy: 91Q4 - 92Q3

Evaluating forecast accuracy is an imprecise science, but an important exercise nonetheless. Two weeks after the CEO was released, the government published a complete rebenchmarking of the National Income and Product Accounts data. Real Gross National Product, prior to the end of last year, was based in terms of 1982 dollars. With the rebenchmarking, the base year shifted to 1987 and the focus of the NIPA data shifted to Gross Domestic Product. GDP differs from GNP in that GDP measures the total value of goods and services produced by factors of production in the U.S., regardless of who owns those factors of production. Gross National Product includes income earned by U.S. nationals working abroad. As you can imagine. GDP is somewhat easier to measure and preliminary estimates of current quarter GDP now are reported earlier than those for GNP. This change in the way the data are made available made it necessary to completely revise the CQEM. This revision took place by students in the economics department at Yale University, where this seminar was offered during the Spring semester. The primary maintenance task of the seminar this semester was to go over the revisions and tie up some of the loose ends which remained.

Computing forecast errors from last year's *CEO* is complicated by the rebenchmarking. The table in the next column presents forecast errors for the major components of real GNP in terms of deviations from the last actual observation prior to the forecast horizon (91Q3). The largest errors were made in the foreign sector as both imports and exports drifted higher over the first four quarters of the horizon than predicted.

Forecast Errors
For the December 1991 *Colby Economic Outlook*

	91:Q4	92:Q1	92:Q2	92:Q3
(Actual - Predicted Changes: Billions of 1982 $s)‡				
Gross National Product	5.1	18.4	-1.0	7.6
Pers. Consumption Exp.	-7.0	10.1	-7.4	-1.4
Durable Goods	2.0	15.2	10.0	14.6
Nondurable Goods	-12.1	-4.8	-12.9	-11.5
Services	1.8	0.5	-4.4	-3.4
Gross Pvt Domestic Investment	7.3	5.6	38.9	43.9
Nonresidential	-2.1	0.5	18.9	17.9
Residential	7.1	10.9	13.7	40.2
Government Purchases	-3.9	1.4	0.2	7.1
Exports	11.0	45.2	59.3	178.4
Imports	18.2	63.2	80.1	95.1
Disposable Income	5.2	12.9	1.4	-14.8
(Actual - Predicted Percentage Points)				
Civilian Unemployment Rate	0.1	0.4	0.7	1.0
3 Month T-Bill Rate	0.0	-0.6	-0.9	-1.6
Aaa Corporate Bond Rate	0.0	0.1	0.2	0.1
Inflation: CPI (Annual rog)	0.1	-0.3	-0.5	-1.6
(Actual - Predicted Percentage Error)				
Exchange Value of the Dollar	-0.1%	1.1%	1.9%	-4.3%
Index of Consumer Sentiment	-3.3%	-7.2%	0.1%	-9.8%
Money Supply: M2	0.3%	0.4%	-0.6%	-1.7%

‡ After the *CEO* was released, the NIPA data were rebenchmarked from 1982 to 1987 dollars. Errors for GNP and its components are computed applying current historical annual rates of growth per quarter to the value for 91:Q3 reported in the Dec '91 forecast to construct "actual" values. Errors are then calculated using "actual" minus predicted deviations from the value in 91Q3.

Our forecasts of unemployment, interest rates and inflation were quite accurate at the beginning of the forecast horizon, due in part to the fact that some of the observations for 2 of the months of 91Q4 were known at the time of the forecasts. Four quarters out, however, our forecasts were less accurate. We were more optimistic with regard to the unemployment rate and did not anticipate the persistent drop in short-term interest rates. We also did not foresee the inflation rate falling to such low levels, however in each case the errors were relatively small.

New Features of the Colby Model

The Colby Quarterly Econometric Model of the U.S. Economy is a simplified model of real gross domestic product and its major components. This semester, all of the equations in the previous version of the model were updated and reestimated and several new behavioral equations were added bringing the total to 54. Of the nearly 100 variables in the model, 15 are exogenously determined.

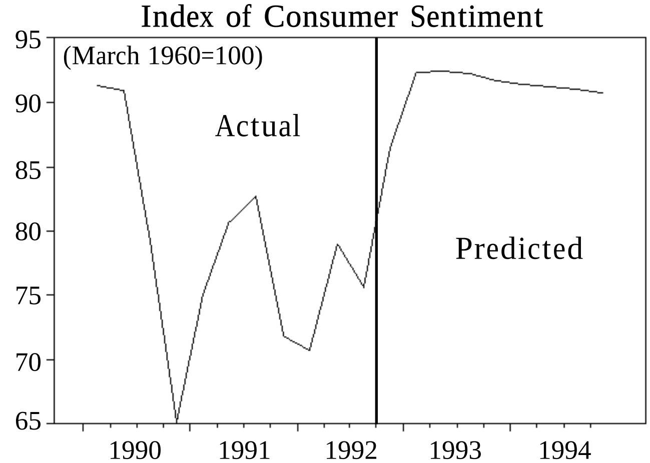
The Colby Model contains equations which model personal consumption expenditures of durables, nondurables, and services; and inflation as measured by the consumer price index, implicit price deflators for the three areas of personal consumption expenditures, and the GDP deflator. There are also equations for predicting gasoline prices, automobile sales and housing starts. The labor sector of the model received considerable attention this semester and provides forecasts of the unemployment rate, the female labor force participation rate, various measures of wages, the duration of unemployment, and output per hour. Consumer sentiment is modeled explicitly, as are various measures of expenditures and employment in the health care industry. The investment sector is now modeled in a greatly improved fashion with particular attention to inventory investment. There are also equations for real and nominal government purchases and the determination of the federal budget deficit. The monetary sector of the model includes seven interest rate equations and two equations for the money supply. Real imports, import and export price deflators, and the exchange rate are each modeled separately and make up the foreign sector of the model.

Consumer Confidence Seems to be the Key

In the 1990-91 recession, the American economy began to adjust for the over development of its service sector during the rapid economic expansion of the 1980's. Service sector industries stopped hiring, and in many cases began to cut back on white collar jobs. As a result, consumer confidence fell, and consumer spending slowed.

The economy's sluggish climb from the recession's trough in the fourth quarter of 1990 and the reluctance of industries to begin hiring again, did little to increase consumer confidence, and consumer spending showed little growth in the months following the recession. It's only now, over a year and a half later, that the consumption sector of the U.S. economy is beginning to show signs of economic revival. Our forecast shows consumer sentiment increasing substantially in early 1993, at a rate 18% over 1992 due partly to the election of a new Presidential, as consumer confidence paves the way for recovery. The index levels off in 1994 averaging for the year 1.2% below 1993.

Index of Consumer Sentiment

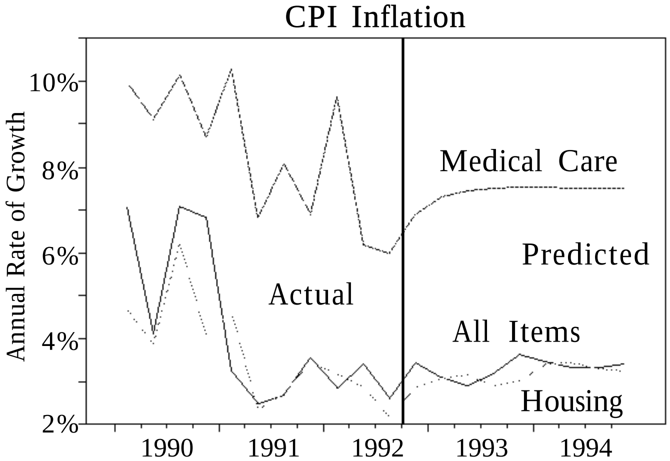


Personal consumption expenditures are forecast to grow at rates of 2.7% in 1993 and 2.4% in 1994. Showing the strongest growth among the major components of consumption expenditures are durable goods, which are forecasted to grow at rates of 6.5% in '93 and 4.7% in '94. Strong durable good sales are seen as a bright spot for an economy which over the past decade has continued to move more and more away from a manufacturing base to a service base.

The strongest indicator of the strength of American manufacturing is automobile sales. Our forecast shows Americans turning away from foreign imports, which are forecasted to grow minimally in over the forecast horizon, and continue to buy domestic American automobiles. Domestic automobile sales are forecasted to grow at a rate of 7.7% in 1993 and level off somewhat, with 1% growth predicted for 1994. The movement away from imported autos may be attributed in part to a poor dollar exchange rate, which is making them comparably more expensive, and a general movement by the American consumer away from foreign products due to discontent over years of protectionist trade policies abroad.

Inflation's Not A Problem

One good thing about recessions, they generally mean lower prices. Due to the fact that growth has been slow for so long, and because the magnitude and speed of this recovery is less than that of past recoveries, inflation is likely to remain moderate throughout the forecast horizon. We predict that the consumer price index will rise by 3.1% in 1993 and 3.4% in 1994.



The CPI for Medical Care shows slower growth, to a 7.5% level in 1993:Q3, and then a leveling off thereafter. Proposals by Clinton to possibly cap health insurance premiums or reduce tax benefits on employer-provided benefits would hopefully bring market forces to the health-care system and help finance coverage for the poor. Direct controls on medical care costs may lead to even greater reductions in the rate of inflation for medical care services.

As the economy gains momentum, real disposable income should rise. Next year should see an increase of about 2.2% while in 1994 disposable income is forecast to grow by 2.6% in real terms.

The world-wide glut of oil should benefit U.S. consumers as gasoline prices are predicted to stay at or below current prices until the first quarter of 1994.

Import prices, which declined by 5% in the third quarter of this year, are forecast to grow by 1.4% in 1993 and by 2.6% in 1994.

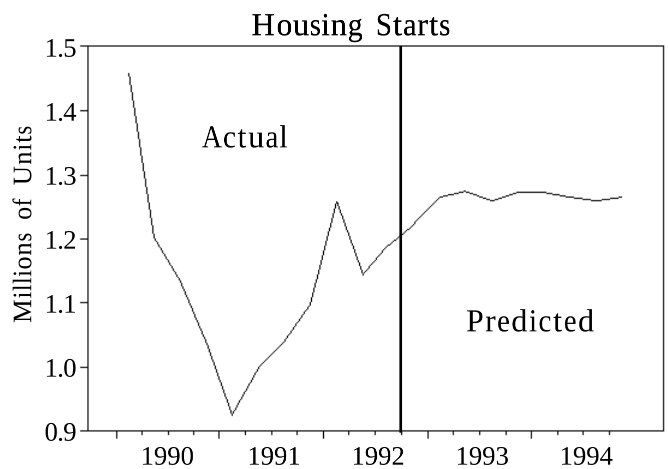
Investment & Housing Starts

Since investment directly affects gross domestic product, the mediocre growth in this sector of the economy over the past year has been cited as a major cause for the slow pace of the recovery. During the first three quarters of this year, non-residential investment grew at an average rate of 1.7% while residential investment grew a bit faster at 2.6%. Housing starts fluctuated during this period, decreasing 9.7% from quarter one to quarter two, but on average grew at a rate of 2.8%. The increase in housing starts has been influenced by decreasing mortgage rates throughout this period.

Gross private domestic investment is forecast to grow 10.9% above the level in 1992 in real terms. This growth is reflected in both the nonresidential and residential sectors, which should grow at rates of 7% and 17% respectively in 1993. Interest rates are forecast to increase slightly over the next year, however this rise should be offset by increasing gross domestic production and personal income which will, in turn, increase business and residential spending and investment.

Heading into 1994, forecasted growth in both residential and nonresidential investment slows from the more rapid pace of 1993. This leveling off is in response to a slow rise in interest rates, including mortgage rates, which will slow investment growth.

Inventory investment rose rapidly in the last two quarters as employment and production increased and sales growth remained sluggish. Overall expenditures should rise over the next two years, lowering the rate of growth of inventories. The emergence of "just-in-time" methods of inventory control seem to be having an impact at the macro level as producers watch inventory levels more closely thereby reducing fluctuations in inventory levels.



There will be a steady increase in Housing Starts through the second quarter of 1993 as the economy gradually recovers. Low home mortgage rates and rising personal incomes should foster continued growth out of the 1990-91 doldrums which saw Housing Starts at their lowest level since World War II. The forecast growth in housing starts pales in comparison to past recovery booms which saw massive expansion coming out of recessions. Even so, this current growth is seen as a very positive sign for the economy for the years ahead.

That Crazy Aunt in the Basement

A hotbed of discussion during the 1992 Presidential election (and the focus of the economic summit this week in Little Rock), the Federal government budget deficit, and its implications for long-term economic growth, will remain in the thoughts of many Americans for a long time to come.

President-elect Clinton has, with his appointments, sent a clear signal to the bond markets that he is serious about tackling the budget deficit sometime during his presidency. The President-elect is under a lot of pressure to fulfill his campaign promises of increased investment in public infrastructure in order to create more jobs. Such spending, at whatever levels will undoubtedly raise the deficit in the short run.

Proponents argue that Clinton has the opportunity to engage in deficit spending for the noblest of purposes --- creating jobs in the short run in order to increase productivity and secure economic growth in the long run. Opponents argue that there's no distinction to be made between government investment and government consumption --- either way it's deficit spending and financing the existing federal debt is already too great a burden on the nation's financial markets.

We think that the temptation will be too great for Clinton and the Democratically controlled Congress to resist and as a result we will see some sort of short-term fiscal stimulus during Fiscal 1994. Clinton should reap some gains in the form of increased tax revenues from an expanding economy and higher taxes on the wealthiest Americans. We are predicting that the deficit will increase by 8.6% during the current fiscal year and remain virtually unchanged (-0.3% growth) in Fiscal 1994.

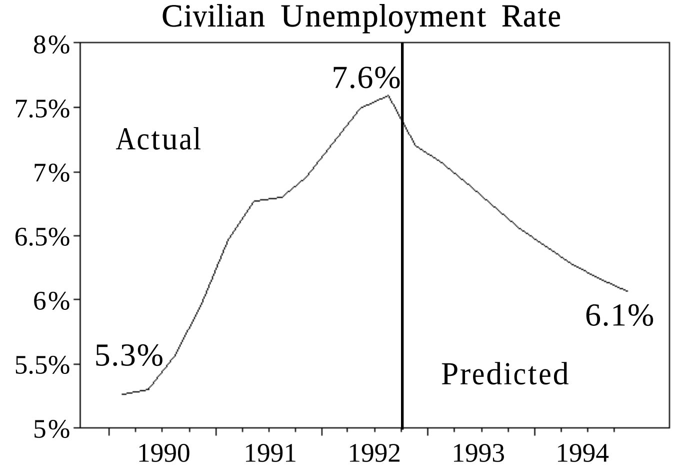
The Foreign Sector

The uncertainty surrounding the foreign sector does not seem be abating in the near future. Although threats of an immanent trade war with France have subsided, the French and German farmers are expected to continue to press for more subsidies. This pressure introduces the possibility of future trade unrest. In addition, even though the exchange rate is expected to appreciate in the short run, possibly within the next several months, the dollar is expected to fall further in the long run. This is reflected in our forecast, with an index value of 90.57 units in 1993Q1 which falls to 83.57 by 1994Q4. This is also readily apparent from the current futures market for foreign exchange. The trade deficit is expected to continue worsening until the third quarter of next year at which time it will start to improve. The Euro-dollar deposit rate, the interest rate earned by dollars held outside the U.S., is forecast to increase steadily from 3.29% in 1992Q3 to 4.95% in 1994Q4. Average foreign interest rates are also rising and are forecast to gain 29 basis points next year and another 59 basis points in 1994.

Labor & Productivity

On December 4th the Department of Labor released its employment report for November which estimated that the unemployment rate was 7.2% and 105,000 jobs were created last month, primarily in the areas of manufacturing and local government. These estimates were no doubt encouraging to President-elect Clinton, who is awaiting convincing signs that employers are hiring again before abandoning the idea of an extra fiscal prod to boost the economy next year.

Civilian Unemployment Rate



We are predicting that by the end of 1994 the unemployment rate will have fallen to 6.1%. We also predict that total employment will rise by 1.5% in 1993 and 2.1% in 1994. The rate of female labor force participation is forecast to grow by about half a percentage point in both 1993 and 1994. We estimate that productivity will grow by 1.4% next year and by 1.2% in 1994. Wages are predicted to grow by about 2.5% in both years of the forecast horizon.

New to the CQEM this year are: forecasts of compensation of employees (3.5% and 4.3% growth in '93 and '94 respectively); index of employment costs for nonunion workers (up 2.5% and 3% in '93 and '94); index of employment costs for union workers; potential manhours lost (declining throughout the forecast horizon); and the average duration of unemployment (slightly higher in 1993, but down by 5% in 1994).

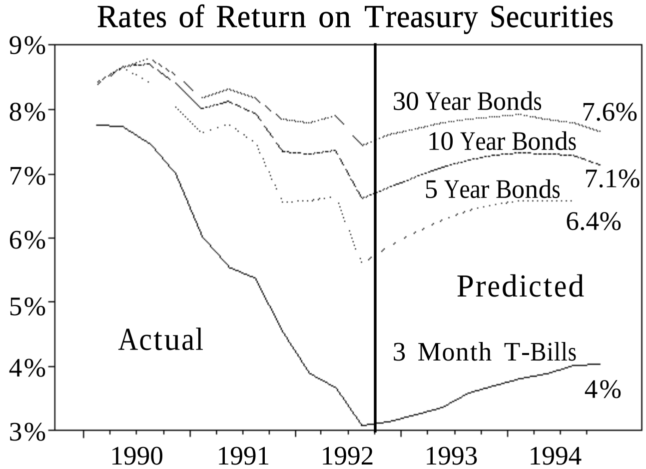
Interest Rates & Monetary Policy

Expansionary monetary policy in the form of lower interest rates initiated by the Federal Reserve Bank during the past two years appears to have finally begun to have an impact in turning the U.S. economy around. With interest rates at their lowest levels in recent memory, investment spending is beginning to pick up and help lift the economy out of the recession.

The interest rate on 3 Month Treasury Bills fell below 2.9% in October and the Federal Funds Rate dipped below 3.1% in November reaching their lowest levels since the early 1960's. Nonetheless, the Fed has taken a lot of blame lately over the timing and magnitudes of the interest rate cuts with many economists calling for further reductions in short-term rates despite signs of strong economic growth.

Despite calls for further action, we are assuming that the Fed will wait for the economy to catch up with their actions of the last two years. Over stimulation may spook inflation wary bond market participants, thereby elevating long-term interest rates and prematurely dampen consumption and investment --- the backbones of the recovery.

Rates of Return on Treasury Securities



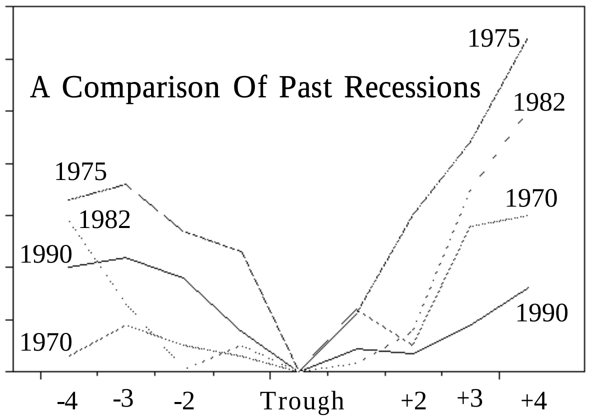
We believe that short term interest rates have now reached their lowest points and are expected to begin slowly rising again as economic activity picks up. The interest rate on 3 Month T-Bills is forecast to gain less than 3 basis points in 1993 but rise by 45 basis points in 1994. Long term bond rates are forecast to rise somewhat in '93 but flatten out and show very little growth in '94. This year's version of the CQEM includes two new interest rate equations, one for the five year U.S. Treasury Bond and one for the ten year Treasury Bond. The money supply (M2) is expected to increase by 3.6% in 1993 and by 5% in 1994.

When is a Recovery Not Really a Recovery?

Answer: When it's a **growth recession**. That's what we've been experiencing since the second quarter of last year. In fact, the third quarter of 1992 may mark the true beginning of the recovery and an end to the growth recession of 1990-1992. A **growth recession** is a period of sustained economic growth, but at a rate below that consistent with an economy producing near it's potential level. Viewed another way, a growth recession is a period of time in which output grows in real terms, but unemployment is above its so-called **natural rate**. Output grows naturally over time simply as a consequence of an increasing labor force and rising productivity. And even in the best of economic times, some people are out of work looking for a job. The **natural rate of unemployment** is unemployment consistent with an economy producing at its potential level of output. Fluctuations occur about these long-term phenomena as the economy experiences periods of economic boom and decline. These are what macroeconomists refer to as business cycles.

Estimates of the natural rate of unemployment range anywhere from 5 to 6 percent, and the rate of growth of potential output is about 3 percent. In June of 1991, the *CEO* boldly announced that the "The Recession Is Over" and real GDP has in fact been growing ever since. But growth remained sluggish and by December the *CEO* was predicting a near "Double Dip" recession with real output in the fourth quarter of 1991 predicted to shrink by 0.1%. As recently as April of this year students of this seminar at Yale University were calling 2% a "genuine recovery in the making." In fact only the third quarter's reported growth of 3.9% puts us above the growth of potential output and our current forecast for unemployment is that it won't even approach the natural rate until the end of 1994.

As the chart at the top of the next page shows, the recession of 1990-91 began in an ordinary enough fashion. The rate at which real output fell beginning four quarters prior to the trough of the recession was somewhere between that experienced in the recessions of 1975 and 1970. In fact the previous recession in 1982 looked more unusual in terms of its onset than did the one in 1990. The real difference comes in what happens in the four quarters following the business cycle trough. The rate of growth coming out of the recession of 1990-91 is far below that of any of the past three recessions.



Precisely why this recovery looks and feels different has been the subject of a lot of debate. Some people point fingers at the banks and the so-called "credit crunch" as responsible for exacerbating the effects of the recession. Others lay the blame with the Fed for responding too little, too late. One notable difference relative to the past three recessions was the lack of fiscal stimulus as the huge federal debt accumulated during the mid to late 1980's left the Bush Administration hamstrung and expansionary fiscal policy simply not an option. Only time will tell whether or not we can look forward to continued economic growth at or above the current levels.

The Maine Economy: NOT the Way Life Should Be

In fact most of New England has been hit pretty hard by the recession of 1990-92 and with the closing of Loring Air Force Base, planned reductions in employment at Bath Iron Works, and a State budget deep in red ink all looming on the horizon it's hard to find a ray of sunshine in such gloomy economic times. But hope springs eternal here as well as in Arkansas and as the national recovery takes hold the effects should wash into Maine sometime early next year according to our projections.

Perhaps the single best measure of the health of the Maine economy is nonagricultural employment in the State. Total nonagricultural employment began to fall in the third quarter of 1990 and experienced the worst of the growth recession of the next two years along with the rest of the nation.

We estimate that the third quarter of this year will prove to be the last before a sustained period of growth sets in for 1993. Our forecast is for total employment in the nonagricultural sector to grow at a seasonally adjusted rate of just below 1.4% in 1993 and just above 1.4% in 1994 --- hardly anything to write home about, but a recovery none-the-less. The closing of Loring Air Force Base and downsizing both in the government and private sectors in the state will continue to be a drag on employment throughout the forecast horizon. The rate of growth in manufacturing employment will lag behind that of nonmanufacturing jobs in Maine, but only slightly over the forecast horizon.

Personal income in Maine grew by 2% last year. Data for the third quarter of this year are not yet available, but we are predicting that personal income will grow by 4.3% this year and improve over the remainder of the forecast horizon, growing by 7.2% in 1993 and 7.5% in 1994. This is somewhat below the 8 to 11% rates of the late 1980s, but consistent with an economy trying to recover from a prolonged period of economic stagnation.

The unemployment rate in Maine for October was a seasonally adjusted 6.5%. We are predicting that unemployment in the fourth quarter will average just about that and fall gradually over the remainder of the forecast horizon. In 1993 the unemployment rate is forecast to be .65 percentage points lower, and in 1994 the unemployment rate should finish the year near 6%.

Two sure signs of recover lie in housing permits and retail sales. Permits for new houses are predicted to show strong growth in 1993 before leveling off at just under 2% growth in 1994. Retail sales are forecast to grow by 6.6% in '93 and 5.4% in '94.

Total tax revenues in the State are forecast to grow by just under 4.7% in Fiscal Year 1993 and by another 6.7% in FY '94. Total tax revenues should wind up at about $1,583 million in FY '93 and $1,689 million in the next fiscal year according to our projections.

Accuracy of the Maine Forecasts

Before presenting the complete detail of our forecasts of the Maine and U.S. economies, we take a look at how well the *CEO* did last year in predicting key indicators of activity in the State. Last year's edition of the *CEO* saw a Maine economy that was "Trollin' Bottom." The prospects for recovery at that time looked rather bleak at best.

It turns out that the CEO was quite accurate at predicting employment in the state. As the table below shows, the mean absolute percentage error of last December's forecast for the four quarters beginning in 91Q4 was just six tenths of one percent. On average, the *CEO* forecasts were slightly above the forecasts for total and nonmanufacturing employment (mean forecast errors of -0.8 and -0.9 respectively), but biased slightly downward in terms of the forecasts for manufacturing employment.

In the table below, a negative forecast error means that the predicted value at the time was greater than what we now believe the data to be. The Mean error is a measure of the bias in the forecast, i.e., a tendency to be either overly optimistic or pessimistic. The MAPE is the average percentage forecast error expressed in absolute terms --- all the forecast errors are computed in terms of their absolute values so that the negatives and positives do not cancel each other out.

Thus the *CEO* forecasts made last December were, on average, off by 16% for total tax revenues for the past four quarters. Part of this overly pessimistic error in these projections is undoubtedly due to the "snack tax" which went into effect about the time the forecasts were made the impacts of which were entirely uncertain as of last December.

This table also illustrates some of the pitfalls encountered when trying to make economic projections --- the historical data keep changing. The column in the table below labeled Revision represents the deviation between what was believed to be the value of the variable as of December 1991 and what is now being reported. For example, total employment is now believed to have been 600 people greater than it was originally reported last year. The unemployment rate for the third quarter of last year has been revised upward by 1% and retail sales were off by $103 million.

Colby Economic Outlook: Dec. 20, 1991 Forecast Errors (Actual - Predicted)		Revision 91:Q3	Forecast 91:Q4	92:Q1	92:Q2	92:Q3	Mean	MAPE
Total Employment	(Thousands)	-0.6	-0.4	4.4	-2.5	-4.5	-0.8	0.6%
Nonmanufacturing	(Thousands)	-0.9	0.1	4.0	-3.2	-4.4	-0.9	0.7%
Manufacturing	(Thousands)	0.4	-0.5	0.4	0.7	-0.1	0.1	0.4%
Unemployment Rate	(%)	-1.0	-1.7	-0.9	-1.8	-1.9	-1.6	
Personal Income	(Billion $'s)	0.4	0.5	0.6	0.7		0.6	2.7%
Retail Sales	(Million $'s)	103.0	33.2	46.1	70.5	89.0	59.7	7.7%
Housing Permits	(Units)	29.7	29.1	-6.3	1.4	-20.9	0.8	4.8%
Total Tax Revenues	(Million $'s)	0.0	63.3	3.1	127.2	76.1	67.4	16.0%

COLBY ECONOMIC OUTLOOK FOR THE MAINE ECONOMY, 1992:Q4 - 1994:Q4

		Actual	Forecast									Percent Change	
Variable	Units	92:Q3	92:Q4	93:Q1	93:Q2	93:Q3	93:Q4	94:Q1	94:Q2	94:Q3	94:Q4	1992-93	1993-94
Total Employment	(Thousands)	509.9	514.3	517.1	519.3	521.1	522.8	524.8	527.0	528.5	530.0	1.4%	1.4%
Nonmanufacturing	(Thousands)	415.1	419.8	422.0	423.3	424.3	425.5	427.0	428.8	430.9	433.2	1.4%	1.5%
Manufacturing	(Thousands)	94.9	94.5	95.1	96.1	96.7	97.3	97.8	98.2	97.7	96.8	1.3%	1.4%
Unemployment Rate	(%)	6.73	6.53	6.31	6.30	6.26	6.21	6.15	6.08	6.02	6.06	-0.65	-0.19
Personal Income	(Billion $'s)	22.54	22.98	23.43	23.87	24.31	24.77	25.22	25.67	26.12	26.57	7.2%	7.5%
Retail Sales	(Million $'s)	800.7	802.6	817.2	828.3	840.1	851.1	862.1	873.3	885.0	897.1	6.6%	5.4%
Housing Unit Permits	(Units)	293	327	336	347	348	350	351	352	352	353	13.7%	2.0%
												FY '93	FY '94
Total Tax Revenues	(Million $'s)	409.4	376.2	358.0	439.4	416.4	407.0	389.3	476.2	450.8	439.9	1,583	1,689
Input Assumptions for the Exogenous Variables in the Maine Model													
Gross National Product	(Bill '87 $'s)		4986.8	5035.1	5081.9	5129.4	5173.1	5214.7	5254.3	5292.8	5329.9	3.5%	3.3%
PCE: Nondurables	(Bill '87 $'s)		1056.9	1062.2	1067.3	1072.4	1077.2	1082.1	1087.0	1091.9	1096.9	1.8%	1.8%
PCE: Durables	(Bill '87 $'s)		1839.7	1850.8	1860.2	1869.7	1879.3	1889.1	1899.3	1909.8	1920.4	2.4%	2.1%
Housing Starts	(Millions)		1.22	1.27	1.27	1.26	1.27	1.27	1.27	1.26	1.27	5.3%	-0.2%
Price Deflator: PCE Durables	(1987=100)		110.1	110.6	111.0	111.3	111.8	112.2	112.6	113.0	113.4	1.6%	1.5%
3 Month T-Bill Rate	(%)		3.13	3.24	3.36	3.58	3.70	3.80	3.88	4.01	4.04	0.8%	13.2%
Index of Consumer Sentiment	(2/66=100)		86.4	92.4	92.4	92.3	91.7	91.4	91.2	91.1	90.8	18.3%	-1.2%
Avg Hourly Earnings	($/hour)		10.69	10.76	10.82	10.89	10.95	11.02	11.08	11.15	11.22	2.5%	2.4%
Avg Interest Rate: Home Mortgages	(%)		7.56	7.39	7.32	7.34	7.38	7.44	7.49	7.54	7.56	-9.0%	2.1%
Civilian Unemployment Rate	(%)		7.21	7.07	6.90	6.72	6.56	6.41	6.28	6.16	6.07	-7.8%	-8.6%
Endogenous Variables with Nonzero Adjustment Constants													
Total Employment	(Thousands)		1	-5	-5	-5	-5	-5	-5	-6	-6		
Nonmanufacturing	(Thousands)		1	-4	-4	-4	-4	-4	-4	-4	-4		
Unemployment Rate	(%)		-0.5	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0		

COLBY ECONOMIC OUTLOOK FOR THE U.S. ECONOMY, 1992:Q4 - 1994:Q4

17-Dec-92

		Actual	Forecast									Percent Change	
Variable	Units	92:Q3	92:Q4	93:Q1	93:Q2	93:Q3	93:Q4	94:Q1	94:Q2	94:Q3	94:Q4	1992-93	1993-94
Gross Domestic Product	(Bill '87 $'s)	4939.4	4977.0	5025.1	5071.7	5119.0	5162.6	5204.0	5243.4	5281.8	5318.7	3.5%	3.3%
Annual Rate of Growth		3.9%	3.1%	3.9%	3.8%	3.8%	3.4%	3.3%	3.1%	3.0%	2.8%		
Personal Consumption Expenditures	(Bill '87 $'s)	3318.4	3339.7	3367.2	3389.3	3410.9	3430.9	3450.8	3470.8	3490.8	3511.1	2.7%	2.4%
Durable Goods	(Bill '87 $'s)	439.9	443.1	454.3	461.8	468.8	474.4	479.6	484.4	489.1	493.7	6.5%	4.7%
Nondurable Goods	(Bill '87 $'s)	1052.2	1056.9	1062.2	1067.3	1072.4	1077.2	1082.1	1087.0	1091.9	1096.9	1.8%	1.8%
Services	(Bill '87 $'s)	1826.3	1839.7	1850.8	1860.2	1869.7	1879.3	1889.1	1899.3	1909.8	1920.4	2.4%	2.1%
Gross Private Domestic Investment	(Bill '87 $'s)	728.9	743.8	762.4	784.4	801.9	817.6	830.6	841.5	851.3	859.5	10.9%	6.8%
Fixed Investment	(Bill '87 $'s)	708.7	728.8	747.7	767.3	784.3	799.5	812.7	823.9	834.0	842.4	9.7%	6.9%
Nonresidential	(Bill '87 $'s)	517.1	527.9	535.7	545.5	554.5	563.2	571.1	578.0	584.4	589.5	7.0%	5.6%
Residential	(Bill '87 $'s)	191.6	201.0	212.1	221.8	229.9	236.3	241.5	245.9	249.6	252.9	17.0%	10.0%
Change in Business Inventories	(Bill '87 $'s)	20.2	15.0	14.7	17.1	17.6	18.1	17.9	17.7	17.3	17.1	122%	3.7%
Government Purchases	(Bill '87 $'s)	941.8	946.2	950.7	955.1	959.6	964.1	968.6	973.1	977.7	982.3	1.9%	1.9%
Net Exports of Good & Services	(Bill '87 $'s)	-49.7	-52.7	-55.2	-57.1	-53.4	-50.0	-45.9	-42.0	-38.0	-34.1	28.6%	-25.8%
Exports of Goods & Services (a)	(Bill '87 $'s)	576.2	584.0	591.8	599.8	607.9	616.1	625.1	634.3	643.6	653.0	5.5%	5.8%
Imports of Goods & Services	(Bill '87 $'s)	625.9	636.7	647.1	656.9	661.3	666.1	671.1	676.3	681.6	687.1	7.1%	3.2%
Gross National Product	(Bill '87 $'s)	4949.0	4986.8	5035.1	5081.9	5129.4	5173.1	5214.7	5254.3	5292.8	5329.9	3.5%	3.3%
Gross Domestic Product	(Bill $'s)	5982.6	6066.8	6165.2	6265.2	6370.5	6476.8	6581.3	6682.9	6783.3	6882.7	6.2%	6.5%
Personal Consumption Expenditures	(Bill $'s)	4108.1	4165.3	4234.5	4299.9	4368.0	4438.4	4510.2	4582.5	4656.0	4731.3	6.0%	6.6%
Durable Goods	(Bill $'s)	482.7	488.1	502.4	512.4	522.0	530.3	538.0	545.4	552.6	559.8	8.2%	6.2%
Nondurable Goods	(Bill $'s)	1293.0	1309.3	1324.8	1340.9	1358.0	1376.1	1394.2	1412.1	1430.3	1448.9	4.8%	5.3%
Services	(Bill $'s)	2332.4	2367.9	2407.3	2446.6	2488.1	2532.0	2578.1	2625.1	2673.2	2722.6	6.3%	7.3%
Gross Private Domestic Investment	(Bill $'s)	786.5	802.7	821.2	844.5	862.7	878.6	890.6	899.2	905.1	907.8	10.4%	5.7%
Fixed Investment	(Bill $'s)	765.4	784.2	803.0	823.1	840.5	855.5	867.6	876.4	882.7	885.5	8.8%	5.7%
Nonresidential	(Bill $'s)	547.9	556.6	563.7	574.3	584.9	595.7	606.0	615.4	624.4	632.2	6.1%	6.9%
Residential	(Bill $'s)	217.5	227.6	239.3	248.7	255.6	259.8	261.6	261.0	258.2	253.3	15.7%	3.0%
Change in Business Inventories	(Bill $'s)	21.1	18.5	18.3	21.5	22.2	23.1	23.0	22.8	22.5	22.4	166%	6.6%
Government Purchases	(Bill $'s)	1122.9	1136.9	1151.2	1165.4	1180.0	1195.0	1210.1	1225.3	1240.6	1256.1	4.9%	5.1%
Net Exports of Good & Services	(Bill $'s)	-34.9	-38.2	-41.6	-44.6	-40.2	-35.2	-29.6	-24.0	-18.4	-12.5	36.7%	-47.7%
Exports of Goods & Services	(Bill $'s)	639.5	650.6	662.6	674.8	688.6	703.6	719.6	736.0	752.8	770.3	7.3%	9.1%
Imports of Goods & Services	(Bill $'s)	674.4	688.8	704.2	719.4	728.8	738.8	749.2	760.0	771.2	782.8	8.6%	6.0%
Gross National Product	(Bill $'s)	5993.1	6077.7	6176.3	6276.5	6381.9	6488.5	6593.1	6695.0	6795.6	6895.1	6.2%	6.5%

(a) Exogenously Determined

COLBY ECONOMIC OUTLOOK FOR THE U.S. ECONOMY, 1992:Q4 - 1994:Q4

17-Dec-92

Variable	Units	Actual 92:Q3	Forecast 92:Q4	93:Q1	93:Q2	93:Q3	93:Q4	94:Q1	94:Q2	94:Q3	94:Q4	Percent Change 1992-93	1993-94
Inflation: GDP Deflator	(%,A.R.)	1.67	2.66	2.63	2.78	2.99	3.28	3.25	3.16	3.10	3.08	2.6%	3.1%
Consumer Price Index	(%,A.R.)	2.60	3.42	3.11	2.89	3.18	3.64	3.45	3.31	3.31	3.40	3.1%	3.4%
Personal Consumption Deflator	(%,A.R.)	1.30	3.01	3.36	3.59	3.82	4.14	4.18	4.14	4.14	4.19	3.2%	4.1%
Consumer Durables	(%,A.R.)	1.10	1.64	1.62	1.32	1.38	1.58	1.48	1.42	1.41	1.44	1.6%	1.5%
Nondurable Consumption	(%,A.R.)	2.31	3.24	2.73	2.96	3.25	3.55	3.45	3.37	3.36	3.41	2.9%	3.4%
Consumer Services	(%,A.R.)	0.95	3.22	4.28	4.55	4.78	5.10	5.24	5.21	5.20	5.24	3.8%	5.1%
Government Purchases	(%,A.R.)	1.70	3.24	3.15	3.08	3.15	3.27	3.20	3.15	3.14	3.16	3.0%	3.2%
Import Price Deflator	(%,A.R.)	-5.03	1.83	2.40	2.51	2.56	2.61	2.65	2.69	2.73	2.77	1.4%	2.6%
Export Price Deflator	(%,A.R.)	0.00	1.51	1.93	1.99	2.77	3.33	3.25	3.21	3.27	3.41	1.7%	3.1%
CPI for Medical Care	(%,A.R.)	5.99	6.92	7.30	7.45	7.51	7.53	7.53	7.52	7.51	7.50	7.1%	7.5%
CPI for Housing	(%,A.R.)	2.16	2.86	3.07	3.16	2.92	3.02	3.39	3.43	3.28	3.23	2.9%	3.2%
Retail Gasoline Prices (All Types)	($/Gal.)	1.23	1.23	1.20	1.20	1.21	1.22	1.23	1.24	1.25	1.26	1.3%	3.3%
Business Inventories	(Bill '87 $'s)	982.2	997.2	1011.8	1028.9	1046.5	1064.7	1082.6	1100.3	1117.6	1134.7	5.6%	6.8%
Real Disposable Income	(Bill '87 $'s)	3579.2	3599.3	3623.9	3647.9	3672.2	3695.7	3719.0	3742.2	3765.8	3789.8	2.2%	2.6%
Nominal Disposable Income	(Bill $'s)	4430.9	4489.2	4557.3	4628.0	4702.7	4781.0	4860.7	4941.0	5022.7	5106.9	5.5%	6.8%
Avg Conventional Home Mortgage Rate	(%)	7.90	7.56	7.39	7.32	7.34	7.38	7.44	7.49	7.54	7.56	-9.0%	2.1%
Aaa Corporate Bond Rate	(%)	7.98	8.10	8.26	8.41	8.50	8.56	8.61	8.57	8.54	8.40	3.3%	1.2%
30 Year Treasury Bond Rate	(%)	7.44	7.61	7.69	7.79	7.85	7.89	7.92	7.85	7.81	7.65	1.6%	0.0%
10 Year Treasury Bond Rate	(%)	6.62	6.79	6.94	7.11	7.21	7.28	7.34	7.29	7.28	7.13	1.6%	1.8%
5 Year Treasury Bond Rate	(%)	5.61	5.87	6.08	6.28	6.42	6.52	6.59	6.56	6.58	6.44	2.4%	3.5%
3 Month Treasury Bill Rate	(%)	3.08	3.13	3.24	3.36	3.58	3.70	3.80	3.88	4.01	4.04	0.8%	13.2%
Effective Rate on Federal Funds	(%)	3.26	3.10	3.18	3.31	3.48	3.66	3.79	3.88	3.96	4.03	-3.7%	14.9%
Average Foreign Interest Rate	(%)	8.67	8.77	8.87	8.99	9.14	9.30	9.45	9.60	9.75	9.88	3.3%	6.6%
Money Supply (M1)	(Bill $'s)	974.1	1012.7	1038.5	1056.4	1069.5	1079.9	1088.7	1096.7	1104.3	1111.9	9.9%	3.7%
Money Supply (M2)	(Bill $'s)	3472.4	3498.8	3536.7	3579.6	3624.2	3669.5	3715.1	3760.5	3805.4	3849.5	3.6%	5.0%
Annual Rate of Growth	(%)	0.3%	3.1%	4.4%	4.9%	5.1%	5.1%	5.1%	5.0%	4.9%	4.7%		
Index of Consumer Sentiment	(Feb '66=100)	75.6	86.4	92.4	92.4	92.3	91.7	91.4	91.2	91.1	90.8	18.3%	-1.2%
Health Services Expenditures	(Bill '87 $'s)	457.9	462.3	466.6	471.1	475.6	480.1	484.7	489.4	494.2	499.0	3.8%	3.9%
Total Automobile Sales	(Millions)	8.20	8.24	8.61	8.76	8.87	8.91	8.91	8.89	8.86	8.82	5.8%	0.9%
Domestic Automobile Sales	(Millions)	6.23	6.25	6.56	6.68	6.76	6.80	6.80	6.78	6.76	6.74	7.7%	1.0%
Import Automobile Sales	(Millions)	1.97	1.99	2.05	2.09	2.11	2.12	2.12	2.11	2.10	2.08	0.1%	0.5%
Outstanding Automobile Credit	(Mill $'s)	257.5	257.5	259.1	261.9	265.4	269.6	274.1	278.8	283.7	288.6	1.9%	6.5%

(a) Exogenously Determined

		Actual	Forecast									Percent Change	
Variable	Units	92:Q3	92:Q4	93:Q1	93:Q2	93:Q3	93:Q4	94:Q1	94:Q2	94:Q3	94:Q4	1992-93	1993-94
Exchange Value of U.S. Dollar	(3/73=100)	81.84	89.91	90.57	90.34	89.76	88.78	87.40	86.07	84.81	83.57	3.3%	-4.9%
Euro-Dollar Deposit Rate	(%)	3.29	3.62	3.75	3.91	4.19	4.38	4.54	4.68	4.88	4.95	8.5%	17.3%
New Privately-Owned Housing Units Started	(Millions)	1.19	1.22	1.27	1.27	1.26	1.27	1.27	1.27	1.26	1.27	5.3%	-0.2%
Civilian Unemployment Rate	(%)	7.60	7.21	7.07	6.90	6.72	6.56	6.41	6.28	6.16	6.07	-7.8%	-8.6%
Health Services Employment	(Millions)	8.49	8.55	8.60	8.66	8.71	8.76	8.80	8.85	8.89	8.93	2.6%	2.1%
Total Employment	(Millions)	117.74	118.03	118.50	119.06	119.65	120.26	120.86	121.48	122.15	122.89	1.5%	2.1%
Civilian Labor Force	(Millions)	127.41	127.19	127.50	127.89	128.28	128.69	129.13	129.62	130.17	130.82	0.8%	1.4%
Female Labor Force Participation Rate	(%)	57.90	58.04	58.20	58.35	58.49	58.63	58.77	58.89	59.01	59.13	0.9%	0.9%
Productivity: Nonfarm Output/Hour	(1982=100)	111.80	112.10	112.46	112.75	113.05	113.35	113.68	114.02	114.38	114.74	1.4%	1.2%
Average Hourly Earnings, Private Nonag	($/hour)	10.62	10.69	10.76	10.82	10.89	10.95	11.02	11.08	11.15	11.22	2.5%	2.4%
Compensation of Employees	(Bill $'s)	3529.8	3556.9	3587.7	3621.6	3658.1	3696.5	3736.5	3777.5	3819.5	3862.2	3.5%	4.3%
Employment Cost: Nonuion Workers	(6/89=100)	114.70	115.23	115.87	116.59	117.39	118.23	119.11	120.02	120.95	121.90	2.5%	3.0%
Employment Cost: Union Workers	(6/89=100)	115.20	115.45	115.93	116.53	117.19	117.88	118.58	119.29	120.00	120.73	2.1%	2.4%
Potential Manhours Lost	(Hours/Week)	418.2	415.2	410.3	403.6	396.4	390.0	384.5	380.0	376.3	373.4	-3.6%	-5.4%
Average Duration of Unemployment	(Weeks)	18.3	18.4	18.5	18.4	18.3	18.0	17.8	17.5	17.3	17.1	2.4%	-5.0%
The Federal Budget											Fiscal Year:	1992-93	1993-94
Government Purchases of Goods & Services	(Bill $'s)	1122.9	1136.9	1151.2	1165.4	1180.0	1195.0	1210.1	1225.3	1240.6	1256.1	4.1%	5.1%
- State & Local Government Purchases (a)	(Bill $'s)	668.8	681.8	695.0	708.5	722.3	736.3	748.9	761.7	774.7	787.9	5.2%	7.8%
+ Other Federal Govt Expenditures (a)	(Bill $'s)	995.4	1007.6	1020.0	1032.5	1045.2	1058.0	1071.0	1084.1	1097.4	1110.9	5.5%	5.0%
- Federal Government Receipts	(Bill $'s)	1155.4	1172.3	1186.0	1200.2	1214.3	1228.2	1241.8	1255.2	1268.4	1281.4	3.6%	4.8%
= Federal Government Budget Deficit	(Bill $'s)	294.1	290.4	290.1	289.1	288.5	288.5	290.4	292.5	294.9	297.7	8.6%	-0.3%

(a) Exogenously Determined

Input Assumptions: Endogenous Variables with Nonzero Intercept Adjustments

		92:Q4	93:Q1	93:Q2	93:Q3	93:Q4	94:Q1	94:Q2	94:Q3	94:Q4
Index of Consumer Sentiment	(Feb '66=100)	4	4	0	0	0	0	0	0	0
Consumer Price Index	(c)	0.002	0	-0.0015	-0.0015	-0.0015	-0.002	-0.0022	-0.0022	-0.0022
Retail Gasoline Prices (All Types)	($/Gal.)	0.02	0	0	0	0	0	0	0	0
Real Disposable Income	(Bill '87 $'s)	-5	-5	-5	-5	-5	-5	-5	-5	-5
Residential Fixed Investment	(Bill '87 $'s)	5	5	5	5	5	5	5	5	5
Business Inventories	(Bill '87 $'s)	11	8	8	8	8	8	8	8	8
New Privately-Owned Housing Units Started	(Thousands)	-100	-90	-80	-70	-60	-50	-40	-30	-20
Aaa Corporate Bond Rate	(%)	0.42	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.1
30 Year Treasury Bond Rate	(%)	0.08	0	0	0	0	0	0	0	0
3 Month Treasury Bill Rate	(%)	-0.08	0	0.02	0.04	0.06	0.08	0.1	0.1	0.1
Effective Rate on Federal Funds	(%)	-0.396	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Money Supply (M1)	(Bill $'s)	20	0	0	0	0	0	0	0	0
Import Price Deflator	(d)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Imports of Goods & Services	(Bill '87 $'s)	15	15	15	10	10	10	10	10	10
Exchange Value of U.S. Dollar	(c)	0.01	0.025	0.015	0.01	0.005	0	0	0	0
Export Price Deflator	(b)	-0.007	-0.006	-0.006	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Euro-Dollar Deposit Rate	(%)	0.4	0	0	0	0	0	0	0	0
Civilian Unemployment Rate	(%)	-0.06	0	0	0	0	0	0	0	0
Total Employment	(Thousands)	90	50	40	30	20	10	0	0	0

(b) The forecasting equation for this variable was estimated in terms of the natural logarithm.

(c) The forecasting equations for these variables were estimated in terms of the first difference of the natural logarithms.

(d) The forecasting equation for this variable was estimated in terms of the first differences.

COLBY ECONOMIC OUTLOOK FOR THE U.S. ECONOMY, 1992:Q4 - 1994:Q4

Input Assumptions: Forecast Paths for the Exogenous Variables in the Model

		Actual	Forecast									Percent Change	
Variable	Units	92:Q3	92:Q4	93:Q1	93:Q2	93:Q3	93:Q4	94:Q1	94:Q2	94:Q3	94:Q4	1992-93	1993-94
Exports of Goods and Services	(Bill '87 $'s)	576.2	584.0	591.8	599.8	607.9	616.1	625.1	634.3	643.6	653.0	5.5%	5.8%
Annual Rate of Growth (a)	(%)		5.5	5.5	5.5	5.5	5.5	6.0	6.0	6.0	6.0		
Avg. Refiners' Price of Crude Oil (a)	($'s/Barrel)	19.80	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.5%	0.0%
Manufacturing Capacity Utilization (a)	(%)	78.73	79.2	79.7	80.2	80.7	81.2	81.7	82.2	82.7	83.2	2.2%	2.5%
Relative Foreign Prices (a, c)	Index	78.31	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3	4.3%	0.0%
Discount Rate (a)	(%)	3.01	3.0	3.0	3.0	3.3	3.3	3.3	3.3	3.5	3.5	-3.9%	8.0%
Nonborrowed Reserves	(Bill $'s)	50.11	50.4	50.6	50.9	51.2	51.4	51.6	51.8	52.1	52.3	3.6%	1.8%
Annual Rate of Growth (a)	(%)		2.1	2.1	2.1	2.0	1.9	1.8	1.7	1.7	1.7		
Median Price of Single-Family Homes	(Thsnd $'s)	103.57	101.64	106.24	107.29	107.70	105.70	110.49	111.58	112.01	109.92	3.6%	4.0%
Seasonal Growth Rates (a)	(%, A.R.)		-7.25	19.40	4.00	1.55	-7.25	19.40	4.00	1.55	-7.25		
Weekly Hours Index: Services Industry	(1977=100)	149.0	149.1	149.3	149.4	149.5	149.6	149.7	149.8	149.9	150.0	0.6%	0.3%
Annual Rate of Growth (a)	(%)		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
Average Hours of Production Workers (a)	(Hrs/week)	34.4	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	0.2%	0.0%
Nonoil Import Price Deflator	(1987=100)	106.21	107.52	108.84	110.17	111.52	112.89	114.28	115.68	117.10	118.537	3.9%	5.0%
Annual Rate of Growth (a)	(%)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Mortgage Debt Outstanding (e)	(Bill $'s)	4.15	4.20	4.26	4.32	4.39	4.45	4.53	4.60	4.68	4.76	5.3%	6.6%
Annual Rate of Growth (a)	(%)		5.0	5.5	6.0	6.2	6.4	6.6	6.8	7.0	7.0		
State & Local Government Purchases	(Bill $'s)	668.8	681.8	695.0	708.5	722.3	736.3	748.9	761.7	774.7	787.9	7.1%	7.4%
Annual Rate of Growth (a)	(%)		8.0	8.0	8.0	8.0	8.0	7.0	7.0	7.0	7.0		
Other Federal Government Expenditures (d)	(Bill $'s)	995.4	1007.6	1020.0	1032.5	1045.2	1058.0	1071.0	1084.1	1097.4	1110.9	3.9%	5.0%
Annual Rate of Growth (a)	(%)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Rest of World Factor Income Receipts	(Bill $'s)	126.0	128.1	130.3	132.6	134.8	137.1	139.5	141.8	144.3	146.7	3.2%	7.0%
Annual Rate of Growth (a)	(%)		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		
Rest of World Factor Income Payments	(Bill $'s)	115.3	117.3	119.3	121.3	123.4	125.5	127.6	129.8	132.0	134.3	4.1%	7.0%
Annual Rate of Growth (a)	(%)		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		

(c) Defined historically as: (Nonoil Import Price Deflator x Exchange Value of the $)/Export Price Deflator

(d) Defined historically as: Total Federal Expenditures - Total Government Purchases of Goods & Services + State & Local Government Purchases

(e) Values in 92:Q2 & 92:Q3 are predicted

(a) Exogenously Determined