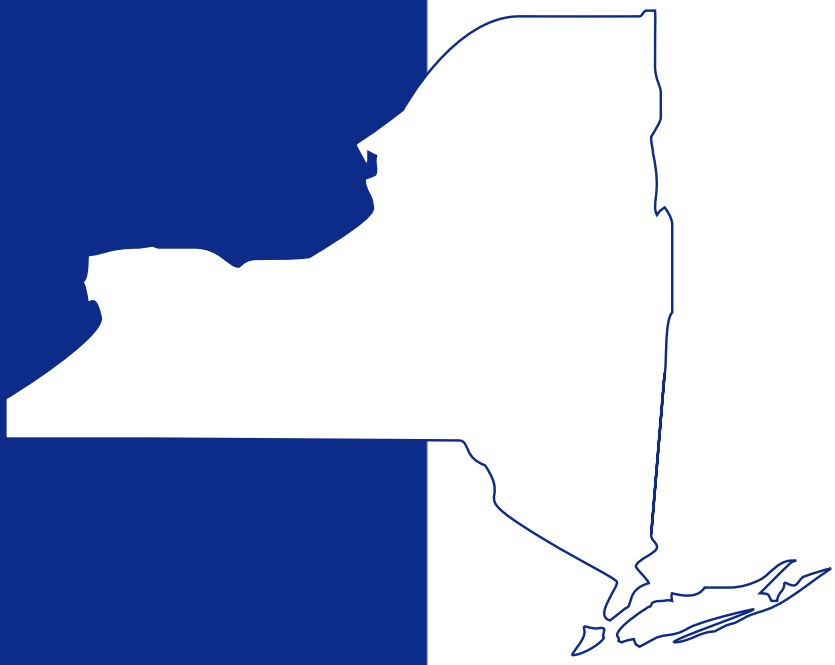

New York State Economic Report 1999 & 2000

Sheldon Silver, Speaker

Herman D. Farrell, Jr., Chairman

New York State Assembly
Ways and Means Committee Staff
February 2000

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February 28, 2000

Dear Colleagues:

I am pleased to provide you with the Ways and Means Committee *New York State Economic Report for 1999 & 2000*. This report is part of our commitment to presenting clear and accurate information to the public. It offers a complete and detailed assessment of the national and State economies.

The U.S. economy is now in the midst of the longest expansion in its history and continues to exhibit tremendous strength. On February 25th, national economic growth for 1999, as measured by growth in real Gross Domestic Product (GDP), was revised upward to a robust 4.1 percent. The nation also continued to enjoy both low inflation and low unemployment. The Committee staff predicts that national economic growth will slow but only moderately, to a still strong 3.8 percent for 2000.

New York State has experienced stronger employment growth as a result of the continuing national expansion, as well as spectacular Wall Street performances over the last five years. In 1999, the State experienced its strongest rate of job growth since the mid-1980's. The Committee staff is predicting a rate of employment growth of 2.1 percent for New York State for 2000, following growth of 2.6 percent in 1999. State wages and salaries will grow 6.7 percent in 2000, following growth of 6.4 percent in 1999.

The Committee staff projections are reviewed by an independent panel of professional economists, drawn from major financial and manufacturing corporations, prestigious universities, and private forecasters from across the State. Assembly Speaker Sheldon Silver and I would like to express our appreciation to all of the members of our Board of Economic Advisors. Their dedication and expert judgement have been invaluable in helping the Ways and Means Committee staff refine and improve this forecast. They have served to make the work of the staff the best in the State. Of course, they are not responsible for either the numbers or the views expressed in this document.

I wish to acknowledge the fine work done by the talented Ways and Means Committee staff. Their forecasts are integral to the budget process. The Speaker and I look forward to working with each of you to achieve a budget fair for all New Yorkers.

Sincerely,

Herman D. Farrell, Jr.
Chairman

NEW YORK STATE

ECONOMIC REPORT

1999 & 2000

February 2000

Herman D. Farrell, Jr.
Chairman
Assembly Ways and Means Committee

Prepared by the
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ECONOMIC REPORT
1999 & 2000

TABLE OF CONTENTS

Economic Overview

Risks to the Forecasts

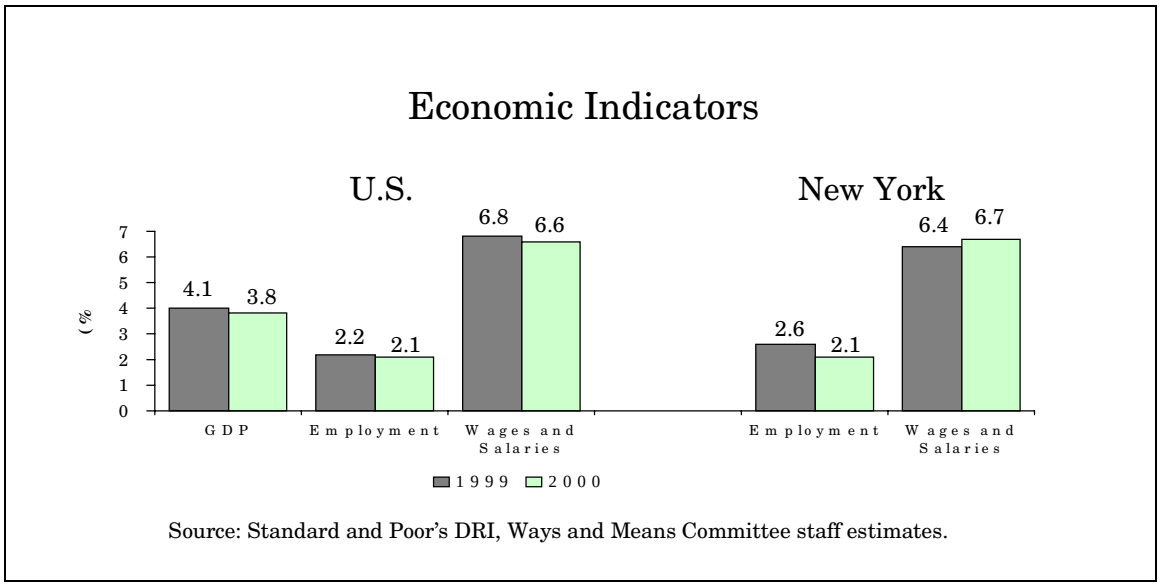
Technical Appendix

EXECUTIVE SUMMARY

The National Economy

The Ways and Means Committee staff projects strong growth in real GDP of 3.8 percent for 2000, only slightly below the 4.1 percent experienced last year. Consistent with this moderate slowdown in the economy, national employment growth is expected to fall very slightly from 2.2 percent in 1999 to 2.1 percent during 2000.

In February 2000, the current expansion became the longest on record. The debate among economists now centers around how successful the Federal Reserve will be in once again engineering a soft landing. The Committee staff believes that another half of a percentage point increase in the federal funds target rate may be sufficient to keep the economy on a steady growth path for the foreseeable future.



Source: Standard and Poor's DRI, Ways and Means Committee staff estimates.

Figure A 1

Today's low-inflation low-unemployment environment—the hallmark of the so-called "new economy"—may be here to stay for some time to come. Business cycle expansions can be expected, on average, to be longer, and recessions to be shorter and less painful than those before 1982. This phenomenon is largely due to four factors—the economy's shift away from manufacturing towards service production, the careful monitoring of the Federal Reserve, the forces of global integration, and the resurgence in productivity growth.

The Federal Reserve's four interest rate increases in June, August, November, and February have thus far had little impact on consumer behavior. However, before the end of the year, higher rates are expected to slow down the vigorous growth in consumption we have so far experienced, especially in the case of consumer durables. Higher interest rates are also expected to reduce housing market activity, a phenomenon we have only barely begun to observe. Nonresidential investment, however, is expected to strengthen, despite higher interest rates, as firms resume technology related spending, some of which had been put on hold as they diverted resources toward solving the Year 2000 computer problem. Export growth is expected to pick up significant momentum as the East Asian economies recover and revive their demand for U.S. goods.

The New York State Economy

Employment Growth

The strength and duration of the national expansion, as well as the remarkable successes of Wall Street have rejuvenated parts of the New York State economy. The Ways and Means Committee staff projects New York employment growth of 2.1 percent for 2000, following 2.6 percent for 1999. The slowdown in employment growth is consistent with the higher interest rates and the moderate slowdown of the national economy.

State Income Growth and Wall Street

State personal income is estimated to grow 6.0 percent in 2000, following growth of 5.2 percent in 1999. The largest component of personal income, wages and salaries, is projected to grow 6.7 percent in 2000, after growing 6.4 percent in 1999.

In 1998, the securities industry saw its pre-tax profits decline for the first time since 1994 due to the Asian crisis. Securities industry bonuses are estimated to have fallen 5.6 percent between the 1997-98 bonus season and 1998-99, from $11.7 billion to $11.1 billion. Consequently, total New York State bonus income is estimated to have grown a mere 1.3 percent over the same period, following 7.8 percent growth the previous year and double-digit growth during the two years before that.

The securities industry saw a year of record profits in 1999, despite a brief third quarter lull. The outlook for 2000 is also strong. The Federal Reserve's is expected to raise its federal funds target rate by a further 50 basis points to 6.25 percent during the first half of the year. With the possibility of additional rate increases becoming remote, we expect the stock market to pick up considerably during the second half of the year. Diminished inflationary expectations should strengthen investor confidence and stimulate further financial market activity. Further, the response of firms to global economic integration will continue to increase their demand for Wall Street investment

banking services. Merger and acquisition activity should remain strong as firms both here and abroad seek to improve their positions relative to increasingly competitive international markets.

The more positive outlook for the 1999-2000 and 2000-2001 bonus seasons should produce bonus income growth well above what was observed during 1998-99. New York State bonus income is projected to grow 28.0 percent and 8.5 percent during the 1999-2000 and 2000-2001 bonus seasons, respectively. The securities industry is responsible for much of that improvement, with bonus income in that industry projected to grow 55.8 percent and 11.0 percent during 1999-2000 and 2000-2001, respectively.

INTRODUCTION

On February 1, 2000, the current expansion became the longest on record. Indeed, since the beginning of the year, debate among economists has shifted from the possible impact of the millenium bug to the question of whether the Federal Reserve will be able to once again successfully engineer a soft landing. How many interest rate hikes will it take to reduce the tremendous momentum of this economy?

Another half of a percentage point increase in the Federal Reserve Bank's federal funds target rate may be all that is required to keep the economy on a steady growth path for the foreseeable future. Few would argue that growth of 6.9 percent—the economy's growth rate for the fourth quarter of 1999—can be sustained without sacrificing price stability. However, based on the experience of the last three years, the Federal Reserve Board appears to believe that the economy can sustain growth rates of close to four percent without igniting a lasting surge in general inflation.

The above conclusion rests on the assumption that today's low-inflation low-unemployment environment—the hallmark of the so-called "new economy"—is here to stay. National business cycle expansions can be expected to be longer and recessions to be shorter than before 1982. We attribute this phenomenon largely to four factors—the shift of employment away from manufacturing towards service production, the careful monitoring of the Federal Reserve, the intensely competitive forces engendered by global economic integration, and the resurgence in productivity growth.

National Economic Outlook

For the year 2000, the Ways and Means Committee staff projects continued strong growth of 3.8 percent in real U.S. Gross Domestic Product (GDP). This forecast is only moderately lower than the 4.3 percent annual average growth we have experienced for the last three years (see Figure 1). While we do expect to see an increase in the rate of general inflation, this increase is attributed almost exclusively to the diffusion of higher oil prices.

Two key factors will prevent increases in the cost of energy from generating the wage-price spiral experienced two decades ago. First are the forces of global competition, which are far more relevant to our daily economic life today than in the 1970's and inhibit the ability of firms to raise the prices of their products. Second, accelerating technology-related investment has fueled productivity growth, allowing firms to earn solid profits despite higher energy costs.

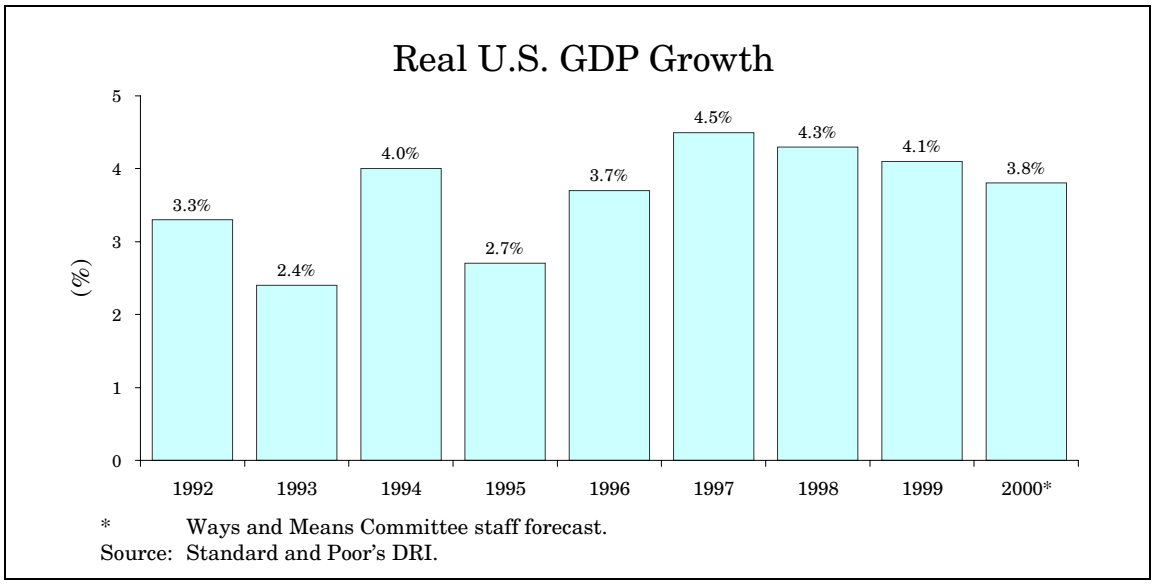


Figure 1

To date, the Federal Reserve's four interest rate increases since June 1999 have had little impact on consumer behavior.[1] However, before the end of the year, higher rates are expected to slow the vigorous growth in consumption we experienced in 1999, particularly in the domain of durable goods. Higher interest rates are also expected to reduce housing market activity, a phenomenon we have only barely begun to observe.

In contrast, nonresidential investment is expected to strengthen, despite higher interest rates, as businesses step up their technology related spending, some of which is believed to have been put on hold as firms targeted resources toward repairing their Year 2000 computer problems. Export growth is also expected to pick up substantial momentum as the East Asian economies continue to recover and revive their demand for U.S. goods.

[1] The average lag between the beginning of a shift in monetary policy and its full impact has historically been about 13 months (see New York State Assembly Ways and Means Committee Staff, "*New York State Economic and Revenue Report, 1994-95 & 1995-96*," March 1995). However, more recent evidence suggests that the length of this lag may be diminishing due to increased participation of consumers in the stock market and a resulting decline in the holding period of stocks. "The average holding period for stocks has fallen from about two years to about eight months over the last decade, according to the report; the holding period for Nasdaq stocks has plunged from under two years to about five months. Some of the hottest stocks now have average holding periods of no more than a few weeks." (Michael Rapoport, Dow Jones News Service, January 31, 2000. Reference is to a report from Sanford C. Bernstein & Co.)

State Economic Outlook

The "new economy" may be a mixed blessing for New York State. Nowhere has the shift toward a service economy occurred with more vigor than in New York. The State's business services industry has exhibited the most consistent strength of any industry since the end of the last recession. Growth in computer services has been especially strong. Moreover, the Federal Reserve's success in maintaining relative price stability has been a boon to the financial markets, which play an important role in employment growth in New York City. Overall State employment is estimated to have grown 2.6 percent in 1999, the highest rate of growth since the mid-1980's,[2] and is projected to grow 2.1 percent in 2000.

However, the benefits of a more integrated global economy have recently proven to be quite variable across the regions of the State. The more manufacturing intensive upstate regions showed little resilience to either the seven interest rate hikes that occurred between February 1994 and February 1995 or the Asian crisis. Four upstate regions actually lost jobs in 1996 after experiencing some growth between 1992 and 1995. Upstate manufacturing employment began to fall in July 1998, following a short period of growth immediately prior. The Western New York region saw virtually no growth in 1998, and has seen very little improvement since then.

In contrast, many downstate areas have seen significant growth due to more integrated global markets. International demand for financial market services, such as those related to merger and acquisition activity, has increased. Global integration has produced a strong wave of merger and acquisition activity as firms position themselves to compete in markets across their borders, as well as more aggressively within their own. While it is true that global integration makes every economy vulnerable to the crises of another, Wall Street recovered fairly quickly from the deepening of the Asian financial crisis in the fall of 1998, and went on to earn a record level of profits in 1999. The outlook for 2000 is even stronger.

Below we explore the features of the "new economy" and their role in prolonging the length of the current national expansion. We also examine recent trends in each of the economy's major sectors. We find that the extended life of the expansion has increased rates of participation in the labor market among almost all groups. However, we also find a widening of the income gap between rich and poor. Finally, we highlight the importance of Wall Street in promoting both income and employment growth in New York State.

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[2] In 1984, employment in New York State grew at a rate of 3.5 percent.

U.S. ECONOMIC FORECAST

Real Gross Domestic Product

The Ways and Means Committee staff predicts that the national economy, as measured by real U.S. Gross Domestic Product (GDP), will grow 3.8 percent during 2000. Although this forecast is below the 4.1 percent growth experienced last year, it is a 0.2 percentage point above the average over the life of the current expansion of 3.6 percent (see Table 1). We believe this rate of growth is sustainable with a modest degree of increased inflation.

Consumption

Consumer spending is projected to grow 4.1 percent in 2000, following 5.3 percent growth for 1999 (see Table 1). Much of this slowdown is related to the realization of the full impact of the Federal Reserve's four interest rate increases since June 1999, including the recent 25 basis point hike in early February 2000. Employment growth will decline slightly in 2000, putting downward pressure on consumption growth as well.

Consumption is comprised of three major types, all of which have remained strong over the last several years. Services consumption is the largest component of real consumption, representing 56.9 percent of the total during 1999, as well as the least volatile. This component includes housing, household energy, and other household operation services, as well as transportation and medical services. Services consumption growth accelerated from an average annual rate of 2.8 percent from 1992 to 1995, to 3.5 percent from 1996 to 1998, to 4.0 percent during 1999. Services consumption is projected to grow 4.1 percent in 2000.

The second largest component of overall consumption is consumption of nondurable goods including such items as food, apparel, and gasoline. Growth in the consumption of nondurable goods accelerated more in 1999 than growth in either of the other two components. Comprising 29.5 percent of real consumption during 1999, growth in consumption of nondurables increased from an average annual rate of 2.9 percent from 1992 to 1995, to 3.3 percent from 1996 to 1998, to 5.3 percent during 1999. Consumption of nondurable goods is projected to grow 3.2 percent in 2000.

Table 1

UNITED STATES ECONOMIC OUTLOOK
(Dollar Amounts in Billions)

	Preliminary	Forecast	Historical Averages		
	1999	2000	1979-1999	1989-1999	Current Expansion
Real GDP	8,867.0	9,203.9			
Percent Change	4.1	3.8	3.1	3.1	3.6
Real Consumption	6,001.0	6,247.0			
Percent Change	5.3	4.1	3.3	3.2	3.5
Real Investment	1,637.8	1,760.6			
Percent Change	5.8	7.5	4.5	5.8	7.5
Real Exports	1,043.6	1,135.5			
Percent Change	3.6	8.8	6.8	7.5	7.0
Real Imports	1,366.5	1,519.5			
Percent Change	11.8	11.2	7.0	8.1	9.4
Government	1,535.3	1,587.5			
Percent Change	3.7	3.4	2.2	1.5	1.1
Personal Income	7,791.0	8,250.6			
Percent Change	5.9	5.9	7.1	5.6	5.3
Wages & Salaries	4,472.4	4,768.7			
Percent Change	6.8	6.6	6.8	5.6	5.6
Transfer Income	1,018.1	1,053.3			
Percent Change	3.5	3.4	7.9	6.8	6.1
Profits	844.1	899.0			
Percent Change	8.0	6.5	6.9	7.7	8.8
Employment	128.6	131.2			
Percent Change	2.2	2.1	1.9	1.9	1.8
CPI-Urban	166.7	171.2			
Percent Change	2.2	2.7	4.6	3.2	2.7
Money Supply (M2)	4,541.2	4,741.0			
Percent Change	7.6	4.4	6.1	4.1	3.9
Treasury Bill Rate (3 month)	4.6	5.8	7.0	5.1	4.6
Treasury Bond Rate (10 year)	5.6	6.7	8.7	6.8	6.5
S&P 500	1,326.1	1,483.5			
Percent Change	22.3	11.9	14.2	16.3	17.1

Source: Standard and Poor's DRI, Committee staff forecasts.

Consumption of durable goods is the smallest and most volatile component of real consumption, comprising 13.6 percent of the total for 1999. Growth in consumption of durable goods accelerated from an average annual rate of 6.4 percent from 1992 to 1995 to 7.9 percent from 1996 to 1998, to 11.4 percent during 1999. While motor vehicles have shown great strength recently, computers, which figure prominently in both consumer spending and investment spending, are by far the fastest growing components of both real and

nominal consumer spending.[3] Real spending on furniture and household equipment other than computers grew only 4.3 percent from 1998 to 1999, while real spending on computers grew 64.7 percent. Consumption of durable goods is projected to grow 6.3 percent in 2000.

Investment

The Committee staff is predicting investment growth of 7.5 percent for 2000, following growth of 5.8 percent for 1999. Although the overall rate of investment growth will rise only moderately, its composition will look much different. Rising interest rates will reduce residential investment below its robust 1999 level. However, non-residential fixed investment, which includes computers and software, is expected to grow more rapidly in 2000 as firms continue to perform technological upgrades and resume those investment plans that were postponed due to the Year 2000 problem.

Net Exports

The Committee staff predicts a significantly higher export growth of 8.8 percent for 2000 than the 3.6 percent growth experienced in 1999. This projection is consistent with a more rapid expansion of the international economy. Import growth is expected to slow slightly from 11.8 percent to 11.2 percent in 2000, with a decline in the rate of consumption growth more than offsetting an increase in the growth rate for nonresidential fixed investment. It is estimated that almost half of all imported goods are producer goods.

Government Spending

Real government spending grew 3.7 percent in 1999, with spending rising 2.8 percent at the federal government level and 4.2 percent at the state and local level. For 2000, the Committee staff anticipates that government spending will increase 3.2 percent at the federal level and 3.4 percent at the state and local level, for combined growth of 3.4 percent. The fiscal outlook for most government entities appears to be good, owing to the tremendous realization of capital gains in the stock market.

[3] Real spending for computers poses a significant measurement problem for the Bureau of Economic Analysis because of simultaneously rising quality and falling prices.

Employment

National employment growth slowed to 2.2 percent in 1999 from 2.6 percent growth during the two previous years. The Committee staff predicts slower growth of 2.1 percent for 2000, consistent with a modest slowdown of the U.S. economy. The national unemployment rate is expected to average 4.2 percent in 2000, the same rate as in 1999.

Table 2

UNITED STATES NON-AGRICULTURAL EMPLOYMENT BY SECTOR
(Employment in Millions)

	Preliminary	Forecast	Historical Averages		
	1999	2000	1979-1999	1989-1999	Current Expansion
TOTAL	128.6	131.2			
Percent Change	2.2	2.1	1.8	1.8	2.2
Construction	6.3	6.5			
Percent Change	4.9	3.4	1.8	2.1	4.0
Manufacturing [1]	19.0	18.8			
Percent Change	(2.0)	(0.8)	(0.7)	(0.6)	0.0
Utilities [2]	6.8	7.0			
Percent Change	2.9	2.8	1.4	1.9	2.1
Wholesale Trade	7.0	7.2			
Percent Change	2.5	2.1	1.5	1.3	1.8
Retail Trade	22.8	23.1			
Percent Change	2.2	1.3	2.1	1.6	2.1
F.I.R.E.	7.6	7.7			
Percent Change	3.1	1.5	2.2	1.4	1.8
Services	39.0	40.6			
Percent Change	3.9	4.0	4.2	3.8	4.1
Government	20.2	20.4			
Percent Change	1.7	1.4	1.2	1.3	1.1

[1] Including Mining .
[2] Transportation, Communication, Public Utilities.
Source: History from Standard and Poor's DRI, Committee staff estimates.

The services sector is expected to once again lead the economy in job creation in 2000 with growth of 4.0 percent, following 3.9 percent growth for 1999 (see Table 2). Retail trade employment is expected to grow 1.3 percent in 2000, following 2.2 percent growth for 1999. The transportation, communication,

and utilities sector is projected to grow 2.8 percent in 2000, just below the rate recorded for 1999. Construction industry job growth is expected to slow down to 3.4 percent in 2000, following growth of 4.9 percent for 1999. Manufacturing employment fell 2.0 percent in 1999 due to the Asian crisis. The decline will continue in 2000 but at the lower rate of 0.8 percent as demand for U.S. exports grows. Government sector employment is expected to grow 1.4 percent for 2000, following 1.7 percent growth for 1999.

With the unemployment rate now hovering at a low four percent level, the prospects for 2.1 percent growth in employment may appear dim due to anticipated labor shortages. Yet, in January 2000, the economy appeared to defy expectations and added almost 400,000 workers on a seasonally adjusted basis. The unemployment rate data and the payroll employment data come from two separate surveys, one of households and the other of establishments, respectively. Recent research which compares the results of the two surveys points to the conclusion that the establishment survey may, for the moment, be the more accurate. The household survey estimates of the labor force and employment are tied to 1990 census results which are now 10 years old. It is expected that the 2000 census will result in an upward "rebasing" of the working-age population, indicating the availability of additional workers.

Personal Income and Wages

Personal income grew 5.9 percent in 1999, with its largest component, wages and salaries, growing 6.8 percent. The Committee staff anticipates that growth in personal income will continue at 5.9 percent in 2000, with wages growing 6.6 percent.

Thus far during the current expansion, personal income and wages and salaries have grown only modestly by historical standards. Employment growth was relatively slow during the first four full years of the expansion, averaging only 2.0 percent from 1992 to 1995. As a result, wages grew only 5.0 percent per year, on average, during that period. However, employment growth has picked up during the past four years, averaging 2.4 percent per year from 1996 to 1999. In addition, record breaking profit levels on Wall Street have produced phenomenal growth in bonus income within the securities industry. Consequently, average annual wages and salaries growth increased to 6.9 percent during the latter four-year period.

Inflation

The Ways and Means Committee staff projects that inflation, as measured by growth in the U.S. Consumer Price Index (CPI), will increase to 2.7 percent in 2000, following 2.2 percent growth in consumer prices for 1999. Inflationary pressures continue to remain in check due to rising international and domestic competition, as well as higher productivity growth. However, an increase is expected for 2000 due primarily to the rise in energy prices and an

upward pressure on world commodity prices fueled by economic recovery overseas. Moreover, medical care services price inflation is expected to rise as the savings which the industry has recently enjoyed as a result of the shift toward managed care approaches its limit.

Interest Rates

The average short-term interest rate, as measured by the yield on three-month Treasury bills, averaged 4.6 percent for 1999, incorporating three increases in the Federal Reserve's federal funds rate target. The Committee staff forecast for 2000 of 5.8 percent presumes additional interest rate hikes totaling 50 basis points during the first half of the year. The average long-term rate, as measured by the yield on ten-year government notes, averaged 5.6 percent for 1999, and is expected to rise to 6.7 percent for 2000. Similarly, the average yield on Aaa corporate bonds is expected to rise from 7.0 percent for 1999 to 7.7 percent for 2000.

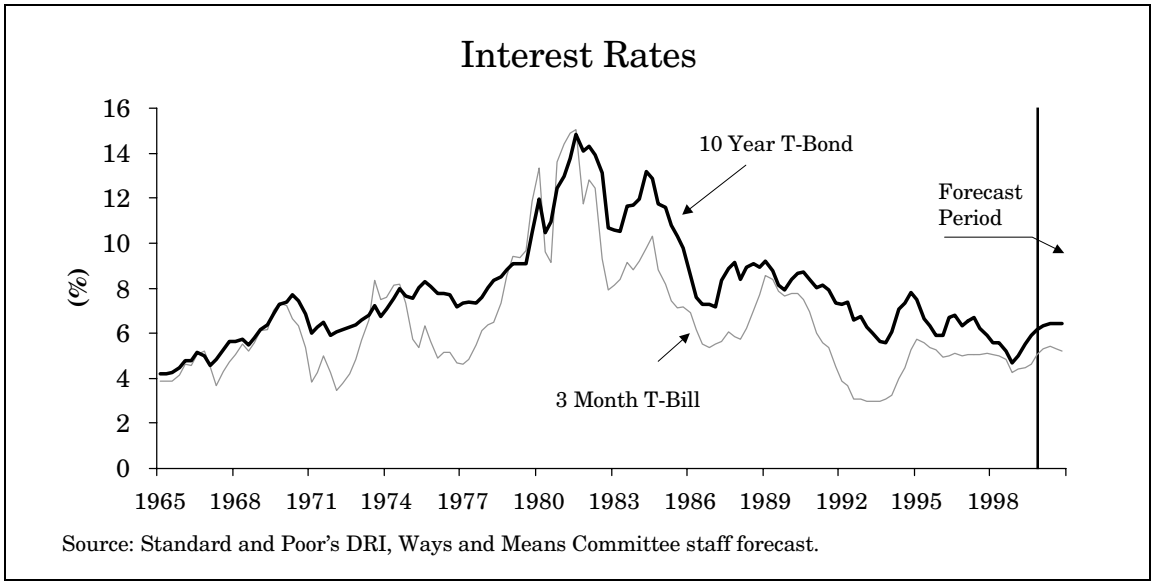

Figure 2

Corporate Profits and the Stock Market

U.S. corporate profits grew a strong 8.0 percent in 1999 as the economy recovered from the impact of the global economic crisis. Profit growth is projected to slow to a still healthy 6.5 percent in 2000 owing to slightly higher interest rates and the inability of firms to pass much of their cost increases on to consumers due to competitive pressures.

Stock prices, as measured by Standard and Poor's Index of 500 common stock prices, are projected to grow 11.9 percent on an annual average basis for 2000, following 22.3 percent growth in 1999 (see Table 1). The Committee staff forecast presumes that the S&P 500 index will remain below its year-end high of 1469 for the first half of 2000 as a result of interest rate fears. However, by the second half of the year, the possibility of additional rate increases should become more remote. As a result, the market should return to its steady growth path, much as it did in 1995. The Committee staff's annual average forecast of 1484 for the year is only about one percent above the index's 1999 year-end peak [4]

Comparison with Other Forecasting Groups

The Ways and Means Committee staff forecast of 3.8 percent for overall economic growth in 2000 is above the WEFA Group and Standard and Poor's DRI forecasts, both at 3.6 percent, but matches the Blue Chip Economic Consensus forecast of 3.8 percent. The Blue Chip Economic Consensus is a compendium of the forecasts of 50 private sector forecasters. As of the middle of January, the New York State Division of the Budget was predicting growth of 3.5 percent for 2000 (see Table 3).

Table 3

U.S. REAL GDP FORECAST COMPARISONS FOR 2000
(Percentage Growth Rates)

Ways & Means	3.8
Blue Chip	3.8
Standard and Poor's DRI	3.6
WEFA	3.6
N.Y.S. DOB	3.5

Source: New York State Assembly Ways & Means staff estimate; WEFA, Executive Summary, February 2000; Standard and Poor's DRI *U.S. Forecast Summary* , February 2000; New York State Division of the Budget, January 2000.

[4] The stock market is much more volatile than the level of corporate profits, an important factor influencing stock price growth. Therefore, the Committee staff estimates stock market growth by comparing annual averages rather than by comparing the year-end value to the value at the beginning of the year. Any single day's value reflects the news and rumors which may happen to be in the air that day, making it impossible to forecast. Annual averages are purged of this daily volatility and are therefore more reflective of the fundamentals driving the market.

NEW YORK STATE ECONOMIC FORECAST

Short-term prospects for economic growth in New York continue to be tied to the success of both the national economy and Wall Street.

Employment

The Committee staff projects that the New York economy will generate about 177,000 jobs in 2000, for growth of 2.1 percent (see Table 4). This is slightly above the expected rate of national employment growth of 2.1 percent. New York is estimated to have added about 199,000 jobs in 1999, for growth of 2.6 percent, 0.4 of a percentage point above the national rate.[5] However, we estimate that about 80 percent of those jobs were created in the State's downstate regions.

By far, the biggest employment gains have occurred in the services sector, a trend which is expected to continue (see Table 4). Services sector employment is predicted to grow by 4.0 percent in 2000, down from 4.3 percent in 1999. The Committee staff is also forecasting net job growth in the trade sector for 2000 of 1.6 percent, following 2.8 percent growth in 1999. Construction employment growth is predicted to slow to 6.0 percent in 2000, following an estimated increase of 9.9 percent for 1999. The transportation, communications, and public utilities sector is expected to increase by 1.4 percent in 2000, following a 1.5 percent increase in 1999.

The long-term decline in the State's manufacturing sector is expected to continue in 2000. The Committee staff predicts a 1.5 percent decline in manufacturing employment for 2000, following a decline of 2.2 for 1999. Since 1979, manufacturing employment has been falling at an average rate of 2.4 percent per year. This trend deteriorated further with the onset of the last recession when the average annual rate of decline rose to 2.6 percent. Total manufacturing employment stood at about 900,000 workers in 1999, compared to over 1.6 million in the mid-1970's.

The projection for government employment calls for an increase of 1.2 percent in 1999 followed by the same percent growth in 2000. The number of federal government employees in New York State has been falling since 1990 due to the downsizing of the federal government, particularly the defense department. On the other hand, local governments have slightly increased their employment levels.

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[5] New York State's employment grew at a rate below the national average over the life of the expansion up until 1999.

Table 4

NEW YORK STATE NON-AGRICULTURAL EMPLOYMENT BY SECTOR (Employment in Thousands)

	Estimate	Forecast	Historical Averages		
	1999	2000	1979-1999	1989-1999	Current Expansion [1]
TOTAL	8,462.0	8,640.1			
Percent Change	2.6	2.1	0.8	0.3	1.3
Construction	313.0	331.8			
Percent Change	9.9	6.0	2.2	(0.5)	3.6
Manufacturing	900.4	886.9			
Percent Change	(2.2)	(1.5)	(2.4)	(2.6)	(1.5)
Utilities [2]	419.3	425.0			
Percent Change	1.5	1.4	(0.1)	0.2	0.7
Trade	1,711.8	1,739.2			
Percent Change	2.8	1.6	0.7	(0.1)	1.2
F.I.R.E.	750.3	755.6			
Percent Change	2.0	0.7	1.1	(0.5)	0.4
Services	2,932.6	3,049.6			
Percent Change	4.3	4.0	2.9	2.3	3.2
Government	1,434.6	1,451.8			
Percent Change	1.2	1.2	0.5	(0.1)	0.1

[1] The State's current expansion started in December 1992. For a discussion of the State business cycle, please see New York State Assembly Ways and Means Committee Staff, "*New York State Economic and Revenue Report, 1995-96 & 1996-97,*" March 1996.

[2] Transportation, Communications, Public Utilities.

Sources: History from Standard and Poor's DRI and the NYS Department of Labor.

Wages and Personal Income

The unique composition of the New York economy can support strong income growth, even in the absence of strong growth in employment. Over the past twenty years, personal income has grown at a substantially higher average annual rate than employment. Since 1979, employment growth has averaged 0.8 percent per year while personal income grew 6.5 percent on average. Even after adjusting for inflation, real personal income grew at 1.9 percent per year, more than double the rate of job growth.

Personal income grew by 5.2 percent in 1999, and is predicted to grow a higher 6.0 percent in 2000 (see Table 5). The largest component of New York personal income, wages and salaries, grew 6.4 percent for 1999 and is expected

to grow at a slightly higher rate of 6.7 percent for 2000.[6] The increase in wages and salaries growth forecast for 2000 is due to higher growth in finance industry bonus earnings in early 2000.

Table 5

NEW YORK STATE SELECTED ECONOMIC VARIABLES
(Dollar Amounts in Billions)

	Estimate	Forecast	Historical Averages		
			1979-1999	1989-1999	Current Expansion [1]
	1999	2000			
Personal Income	$592.0	$627.3			
Percent Change	5.2	6.0	6.5	4.6	4.6
Wages and Salaries	$350.4	$373.8			
Percent Change	6.4	6.7	6.4	4.7	5.2
Property Income	$100.0	$105.6			
Percent Change	3.2	5.6	6.6	2.4	3.7
Transfer Payment	$110.7	$115.2			
Percent Change	3.8	4.0	7.3	6.7	4.5
Consumer Price Index	177.0	181.1			
Percent Change	1.9	2.3	4.5	3.1	2.4

[1] The State's current expansion started in December 1992. For a discussion of the State business cycle, please see New York State Assembly Ways and Means Committee Staff, "*New York State Economic and Revenue Report, 1995-96 & 1996-97,*" March 1996.

Sources: History from Standard and Poor's DRI and the NYS Department of Labor.

[6] The Committee staff's wages and salaries series, and therefore personal income series, is based on the NYS Department of Labor's ES-202 data, rather than U.S. Bureau of Economic Analysis data. The data compiled and published by the BEA on national and state personal income is subject to substantial revision. A major source of these revisions is the so-called "benchmarking" of preliminary BEA wage data with the universe of businesses captured by the ES-202 data series compiled by the U.S. and New York State Departments of Labor (see Box 2, Technical Appendix). In fact, the size of these revisions can be so large as to call into question the utility of preliminary BEA data for purposes of forecasting. To avoid this problem, the Committee staff bases its wages and salaries forecast directly on the ES-202 data and incorporates the result into its forecast for State personal income. This explains why the historical data on personal income presented by the Committee staff differ from that published by the BEA.

Comparison with Other Forecasting Groups

The WEFA Group estimates that New York State personal income grew 5.4 percent for 1999, and predicts 5.5 percent growth for 2000. They also estimate wage and salary growth of 7.2 percent for 1999 and predict growth of 6.1 percent for 2000. For nonagricultural employment, WEFA predicts growth of 1.5 percent for 2000, following 1.8 percent growth in 1999.

According to Standard and Poor's DRI's most recent forecasts, State personal income is estimated to have grown 5.9 percent in 1999, with a projection of 5.6 percent growth for 2000. DRI is forecasting wage and salary growth of 6.1 percent for 2000, following 7.8 percent growth in 1999. DRI expects non-farm employment to grow 1.5 percent in 2000, following 1.8 percent growth in 1999. As of January 2000, the Executive was forecasting personal income growth of 5.3 percent for 2000, following 4.6 percent growth in 1999. The Executive predicts that employment will grow 1.7 percent in 2000, after having grown 2.3 percent last year (see Table 6).

Table 6

NYS FORECAST COMPARISONS
(Percentage Growth Rates)

	Ways & Means		WEFA		Standard & Poor's DRI		N.Y. DOB	
	1999	2000	1999	2000	1999	2000	1999	2000
Personal Income	5.2	6.0	5.4	5.5	5.9	5.6	4.6	5.3
Wages & Salaries	6.4	6.7	7.2	6.1	7.8	6.1	5.8	6.2
Employment	2.6	2.1	1.8	1.5	1.8	1.5	2.3	1.7

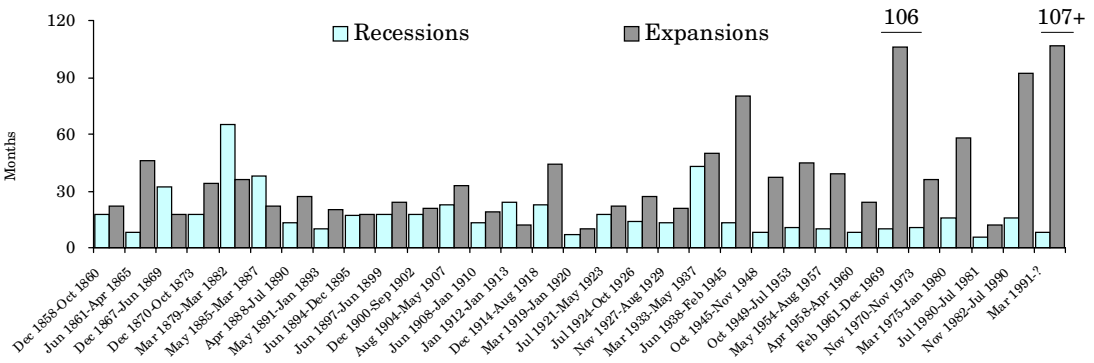
Source: New York State Assembly Ways & Means staff estimate; WEFA, *U.S. Regional,* February 2000; Standard and Poor's DRI, February 2000; New York State Division of the Budget, January 2000.

ECONOMIC OVERVIEW

The New Economy

In April 2000, the current expansion will enter its tenth year. How do economists explain this unprecedented phenomenon? There has been much talk in recent years of the so-called "new economy" and much debate about its existence. Do we observe anything about recent expansions and recessions which can be characterized as a fundamental departure from those of an earlier era? To answer this question, we turn our attention to two key characteristics of the business cycle—the length of expansions and the length and severity of recessions.

As seen in Figure 3, expansions have indeed been getting longer, on average, as one moves closer to the present, while recessions have become shorter. In fact, the 1990-91 recession was one of the shortest on record. Moreover, the recent Bureau of Economic Analysis (BEA) revisions to the GDP data indicate that the recession was even milder than initially estimated (see Box 1, Technical Appendix). Why might the economy have become less cyclical?



Note: Dates refer to the beginning and end of expansions.
Source: National Bureau of Economic Research.

Figure 3

One reason for the change in the shape of U.S. business cycles may relate to the shift from a manufacturing-based economy to a service-based economy. As indicated in Figure 4, the percentage of employment accounted for by manufacturing has been generally falling since the 1940's, while the share accounted for by services production has been on the rise.

Moreover, as illustrated in Figure 5, the nature of goods and services production is such that the goods component of real GDP is much more volatile than the services component. Reduced fluctuations in the demand for labor reduces fluctuation in the economy overall.

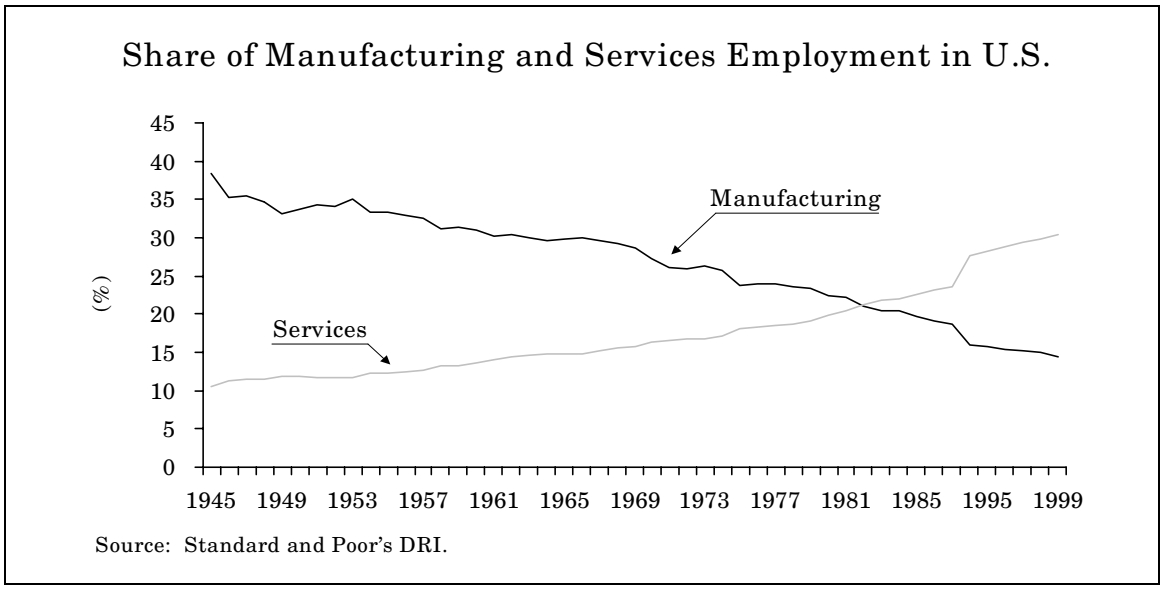


Figure 4

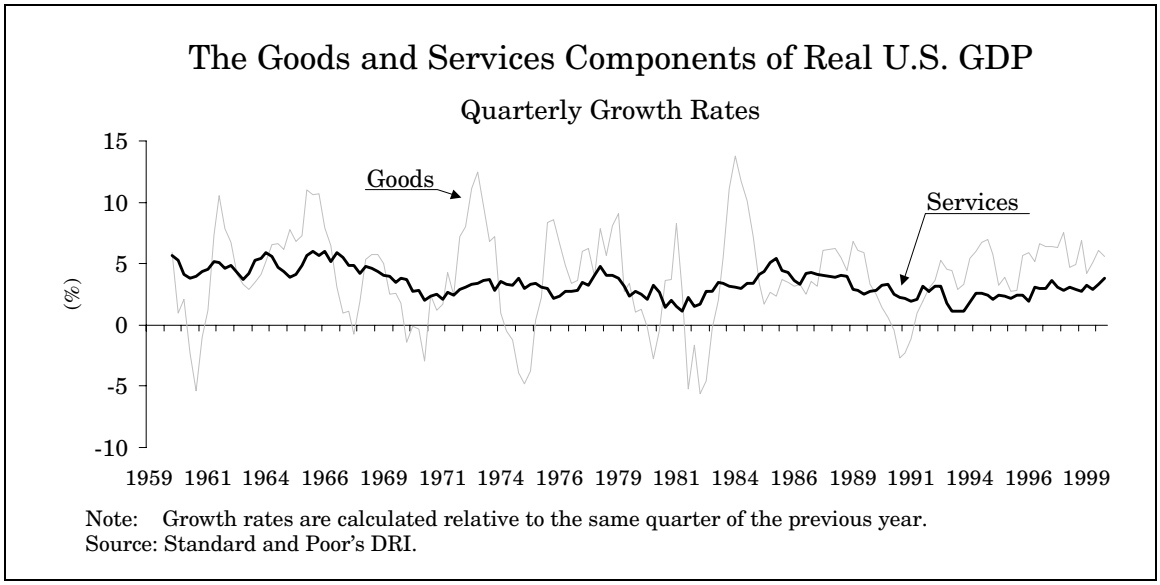


Figure 5

Even within the manufacturing economy, more efficient methods of production management have reduced the need for a large buildup of inventories for a given volume of shipments (see Figure 6). Computer technology may in part be responsible for this improvement, enabling the widespread use of just-in-time inventory management. The contribution of information technologies in manufacturing may be responsible for the resurgence of goods manufacturing as a share of GDP. For 1999, goods production accounted for 39.6 percent of GDP, the highest of any year since the government started reporting GDP data in 1947. However, due to rising productivity, it requires far fewer workers to produce that output than it would have 50 years ago. The incorporation of the Internet and other means of high speed communication into production management is likely to enhance productivity growth further still.

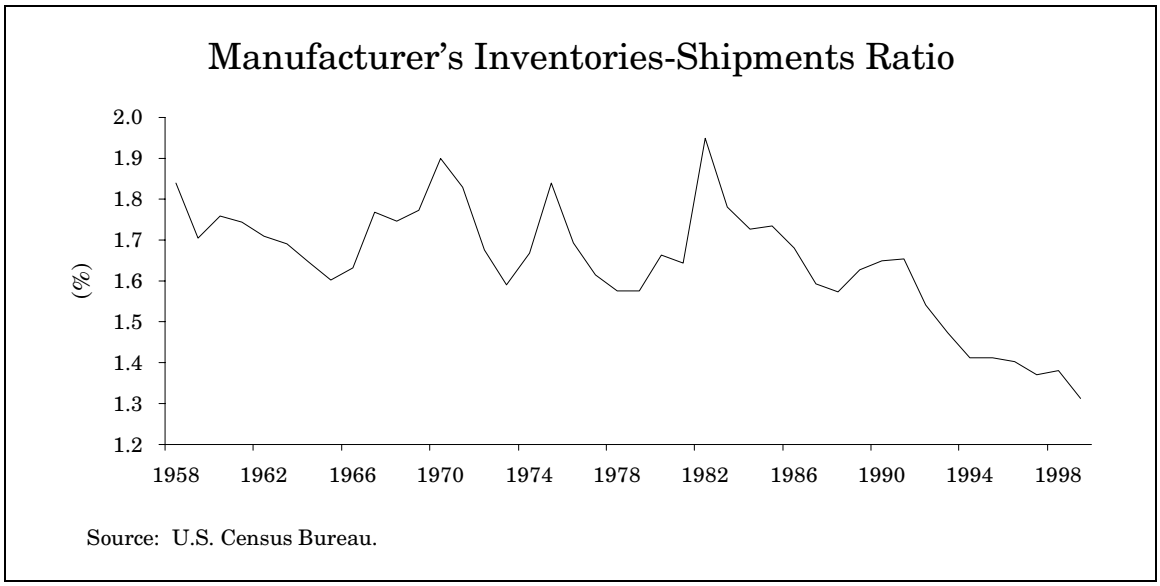


Figure 6

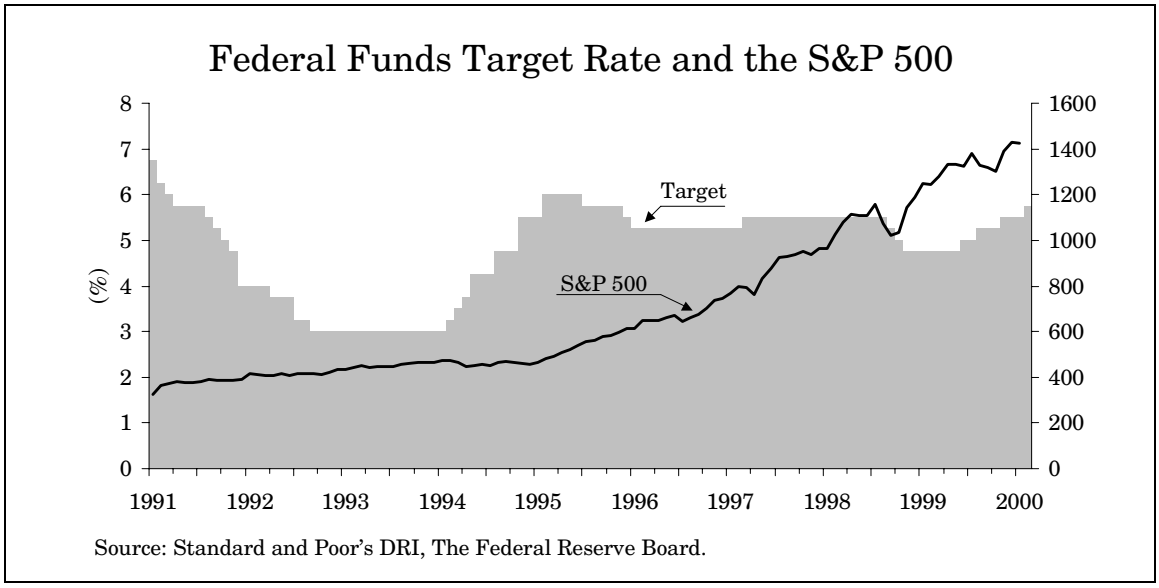
Monetary Policy Comes of Age

Many credit the long expansion of the 1960's to the expansionary policies of the federal government.[7] During that period, the economy was buttressed by both the spending needs associated with fighting the Vietnam War and the demand generated by a prosperous domestic economy. In contrast, fiscal policy

[7] Christina Romer and David Romer quantify the effects of postwar monetary policy on economic fluctuations. They find that over the postwar period, output has tended to grow at an average rate of 4.6 percent during the year following a trough. Of this, monetary policy contributed 1.5 percentage points, fiscal policy contributed 0.5 percentage points, automatic stabilizers contributed 0.85 percentage points, and the remaining growth of 1.75 percentage points was due to other factors. See Romer, Christina D. and David H. Romer, "What Ends Recessions?" NBER Macroeconomics Annual. 9, pp. 13-57 and Romer, Christina D., "Changes in Business Cycles", *Journal of Economic Perspectives*, Vol. 13, No. 2, Spring 1999, pp. 23-44.

has been contractionary during much of the current expansion due to the policy decision to reduce the growth in the national debt. However, one of the factors which clearly distinguishes the current period from the 1960's is the more aggressive policy stance taken by the Federal Reserve since 1981.

The more aggressive stance of the Federal Reserve Board is easily observable in the five distinct policy course changes pursued by the Board since 1993 (see Figure 7). In two of those instances, the Federal Reserve acted to maintain the stability of the financial markets. In the other three instances, the Federal Reserve was responding to the need to reign in the economy's own momentum.



Source: Standard and Poor's DRI, The Federal Reserve Board.

Figure 7

In the current expansion's early years, employment growth was relatively slow, particularly when compared to the early years of prior expansions (see Figure 8). It took several years before employment growth reached its expansionary peak, with that peak being the lowest of any postwar expansion save the short-lived one of 1980-81. However, low interest rates, a relatively weak dollar, and global economic expansion fueled robust growth in both private domestic investment and exports. By early 1994, the national economy's strong momentum was beginning to produce fears of inflationary pressure. Those fears prompted the Federal Reserve to raise interest rates seven times between February 1994 and February 1995. The central bank then lowered the federal funds rate three times during the second half of 1995.

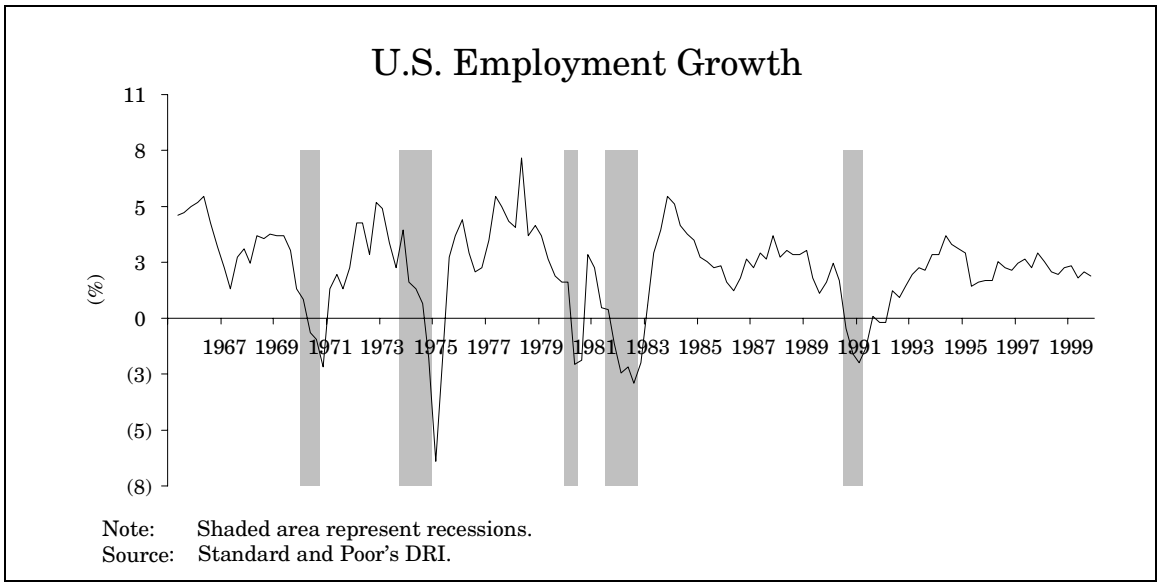


Figure 8

By late 1995, the Federal Reserve was being credited for successfully engineering a soft landing and setting the stage for a period of optimism within the financial markets. This optimism in conjunction with stronger job growth helped to transform the current growth cycle from an investment and export led expansion to one which was consumption-driven. The expansion was, in effect, reborn in the beginning of its fifth year. Buoyed by the success of the Federal Reserve in stabilizing the economy, investor confidence fueled what has been one of the strongest bull markets in the stock market's history.

By November 1997, it appeared to the Federal Reserve that the stock market had been overtaken by an "irrational exuberance" and that the development of a price bubble could potentially threaten the stability of the financial markets. The central bank communicated its concern related to that threat by increasing its federal funds policy target by one-quarter point. It was becoming apparent that the Federal Reserve had come to view the stock market as a potential source of instability and inflationary growth.

The 1997 increase was more than reversed in the fall of the following year when the collapse of the Russian ruble sent a wave of fear through global markets, with investors flocking to only the safest of securities. To prevent a liquidity crisis from materializing the Federal Reserve lowered its policy target in three steps, leaving the U.S. economy nearly unscathed from a crisis which left a significant portion of the East Asian and Latin American economies in recession. Following a brief pause, the financial markets resumed their wave of growth and profitability.

We note several factors that may have made the Federal Reserve's job of maintaining price stability somewhat easier through the beginning of 1999. Low oil prices and declining medical price growth due to the diffusion of managed care have contributed to the low inflation environment we now enjoy.[8] Wage growth has also been relatively slow during the current expansion. It is believed that job insecurity associated with the large volume of layoffs stemming from corporate restructuring kept wage demands down during the early 1990's. Wage growth over the life of the current expansion has averaged only 5.6 percent per year, well below the 7.6 percent annual average for the 1960's expansion and the 7.2 percent annual average for the expansion of the 1980's.

By the middle of 1999, the Federal Reserve was faced with a situation similar to the one in early 1994—growth so strong that it could potentially threaten price stability. In June, the central bank shifted its policy stance yet again in order to tap the brakes on the economy's momentum. Thus far, the federal funds target rate has risen four times. However, with consumer confidence at a record high and the public's appetite for technology stocks seemingly insatiable, it is quite likely that the Federal Reserve will find additional interest rate increases necessary in order to achieve a soft landing in 2000 as it did in 1995.

Global Integration and the Resurgence of Productivity Growth

One of the key factors helping to make the Federal Reserve's goal of price stability easier to achieve has been the increasing integration of the global economy. Global competition has not only kept import prices down, but has also prohibited domestic firms from raising their prices for fear of losing market share. The inability to raise prices has caused firms to focus on cutting costs in order to strengthen profits. Firms have aggressively pursued mergers and acquisitions which not only offer the benefits of scale economies but also allow firms to enter new markets at the lowest possible cost.

Global competition has also encouraged firms to strengthen their productivity growth. Higher labor productivity growth permits firms to raise wages without having to pass the increase on to consumers in the form of higher prices. The personal computer revolution which had begun some years earlier accelerated in 1995, with real private investment spending on information equipment and software jumping 23.0 percent over the previous year and computer hardware prices continuing to fall.

Awareness of the Y2K problem also began to diffuse throughout the economy, prompting firms in the late 1990's to choose between two options – invest in new Y2K-compliant hardware and software or hire programmers to

[8] See New York State Assembly Ways and Means Committee Staff, "*New York State Economic Report, 1998 & 1999,*" March 1999.

debug their existing information systems. While we believe that both options may have contributed positively to economic growth over the last several years, those firms that chose to invest in new information technologies can be expected to reap dividends in the form of higher productivity in the near future. Below we examine in more detail the recent trends in productivity growth and the possible impact of the Internet.

The Recent Behavior of U.S. Productivity

A critical element in a nation's capacity to improve the material well-being of its people over time is the rate of economic growth that it is able to achieve and sustain. Long run economic growth in turn depends upon the rates of growth of labor and capital inputs, and growth in the productivity of these inputs. While economic growth from an increase in inputs is important, an economy cannot rely solely on it. Growth in the productivity of capital and labor is key to sustained economic growth. Productivity growth, by lowering unit costs, allows consumers to enjoy lower prices and higher real wages, while maintaining levels of corporate profits. There is thus a direct link between productivity growth and living standards.

The United States has been the world leader in terms of living standards and economic performance during the twentieth century. The U.S. economy witnessed remarkable growth in labor productivity in the two decades immediately following World War II. During the decade of the sixties, productivity growth averaged three percent. However, there was a distinct slowdown in the rate of productivity growth in the early 1970's. The year 1973 is generally accepted as the watershed year that the deceleration in productivity began. Between 1961 and 1972, labor productivity in the non-farm business sector grew at an average annual rate of 3.3 percent, falling to 1.5 percent between 1973 and 1994, and picking up in more recent years, to grow at a rate of 2.3 percent between 1995 and 1999. In 1998 and 1999, labor productivity grew at an annual average rate of over three percent (see Table 1). Is the recent resurgence in productivity here to stay, heralding a structural change driven by rapid progress in information technology, or is it a fleeting phenomenon? The answer to this question is key in determining the nation's long-run economic growth.

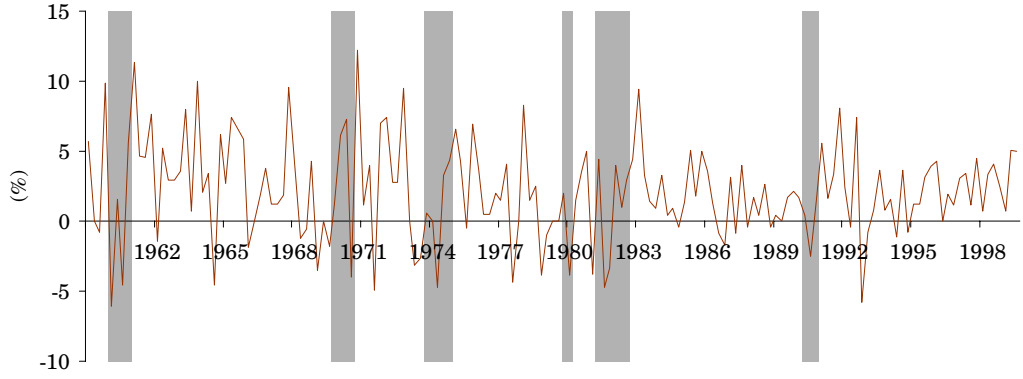
The slowdown in productivity growth during the 1970's and 1980's, and the subsequent pickup more recently can be primarily attributed to a combination of three factors: data measurement problems, energy price hikes, and the nature of recent technological innovations. It is quite possible that productivity data have grossly overstated the slowdown. Labor productivity is typically measured as real output per hour. There are, however, several well-known shortcomings in the measurement of real national product. The value of real output as estimated from the production side is typically an underestimate of the actual value; consequently, labor productivity numbers may actually be underestimates. Additionally, the measurement problem becomes more severe as

the nation shifts from a manufacturing-based to a services-based economy, as has been occurring for the last three decades.[9]

Oil shocks played a key role in the deceleration of productivity in the 1970's and 1980's. That explains the fact that the productivity slowdown was a worldwide phenomenon. Finally, the rates of technological innovation since the 1970's has been slow relative to the rapid pace at which they occurred during the period immediately following World War II. The nature of technological change have also been different, involving a fairly long learning period due to which there have come to exist long lags between innovations and implementation, with the rewards from these innovations only just being reaped, as evidenced in the large productivity gains in recent years.

Productivity over the Business Cycle

It has generally been observed that productivity tends to be procyclical, i.e., productivity rises during expansions and falls during recessions (see Figure 9). Moreover, productivity growth tends to be strongest at the beginning of an expansion, when output grows the fastest, slowing down as the expansion comes to an end and output growth slows. The anticipated slowdown in economic growth from 4.1 percent in 1999 to 3.8 percent in 2000 can be expected to be accompanied by somewhat slower productivity growth for the coming year.



Note: The gray bars indicate periods of recession.
Source: Bureau of Labor Statistics.

Figure 9

[9] Value added within the service industries has proven more difficult to measure than value added within the goods producing sector.

Labor Productivity and Wage Growth

The relationship between labor productivity growth and real wages is critical in understanding the impact of productivity growth on standards of living. So long as growth in wages is less than productivity growth, firms can pay higher wages without raising prices, and still maintain their profit margins. During the decades immediately following World War II, rapid productivity growth was accompanied by comparable, or even faster growth in real hourly compensation. However, over the course of the current expansion, despite the recent resurgence in productivity growth, real compensation has failed to keep pace with productivity gains (see Table 7). Intensified competition due to globalization, expectations of the low-inflation environment continuing, and a decrease in unionization have all contributed to firms' reluctance to pass on the productivity gains to workers in the form of higher wages.

Table 7

PRODUCTIVITY AND REAL HOURLY COMPENSATION GROWTH RATES

	Productivity		Real Hourly Compensation	
Prior Expansions	**Non-Farm Business**	**Manufacturing**	**Non-Farm Business**	**Manufacturing**
1961-69	3.1 %	3.0 %	2.6 %	2.1 %
1971-73	3.0	3.5	2.1	1.3
1975-79	1.7	2.5	1.4	1.4
1980-81	1.6	1.5	0.2	0.5
1983-90	1.9	2.8	0.7	0.2
Current Expansion	2.3	4.5	1.3	1.3
1991	3.5	4.9	2.8	2.5
1992	4.4	4.6	2.1	1.3
1993	(0.5)	1.6	(1.0)	0.3
1994	1.2	3.5	(0.1)	0.2
1995	1.2	4.1	0.1	(0.6)
1996	2.5	4.3	0.3	(1.3)
1997	2.2	5.5	2.4	2.8
1998	3.2	5.1	3.9	3.9
1999	3.3	7.0	1.8	2.5

Note: Growth rates are annualized averages, and reflect the Bureau of Economic Analysis' eleventh revision of the national income and product accounts.

Source: Bureau of Labor Statistics.

E-Commerce and Productivity

It has been widely speculated that the national economy may be reaping productivity gains from the phenomenal growth of the Internet economy. According to the Center for Research in Electronic Commerce at the University of Texas, the Internet economy grew 68 percent from the first quarter of 1998 to the first quarter of 1999.[10] At this rate of growth, the Center estimates that the Internet economy generated $507 billion in revenues in 1999. In addition, the Center estimates that the Internet economy accounted for 2.3 million jobs in the first quarter of last year, representing growth of 46 percent over the first quarter of 1998. In addition, revenue per employee in Internet-related companies rose 15 percent between the first quarter of 1998 and the first quarter of 1999.

The Internet economy may be increasing economic efficiency and labor productivity in several ways.[11] The Internet provides information about prices and product availability, not just in the customer's local market, but throughout the national economy. The benefits of this degree of accessibility are threefold. First, it reduces the transaction costs associated with both searching for a particular product or service and "shopping around" for the best price. Second, it increases price competition, thereby reducing inflationary pressure. Finally, if the buyer can glean as much information by examining the virtual product as the real thing, the pressure to maintain inventories is reduced even further.

The Internet makes available to small firms information technology which permits more effective supply chain management. This tool, formerly only available to large corporations who could afford sophisticated proprietary systems, reduces the need to stockpile production inputs, thus lowering the cost of production. The Internet also has the potential to reduce small firm costs by enabling an electronic auction where suppliers bid to supply potential clients with the materials they need to produce their products.

There appears to be a significant potential for the Internet economy to produce productivity gains in the service and retail trade sectors. Banking, stock trading, and travel booking are examples of services where extensive inroads have already been made. In addition, automobile and home purchasing are areas where the Internet's auction capabilities are expected to reduce transaction costs and ultimately the prices paid by buyers. The short-term cost of these productivity improvements is likely to be job losses in these specific industries, much as we have been seeing in the retail banking industry. However, in the longer run, these improvements are expected to increase the

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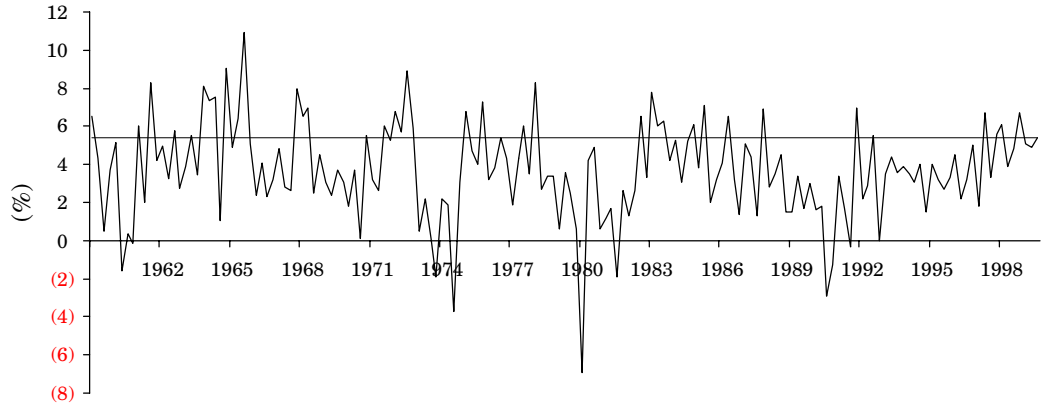
[10] Center for Research in Electronic Commerce, "Internet Indicators." Available Online, <http://www.internetindicators.com>.

[11] See Albert E. DePrince, Jr. and William F. Ford, "A Primer on Internet Economics Macro and Micro Impact of the Internet on the Economy," *Business Economics*, October 1999, Vol. 34, no. 4, pp. 42-50.

economy's growth potential, and thereby reduce the economy's non-accelerating inflation rate of unemployment (NAIRU).[12] The economy's ability to sustain today's relatively low unemployment rate without generating accelerating inflation is evidence of the benefits of productivity growth. Of course, what types of jobs will replace those that are lost, as well as the wages they will pay, remain uncertain.

Consumption: Still the Economy's Driving Force

Consumption comprises over two thirds of real U.S. GDP, making it the economy's most important driver. The acceleration of consumption growth since 1995 has been the national economy's primary source of strength, particularly since the Asian crisis threatened world economic stability in late 1997. From 1992 to 1996, consumption grew at an average annual rate of 3.2 percent. Consumption growth peaked in 1994 at 3.7 percent, but fell back to 3.0 percent in 1995 in response to seven interest rate hikes by the Federal Reserve. In contrast, during the three years from 1997 to 1999, consumption growth averaged 4.7 percent, with this acceleration occurring across all types of consumption. However, as Figure 10 indicates, even the 1999 rates of consumption growth cannot be considered unusually high by historical standards.[13]



Note: The horizontal line across the graph represents the 1999 consumption growth rate of 5.4 percent.
Source: Standard and Poor's DRI.

Figure 10

[12] For a more extensive discussion of the significance of the NAIRU, see New York State Assembly Ways and Means Committee Staff, "*New York State Economic Report, 1998 & 1999*," March 1999.

[13] Real consumption growth averaged 5.4 percent per year between 1961 and 1966.

What has caused consumption growth to increase so substantially since 1995? The most obvious answer is the stock market. As stated above, 1995 was the first of a string of record breaking stock market performances, with growth in the Standard and Poor's Index of 500 common stocks topping 30 percent in 1997. The big bull market in stocks has contributed to consumption growth through what is commonly termed the wealth effect, which measures the increased purchases by consumers resulting from increases in total wealth. Committee staff analysis finds that a one-dollar increase in wealth is expected to increase consumption spending by 3.9 cents.[14] Although this may seem small, the impact turns out to be quite large when one considers the $7.4 trillion increase in average net personal financial wealth between 1996 and 1999. Of this increase, 51 percent was created in the stock market. Within the household sector's financial asset portfolio, stock market related assets comprise about 30 percent (see Figure 11).

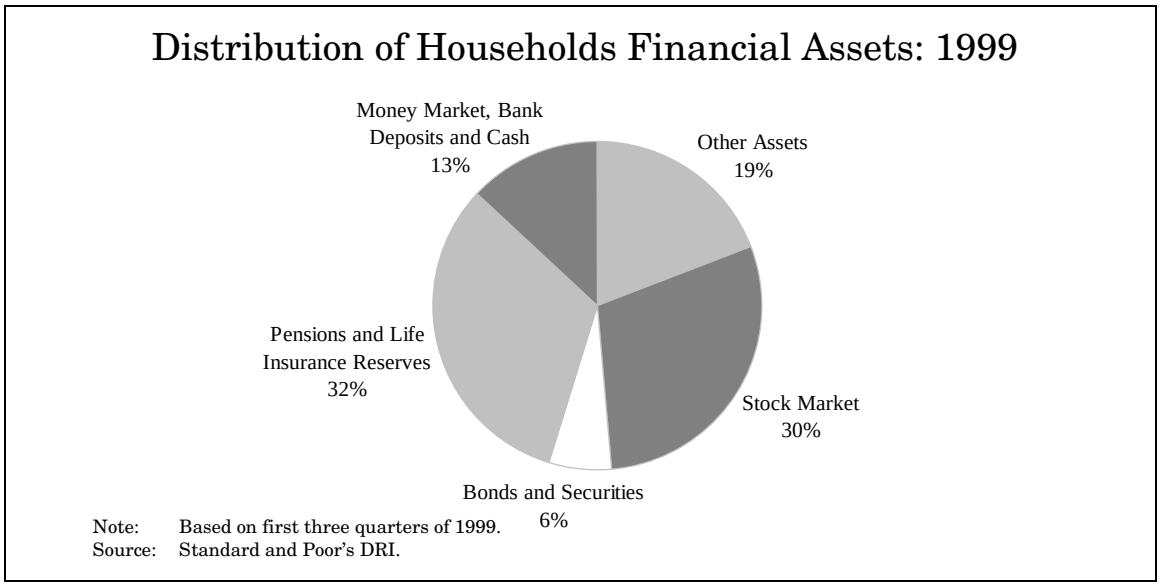
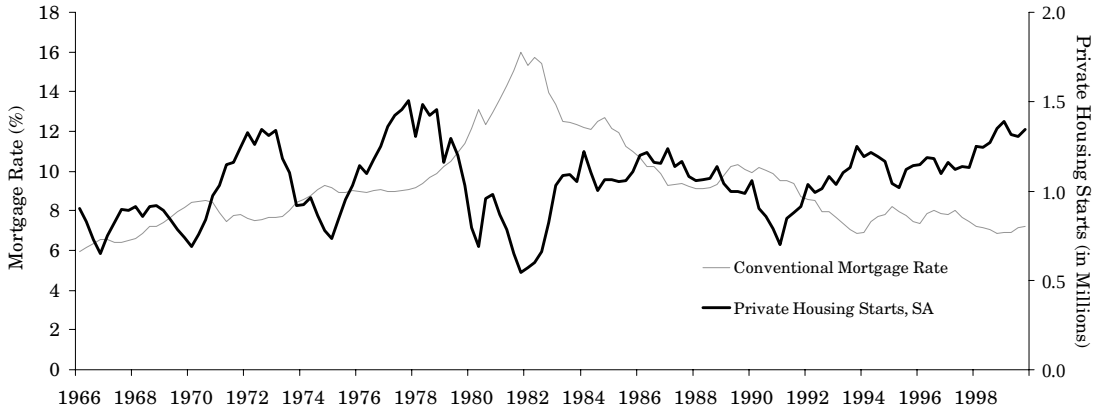


Figure 11

Consumption has also been given a boost by rising non-financial wealth. The low mortgage rates begotten by low inflation have been a boon to the housing market (see Figure 12). Increased demand for housing has in turn produced rising home values and, hence, an increase in consumer wealth. According to the National Association of Realtors' estimates, the cumulative rise in the median home value accelerated from 10.8 percent between 1992 and 1995

[14] A marginal propensity to consume out of wealth of 3.9 percent is consistent with that found in other studies. See Sydney Ludvigson and Charles Steindel, "How Important Is the Stock Market Effect on Consumption?", *Federal Reserve Bank of New York Economic Policy Review*, July 1999.

to 16.2 percent between 1995 and 1998. The Federal Reserve estimates that, "since 1995, home sales have yielded an average of about $35,000 in capital gains for a total economic impact of $150 billion annually."[15]



Source: Standard and Poor's DRI.

Figure 12

The rise in home values may have further stimulated household borrowing through home equity loans and mortgage refinancings. Such loans allow homeowners to "cash in" on the increased value of their homes without having to sell them. It is believed that such loans typically finance consumption rather than savings. Although higher interest rates have reduced the volume of such loans and refinancings, consumers continue to use the proceeds of recent loan activity to finance home-related purchases. The strength of retail sales during the usually slow month of January is believed to be related in large part to home furnishing.

Before a recent data revision (see Box 1, Technical Appendix), it was believed that rising levels of debt might threaten the sustainability of consumption growth in the near future. The national saving rate, as measured by the Department of Commerce Bureau of Economic Analysis (BEA), was thought to have fallen below three percent as of 1996 and to have become negative during the first half of 1999. This phenomenon had been attributed to the spectacular rise in financial wealth since 1995.[16] However, revised data released by the BEA in October 1999 indicate that while the saving rate has

[15] See Tristan Mabry, "This Boom, Some Say, Is on the House," *The Wall Street Journal*, July 6, 1999, p. A2.

[16] For a detailed discussion, see New York State Assembly Ways and Means Committee Staff, "*New York State Economic Report, 1998 & 1999*," March 1999.

indeed fallen to a historical low since the beginning of the expansion, it has remained positive. This new outlook on national saving behavior produces a more favorable view as to the sustainability of healthy levels of consumption growth through the year 2000.

For 2000, higher interest rates will reduce activity in the housing market, as well as produce slower stock market growth. Durable consumption growth is also expected to fall as a result of higher borrowing rates. However, continued high levels of employment along with rising wages implies continued solid growth in disposable income. This implies continued strong, albeit slower, consumption growth in 2000. The Ways and Means Committee staff projects real consumption growth of 4.1 percent in 2000, following growth of 5.4 percent in 1999.

The Longest Expansion: Are We All Better Off?

The length and strength of the current expansion has had positive impact for many participants in the national workforce. Unemployment rates are near historic lows while labor force participation rates for many groups are at record highs. Among whites, the average unemployment rate for 1999 of 3.7 percent was the lowest since registering a 3.1 percent rate in 1969. Labor force participation rates among whites are also at a record high, although this is the result of divergent trends for men and women. The share of all white males 20 years and over participating in the labor force has dropped steadily from 87.8 percent in 1954, the first year for which data are available, to 77.2 percent for 1999. In contrast, the participation rate among women has almost doubled from 32.7 percent in 1954, to 59.9 percent in 1999.

Among African-Americans, the average unemployment rate for 1999 fell to 8.0 percent, the lowest since 1972, the first year for which data are available; this is still, however, more than double the unemployment rate of whites. For African-American men, the 6.7 percent rate of unemployment for 1999 was the lowest since falling to 6.0 percent in 1973. The 1999 unemployment rate among African-American women was the lowest since data became available, at 6.8 percent. Labor force participation rates for African-American men and women show the same divergent pattern as those for whites, with the overall rate at an historic high of 65.8 percent.

Teenage African-Americans age 16 to 19, among whom unemployment rates are particularly high, are also seeing some modestly improved employment opportunities. Their rate of unemployment has fallen from a cyclical high of 39.7 percent in 1992 to 27.9 percent in 1999.

The average 1999 unemployment rate among Hispanics also fell to a record low of 6.4 percent. However, the labor force participation rate for that group actually rose two-tenths of a percentage point in 1999, from its record high of 67.9 percent reported for both 1997 and 1998. For Hispanic men, the 1999

unemployment rate of 5.6 percent was the lowest since the data became available in 1976; the corresponding rate for Hispanic women was 7.6 percent in 1999, also a record low. At 18.6 percent in 1999, the unemployment rate for Hispanic teenagers is also at a record low.

Consistent with these findings, a recent Federal Reserve Board study using Survey of Consumer Finances data finds that the proportion of families earning less than $10,000 declined by 2.5 percentage points between 1995 and 1998, adjusted for inflation.[17] This suggests that growth in employment and incomes did to some extent benefit low income families.

However, the Federal Reserve Board study also finds that the gains in net worth attained over the period far exceeded gains in income. Given that high income households are more likely to hold stocks and benefit from strong stock market performances, it is not surprising that the largest gains in net worth were attained by families with incomes of $100,000 or more. In contrast, mean net worth for the lowest income group actually declined during this period. These factors, combined with the relatively slow rate of wage growth which has characterized the current expansion, have resulted in a widening of the degree of economic inequality in the nation. Indeed, a study based on Current Population Survey data finds that despite low rates of unemployment, "income disparities in most states are significantly greater in the late 1990's than they were during the late 1980's."[18]

Outlook for Inflation

Despite the length and the strength of the current expansion, the rate of inflation, as measured by the growth in the Consumer Price Index (CPI), has remained well below 4.0 percent since 1992. Moreover, in 1998, the eighth year of the expansion, the U.S. economy witnessed a rate of inflation in consumer prices of 1.6 percent, the lowest since 1964. In contrast, by 1968, the eighth year of the 1960's expansion, inflation had accelerated to 4.2 percent. Producer prices, as measured by the Producer Price Index (PPI) actually fell in 1998 at a rate of 0.9 percent.

However, inflation has picked up somewhat in 1999. Consumer prices grew 2.2 percent in 1999 relative to the same period in 1998, while producer prices went up 1.6 percent. The upturn in inflation was anticipated by the long-term bond markets where interest rates started rising towards the end of 1998. Higher long-term rates have just begun to have their impact felt in the housing

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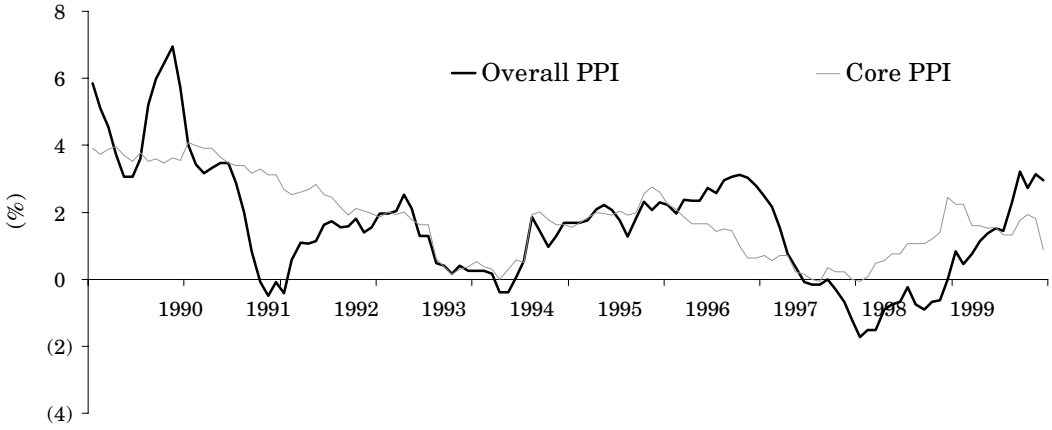
[17] Arthur B. Kennickell, Martha Starr-McCluer, and Brian J. Surette, "Recent Changes in U.S. Family Finances: Results from the 1998 Survey of Consumer Finances," Federal Reserve Board, 1999.

[18] Jared Bernstein, Elizabeth C. McNichol, Lawrence Mishel, and Robert Zahradnik, *Pulling Apart, A State-by-State Analysis of Income Trends*, Center on Budget and Policy Priorities and Economic Policy Institute, January 2000.

market following a torrid spring and summer, and may yet be cooling off the strong growth in consumption we saw during the first three quarters of the year.

As mentioned above, the low inflation rates of the last several years can be attributed largely to low energy and other import prices, slower growth in medical care costs, as well as declining computer prices. Energy prices have taken a sharp turn upward due to a new-found cohesion among OPEC members joined by large oil-producing non-OPEC countries, i.e., Mexico and Norway. In February 2000, crude petroleum prices were up about 135 percent relative to the same month a year ago. In contrast, the prices of manufactured good imports as well as agricultural imports had fallen. Additionally, prices of some other production input besides energy have turned upward as well. Medical cost growth has been rising since the end of 1997 due to higher prescription drug prices, and is expected to accelerate further as the managed care revolution enters a new phase in which savings will be harder to achieve. These factors were no doubt among those which prompted the Federal Reserve to raise interest rates four times since June 1999.



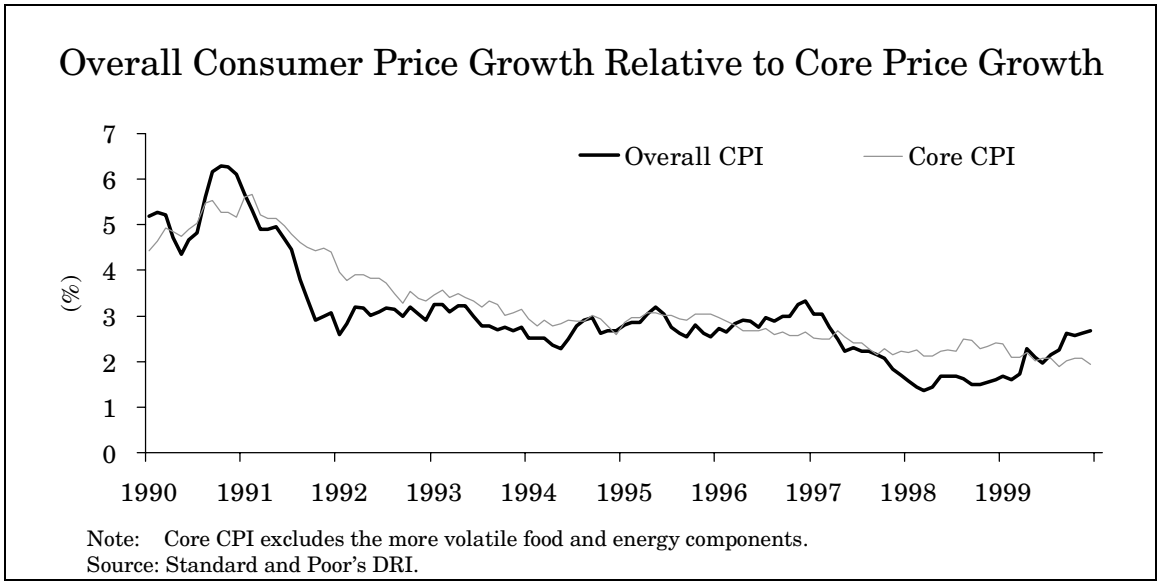
Note: Core PPI excludes the more volatile food and energy components.
Source: Standard and Poor's DRI.

Figure 13

How much evidence is there that the economy is truly departing in a significant way from the low-inflation environment we have enjoyed over the last few years? Figure 13 compares the growth in the overall PPI with that of the so-called core PPI, which excludes the volatile food and energy components.[19] The fact that the core PPI has followed a much smoother path than the overall index is an indication of the role which oil prices have played in recent

[19] In this discussion, growth is defined relative to the same month of the previous year. Looking at growth in this way helps to smooth out the monthly volatility and better identify the long-term trend.

fluctuations in producer prices. The overall PPI actually fell every month between October 1997 and December 1998. This declining trend in oil prices then reversed itself in April 1999 when the OPEC nations, Mexico, and Norway agreed to restrict the supply of crude oil. Since then, the price of a barrel of crude oil rose to a high of $30. Recent National Association of Purchasing Managers survey results indicate that purchasers are observing rising prices for some of their raw materials. However, many of these increases can be traced back to the higher cost of oil.



Note: Core CPI excludes the more volatile food and energy components.
Source: Standard and Poor's DRI.

Figure 14

Rising producer prices become inflationary when they are passed on in the form of rising consumer prices. Figure 14 shows the growth in the overall CPI along with that of the core CPI, which excludes food and energy. A comparison of Figures 14 and 15 indicates that consumer price inflation has followed a much smoother downward path than has producer price inflation since the beginning of the expansion in early 1991. Moreover, while consumer price growth was certainly decelerating before 1999, neither the overall CPI nor the core CPI actually falls during the period shown, as does the PPI. These observations indicate that the full value of the increases and decreases in producer prices tend not to be fully passed on to consumers. Given the intense competitiveness of the global economic environment, we expect U.S. firms to continue to feel constrained from passing the full value of their cost increases on to consumers.

Relatively low rates of capacity utilization in the U.S. along with excess capacity in those countries now emerging from recession should continue to put downward pressure on domestic U.S. prices and prevent higher labor costs from turning into significantly higher consumer prices. The domestic economy's capacity utilization rate is particularly low for a point this late in an expansion.

This low rate may in part be due to the high rates of investment experienced over the course of much of the expansion, leading in turn to the high rates of capacity growth depicted in Figure 15.

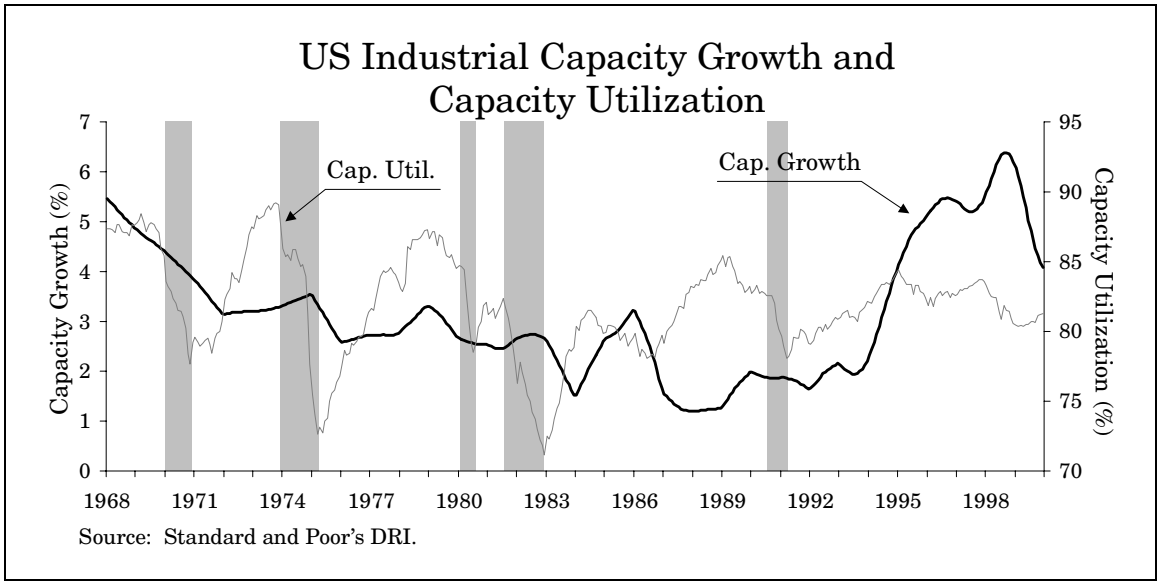


Figure 15

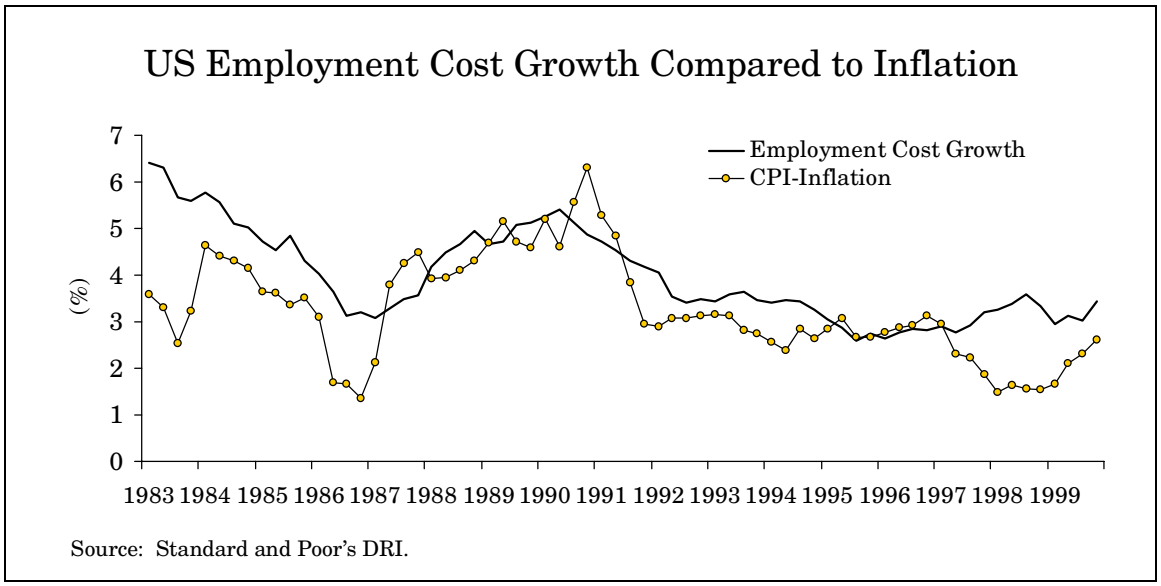


Figure 16

Traditionally, a persistently low rate of unemployment such as we have been experiencing would signal tight labor market conditions and would ultimately result in accelerating wage growth and inflation. However, growth in the employment cost index indicates that labor cost growth has actually slowed down in 1999 relative to 1998 when the Consumer Price Index grew only

1.6 percent (see Figure 16). Therefore, wage growth is not expected to significantly drive upward the rate of consumer price inflation in 2000. The Ways and Means Committee staff projects growth in the Consumer Price Index of 2.7 percent for 2000, following growth of 2.2 percent for 1999.

State of the International Economy

The outlook on the international economy improved significantly in 1999, portending even greater demand for U.S. exports in 2000. After falling 5.5 percent on a seasonally adjusted annual average basis during the first quarter of 1999, exports rose steadily throughout the rest of the year. Exports for the second half of 1999 were fully 7.7 percent above the level for the same period in 1998. Hence, the nation's trade sector is expected to be much less of a drag on national economic growth in 2000 than it was during the last two years. Merchandise exports to the nation's two largest trading partners, Canada and Mexico, rose 6.3 percent and 9.9 percent, respectively, during 1999.

The overall outlook for East Asia is significantly better than it was a year ago. Perhaps the country which has exhibited the most dramatic improvement is South Korea, where industrial production increased 22.5 percent during 1999. Korean imports of U.S. goods grew 38.8 percent during 1999. More importantly, the U.S. export sector's second largest market, Japan, may finally be emerging from its long period of contraction. That belief has been mirrored in international capital markets and was reflected in the slide of the dollar against the yen during the last half of 1999. Exports to Japan through November 1999 slid only 0.7 percent, an improvement over the previous two years.

Recent growth trends in both Great Britain and the European Monetary Union have exceeded expectations, so much so that both the Bank of England's Monetary Policy Committee and the new European Central Bank recently raised interest rates in their respective jurisdictions. European industrial production grew 1.2 percent during 1999 while exports of U.S. goods to the European Union countries grew 1.5 percent last year. The European Union accounted for 21.8 percent of U.S. exports in 1999.

The news from Latin America is less encouraging. The Brazilian currency had been falling in value against the dollar since early 1999. Moreover, recent developments do not bode well for the value of a few other South American currencies. Ecuador recently defaulted on some of its foreign debt, while Moody's Investors Service has downgraded Argentina's long-term-debt credit rating.[20] U.S. exports to Central and South America fell 13.0 percent last year. However, Central and South American countries accounted for only 7.9 percent of U.S. exports in 1999.

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[20] Jonathan Fuerbringer, "Ignoring the Skips In a Latin American Beat." *The New York Times*, October 17, 1999, Section C, page 8.

The continued deterioration of the nation's trade balance raises concerns about the longer-term value of the dollar against the currencies of our major trading partners. A significant decline in the value of the dollar makes imports more expensive for U.S. consumers, reducing the incentive for domestic producers to keep prices down, thus making the U.S. economy more vulnerable to inflationary pressures. The dollar has recently slid against the Canadian dollar, the Japanese yen, and the Korean won.[21] However, the dollar has gradually moved up against the Euro since the latter's inception in January 1999. In addition, the projected decline in consumption growth for 2000 will modestly dampen the domestic appetite for all foreign goods, particularly for automobiles which dominate U.S. imports from Japan.[22]

The Ways and Means Committee staff expects export growth to rise from 3.6 percent in 1999 to 8.8 percent in 2000. However, imports in 2000 will continue to overwhelm exports, as we expect imports to grow 11.2 percent in 2000, only slightly below the 1999 rate of 11.8 percent.

The Asian Aftermath

U.S. Manufacturing

Although the worst of the Asian crisis is behind us, its full impact on the national and State economies is still being determined. Although the nation as a whole recovered quickly, one can identify areas where the impact was significant. Workers in the export manufacturing sector certainly felt the impact. U.S. manufacturing employment has fallen almost every month since July 1998 after rising over the two previous years.[23] However, as the global economy recovers and worldwide demand for U.S. exports revives, the rate of

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[21] Between January 1999 and December 1999 the exchange rate of the U.S. dollar against the Canadian dollar fell from 1.52 Canadian dollars per U.S. dollar to 1.47 Canadian dollars per U.S. dollar. During the same period, the exchange rate of the U.S. dollar fell from 113.29 yens per dollar to 102.45 yens per dollar; and from 1175.11 won per dollar to 1136.80 won per dollar.

[22] The domestic demand for automobiles has survived the recent rise in interest rates with unusual strength. This may be due to supplier deals which manufacturers have been able to pass on to consumers in the form of special financing rates, thus circumventing the higher market interest rates (see *The New York Times*, October 10, 1999, Section C). An additional factor at play here may be the recent rise, in recent years, in automobiles being leased. According to *Ward's Motor Vehicle Facts & Figures 1999*, the percentage of lease transactions out of all new vehicle retail transactions increased from 7.3 percent in 1990 to 31.5 percent in 1999. We expect the auto market to eventually succumb to market fundamentals.

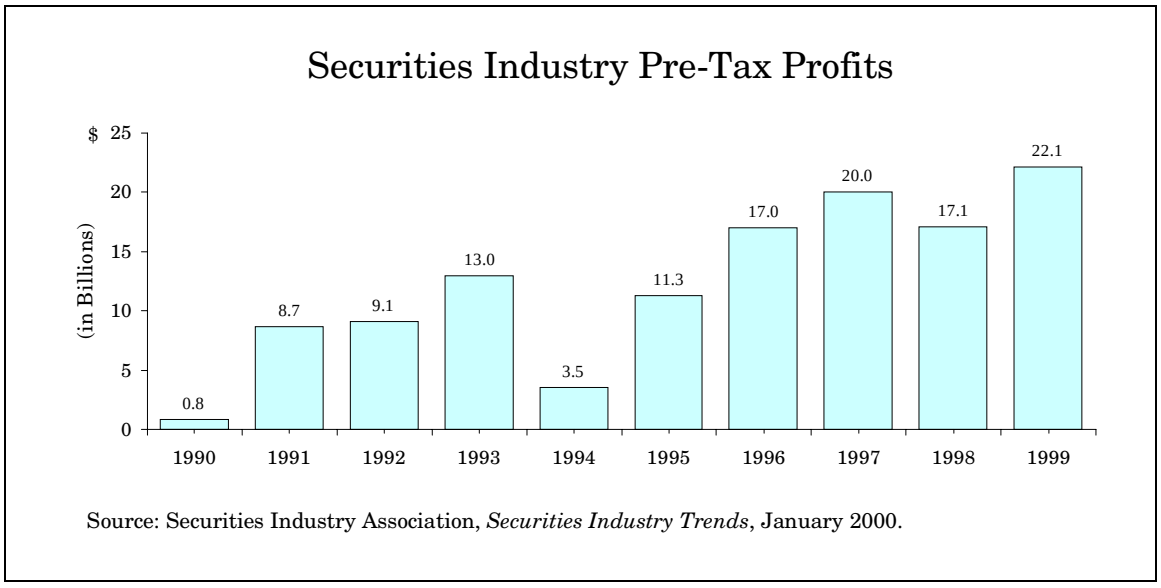
[23] In order to make use of the most recent data available for both U.S. and State employment growth, the data cited here are based on the Current Employment Statistics (CES). See, Technical Appendix, for a discussion of the problems associated with using state-level CES data.

decline in manufacturing jobs should abate. U.S. manufacturing employment is expected to decline by only 0.8 percent in 2000, following a much larger decline of 2.0 percent in 1999.

New York State Manufacturing

In New York State, manufacturing employment had been falling consistently, relative to the same month of the previous year, since the end of the last recession until October 1997. The upstate manufacturing sector had just begun to exhibit modest but positive growth, of about 0.4 percent between October 1997 and June 1998, when the impact of the Asian crisis became evident. Manufacturing employment fell at an annual average rate of 1.1 percent during the second half of 1998, with the rate of decline accelerating to 1.7 percent during 1999. In April 1998, the downstate manufacturing sector also resumed its decline as a result of the Asian crisis but at a lower annual average rate of 0.5 percent per month through the end of 1999. The decline in State manufacturing employment is expected to moderate slightly in 2000 to 1.5 percent, following a decline of 2.2 percent in 1999.

Wall Street



Source: Securities Industry Association, *Securities Industry Trends*, January 2000.

Figure 17

The impact of the Asian crisis was felt sharply on Wall Street. Underwriting activity came to a virtual standstill during September 1998 in the wake of a stock market tumble which followed Russia's late summer default on its debt. That default precipitated a string of events which culminated in the demise of Long Term Capital Management and three interest rate decreases by the Federal Reserve. The steep decline in the stock market during the third quarter produced a major dent in the balance sheets of Wall Street firms.

Securities firm pre-tax profits slid down 14.5 percent in 1998 relative to 1997 to a still significantly high level of $17.1 billion (see Figure 17). Indeed, in 1998, the securities industry saw its pre-tax profits decline for the first time since 1994.

The impact of this setback in the industry is apparent in the magnitude of estimated bonus income for New York State for the fourth quarter of 1998 and the first quarter of 1999 (see Figure 18). Securities industry bonuses are estimated to have fallen 5.6 percent between the 1998-99 bonus season and 1997-98, from $11.7 billion to $11.1 billion. Consequently, total New York State bonus income is estimated to have grown a mere 1.3 percent over the same period, following 7.8 percent growth the previous year and double-digit growth the two years before that.

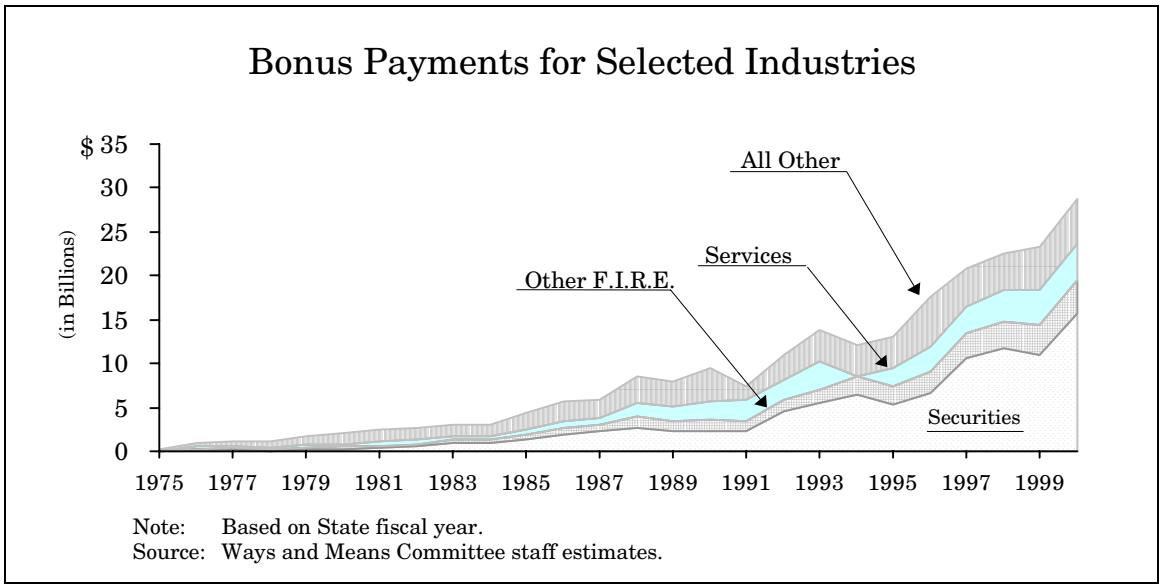


Figure 18

Happy New Year on Wall Street

Last year saw a number of records broken on Wall Street. The securities industry saw yet another year of record profits in 1999, despite a brief lull in the third quarter.[24] A record $2.57 trillion in capital was raised by the securities industry for U.S. businesses, nearly exceeding the $2.8 trillion total that was raised over the entire decade of the 1980's. At $1.63 trillion, the total value of corporate bond underwriting for 1999 ended the year slightly below the value for 1998. However, the total value of equity underwriting, which earns much higher

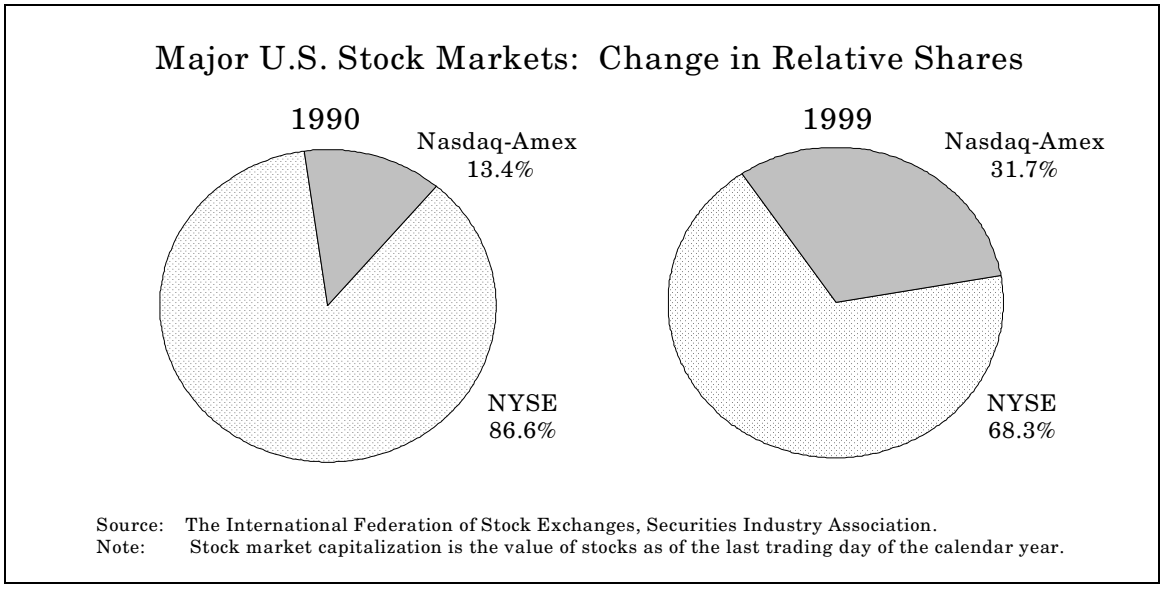
[24] Securities industry profits would have been between $1 billion and $2 billion higher still, if not for an extraordinary employee compensation payment made by Goldman-Sachs as a result of the corporation going public. See Securities Industry Association, *Securities Industry Trends*, October 1999.

profits than the underwriting of bonds, grew 34.3 percent in 1999 to a record $204.6 billion.

The extremely high profit business of initial public offerings (IPO's) rose 70 percent in 1999, with the value of so-called "true" IPO's (excluding closed-end funds) almost doubling. Two high-profile offerings bought the total value up for the year. UPS tied the previous record for the largest IPO, while Goldman Sachs became the third largest IPO ever.

In 1999, both the primary and secondary markets for equities were dominated by the technology sector. Approximately one third of the total value of equity underwriting was generated by technology companies. By the last few months of the year, technology's share of new issuances was exceeding 40 percent. The sector's dominance of the secondary markets was just as spectacular. The technology-laden Nasdaq more than doubled in 1999 and has more than tripled since 1996. In contrast, the S&P 500 index grew 22.3 percent in 1999. Recent equity market growth has not been as broad-based as one might expect, given the strength of the expansion.

It is popular to cite growth in such stock market price indices as the Dow Jones Industrial Average as measures of overall market growth. However, a truer measure of the wealth being created in the stock market is market capitalization, i.e., the total market value of shares held by investors. By this measure, the increase in the amount of wealth being created by those companies whose stocks are traded on the Nasdaq has been nothing less than spectacular.



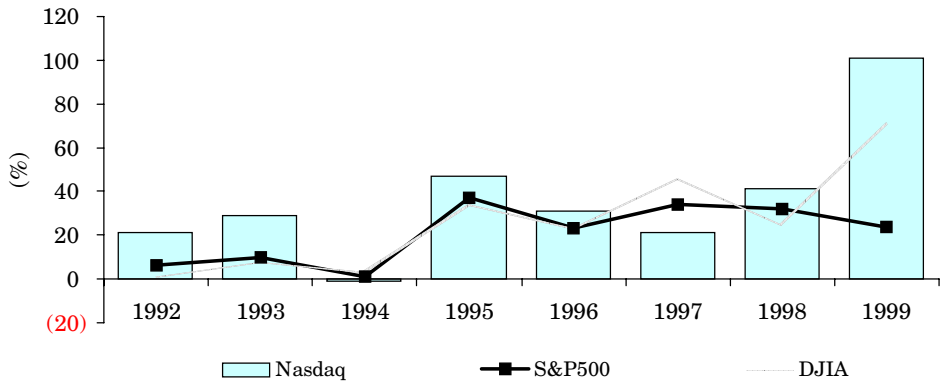
Source: The International Federation of Stock Exchanges, Securities Industry Association.
Note: Stock market capitalization is the value of stocks as of the last trading day of the calendar year.

Figure 19

The Nasdaq is one of the nation's three major stock markets, the other two being the New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX)[25]. In 1999, the market capitalization of firms whose shares are traded on the NYSE was more than double that of firms traded on the Nasdaq. However, that ratio has been falling since 1990 (see Figure 19). Between 1990 and 1999, the NYSE's share of total U.S. market capitalization fell from 86.6 percent to 68.3 percent.

Figure 20 shows the growth in the market capitalization of the companies included in the three most widely cited market indices, the Dow Jones Industrial Average, the S&P 500, and the Nasdaq. The S&P 500 represents a larger share of wealth than the other two indices combined, topping $12.6 trillion in 1999. However, Nasdaq firms have seen the value of their shares increase at an average annual rate of 39.3 percent since 1990. Indeed, growth in the market capitalization of the Dow Jones Industrial Average accelerated to 71 percent in 1999 when two Nasdaq firms, Intel and Microsoft, were incorporated into the index.

Major U.S. Stock Market Indices: Growth in Market Capitalization



Source: The International Federation of Stock Exchanges, Standard and Poor's DRI, Dow Jones, Securities Industry Association.

Figure 20

Although the S&P 500 has lagged well behind the other two indices in the rate of growth of market capitalization since the beginning of 1999, Figure 20 indicates that for most of the decade of the 1990's, the three indices have tended to move together.

[25] The merger of Nasdaq with AMEX was completed on November 2, 1998.

Turmoil in the Bond Markets

In January and February, the U.S. Department of the Treasury made announcements that it would both buy back a portion of outstanding 10- to 30-year bonds and reduce new issuances. The February announcement sent participants in the bond markets scrambling to purchase long-term government securities. As of February 25, 2000, the yield on 30-year Treasury bonds was 26 basis points lower than the yield on 2-year notes, causing the relationship between short-term and long-term interest rates to become inverted.

The line that traces the relationship between short- and long-term interest rates is known as the yield curve. Although an inverted yield curve is typically regarded as pointing to an economic slowdown, the current situation is largely related to U.S. Treasury policy, that many view as a technical phenomenon. Its impact may be quite significant nonetheless. Financial institutions, such as banks, tend to borrow funds at short-term rates and lend those funds out at longer rates in the form of such instruments as 15- to 30-year mortgages. These institutions will experience an increase in their borrowing costs and, hence, a decline in their profit margins as long-term rates fall relative to short-term rates. Indeed, the value of equity shares in financial institutions is already declining.

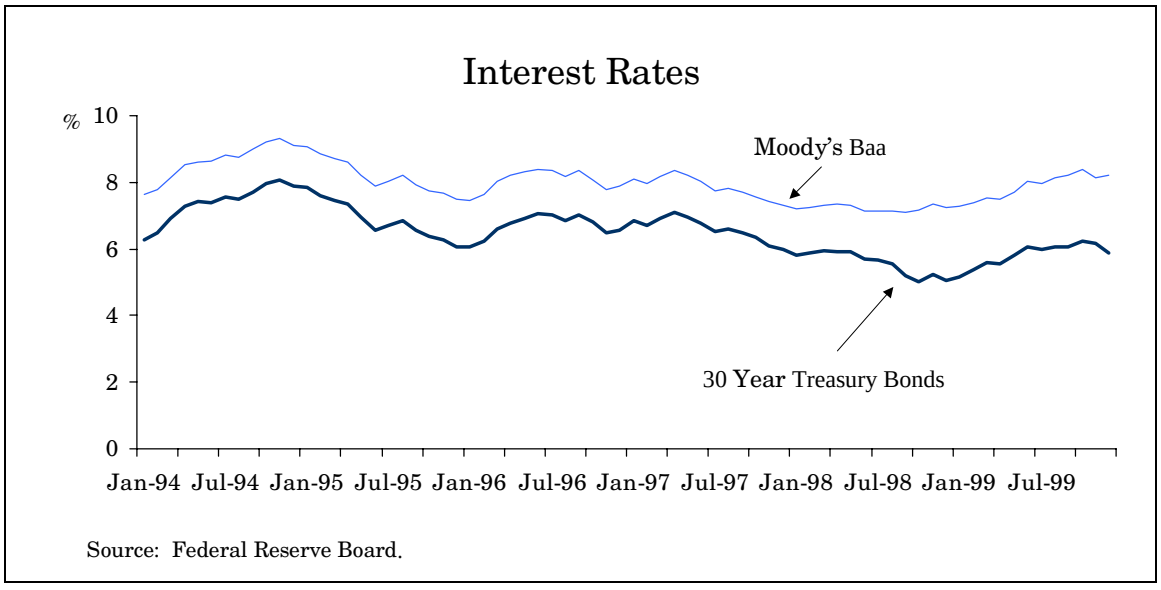


Figure 21

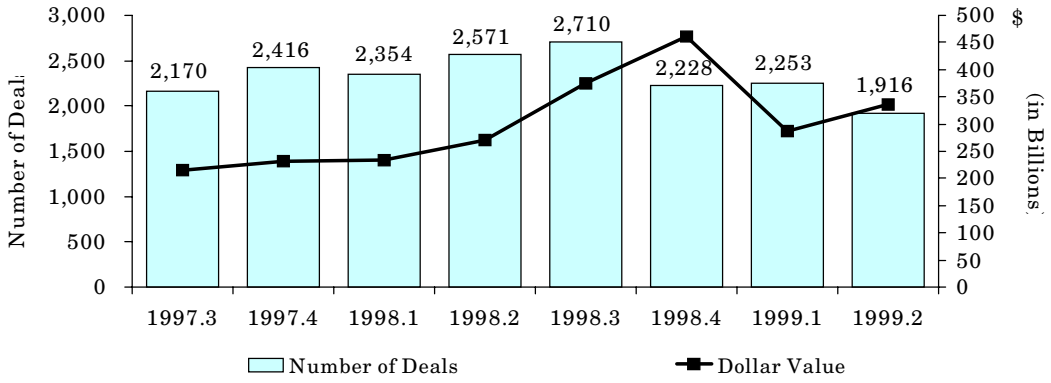
Banks, which often use highly liquid government bonds as a hedge against interest rate risk, will now find that hedge to be pricier and therefore less affordable, possibly reducing their willingness to lend. If banks reduce their willingness to lend due to falling profit margins, the Treasury's actions will have produced a result which is consistent with current monetary policy. However,

declining yields on long-term government securities have historically resulted in lower yields on private sector long-term debt as well. This result would be at odds with what the Federal Reserve is trying to achieve. However, as indicated in Figure 21, the market has demanded a greater risk premium for corporate bonds relative to the 30-year Treasury bond.

The ultimate impact of Treasury actions on the economy will depend upon how persistent the shortage of long-term bonds relative to short-term bonds will be, as well as how receptive bond market participants will be to alternative hedge instruments, such as 10-year bonds and other government agency securities.

Outlook for 2000

The outlook for 2000 is strong. The Federal Reserve is expected to raise its federal funds target rate by another 50 basis points to 6.25 during the first half of this year. Diminished inflationary expectations should strengthen investor confidence. Entrepreneurial activity, particularly related to the Internet, should be ready to take advantage of this improved situation, producing strong demand for industry services related to IPO's. It is also believed that there may be some pent up demand due to the postponement of investment decisions in anticipation of problems associated with Y2K.



Source: *Mergers and Acquisitions*, September/October, 1999.

Figure 22

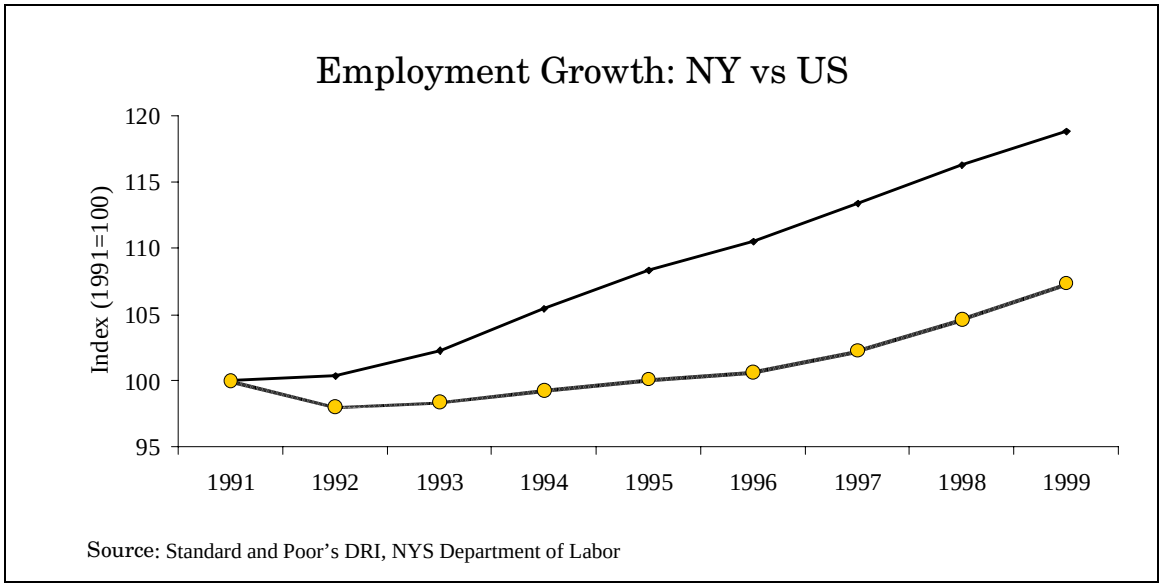
Finally, the response of firms to global economic integration will continue to increase their demand for Wall Street investment banking services. Merger and acquisition activity should remain strong as firms seek to improve their positions relative to increasingly competitive international markets. As

indicated in Figure 22, the number of deals completed during the first half of 1999 was down relative to the same period in 1998. However, their dollar value, which more closely determines profitability, is up significantly. Moreover, brewing deals, such as those involving pharmaceutical companies Pfizer and Warner-Lambert and media giants AOL and Time-Warner are an indication that the level of activity should remain high in the coming year, despite increased scrutinizing behavior on the part of the Federal Trade Commission.

The more positive outlook alluded to above for the 1999-2000 and 2000-2001 bonus seasons should produce bonus income growth well above what was observed during 1998-99. New York State bonus income is projected to grow 28.0 percent during the 1999-2000 bonus season and followed by growth of 8.5 percent for 2000-2001. The securities industry is responsible for much of that improvement relative to 1998-99, with bonus income in that industry projected to grow 55.8 percent during 1999-2000, followed by growth of 11.0 percent during 2000-2001.

Recent New York State Employment Trends

The strength and duration of the national expansion, as well as the spectacular success of Wall Street have both had a positive impact on the overall New York State economy. The Ways and Means Committee staff projects New York employment growth of 2.6 percent for 1999, followed by slightly slower growth of 2.1 percent for 2000.



Source: Standard and Poor's DRI, NYS Department of Labor

Figure 23

Current Employment Statistics (CES) survey data made available by the New York State Department of Labor indicate that State employment grew

1.9 percent in 1999. This is below the overall national growth rate from the same data source of 2.2 percent. Since the beginning of the current expansion, New York State has lagged behind the nation in employment growth (see Figure 23). On the basis of total employment growth, New York ranks 26th among the 50 states and the District of Columbia. The State's rank rises to 24th on the basis of private sector growth only. In contrast to New York, all of the nation's other large states rank among the top ten. Florida's 3.8 percent rate of growth makes that state the second fastest growing state in the nation. California ranks sixth at 3.0 percent, while Texas ranks seventh at 2.9 percent.

The ES-202 Covered Employment and Payroll (ES-202) data set, also available by the State Department of Labor, provides another more accurate but less timely source of State jobs data. ES-202 data for the first six months of 1999 will be used by the State Department of Labor for the first of two benchmarkings of the 1999 CES data, the first of which will be released in March 2000 (see Box 2, Technical Appendix). The employment data for that period indicates growth of 2.8 percent over the same period in 1998, compared to growth indicated by the CES data for the same period of only 1.7 percent. Although the ES-202 is not the only source used in the revision process, it provides a strong indication that the 1999 CES employment data will ultimately be revised upward in March.[26]

[26] Although New York State's relative ranking in employment growth may change as a result of the revisions, it is important to note that other states' employment data may be revised upward as well.

RISKS TO THE FORECASTS

Risks to the National Forecast

The most substantial risks to this forecast are energy prices, and their impact on the overall consumer price level, and the stock market. In the past, the OPEC nations have attempted to maintain coordinated supply quotas, but as the demand for oil rose, individual member-nations have broken ranks and increased supply in order to capture the additional revenues. Typically, this would result in lower prices over the longer run. The Committee staff forecast of 2.7 percent inflation for 2000 is consistent with higher energy prices for 2000 than in 1999. However, higher than expected oil prices would result in higher inflation, further monetary tightening by the Federal Reserve, and, hence, slower growth.

The uncertainty related to the stock market poses both upside and downside risk to the forecast. If the exuberance which investors have been exhibiting for technology stocks should spread to the rest of the market, even greater market growth than projected could occur. We would then see a positive impact on consumption growth via the wealth effect. A deeper market correction than now experienced would have the opposite effects.

If the world economy should grow more slowly than expected, U.S. export growth could be less than projected. Lower export growth would in turn reduce U.S. profit growth. A slowdown in productivity growth would also negatively affect profit growth. Lower profits could ultimately reduce domestic business investment and result in worker layoffs, slower employment growth, and, in turn, lower consumption growth than anticipated. Of course, the possibility that the global economy will grow more rapidly than expected—producing stronger than anticipated exports, profits, employment, and consumption—poses an upside potential to our forecast.

Risks to the New York Forecast

The uncertainty that surrounds energy prices and the overall outlook for inflation is expected to be the primary source of downside risk to the State as well as the national forecast. Higher inflation will trigger further monetary tightening by the Federal Reserve. Although the national economy as a whole should be able to absorb such increases without significant disruption, the impact on the financial markets, and therefore the downstate economy, could be more negative. Higher interest rates could also reduce expectations for corporate profits, possibly reducing stock market growth. The resulting decline in the demand for corporate underwriting services would result in lower Wall Street profits and, hence, lower bonus income than predicted.

On the other hand, there could be stronger stock market growth than expected. If the level of merger and acquisition activity were to be even higher than expected, we might see stronger corporate profit growth. Stronger corporate profits would in turn lead to higher bonus incomes both within and outside Wall Street, resulting in stronger than predicted growth in wages and salaries.

TECHNICAL APPENDIX

Box 1

BEA REVISIONS

The Department of Commerce Bureau of Economic Analysis (BEA) issued its eleventh major comprehensive revision of the National Income and Product Account (NIPA) data in October 1999 and the first since 1996. The BEA implemented five major types of methodological changes:

- Inclusion of business and government software purchases as fixed investment;
- Treatment of government employee retirement plans in the same manner as private pension plans;
- New treatments of the property income of private noninsured pension plans and of certain transfers of existing assets;
- Improved methodologies for estimating prices and quantities, as well as updating the base year for calculating real growth from 1992 to 1996; and
- Incorporation of more reliable and comprehensive source data.

The revisions reveal a number of significant phenomena. First, economic growth has been slightly higher than indicated by previous estimates. For the period from 1959 through 1998, the average annual growth rate of real GDP is 3.4 percent, an increase of 0.2 percentage points, with much of that increase concentrated during the period since 1988. The inclusion of business software purchases as fixed investment accounts for much of this increase. Growth rates for exports of services and producer equipment and software are revised up the most.

Accordingly, the current economic expansion has been even stronger than previously estimated. For the current expansion, average annual growth is estimated at 3.6 percent, 0.5 percentage points higher (see Table A). The upward revision for both 1990 and 1991 indicate that the 1990-91 recession was even milder than previously thought.

Box 1, Table A

GDP Growth Over the Business Cycles

Cycles	Average GDP Growth 1992 Chain Weighted	1996 Chain Weighted	Difference
Recessions			
1960Q3 - 1961Q1	(0.8)	(0.7)	0.1
1970Q1 - 1970Q4	(0.1)	(0.2)	(0.1)
1974Q1 - 1975Q1	(2.9)	(2.4)	0.5
1980Q1 - 1980Q2	(3.6)	(3.0)	0.7
1981Q3 - 1982Q4	(1.0)	(0.9)	0.1
1990Q3 - 1991Q1	(2.7)	(1.8)	0.9
Expansions			
1961Q2 - 1969Q4	4.8	4.9	0.0
1971Q1 - 1973Q4	5.3	5.2	(0.1)
1975Q2 - 1979Q4	4.4	4.6	0.1
1980Q3 - 1981Q2	3.0	3.0	0.0
1983Q1 - 1990Q2	4.0	4.3	0.3
1991Q2 - Current	3.1	3.6	0.5

Note: Growth rates are calculated as the average of annualized quarterly growth rate
Shaded cells indicate recessions. Detail may not add due to rounding.
Source: Standard and Poor's DRI.

The size of the revisions relative to the level of GDP generally increase over time. Prior to 1995, the revisions are largely accounted for by the definitional change that recognizes software as investment. Beginning with 1995, they also grow as a result of statistical changes that affect personal consumption expenditures and nonresidential structures. As a result, the recent acceleration in the rate of productivity growth is now known to be even greater than previously believed (see discussion above, page 8).

Substantial revisions in the area of personal saving due to a reclassification of government employee retirement plans indicate a higher rate of saving than previously estimated. However, the long-term decline in the personal saving rate is also evident in the revised numbers, with the rate falling from 10.9 percent in 1982, to 3.7 percent in 1998.

Box 2

NEW YORK STATE EMPLOYMENT TRENDS: A PROBLEM OF MEASUREMENT

There is no ideal measure of state-level employment. Below we provide an overview of two commonly cited data sources and describe how they are used to determine the trend in State employment growth. We also offer some caveats to be considered when interpreting these publicly available data.

The Current Employment Statistics Survey

The New York State Department of Labor distributes a monthly survey known as the Current Employment Statistics (CES) survey to about 18,500 employers. The New York firms which are sampled voluntarily report information from which statistics on employment and earnings are obtained. Although these 18,500 firms represent only about four percent of the State's firms, they account for approximately a third of the employed workforce. Large firms are thus disproportionately represented in the survey. The CES data indicate that for 1999, State employment grew 1.9 percent.

ES-202 Covered Employment and Payroll

The Covered Employment and Payroll (ES-202) data set provides comprehensive employment and wage data by industry and county, and by location in the public or private sector, for employers covered by the State's Unemployment Insurance (UI) program. Covering over 450,000 establishments, or about 98 percent of all non-farm employees, the ES-202 represents a "near universe" of the State's workforce. The employment data from this source thus most accurately capture the State's trend in employment growth. Since the primary purpose of the ES-202 is its role in administering the UI program, the data are generally not subject to revision.

The ES-202 data are released on a quarterly basis with a lag of approximately six months; they are not a timely source of employment data. The most recent data available for 1999 are for the second quarter. For the first half of 1999, the preliminary ES-202 data indicate statewide employment growth of 2.8 percent, fully 0.9 percentage points above that indicated by CES data.

CES Data Limitations

The Current Employment Statistics survey's disproportionate reliance on large firms may be introducing a bias into the CES employment data, given that the employment patterns of large firms in relation to the business cycle tend to

differ from those of small firms. For instance, as the economy enters a downturn, it is typically smaller firms that tend to suffer the earliest employment losses, with large firms typically responding more slowly. This inherent bias in the survey design can lead to large estimation errors, with the preliminary data failing to indicate turning points in the business cycle.

Several additional factors should be considered when interpreting the CES survey data. The CES survey, also known as the payroll survey, employs the workplace rather than residence, as the unit of analysis. Therefore, commuters into New York City from New Jersey and Connecticut are counted as New York employees. In addition, the CES is designed to count the number of jobs, not the number of jobholders. Hence, a person with more than one job is counted more than once. Full time and part time employees are given equal weight in the job count. These are not concerns peculiar to the CES data alone. The same issues arise with the ES-202 data as well.

The data set is restricted to civilian, non-agricultural employees only. Any employee who was on a firm's payroll during the payroll period that includes the 12th of the month is counted in the employment statistics. Those who were not on the payroll during this period are not included. The CES data do not cover the self-employed or domestic workers.

Data Revisions—the Benchmarking Process

A standard part of CES data collection and employment estimation is the benchmark revision process. The CES data are among the earliest estimates available for economic analyses. Preliminary monthly estimates of employment are first made public about two weeks after the end of that month. These preliminary data are revised when the following month's data are released. The smaller size of the CES sample provides a quick, snapshot view of the economy's employment situation. However, as with all survey data, the CES data are subject to both sampling and non-sampling errors. Sampling error occurs whenever a sample rather than the entire population is surveyed, simply due to chance. Non-sampling errors arise from inadequate coverage, inaccurate responses, as well as data processing problems.

To correct some of the inaccuracy which can result from both sampling and non-sampling errors, the CES estimates are adjusted to reflect currently available employment counts from the "near universe" ES-202 data set, as well as from other sources. This process is known as benchmarking. At the beginning of each year, the benchmarking procedure revises the employment estimates for the previous two years using the available ES-202 estimates and estimates from other sources for employment not covered by the UI program. The benchmarking process determines the final employment levels, while the sample data provide month-to-month movements.

Interpreting CES Data Revisions

When the data revisions are extraordinarily large, care must be taken in interpreting the CES data. For example, in 1998 State employment was revised upward all the way back to 1972, with the revisions becoming much larger after 1996. Based on the revised data, there appears to be considerable improvement in State employment growth in recent years.

A careful analysis, however, reveals that the growth pattern may have more to do with the implementation of the revisions than with economic growth. Following the discovery of data reporting errors, New York City education employment was revised upward by 26,500 for 1997, accounting for 66 percent of the size of the revision for that year. Similarly, for 1998, the revision for that sector was 36,000, or about a half of the total. The overall State government employment was revised up 45,400 for 1998, accounting for about 62 percent of the total statewide revision. Although these reporting errors are thought to have persisted over a long period of time, the magnitude of the errors going back historically can only be guessed at. Significant upward revisions were made to the employment data only as of 1997. Thus, caution must always be exercised when interpreting the revised data.

Another caveat that needs to be kept in mind is that the states' employment numbers cannot be aggregated to sum to the national employment numbers; state level and national data are not directly comparable. However, other states' employment data are subject to revision as well.