

*Employment outlook: 1994–2005*

## The U.S. economy to 2005

*BLS projects a wide range for gross domestic product, accompanied by several key shifts in the composition of its demand components*

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**T**he Bureau of Labor Statistics has prepared projections of the U.S. economy for the period 1994–2005.<sup>1</sup> As with prior BLS aggregate economic projections, three alternatives have been developed: low growth, moderate growth, and high growth. These alternatives are designed to examine a range of production possibilities and their implications for employment over the next 11 years, based on different assumptions regarding those factors most subject to uncertainty in future periods.

The moderate-growth projection is characterized by a gross domestic product (GDP) influenced by somewhat slower labor force growth than currently exists, an improving balance of foreign trade, modest improvements in labor productivity, several key shifts in the distribution of the demand components of GDP, and a gradually improving Federal budget deficit. In comparison, the high-growth model has greater population, labor force, and labor productivity growth; marked shifts in demand toward investment and exports; a more optimistic foreign trade outlook; and a balanced Federal budget by the end of the projection period. Finally, the low-growth scenario contains a lower estimate of labor force growth, a continuation of recent trends in demand shares and labor productivity growth, and a deteriorating budget deficit and foreign trade balance.

Under the assumptions used by the Bureau in developing these projections, by 2005 GDP is expected to range between \$6.4 trillion and \$7.4

trillion (in 1987 dollars). This translates to an average annual rate of growth for real GDP of 1.6 percent in the low-growth alternative, 2.3 percent in the moderate-growth scenario, and 3.0 percent in the high-growth alternative over the 1994–2005 period, contrasting with a historical rate of 2.9 percent between 1983 and 1994. Real disposable personal income ranges between \$4.5 trillion and \$5.2 trillion, and disposable income per capita, also in real terms (that is, 1987 dollars), is projected to range from roughly \$15,800 to \$17,700 in 2005, compared with \$14,700 in 1994.

### Framework of the projections

More than 200 exogenous variables are used in conjunction with a macroeconomic model to generate aggregate projections of the U.S. economy.<sup>2</sup> A relatively small number of these assumptions contained within the variables significantly affect the long-term projections of employment and major demand categories of GDP.<sup>3</sup> The assumptions are summarized in table 1.

In addition, the projections are generally prepared with selected variables, such as the level of the unemployment rate, the rate of growth of labor productivity, the inflation rate, and the presence and severity of business cycle fluctuations, that are much more carefully evaluated than the other variables in the model. These target variables assist the Bureau in defining the important

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**Table 1. Major assumptions affecting aggregate projections, 1983, 1994, and projected to 2005**

Exogenous Variable	Levels					Average annual rates of change			
	1983	1994	2005			1983-94	1994-2005		
			Low	Moderate	High		Low	Moderate	High
Domestic share of crude oil use .....	70.8	49.7	35.8	39.2	42.4	-3.2	-2.9	-2.1	-1.4
Federal gas tax (cents/gallon) .....	7.8	19.4	19.4	19.4	19.4	8.6	.0	.0	.0
Defense construction (1987 dollars) .....	5.5	3.4	3.7	3.1	3.9	-4.3	.8	-.8	1.3
Other defense purchases (1987 dollars) .....	130.5	135.2	106.3	129.0	135.4	.3	-2.2	-.4	.0
Defense compensation (1987 dollars) .....	103.7	91.1	81.8	87.4	89.4	-1.2	-1.0	-.4	-.2
Federal nondefense construction (1987 dollars) .....	7.3	9.4	10.3	10.4	10.8	2.3	.8	.9	1.3
Other Federal nondefense purchases (1987 dollars) .....	43.2	63.5	66.5	78.2	82.4	3.6	.4	1.9	2.4
Federal nondefense compensation (1987 dollars) .....	41.1	48.4	38.2	40.9	47.8	1.5	-2.1	-1.5	-.1
Households, single-family .....	62.0	72.0	81.7	81.7	83.6	1.4	1.2	1.2	1.4
Households, multifamily .....	23.2	26.5	29.5	29.5	30.2	1.2	1.0	1.0	1.2
Fuel efficiency, all autos (miles per gallon) .....	17.2	21.0	22.4	22.8	23.1	1.8	.6	.8	.9
Population, including Armed Forces overseas ..	234.6	261.0	284.8	284.8	293.8	1.0	.8	.8	1.1
Population aged 16 years and older .....	179.5	200.1	222.2	222.2	228.6	1.0	1.0	1.0	1.2
Federal corporate profits tax rate .....	46.0	35.0	35.0	35.0	35.0	-2.5	.0	.0	.0
Federal marginal personal tax rate .....	27.2	24.5	25.0	25.0	25.0	-.9	.2	.2	.2
Federal social insurance tax rate .....	15.0	17.0	17.4	17.4	17.4	1.1	.2	.2	.2
Federal grants-in-aid, medical (1987 dollars) ....	23.9	54.6	75.1	82.7	99.2	7.8	2.9	3.8	5.6
Federal grants-in-aid, other (1987 dollars) .....	79.8	92.0	70.2	88.8	106.5	1.3	-2.4	-.3	1.3
Federal transfer payments, other (1987 dollars) .....	306.8	384.0	445.3	465.5	512.1	2.1	1.4	1.8	2.7
Federal transfer payments, medical (1987 dollars) .....	71.6	107.4	136.7	156.9	194.6	3.8	2.2	3.5	5.6

SOURCE: Historical data, Bureau of Economic Analysis and Bureau of the Census; projected data, Bureau of Labor Statistics.

parameters around which alternatives are developed, but in no sense should they be considered fixed. Rather, the preliminary target values provide a test of reasonableness against which the overall projection results may be compared.

Major target assumptions were made regarding business cycle fluctuations in the 1990's. Critical reviews of past projection efforts have indicated that certain sectors of the economy—notably, durable goods consumption and investment in equipment and structures—are overstated when no cycle is present. Consequently, to improve the accuracy of the projections, two recessions were assumed during the 1994–2005 period. It is important that this assumption not be read as a prediction that there will be recessions—either at all or in any specific years—during 1994–2005. Rather, it is a realistic nod to the seeming inevitability of business cycle fluctuations and the impact they have on the distribution and levels of demand GDP components, as well as on employment. It is also important to note that neither a downturn nor a recovery is projected for the year 2005; that year represents, in the BLS projections, a year on the long-term trend growth path for GDP. In addition to yielding slightly different results for the distribution of GDP, the assumption of recessions modestly lowers the overall rate of growth of GDP from what would

have been projected in a straight trend-growth scenario.

Another major target assumption used in developing the projections was the general trend for the unemployment rate. In a business cycle, the percentage of the labor force that is out of work can be expected to rise, sometimes dramatically; in a recovery period, it can be expected to fall. Despite these fluctuations, a general trend in the underlying unemployment rate should be apparent in any set of projection scenarios. In the moderate-growth alternative, the unemployment rate is assumed to tend toward the level attained in 1990, a period following a long, sustained economic recovery and well-controlled inflation. The unemployment rate targets are 4.0 percent in the high-growth projection, 7.0 percent in the low-growth scenario, and 5.7 percent in the moderate-growth alternative.

### Assumptions of moderate growth

Many assumptions must be spelled out in very specific terms in order for an economic model to generate estimates of future growth paths. Numerous assumptions, although important to particular parts of the model and its results, have very little impact on those components of the projections used in

subsequent stages of the BLS projection process. This section focuses on those assumptions which have the greatest impact on GDP, on the demand components of GDP, and on employment and productivity.

*Fiscal policy.* Following the Viet Nam War, real defense purchases declined steadily, reaching a low of \$180 billion in 1976. Between 1976 and 1987, there was a resurgence of spending on defense preparedness. Real defense purchases of goods and services grew at an annual rate of 4.5 percent. A large proportion of this growth was attributable to efforts to modernize and expand the capabilities of the Armed Forces and included expenditures on such programs as the expansion of the Navy to a 600-ship fleet, the development of the B-1 bomber, increased air wing size, and more advanced rolling stock (for example, new tanks and troop carriers). More recently, increased pressure to trim the budget deficit, along with the end of the Cold War, has resulted in a \$66 billion cut in real defense spending between 1987 and 1994. A continued contraction in defense spending is assumed throughout the remainder of the 1990's, with some resumption in growth expected after 2000 as replacement needs push spending up in real terms. As a result of these assumptions, real spending on military goods and services is projected to drop at an average annual rate of 0.4 percent between 1994 and 2005.

Federal spending on nondefense purchases of goods and services grew at a real rate of 2.3 percent a year between 1983 and 1994. This rate resulted in a slight decline in such spending as a share of GDP, from 2.2 percent in 1983 to 2.1 percent in 1994—a post-World War II historical low. Spending on many domestic Federal programs decreased during the period. Recently, pressure has been placed on the Federal Government to commit more resources to some of these programs. However, due to budget deficits, real nondefense spending is expected to grow only 0.6 percent per year between 1994 and 2005. This is a significantly slower rate of growth than that projected for overall GDP and thus results in a continuing decline in nondefense spending as a share of GDP.

Federal transfer payments for medicare are expected to increase at a real rate of 3.5 percent annually between 1994 and 2005, a small slowdown in growth from the preceding 11 years, when such payments grew at a real rate of 3.8 percent per year. This slowdown reflects, in part, the expected slower growth of the population 65 years and older during the 1994–2005 period. Other transfer payments are also assumed to slow somewhat, to a 1.8-percent annual rate of growth over the projection period, down from the 1983–94 growth rate of 2.1 percent.

Real grants-in-aid to State and local governments were cut relatively sharply during the 1970's, but grew strongly during the 1980's. The continued deterioration of the Nation's interstate highway system stimulated some of these increases,

but the strongest growth has been for medicaid-related grants. Between 1983 and 1994, real grants-in-aid for nonmedicaid items grew by 1.3 percent per year. This category of grant spending is expected to decline in real terms over the projection period at a rate of 0.3 percent per year, reflecting the assumption that Federal aid programs will be far more tightly controlled as a part of the effort to address budget deficits during the coming 11 years than during the previous 11 years.

Medicaid grants, on the other hand, increased at a real rate of almost 8 percent per year between 1983 and 1994. In the 1994–2005 period, this category of grants is assumed to continue to show strong real growth, but at 3.8 percent annually, considerably slower than the historical rate.

On the revenue side, most tax rates are specified as an exogenous variable to the macroeconomic model—either as statutory rates or as average marginal rates. The relevant effective rates for taxes on corporations and on personal income are then derived from the mandated rates, general business conditions, the progressive nature of such taxes, surcharges, tax credits, and changes in the tax law. It has been assumed that no major changes will affect the currently mandated tax rates for corporations or persons, or the rates for social insurance and indirect business taxes.

Taxation and spending assumptions in the moderate-growth alternative are generally consistent with spending and revenue proposals that lead to a steadily declining budget deficit over the entire projection period. The high-growth and low-growth alternatives embody fiscal assumptions that cover a much broader range of possibilities for the deficit—from a slight budget surplus by 2005 in the high-growth projection to a deficit continuing to grow at current rates and reaching a level of more than \$300 billion by 2005 in the low-growth scenario. Clearly, this is an area of great uncertainty and is one of the major reasons the Bureau prepares alternative projections.

*Monetary policy.* The monetary sector of the economic model has been designed to determine the rate of growth of the money supply that is commensurate with long-term stable growth, as well as the particular interest rates that are consistent with steady growth and controlled inflation. In the short run, the monetary authority wields much more influence in determining the growth of the economy than it does in the long term. Only two critical monetary assumptions need to be specified for the moderate-growth projection: the required reserve ratio on demand and time deposits and the nonborrowed reserves of member banks. Both of these are assumed to be set in a way best described as accommodative, maintaining a roughly constant rate of growth of velocity and stable interest rates.

*Demographic assumptions.* The population estimates underlying the low- and moderate-growth projections are the

middle scenario developed by the Bureau of the Census.<sup>4</sup> The Census Bureau's high-migration population projection underlies the BLS high-growth projections. The low, middle, and high civilian labor force projections, developed by BLS to be consistent with the Census Bureau population projections, are incorporated into the three aggregate scenarios in place of labor force estimates derived in the macroeconomic model.<sup>5</sup> The only other major demographic assumption is the new-household formation rate, derived by BLS by updating earlier Census Bureau projections of household formation rates to reflect the most recent population projections.<sup>6</sup>

*General assumptions.* It was further assumed that there would be no major wars, oil embargoes, major price shocks, or serious natural catastrophes of a magnitude that would affect the long-term growth potential of the economy during the projection period.

### Moderate-growth alternative

As noted earlier, real GDP is expected to grow at an average annual rate of 2.3 percent between 1994 and 2005 in the moderate-growth scenario, somewhat slower than the 1983–94 rate of growth of 2.9 percent. To understand why the GDP is expected to slow somewhat in the future, one must examine the behavior of the major factors of production—labor and capital. The growth in the supply of labor, represented by the civilian labor force, is projected to slow to a 1.1-percent rate over the 1994–2005 period, down 0.4 percentage point from the 1983–94 growth rate of 1.5 percent. As population growth slows, so, too, will labor force growth, in spite of assumptions of continued high immigration. Offsetting this decline in labor force growth to some extent is a lower unemployment rate. Real GDP per employee is expected to increase at an annual rate of 1.2 percent between 1994 and 2005, slightly higher than the 1.0-percent growth experienced during the 1983–94 period.<sup>7</sup>

The horizon for this latest set of BLS projections is 11 years, from the base year 1994 to the target year 2005. To compare a set of projections with what has happened in the past, it is helpful to present the preceding historical period of an equal number of years, in this case, 1983 to 1994. That period is used in all of the major tables in this article. However, no one historical period can adequately describe the events shaping the behavior of all of the individual variables considered in the projections. For that reason, the text of the article may refer to other, more representative, historical periods.

In the moderate-growth alternative, several of the ills that currently afflict the economy are projected to become less serious. Specifically, the Federal budget deficit is expected to be smaller than it is now, the Nation is projected to continue to improve its world trading position, and employment growth

is anticipated to remain steady. The rest of this section examines the moderate-growth scenario in more detail.

*Personal consumption expenditures.* Traditionally, personal consumption expenditures have accounted for the largest share of GDP. In 1968, such expenditures, in real terms, constituted 61 percent of final purchases. Their share increased over the 1970's and early 1980's, reaching 67 percent of GDP in 1983, where it remained in 1994. Tax cuts instituted during the 1980's, accompanied by rapid increases in Medicare and Medicaid spending, were viewed by consumers as "found money." Virtually all of the increases in income were spent, with almost none flowing into personal savings.

The increasing share of GDP accounted for by consumption appears, for the most part, to have been at the expense of gross savings. The personal savings rate began a long, slow slide in the mid-1970's, declining from an average of 7.8 percent of disposable income for the 1970's to an average of just 6.5 percent during the 1980's. In a further erosion, the personal savings rate dropped to 4.1 percent by 1994.

Accompanying the declining rate of personal savings was a Federal budget deficit<sup>8</sup> (an important, albeit negative, component of gross savings) that grew from \$180 billion in 1983 to more than \$280 billion by 1992, lowering the gross savings rate from almost 15 percent in 1979 to 12.0 percent by 1992. Even with improvements in the deficit in 1993 and 1994, the gross savings rate was still only 13.7 percent in 1994. The impact of these structural shifts in the rate, a key factor in the determination of funds available for investment growth in the U.S. economy, will be covered more fully later; here, it suffices to say that the result has been a personal consumer spending surge focused on durable goods (notably, automobiles and consumer electronics) and on a vast array of consumer services (primarily medical, but also sophisticated financial services).

The Bureau's projections result in very little expected change in the share of GDP accounted for by personal spending. As noted, however, this clearly reverses the long-run historical trend. The moderate-growth projections show personal consumption expenditures constituting 66.7 percent of GDP in 2005, a very slight decline from the 1994 share of 67.0 percent. (See table 2.) This halting of the upward trend in the personal consumption expenditures share of GDP results in part from the aging of the baby-boom population, a group that is expected to anticipate a need for retirement funds and that thus helps to arrest the long-term decline in savings. In addition, the boost to consumer spending during the 1980's that was fueled by tax cuts and lower personal savings is expected to disappear, as no further tax cuts are assumed to be forthcoming and the decline in the savings rate is presumed to taper sharply. Some interesting shifts in the composition of personal consumption expenditures by

**Table 2. Gross domestic product by major demand category, 1983, 1994, and projected to 2005**

Category	Billions of 1987 dollars				
	1983	1994	2005		
			Low	Moderate	High
Gross domestic product .....	3,906.6	5,343.1	6,356.6	6,829.7	7,423.3
Personal consumption expenditures .....	2,619.4	3,579.6	4,293.7	4,554.7	4,869.7
Gross private domestic investment .....	599.5	951.2	1,118.5	1,232.0	1,404.0
Exports .....	286.0	656.9	1,055.5	1,223.0	1,433.2
Imports .....	342.1	767.6	1,104.5	1,238.7	1,415.2
National defense .....	234.2	226.6	203.5	216.4	224.7
Federal nondefense .....	86.6	111.2	111.6	119.1	130.2
State and local .....	423.1	585.2	678.8	723.2	776.7
	Percent distribution				
	1983	1994	2005		
			Low	Moderate	High
Gross domestic product .....	100.0	100.0	100.0	100.0	100.0
Personal consumption expenditures .....	67.1	67.0	67.5	66.7	65.6
Gross private domestic investment .....	15.3	17.8	17.6	18.0	18.9
Exports .....	7.3	12.3	16.6	17.9	19.3
Imports .....	8.8	14.4	17.4	18.1	19.1
National defense .....	6.0	4.2	3.2	3.2	3.0
Federal nondefense .....	2.2	2.1	1.8	1.7	1.8
State and local .....	10.8	11.0	10.7	10.6	10.5
	Average annual rates of change				
	1983-94	1994-2005			
		Low	Moderate	High	
Gross domestic product .....	2.9	1.6	2.3	3.0	
Personal consumption expenditures .....	2.9	1.7	2.2	2.8	
Gross private domestic investment .....	4.3	1.5	2.4	3.6	
Exports .....	7.9	4.4	5.8	7.3	
Imports .....	7.6	3.4	4.4	5.7	
National defense .....	-3	-1.0	-4	-1	
Federal nondefense .....	2.3	.0	.6	1.4	
State and local .....	3.0	1.4	1.9	2.6	

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

major product categories, however, are expected. (See table 3.)

Current population projections published by the Bureau of the Census imply a marked slowdown in new entrants to the driving-age population, suggesting relatively flat new-car sales over the entire projection period. Sales of new light vehicles are expected to rise from 15.0 million units in 1994 only to about 15.3 million units in 2005. The aging of the population results in a tendency toward larger, higher valued cars, on average, thus allowing projected spending on new cars to outpace overall consumer spending slightly, but the share of personal consumption expenditures going for new vehicles still drops from 3.8 percent in 1994 to 3.5 percent by 2005.

The remainder of consumer spending on durable goods encompasses personal computers, household furniture, and all

other durable goods. Computer spending is projected to continue at a very rapid pace throughout the projection period. Computers, which accounted for 0.1 percent of personal consumption spending in 1983 and 0.7 percent by 1994, are expected to increase their share to 1.8 percent of total real consumer spending by 2005. Spending on household furniture, which also includes purchases of china, glassware, and utensils, as well as all purchases of household audio and video products, is projected to slow somewhat from the strong growth experienced during the 1983-94 period, but still is expected to grow more rapidly than overall consumer spending from 1994 to 2005. In other words, slower growth in spending on furniture and china is expected to be more than offset by continued very strong demand for consumer electronics. Overall, the furniture category of durable consumer spending is projected to increase its share of total personal consumer expenditures from 6.0 percent in 1994 to 6.7 percent in 2005.

Spending on other durable goods covers a broad range of recreational products and vehicles, ophthalmic goods, jewelry and silverware, and more. This category of spending grew at a real annual rate of 4.0 percent between 1983 and 1994 and is projected to slow somewhat to a 2.5-percent growth rate over the 1994-2005 period, still more rapid than overall personal consumption spending.

Consumer energy use—of gasoline and motor oil for our automobiles and of fuel oil, natural gas, and electricity for heating and air-conditioning our homes—has grown at a relatively slow pace since 1972, a reaction to higher energy costs and a reflection of the economywide moves toward energy conservation. More energy-efficient automobiles and appliances and better insulated homes have led to declining consumer energy use, from a 6.5-percent share of overall personal consumption expenditures in 1983 to 5.4 percent by 1994. The moderate-growth alternative assumes that many of these trends will continue, leading to energy use accounting for only 4.8 percent of spending on consumption by 2005.

Consumer spending on nondurables is generally made up of so-called subsistence items such as food, cleaning products, cosmetics, and other short-term consumables. As family incomes rise, expenditures on nondurables also rise, up to a point. After that point is reached, spending on these items, at the household level, tends to increase much slower than rises in income. Generally, improving standards of living in the United States have led to this component of consumer spending accounting for smaller shares in overall consumption over time. Between 1983 and 1994, for example, consumption of nondurables fell from a 34.4-percent share of personal consumption expenditures to 31 percent. This is not, of course, to say that spending on these items declined numerically; rather, it simply grew at a significantly slower pace than did overall personal consumption expenditures. The Bureau projects that this trend will continue, with spending on food and other nondurables increasing 1.4 percent annually, or only slightly faster than population growth. The share of consumption of nondurables is expected to continue to decline, falling to 28.5 percent by 2005.

The Census Bureau population projections imply a noticeable slowdown in the net formation of new households. This is borne out in the BLS projections of consumer spending for housing. Some offsets to the slowdown are anticipated as consumers purchase new homes with rising average values, but this effect is expected to be relatively small. Thus, the share of consumer spending going for housing needs is projected to continue to drop, falling to 12.3 percent of total personal consumption spending by 2005, down from 14.0 percent in 1994.

Spending on consumer services, on the other hand, is expected to grow slightly more rapidly than overall consumer spending—2.4 percent annually between 1994 and 2005. The share of the consumer dollar allocated to services is projected to grow noticeably, reaching more than 55 percent in 2005,

up from 54.3 percent in 1983 and 54.1 percent in 1994. As the population ages, and as medical technology advances, the demand for medical services is expected to continue to grow disproportionately. As previously noted, however, the 1980's have seen major growth in new services such as investment counseling and other professional services, and these trends are also expected to continue over the projection horizon. In

**Table 3. Personal consumption expenditures, 1983, 1994, and projected to 2005**

Category	Billions of 1987 dollars				
	1983	1994	2005		
			Low	Moderate	High
Personal consumption expenditures .....	2,619.4	3,579.6	4,293.7	4,554.7	4,869.7
Durable goods .....	297.7	532.1	686.2	745.9	852.4
Autos .....	75.8	86.3	74.3	83.2	98.3
Light trucks .....	21.2	48.5	70.4	75.4	79.8
Other automotive .....	41.1	73.5	82.4	87.2	99.0
Computers .....	1.4	23.4	69.6	81.5	112.4
Furniture .....	102.9	215.2	291.3	306.7	340.1
Other durables .....	55.3	85.2	98.2	111.9	122.8
Nondurable goods .....	900.3	1,109.6	1,208.1	1,299.0	1,364.5
Food and beverages .....	463.4	535.7	587.2	596.7	601.7
Clothing and shoes .....	142.4	208.8	231.0	262.1	288.0
Gasoline and oil .....	75.7	87.3	92.4	94.9	110.3
Fuel oil and coal .....	11.1	11.9	10.4	10.5	11.7
Other nondurables .....	207.8	265.9	287.2	334.8	352.7
Services .....	1,421.4	1,937.9	2,399.4	2,509.8	2,652.8
Housing .....	415.4	501.3	541.9	561.8	591.3
Household operation .....	169.4	228.1	293.9	308.4	329.0
Electricity .....	57.4	69.3	82.6	85.6	93.8
Natural gas .....	26.3	28.8	28.9	29.3	34.0
Other .....	85.6	130.0	182.4	193.5	201.2
Transportation .....	91.6	132.5	132.5	155.0	164.3
Medical services .....	332.6	479.0	625.9	648.5	710.2
Other services .....	412.4	597.0	805.1	836.1	857.9
	Percent distribution				
	1983	1994	2005		
			Low	Moderate	High
Personal consumption expenditures .....	100.0	100.0	100.0	100.0	100.0
Durable goods .....	11.4	14.9	16.0	16.4	17.5
Autos .....	2.9	2.4	1.7	1.8	2.0
Light trucks .....	.8	1.4	1.6	1.7	1.6
Other automotive .....	1.6	2.1	1.9	1.9	2.0
Computers .....	.1	.7	1.6	1.8	2.3
Furniture .....	3.9	6.0	6.8	6.7	7.0
Other durables .....	2.1	2.4	2.3	2.5	2.5
Nondurable goods .....	34.4	31.0	28.1	28.5	28.0
Food and beverages .....	17.7	15.0	13.7	13.1	12.4
Clothing and shoes .....	5.4	5.8	5.4	5.8	5.9
Gasoline and oil .....	2.9	2.4	2.2	2.1	2.3
Fuel oil and coal .....	.4	.3	.2	.2	.2
Other nondurables .....	7.9	7.4	6.7	7.4	7.2
Services .....	54.3	54.1	55.9	55.1	54.5
Housing .....	15.9	14.0	12.6	12.3	12.1
Household operation .....	6.5	6.4	6.8	6.8	6.8
Electricity .....	2.2	1.9	1.9	1.9	1.9
Natural gas .....	1.0	.8	.7	.6	.7
Other .....	3.3	3.6	4.2	4.2	4.1
Transportation .....	3.5	3.7	3.1	3.4	3.4
Medical services .....	12.7	13.4	14.6	14.2	14.6
Other services .....	15.7	16.7	18.8	18.4	17.6

**Table 3. Continued—Personal consumption expenditures, 1983, 1994, and projected to 2005**

Category	Average annual rates of change			
	1983-94	1994-2005		
		Low	Moderate	High
Personal consumption expenditures .....	2.9	1.7	2.2	2.8
Durable goods .....	5.4	2.3	3.1	4.4
Autos .....	1.2	-1.4	-3	1.2
Light trucks .....	7.8	3.4	4.1	4.6
Other automotive .....	5.4	1.0	1.6	2.7
Computers .....	29.2	10.4	12.0	15.3
Furniture .....	6.9	2.8	3.3	4.2
Other durables .....	4.0	1.3	2.5	3.4
Nondurable goods .....	1.9	.8	1.4	1.9
Food and beverages .....	1.3	.8	1.0	1.1
Clothing and shoes .....	3.5	.9	2.1	3.0
Gasoline and oil .....	1.3	.5	.8	2.1
Fuel oil and coal .....	.6	-1.2	-1.2	-2
Other nondurables .....	2.3	.7	2.1	2.6
Services .....	2.9	2.0	2.4	2.9
Housing .....	1.7	.7	1.0	1.5
Household operation .....	2.7	2.3	2.8	3.4
Electricity .....	1.7	1.6	1.9	2.8
Natural gas .....	.8	.0	.2	1.5
Other .....	3.9	3.1	3.7	4.1
Transportation .....	3.4	.0	1.4	2.0
Medical services .....	3.4	2.5	2.8	3.6
Other services .....	3.4	2.8	3.1	3.4

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

addition, stronger-than-average growth is expected for some of the traditional service sectors, such as air travel and all of the recreation categories (for example, membership in health clubs and attendance at sporting events).

In sum, consumer spending during the 1994-2005 period is projected to be healthy, slowing with the slowing of overall GDP, but continuing to account for a major part of economic growth. Significant shifts in distribution are expected, but, for the most part, the trends exhibited in the 1970's and 1980's are projected to continue.

**Gross private domestic investment.** This component of GDP, hereinafter referred to simply as private investment, is comprised of business fixed investment—that is, purchases of nonresidential structures and purchases of producers' durable equipment—construction of residential buildings, and changes in business inventories. Over the last couple of decades, private investment has accounted for a remarkably stable share of GDP—16.5 percent during the 1970's and 16.3 percent during the 1980's. This seeming stability in the averages can be deceptive, however.

Business investment in the form of purchases of plant and equipment has traditionally been the most volatile component of GDP, responding sharply and even wildly at times to swings in the business cycle. Equipment purchases, for example, ranged from a low of 4.4 percent of real GDP in 1961 to a high of almost 10.0 percent in 1994. Even more noteworthy

is the spectacular range in annual changes over the post-World War II period, from a low of an 11.3-percent decline in 1975 to a high of 18-percent growth in 1984. Over the projection period, the Bureau expects producers' durable equipment purchases to continue to grow more rapidly than overall GDP, attaining an 11.5-percent share by 2005. What is notable, however, about producers' durable equipment growth, both in the 1980's and projected to 2005, is the growing proportion accounted for by computers. Because of the enormous increases over the past 10 years in the quality of business computing, constant-dollar estimates of this commodity grew at a phenomenal pace during the 1980's. Many analysts of the computer industry expect this growth to continue almost unabated throughout the projection period.

Between 1983 and 1994, spending by businesses on auto fleets grew at an average annual real rate of 3.5 percent. This is projected to slow to 1.5 percent between 1994 and 2005 as the share of new-car purchases remains fixed at roughly 7.0 percent of total equipment purchases, but the share of net sales (the opposite of purchases and hence represented by a negative sign) of used investment autos increases from -3.0 percent of equipment purchases in 1994 to -3.6 percent in 2005. (See table 4.) Greater private demand for used cars is inducing a faster rate of turnover in rental fleets, thus accounting for the overall slower growth in investment demand for autos as the sale of used investment autos partially offsets spending by business for new cars.

Purchases by businesses of office equipment, whose main component is computer equipment, are expected to slow to a 7.1-percent annual real growth rate between 1994 and 2005, down from almost 20 percent between 1983 and 1994. This still leaves computers as the most rapidly growing component of investment, despite the projected slowdown in growth.

The final category of producers' durable equipment, other equipment, is the bread and butter of expenditures on producers' durable equipment—machine tools, construction equipment, industrial apparatus—in short, all those items of which U.S. industries have traditionally been strong world suppliers. Between 1983 and 1994, this category grew by 4.3 percent a year, increasing its share of gross domestic product from 5.5 percent in 1983 to 6.4 percent by 1994. Growth is expected to moderate slightly in the coming 11 years, but U.S.

equipment suppliers are projected to maintain a fixed share of GDP over those 11 years as purchases of other equipment are projected to grow at a real rate of 2.2 percent per year between 1994 and 2005.

Over the past few decades, nonresidential construction growth has generally been slowing. During the 1960's, nonresidential construction accounted for almost 5 percent of GDP. However, its share fell to about 4 percent in the early 1980's and, further, to about 2.5 percent in the early 1990's. In spite of this slowdown, construction markets were still glutted with an oversupply of office and commercial buildings. The working off of this glut lasted through the 1980's and into the first part of the current decade. Now, vacancy rates are falling, and new construction projects are once again getting under way with some regularity in many parts of the country. A relatively strong resumption of growth is anticipated over the coming 11-year period, resulting in nonresidential construction rebounding to an almost 3-percent share of real GDP by 2005.

The market for residential construction was remarkably stable from 1960 to 1983, accounting for about a 5.0-percent share of GDP during that period. However, as the baby-boom generation aged, and as baby-boomers moved away from the period of their lives when they were forming new households, the residential share of GDP began to decline, averaging 4.0 percent during the 1980's. Offsetting the slowdown somewhat is the wave of children of baby-boomers, who will be establishing households over the next 15 years. This phenomenon helped boost residential investment's share of GDP to about 4.5 percent in 1994, but the improvement is expected to be temporary as the share drops steadily over the projection period to 3.5 percent by 2005.

In sum, private investment is expected to grow only slightly more rap-

**Table 4. Gross private domestic investment, 1983, 1994, and projected to 2005**

Category	Billions of 1987 dollars				
	1983	1994	2005		
			Low	Moderate	High
Gross private domestic investment .....	599.5	951.2	1,118.5	1,232.0	1,404.0
Fixed nonresidential investment .....	420.8	672.5	881.3	972.2	1,106.5
Producers' durable equipment .....	260.5	521.9	703.7	782.8	883.1
New autos .....	35.2	66.6	75.7	89.3	114.3
Net used autos .....	-8.8	-28.1	-42.6	-44.0	-50.3
Office equipment .....	20.7	142.7	271.3	303.2	342.8
Other equipment .....	213.5	340.7	399.3	434.3	476.3
Nonresidential structures .....	160.3	150.6	177.7	189.4	223.4
Public utilities .....	29.6	29.5	29.0	31.4	35.0
Mining and exploration .....	22.2	9.3	12.9	13.5	17.1
Buildings and other .....	108.5	111.8	135.8	144.5	171.3
Fixed residential investment .....	174.2	231.3	219.8	242.1	266.2
Residential structures .....	169.9	223.5	208.9	230.4	252.7
Landlord durables .....	4.3	7.8	11.0	11.7	13.5
Change in business inventories .....	4.4	47.4	17.4	17.7	31.2
<b>Percent distribution</b>					
Category	1983	1994	2005		
			Low	Moderate	High
Gross private domestic investment .....	100.0	100.0	100.0	100.0	100.0
Fixed nonresidential investment .....	70.2	70.7	78.8	78.9	78.8
Producers' durable equipment .....	43.5	54.9	62.9	63.5	62.9
New autos .....	5.9	7.0	6.8	7.2	8.1
Net used autos .....	-1.5	-3.0	-3.8	-3.6	-3.6
Office equipment .....	3.5	15.0	24.3	24.6	24.4
Other equipment .....	35.6	35.8	35.7	35.3	33.9
Nonresidential structures .....	26.7	15.8	15.9	15.4	15.9
Public utilities .....	4.9	3.1	2.6	2.5	2.5
Mining and exploration .....	3.7	1.0	1.2	1.1	1.2
Buildings and other .....	18.1	11.8	12.1	11.7	12.2
Fixed residential investment .....	29.1	24.3	19.7	19.7	19.0
Residential structures .....	28.3	23.5	18.7	18.7	18.0
Landlord durables .....	.7	.8	1.0	.9	1.0
Change in business inventories .....	.7	5.0	1.6	1.4	2.2
<b>Average annual rates of change</b>					
Category	1983-94	1994-2005			
		Low	Moderate	High	
Gross private domestic investment .....	4.3	1.5	2.4	3.6	
Fixed nonresidential investment .....	4.4	2.5	3.4	4.6	
Producers' durable equipment .....	6.5	2.8	3.8	4.9	
New autos .....	6.0	1.2	2.7	5.0	
Net used autos .....	11.1	3.9	4.2	5.4	
Office equipment .....	19.2	6.0	7.1	8.3	
Other equipment .....	4.3	1.5	2.2	3.1	
Nonresidential structures .....	-6	1.5	2.1	3.6	
Public utilities .....	.0	-2	.6	1.6	
Mining and exploration .....	-7.6	3.0	3.4	5.7	
Buildings and other .....	.3	1.8	2.4	4.0	
Fixed residential investment .....	2.6	-5	.4	1.3	
Residential structures .....	2.5	-6	.3	1.1	
Landlord durables .....	5.6	3.2	3.8	5.1	
Change in business inventories .....	24.1	.0	-8.6	-3.7	

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.



idly than overall GDP during the 1994–2005 period, entirely as a result of strong growth in producers' durable equipment. Much of this strength is attributable to the increasing share of purchases of equipment—especially computers—which is expected to have only a minor impact on labor productivity.

*Exports and imports.* In the 1950's and 1960's, almost all U.S. foreign trade was in commodities or manufactured goods, which were transported by sea. Trade barriers took the form of tariffs and quotas. Most of the companies involved in foreign trade dealt with only one country, and trade tended to be protected vigorously. In 1960, real gross exports of goods and services accounted for 3.7 percent, while gross imports were 4.9 percent, of GDP.

By 1983, the picture had changed dramatically. The U.S. took the lead in working for liberalized trade on a global level, and producers increasingly established operating subsidiaries in foreign markets, thus blurring the definition of a national firm. Also, trade in intellectual property, technology-intensive goods, and a wide array of services began to change the product landscape, and by 1994 trade regularly took place among a much broader array of countries.

For producers, the impact of all this change has been access to lower cost supplies and the ability to reap returns on investment over a much larger market. For consumers, the new developments have meant wider choices, higher quality goods, and lower prices.

By 1983, real exports had jumped to account for 7.3 percent of GDP, and their share continued to increase, reaching more than 12 percent of GDP in 1994. In a

**Table 5. Exports and imports of goods and services, 1983, 1994, and projected to 2005**

Category	Billions of 1987 dollars				
	1983	1994	2005		
			Low	Moderate	High
Exports of goods and services .....	286.0	656.9	1,055.5	1,223.0	1,433.2
Merchandise .....	208.3	496.9	790.2	919.4	1,092.8
Foods, feeds, and beverages .....	26.6	35.7	38.4	51.3	55.1
Industrial supplies and materials .....	60.1	100.5	117.9	156.8	160.2
Capital goods .....	71.6	232.5	448.5	497.7	648.0
Computers .....	5.8	84.5	212.4	248.6	349.1
Other .....	65.8	148.0	236.1	249.1	298.9
Autos and parts .....	20.2	50.4	76.6	83.2	94.9
Consumer goods .....	16.2	51.0	75.4	89.8	93.5
Other merchandise exports .....	13.7	26.7	33.3	40.6	41.1
Services .....	77.6	160.1	265.3	303.6	340.4
Imports of goods and services .....	342.1	767.6	1,104.5	1,238.7	1,415.2
Merchandise .....	276.5	658.5	959.0	1,073.1	1,239.3
Foods, feeds, and beverages .....	20.2	26.0	28.9	33.1	34.5
Industrial supplies and materials .....	84.3	149.6	168.6	190.3	206.2
Petroleum and products .....	33.6	59.5	64.7	81.1	91.2
Other .....	50.7	90.1	103.9	109.2	115.0
Capital goods .....	46.8	227.8	435.9	489.5	616.1
Computers .....	2.8	112.7	280.2	312.5	400.0
Other .....	44.0	115.1	155.7	177.0	216.1
Autos and parts .....	53.1	97.9	114.3	124.6	129.4
Consumer goods .....	56.5	123.7	161.5	176.8	185.2
Other merchandise imports .....	15.5	33.5	49.8	58.8	68.0
Services .....	65.6	109.0	145.5	165.6	175.9
	Percent distribution				
Category	1983	1994	2005		
			Low	Moderate	High
Exports of goods and services .....	100.0	100.0	100.0	100.0	100.0
Merchandise .....	72.8	75.6	74.9	75.2	76.2
Foods, feeds, and beverages .....	9.3	5.4	3.6	4.2	3.8
Industrial supplies and materials .....	21.0	15.3	11.2	12.8	11.2
Capital goods .....	25.0	35.4	42.5	40.7	45.2
Computers .....	2.0	12.9	20.1	20.3	24.4
Other .....	23.0	22.5	22.4	20.4	20.9
Autos and parts .....	7.1	7.7	7.3	6.8	6.6
Consumer goods .....	5.7	7.8	7.1	7.3	6.5
Other merchandise exports .....	4.8	4.1	3.2	3.3	2.9
Services .....	27.1	24.4	25.1	24.8	23.8
Imports of goods and services .....	100.0	100.0	100.0	100.0	100.0
Merchandise .....	80.8	85.8	86.8	86.6	87.6
Foods, feeds, and beverages .....	5.9	3.4	2.6	2.7	2.4
Industrial supplies and materials .....	24.6	19.5	15.3	15.4	14.6
Petroleum and products .....	9.8	7.8	5.9	6.5	6.4
Other .....	14.8	11.7	9.4	8.8	8.1
Capital goods .....	13.7	29.7	39.5	39.5	43.5
Computers .....	.8	14.7	25.4	25.2	28.3
Other .....	12.9	15.0	14.1	14.3	15.3
Autos and parts .....	15.5	12.8	10.3	10.1	9.1
Consumer goods .....	16.5	16.1	14.6	14.3	13.1
Other merchandise imports .....	4.5	4.4	4.5	4.7	4.8
Services .....	19.2	14.2	13.2	13.4	12.4

**Table 5. Continued—Exports and imports of goods and services, 1983, 1994, and projected to 2005**

Category	Average annual rates of change			
	1983-94	1994-2005		
		Low	Moderate	High
Exports of goods and services .....	7.9	4.4	5.8	7.3
Merchandise .....	8.2	4.3	5.8	7.4
Foods, feeds, and beverages .....	2.7	.7	3.4	4.0
Industrial supplies and materials .....	4.8	1.5	4.1	4.3
Capital goods .....	11.3	6.2	7.2	9.8
Computers .....	27.6	8.7	10.3	13.8
Other .....	7.6	4.3	4.8	6.6
Autos and parts .....	8.7	3.9	4.7	5.9
Consumer goods .....	11.0	3.6	5.3	5.7
Other merchandise exports .....	6.3	2.0	3.9	4.0
Services .....	6.8	4.7	6.0	7.1
Imports of goods and services .....	7.6	3.4	4.4	5.7
Merchandise .....	8.2	3.5	4.5	5.9
Foods, feeds, and beverages .....	2.3	1.0	2.2	2.6
Industrial supplies and materials .....	5.4	1.1	2.2	3.0
Petroleum and products .....	5.3	.8	2.9	4.0
Other .....	5.4	1.3	1.8	2.2
Capital goods .....	15.5	6.1	7.2	9.5
Computers .....	39.9	8.6	9.7	12.2
Other .....	9.1	2.8	4.0	5.9
Autos and parts .....	5.7	1.4	2.2	2.6
Consumer goods .....	7.4	2.5	3.3	3.7
Other merchandise imports .....	7.3	3.7	5.2	6.6
Services .....	4.7	2.7	3.9	4.4

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

like manner, imports reached an 8.8-percent share of GDP in 1983 and drove further to a 14.4-percent share by 1994.

The key to the Bureau's long-term outlook for trade is the increasing openness of the U.S. economy, which is expected to boost the share of both exports (to almost 18 percent of GDP) and imports (to slightly more than 18 percent) by 2005. Over the coming 11 years, real GDP is projected to grow by 2.3 percent per year, while real exports soar at 5.8 percent annually and imports by 4.4 percent between 1994 and 2005. (See table 5.)

The real balance of trade varies over the forecast horizon in response to business cycle fluctuations. The clear trend, however, is for a rough stabilization in the real merchandise trade deficit and for significant increases in the surplus in foreign trade services, as shown in the following tabulation (in billions of 1987 dollars):

	<u>Trade surplus or deficit (-)</u>		
	1983	1994	2005
Gross trade .....	-56.1	-110.7	-15.7
Merchandise .....	-68.2	-161.6	-153.7
Services .....	12.0	51.1	138.0

By end-use category, the major areas of growth in exports are expected to be capital goods, services, and consumer goods; all are projected to increase their share of gross ex-

ports by significant amounts in the next 11 years. By contrast, growth in imports is expected to moderate somewhat in many categories, with the largest dropoffs in the growth of capital goods and consumer goods.

In sum, the improvement in U.S. foreign trade seen during the latter half of the 1980's is expected to continue, albeit at a somewhat more moderate pace. However, this is perhaps one of the least understood areas of the BLS projections and the area subject to the greatest uncertainty. For that reason, significantly different trends in foreign trade are examined more closely later in the article.

*Federal Government.* During the past decade, the debate over the Federal budget has been dominated by one consideration: how to bring the growing deficit under control. On a national income accounting basis, the deficit grew from \$15.7 billion in 1979 to \$180 billion in 1983, peaked

at \$283 billion in 1992, and then dropped to \$158 billion by 1994. (See table 6.) Over this period, effective personal tax rates declined from 13.3 percent to 11.6 percent of personal income by 1992 and then grew slightly to 12.2 percent by 1994. Various expenditure categories that had grown sharply in the 1980's began to slow—some significantly—between 1987 and 1994.

The Bureau has assumed that real defense spending will continue to decline right through the year 2000, bottoming out at \$189 billion in that year, an annual rate of decline of almost 3 percent. After 2000, it is assumed that some resumption of real spending growth will take place as existing stocks of planes, tanks, and other defense-related material begin to show signs of age and the need for replacement. Real defense spending is assumed to reach \$216 billion by 2005, showing an average annual growth of 2.7 percent between 2000 and 2005.

Federal nondefense purchases of goods and services—real spending on salaries and on administrative expenses of all Federal nondefense programs—is assumed to increase 0.6 percent per year between 1994 and 2005, compared with the 2.3-percent annual growth for this item between 1983 and 1994.

These assumptions lead to a projected nominal growth between 1994 and 2005 of 3.9 percent per year for all purchases of goods and services, virtually identical to the 3.8-percent

annual growth posted over the preceding 11-year period. Purchases, which account for almost 30 percent of Federal expenditures in 1994, are expected to decline to a less-than-25-percent share by 2005.

Other categories of expenditures beyond purchases of goods and services are expected to grow more substantially over the projection period. These include medical-related transfer payments (primarily medicare) and medical-related grant payments to State and local governments (primarily medicaid). In both cases, expenditures are assumed to grow less rapidly than over the preceding 11-year period, but much more rapidly than overall expenditures between 1994 and 2005.

The net effect of the spending assumptions, combined with little basic change in underlying Federal effective tax rates in 1994, is projected to be a Federal budget deficit that declines to \$105 billion by 2005, the lowest deficit in terms of share of GDP since that of the Carter Administration in the late 1970's.

The 1994 midterm elections have resulted in a Congress that not only is more concerned with balancing the Federal budget, but also appears to have an interest in the long-term redefinition of the duties and powers of the Federal Government. The paths the current Congress will ultimately take are not yet clear, nor is the extent to which existing systems of revenue collection may be modified or replaced.

*State and local government.* Real purchases of goods and services by State and local governments increased their share of GDP steadily throughout the 1960's and early 1970's, peaking at 12.4 percent of GDP in 1975, up from 11 percent in 1960. An important part of the increase was funded by increasing grants-in-aid from the Federal Government, both in earmarked funds, such as the Federal Highway Trust

**Table 6. Federal Government receipts and expenditures, 1983, 1994, and projected to 2005**

Category	Billions of current dollars				
	1983	1994	2005		
			Low	Moderate	High
Receipts .....	660.0	1,377.7	2,501.5	2,633.9	2,832.0
Personal tax and nontax payments .....	292.6	566.5	1,022.9	1,094.1	1,184.3
Corporate profits taxes .....	61.3	164.0	327.4	342.2	369.4
Indirect business taxes .....	53.5	91.9	132.5	148.7	175.1
Contributions for social insurance .....	252.6	555.4	1,018.7	1,048.9	1,103.2
Expenditures .....	840.0	1,535.5	2,829.9	2,739.1	2,798.7
Purchases of goods and services .....	292.0	437.8	655.4	665.8	659.6
National defense .....	214.5	291.9	430.0	435.3	420.6
Compensation .....	89.6	135.0	225.4	227.5	216.4
Other defense .....	124.9	156.9	204.6	207.8	204.2
Nondefense .....	77.5	145.9	225.4	230.5	238.8
Compensation .....	35.4	72.1	100.7	101.5	110.1
Other nondefense .....	39.7	74.4	124.8	129.1	128.9
Transfer payments .....	347.5	679.3	1,414.0	1,340.4	1,379.7
To persons .....	340.2	666.9	1,386.7	1,313.1	1,352.3
Medicare .....	57.2	162.9	481.7	418.6	478.6
Other .....	282.9	504.1	905.0	894.5	873.8
To foreigners (net) .....	7.3	12.3	27.3	27.3	27.3
Grants-in-aid .....	87.0	198.8	419.6	382.7	430.9
Medicaid .....	19.1	82.8	245.5	220.6	243.9
Other grants .....	67.9	116.0	174.0	162.2	187.0
Net interest paid .....	92.7	190.3	305.9	315.2	293.7
Subsidies less current surplus .....	20.4	29.4	35.1	35.1	35.1
Wage accruals less disbursements .....	-.4	.0	.0	.0	.0
Surplus or deficit (-) .....	-180.1	-157.7	-328.9	-105.2	33.3
	Percent distribution				
	1983	1994	2005		
			Low	Moderate	High
Receipts .....	100.0	100.0	100.0	100.0	100.0
Personal tax and nontax payments .....	44.3	41.1	40.9	41.5	41.8
Corporate profits taxes .....	9.3	11.9	13.1	13.0	13.0
Indirect business taxes .....	8.1	6.7	5.3	5.6	6.2
Contributions for social insurance .....	38.3	40.3	40.7	39.8	39.0
Expenditures .....	100.0	100.0	100.0	100.0	100.0
Purchases of goods and services .....	34.8	28.5	23.2	24.3	23.6
National defense .....	25.5	19.0	15.2	15.9	15.0
Compensation .....	10.7	8.8	8.0	8.3	7.7
Other defense .....	14.9	10.2	7.2	7.6	7.3
Nondefense .....	9.2	9.5	8.0	8.4	8.5
Compensation .....	4.2	4.7	3.6	3.7	3.9
Other nondefense .....	4.7	4.8	4.4	4.7	4.6
Transfer payments .....	41.4	44.2	50.0	48.9	49.3
To persons .....	40.5	43.4	49.0	47.9	48.3
Medicare .....	6.8	10.6	17.0	15.3	17.1
Other .....	33.7	32.8	32.0	32.7	31.2
To foreigners (net) .....	.9	.8	1.0	1.0	1.0
Grants-in-aid .....	10.4	12.9	14.8	14.0	15.4
Medicaid .....	2.3	5.4	8.7	8.1	8.7
Other grants .....	8.1	7.6	6.1	5.9	6.7
Net interest paid .....	11.0	12.4	10.8	11.5	10.5
Subsidies less current surplus .....	2.4	1.9	1.2	1.3	1.3
Wage accruals less disbursements .....	.0	.0	.0	.0	.0

**Table 6. Continued—Federal Government receipts and expenditures, 1983, 1994, and projected to 2005**

Category	Average annual rates of change			
	1983-94	1994-2005		
		Low	Moderate	High
<b>Receipts</b> .....	6.9	5.6	6.1	6.8
Personal tax and nontax payments .....	6.2	5.5	6.2	6.9
Corporate profits taxes .....	9.4	6.5	6.9	7.7
Indirect business taxes .....	5.0	3.4	4.5	6.0
Contributions for social insurance .....	7.4	5.7	6.0	6.4
<b>Expenditures</b> .....	5.6	5.7	5.4	5.6
Purchases of goods and services .....	3.8	3.7	3.9	3.8
National defense .....	2.8	3.6	3.7	3.4
Compensation .....	3.8	4.8	4.9	4.4
Other defense .....	2.1	2.4	2.6	2.4
Nondefense .....	5.9	4.0	4.2	4.6
Compensation .....	6.7	3.1	3.2	3.9
Other nondefense .....	5.9	4.8	5.1	5.1
Transfer payments .....	6.3	6.9	6.4	6.7
To persons .....	6.3	6.9	6.4	6.6
Medicare .....	10.0	10.4	9.0	10.3
Other .....	5.4	5.5	5.4	5.1
To foreigners (net) .....	4.9	7.5	7.5	7.5
Grants-in-aid .....	7.8	7.0	6.1	7.3
Medicaid .....	14.3	10.4	9.3	10.3
Other grants .....	5.0	3.8	3.1	4.4
Net interest paid .....	6.8	4.4	4.7	4.0
Subsidies less current surplus .....	3.4	1.6	1.6	1.6

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

Fund, and in nonallocated monies from the general revenue-sharing program begun during the Nixon administration.

From 1975 through the early 1980's, the general revenue-sharing program was phased out. The belief that the interstate highway system was completed led to further slowdowns in Federal grants. As a result, State and local purchases of goods and services again receded to a share of 11.0 percent of GDP by 1994, very close to their 1960 share.

During the 1980's, many State and local programs were cut, sometimes sharply, in response to general taxpayer dissatisfaction and to the needs of fiscal integrity. Offsetting the cuts, to some extent, was a resumption in the growth of Federal Highway Trust Fund monies, as it became apparent that even if the interstate highway system was complete, some significant maintenance and repair expenditures would be required to keep it in working order.<sup>9</sup>

Both of these trends are expected to continue, with fiscal belt tightening remaining a fact of life for State and local governments throughout the next 11 years, especially as regards social programs. This will be necessary to maintain balanced budgets in the face of increasing needs for expenditures on public safety and incarceration facilities. The Bureau has further assumed that real grants-in-aid will grow at a rate of 1.4 percent over the next 11 years in response to infrastructure maintenance

needs and expansion of the medicaid program. As a result, State and local spending on goods and services is expected to fall just slightly as a share of GDP over the 11-year projection period, from 11.0 percent in 1994 to 10.6 percent in 2005, in real terms. (Table 7 presents various aspects of State and local government receipts and expenditures since 1983 and projected to 2005.)

*Income, employment, and productivity.* Generally speaking, labor income has accounted for a smaller share of personal income over time. This continues to be the case in the BLS projections. Wage and salary payments and other labor income constituted 65.0 percent of personal income in 1983. The share dropped to 64.2 percent in 1994, and the trend is expected to continue through the projection period, with labor income accounting for 63.6 percent of personal income by 2005 in the moderate-growth alternative. (See table 8.)

Over the same period, business-related personal income, which includes proprietors', rental, personal dividend, and personal interest incomes, has maintained a remarkably stable share of personal income, 23.8 percent in both 1983 and 1994. This type of income is expected to fall just slightly, to a 23.4-percent share, by 2005 in the moderate-growth projection.

If these two major components of personal income are becoming less important over time, what is taking their place? Between 1983 and 1994, transfer payments net of personal social insurance contributions rose from an 11.1-percent to a 12-percent share of personal income. The Bureau projects that this category of personal income will continue to rise, to a 12.8-percent share by 2005, reflecting both rising per-capita medical costs and an increase in the older population, the most likely users of medicare programs.

With regard to how people use their incomes, personal taxes and personal consumption have been accounting for larger shares over time, mostly at the expense of personal savings. The moderate-growth projection extends this historical trend, resulting in a savings rate that continues at the relatively low levels of the 1980's and early 1990's, reaching 4.3 percent in 2005.

Per-capita disposable income is projected to increase at an average annual rate of 5.2 percent, reaching a level of almost \$33,300 by 2005, an increase of \$14,300 over the

1994 figure. In real terms, this translates into a 1.2-percent yearly growth rate over the projection period, consistent with the expected growth in GDP of 2.3 percent annually. In short, the Bureau expects the moderate-growth projections to be characterized by modest increases in the real standard of living, at least as depicted by growth in real per-capita disposable income. These increases are roughly consistent with the overall growth in GDP and per-capita real income between 1983 and 1994.

Although the unemployment rate is expected to fluctuate with the business cycle over the next 11 years, the moderate-growth alternative projects that the unemployed will continue to account, on average, for a roughly constant share of the labor force. This means that employment growth is expected to be 1.1 percent per year over the 1994–2005 period, an increase of 15.8 million employed persons, as measured on a household basis. (See table 9.) The result is an average of 1.4 million newly employed persons added to the economy each year over the next 11 years.

As noted earlier, real GDP is expected to grow 2.3 percent per year, on average, between 1994 and 2005. What accounts for this growth? In the simplest possible accounting scheme, the supply of labor, represented by the civilian labor force, is projected to increase at a 1.1-percent annual rate, which leaves exactly 1.2 percent of the expected growth in GDP to be accounted for by other factors, such as changes in the quality of labor, changes in the quantity and quality of available capital, and changes in utilization rates of both labor and capital, all of which conveniently fall under the rubric of “labor productivity.” In fact, real GDP per employee, a very rough proxy for labor productivity, is expected to grow by 1.2 percent a year over the projection period, a small but notice-

**Table 7. State and local government receipts and expenditures, 1983, 1994, and projected to 2005**

Category	Billions of current dollars				
	1983	1994	2005		
			Low	Moderate	High
Receipts .....	443.4	944.4	1,931.6	1,860.0	1,870.0
Personal taxes .....	76.3	176.5	383.7	371.3	369.2
Corporate profits taxes .....	15.9	34.8	78.6	84.2	86.9
Indirect business taxes .....	226.7	463.4	899.8	891.3	871.5
Social insurance contributions .....	37.7	70.9	138.5	130.4	122.9
Grants-in-aid from Federal Government .....	87.0	198.8	430.9	382.7	419.6
Medicaid .....	19.1	82.8	243.9	220.6	245.5
Other grants .....	67.9	116.0	187.0	162.2	174.0
Expenditures .....	403.1	916.6	1,854.9	1,748.1	1,738.6
Purchases of goods and services .....	360.3	737.6	1,363.9	1,321.3	1,275.9
Transfer payments .....	85.9	273.3	657.7	606.9	643.8
Medical care .....	35.2	147.3	441.5	399.2	444.4
Social insurance .....	24.5	75.3	149.2	137.8	125.2
Other .....	26.2	50.7	67.0	69.8	74.2
Net interest paid .....	-30.9	-55.2	-84.8	-98.6	-99.1
Subsidies less current surplus .....	-8.7	-28.3	-59.2	-59.2	-59.2
Less dividends received .....	3.4	10.9	22.7	22.2	22.7
State and local surplus .....	40.3	27.8	76.7	111.9	131.4
<b>Percent distribution</b>					
Category	1983	1994	2005		
			Low	Moderate	High
Receipts .....	100.0	100.0	100.0	100.0	100.0
Personal taxes .....	17.2	18.7	19.9	20.0	19.7
Corporate profits taxes .....	3.6	3.7	4.1	4.5	4.6
Indirect business taxes .....	51.1	49.1	46.6	47.9	46.6
Social insurance contributions .....	8.5	7.5	7.2	7.0	6.6
Grants-in-aid from Federal Government .....	19.6	21.1	22.3	20.6	22.4
Medicaid .....	4.3	8.8	12.6	11.9	13.1
Other grants .....	15.3	12.3	9.7	8.7	9.3
Expenditures .....	100.0	100.0	100.0	100.0	100.0
Purchases of goods and services .....	89.4	80.5	73.5	75.6	73.4
Transfer payments .....	21.3	29.8	35.5	34.7	37.0
Medical care .....	8.7	16.1	23.8	22.8	25.6
Social insurance .....	6.1	8.2	8.0	7.9	7.2
Other .....	6.5	5.5	3.6	4.0	4.3
Net interest paid .....	-7.7	-6.0	-4.6	-5.6	-5.7
Subsidies less current surplus .....	-2.2	-3.1	-3.2	-3.4	-3.4
Less dividends received .....	.8	1.2	1.2	1.3	1.3
<b>Average annual rates of change</b>					
Category	1983-94	2005			
		Low	Moderate	High	
Receipts .....	7.1	6.7	6.4	6.4	
Personal taxes .....	7.9	7.3	7.0	6.9	
Corporate profits taxes .....	7.4	7.7	8.4	8.7	
Indirect business taxes .....	6.7	6.2	6.1	5.9	
Social insurance contributions .....	5.9	6.3	5.7	5.1	
Grants-in-aid from Federal Government .....	7.8	7.3	6.1	7.0	
Medicaid .....	14.3	10.3	9.3	10.4	
Other grants .....	5.0	4.4	3.1	3.8	
Expenditures .....	7.8	6.6	6.0	6.0	
Purchases of goods and services .....	6.7	5.7	5.4	5.1	
Transfer payments .....	11.1	8.3	7.5	8.1	
Medical care .....	13.9	10.5	9.5	10.6	
Social insurance .....	10.7	6.4	5.6	4.7	
Other .....	6.2	2.6	2.9	3.5	
Net interest paid .....	5.4	4.0	5.4	5.5	
Subsidies less current surplus .....	11.3	6.9	6.9	6.9	
Less dividends received .....	11.2	6.9	6.7	6.9	

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

**Table 8. Personal income, 1983, 1994, and projected to 2005**

Type and disposition	Billions of current dollars				
	1983	1994	2005		
			Low	Moderate	High
<b>Sources</b>					
Personal income .....	2,862.5	5,701.7	10,604.9	10,943.2	11,092.3
Wages and salaries .....	1,684.7	3,279.0	5,929.2	6,103.6	6,177.3
Private .....	1,358.8	2,676.2	4,945.0	5,062.9	5,074.8
Government .....	325.9	602.8	984.2	1,040.7	1,102.5
Other labor income .....	174.7	381.0	831.4	858.2	869.7
Group health contributions .....	91.5	258.5	605.9	626.9	635.4
Other .....	83.2	122.5	225.5	231.2	234.3
Proprietors' income .....	186.6	473.7	809.5	816.6	821.3
Rental income .....	22.1	27.7	70.3	74.7	80.5
Personal dividend income .....	77.8	194.3	309.2	335.7	354.8
Personal interest income .....	397.5	664.0	1,276.2	1,326.2	1,375.2
Transfer payments .....	438.9	963.4	1,914.7	1,945.2	1,972.4
Less social insurance contributions .....	-119.7	-281.5	-535.6	-545.0	-558.9
<b>Uses</b>					
Personal income .....	2,862.5	5,701.7	10,604.9	10,943.2	11,092.3
Tax and nontax payments .....	368.8	742.1	1,410.5	1,452.1	1,475.3
Consumption expenditures .....	2,257.5	4,628.4	8,570.8	8,842.7	8,979.7
Interest payments .....	65.7	117.6	206.3	215.5	211.7
Transfers to foreigners .....	1.8	10.5	14.4	14.9	15.2
Savings .....	168.7	203.1	402.9	418.0	410.4
<b>Addenda</b>					
Disposable personal income .....	2,493.8	4,959.6	9,194.4	9,453.1	9,617.0
Disposable personal income (1987 dollars) .....	2,894.0	3,835.7	4,491.0	4,743.6	5,185.0
Per-capita disposable income .....	10,600	19,000	31,400	33,300	32,800
Per-capita disposable income (1987 dollars) .....	12,300	14,696	15,800	16,700	17,700
Personal savings rate .....	6.8	4.1	4.3	4.3	4.2
<b>Percent distribution</b>					
	1983	1994	2005		
			Low	Moderate	High
<b>Sources</b>					
Personal income .....	100.0	100.0	100.0	100.0	100.0
Wages and salaries .....	58.9	57.5	55.9	55.8	55.7
Private .....	47.5	46.9	46.6	46.3	45.8
Government .....	11.4	10.6	9.3	9.5	9.9
Other labor income .....	6.1	6.7	7.8	7.8	7.8
Group health contributions .....	3.2	4.5	5.7	5.7	5.7
Other .....	2.9	2.1	2.1	2.1	2.1
Proprietors' income .....	6.5	8.3	7.6	7.5	7.4
Rental income .....	.8	.5	.7	.7	.7
Personal dividend income .....	2.7	3.4	2.9	3.1	3.2
Personal interest income .....	13.9	11.8	12.0	12.1	12.4
Transfer payments .....	15.3	16.9	18.1	17.8	17.8
Less social insurance contributions .....	-4.2	-4.9	-5.1	-5.0	-5.0
<b>Uses</b>					
Personal income .....	100.0	100.0	100.0	100.0	100.0
Tax and nontax payments .....	12.9	13.0	13.3	13.3	13.3
Consumption expenditures .....	78.9	81.2	80.8	80.8	81.0
Interest payments .....	2.3	2.1	1.9	2.0	1.9
Transfers to foreigners .....	.1	.2	.1	.1	.1
Savings .....	5.9	3.6	3.8	3.8	3.7

able improvement over the growth in GDP per employee during the 1983-94 period.

Also noted earlier was a shift toward investment during the projection period. In fact, this increasing share of current spending on capital goods is enough to generate a growth in real capital per employee of 1.7 percent annually, a significant improvement over the growth of this factor during the 1983-94 period. The implication is clear: productivity growth is expected to improve as spending on capital per employee improves.

### The other alternatives

Attempts to look into the future are filled with uncertainty. The alternative projections prepared by the Bureau provide users with a range of results that encompasses reasonable economic futures, but that in no sense exhausts all possible variations. The projected growth in GDP and in employment is determined by many factors, all subject to a wide range of values that may be chosen. The BLS alternatives attempt to address the inherent uncertainty in the projections, at least for those variables deemed most critical in the process of determining GDP.

As with the moderate-growth projection, a number of assumptions must be spelled out in order to generate alternative low- and high-growth paths. Some of the more than 200 exogenous variables necessary to generate a solution from the macroeconomic model are especially important in determining the level of GDP, the demand distribution of GDP, and the level of employment required to produce the given level of GDP. Following are the most important assumptions underlying the low- and high-growth alternative scenarios. (See table 1.)

*Fiscal policy.* In the low-growth alternative, real defense purchases of goods and services are assumed to decline over the entire projection period to \$203.5 billion, an average annual rate of decline of 1.0 percent and approximately \$13 billion lower than defense purchases in the moderate-growth alternative. Because the Federal deficit continues to be a chronic presence in the low-growth alternative, any tendency to turn around the annual declines in spending during the 2000–2005 period, as was assumed in the moderate-growth scenario, is absent from the low-growth alternative.

In contrast, in the high-growth alternative, stronger economic growth and increasing Federal revenues near the end of the projection period allow for a shorter period of decline in real defense spending and a somewhat more marked turnaround after 2000. Here, the assumption is that defense spending will also decline in real terms, at an average annual rate of 0.1 percent, resulting in real defense purchases of \$225 billion in 2005, about \$8 billion higher than in the moderate-growth projection and about \$2 billion lower than in 1994.

In a like manner, in response to continuing high deficits and the need to gain some control over Federal spending, nondefense purchases of goods and services in the low-growth scenario are assumed to be flat over the forecast horizon, compared with 0.6-percent annual growth in the moderate-growth scenario.

In the high-growth alternative, growing surpluses are expected to result in more interest in federally funded programs to deal with a broad range of issues, from improving educational resources to promoting awareness of and ameliorating the environment. In this scenario, real nondefense purchases of goods and services are assumed to grow at an annual rate of 1.4 percent, resulting in real spending for the year 2005 of about \$11 billion more than in the moderate-growth alternative.

The high- and low-growth scenarios encompass an \$18 billion range in real nondefense purchases for 2005—from \$112 billion to \$130 billion. In both projections, nondefense purchases account for lower shares of GDP in 2005—about 1.8 percent—than the 2.3 percent posted in 1994.

Federal grants-in-aid to State and local governments are

Table 8. Continued—Personal income, 1983, 1994, and projected to 2005

Type and disposition	Average annual rates of change			
	1983–94	1994–2005		
		Low	Moderate	High
<b>Sources</b>				
Personal income .....	6.5	5.8	6.1	6.2
Wages and salaries .....	6.2	5.5	5.8	5.9
Private .....	6.4	5.7	6.0	6.0
Government .....	5.8	4.6	5.1	5.6
Other labor income .....	7.3	7.4	7.7	7.8
Group health contributions .....	9.9	8.1	8.4	8.5
Other .....	3.6	5.7	5.9	6.1
Proprietors' income .....	8.8	5.0	5.1	5.1
Rental income .....	2.1	8.8	9.4	10.2
Personal dividend income .....	8.7	4.3	5.1	5.6
Personal interest income .....	4.8	6.1	6.5	6.8
Transfer payments .....	7.4	6.4	6.6	6.7
Less social insurance contributions .....	8.1	6.0	6.2	6.4
<b>Uses</b>				
Personal income .....	6.5	5.8	6.1	6.2
Tax and nontax payments .....	6.6	6.0	6.3	6.4
Consumption expenditures .....	6.7	5.8	6.1	6.2
Interest payments .....	5.4	5.2	5.7	5.5
Transfers to foreigners .....	17.4	2.9	3.3	3.4
Savings .....	1.7	6.4	6.8	6.6
<b>Addenda</b>				
Disposable personal income .....	6.4	5.8	6.0	6.2
Disposable personal income (1987 dollars) .....	2.6	1.4	2.0	2.8
Per-capita disposable income .....	5.4	4.7	5.2	5.1
Per-capita disposable income (1987 dollars) .....	1.6	.7	1.2	1.7

SOURCE: Historical data, Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

also expected to range fairly widely in the alternative projections for the year 2005, from a real level of \$145 billion in the low-growth to \$205 billion in the high-growth scenario.

The Federal corporate profits tax rate, the marginal Federal personal tax rate, and the combined employer-employee social insurance contribution rate are all assumed to be the same across the three alternatives. Thus, differences noted among the scenarios in Federal revenues are attributable only to differences in economic activity.

*Monetary policy.* As in the moderate-growth alternative, monetary policy levers in the other two alternatives are set in the macroeconomic model to accommodate reasonably non-inflationary growth. The high-growth scenario encompasses a somewhat less restrictive monetary policy, the low-growth alternative a somewhat more restrictive one, but in neither case are the differences great enough to account for significant shares of the differences in real economic growth or inflation.

*Demographic assumptions.* The high-growth alternative is based on a higher net immigration scenario prepared by the

**Table 9. Labor supply and factors affecting productivity, 1983, 1994, and projected to 2005**

[Numbers in millions]

Category	1983	1994	2005		
			Low	Moderate	High
Total population .....	234.6	261.0	264.8	264.8	293.8
Population aged 16 years and older .....	179.5	200.1	222.2	222.2	228.6
Civilian labor force .....	111.5	131.1	143.6	147.3	153.3
Civilian household employment .....	100.8	123.1	133.6	138.9	147.2
Nonfarm establishment employment .....	90.1	113.4	126.1	130.5	137.6
Unemployment rate .....	9.6	6.1	7.0	5.7	4.0
Wage and salary Employment					
Cost Index .....	.801	1.186	1.897	1.876	1.814
Nonfarm labor productivity .....	1.025	1.179	1.305	1.371	1.435
Capital per employee (1987 dollars) .....	39,091	41,754	49,304	50,404	51,688
Equipment .....	17,779	20,399	27,700	29,079	30,214
Structures .....	21,313	21,355	21,604	21,325	21,474
Gross domestic product per employee (1987 dollars) .....	38,750	43,271	47,570	49,178	50,430
<b>Average annual rates of change</b>					
			1994-2005		
	1983-94		Low	Moderate	High
Total population .....	1.0	0.8	0.8	1.1	
Population aged 16 years and older .....	1.0	1.0	1.0	1.2	
Civilian labor force .....	1.5	.8	1.1	1.4	
Civilian household employment .....	1.8	.7	1.1	1.6	
Nonfarm establishment employment .....	2.1	1.0	1.3	1.8	
Wage and salary employment					
Cost Index .....	3.6	4.4	4.3	3.9	
Nonfarm labor productivity .....	1.3	.9	1.4	1.8	
Capital per employee (1987 dollars) .....	.6	1.5	1.7	2.0	
Equipment .....	1.3	2.8	3.3	3.6	
Structures .....	.0	.1	.0	.1	
Gross domestic product per employee (1987 dollars) .....	1.0	.9	1.2	1.4	

SOURCE: Historical data, Bureau of the Census and Bureau of Economic Analysis; projected data, Bureau of Labor Statistics.

Bureau of the Census. Significantly higher projections of labor force participation rates<sup>10</sup> in the high-growth alternative lead to a civilian labor force of 153.3 million in 2005, 6 million higher than in the moderate-growth projection. In the low-growth alternative, lower labor force participation rates, combined with the Census Bureau's midlevel population scenario, are projected to result in a civilian labor force of 143.6 million persons, 4 million lower than the moderate-growth assumption of 147.3 million. The low-growth labor force is much closer to that of the moderate-growth alternative than is the high-growth labor force because both the moderate- and low-growth scenarios are based on the same population projection from the Bureau of the Census, namely, the middle-growth set.

Household formation rates, based as well on the Census Bureau's population projections, are identical in the moderate- and low-growth alternatives—111 million in 2005—but are

higher in the high-growth scenario, rising to 114 million in 2005 in response to the higher population projections assumed.

As noted earlier, projected unemployment rates range from 4 percent in the high-growth alternative—indicative of a healthy, dynamic economy—to 7 percent in the low-growth version—symptomatic of a more depressed and stagnant economic environment.

The assumed ranges for the civilian labor force and the civilian unemployment rate are the primary factors affecting the projected spread in GDP growth rates in the three BLS alternatives. Long-term demographic factors also have important impacts on the distribution of demand.

*Other factors.* As with the moderate-growth projection, two cyclical troughs, falling in the mid-1990's and the early 2000's, have been imposed on each of the alternative scenarios. In the low-growth scenario, the downturns are deep and relatively prolonged—true recessions. The high-growth alternative, on the other hand, is characterized more by slowdowns in growth at these two points in time, rather than by real declines in GDP and employment. In both cases, the year 2005 should be considered

on the long-term growth path—neither a downturn year nor the year following the trough of a recession.

The low-growth scenario was designed primarily to afford a glimpse into what the projection period would be like if poorer economic conditions were to persist. Critical assumptions in this scenario include supply factors that constrain the economy's ability to expand and below-trend growth in population, the labor force, capital stocks, and productivity. Further, in this alternative, inflation steadily regains momentum in the 1990's and remains above the trend for almost all of the projection period. Combined with a presupposition of deeper recessions and relatively sluggish recoveries, this leads to a real GDP approximately \$473 billion lower in 2005 in the low-growth projection than in the moderate-growth projection, with employment lower by more than 5 million.

The high-growth projection, on the other hand, assumes



somewhat stronger growth in labor force participation, a major shift toward the production of investment goods, and a moderate rate of inflation. The result is a GDP of \$7.4 trillion in 2005, \$594 billion higher than in the moderate-growth projection. This sustained growth leads to an unemployment rate of 4.0 percent in 2005, with more than 8 million persons employed that year than in the moderate-growth alternative.

Together, the two alternatives to the moderate-growth projection encompass a \$1.1 trillion spread in real GDP in 2005 (a range of potential annual average growth from 1.6 percent to 3.0 percent), a 9.7 million-person difference in the civilian labor force, and a 14 million-person divergence in the numbers of employed.

### Low-growth alternative

In the low-growth projection, the major factors affecting GDP growth include slower labor force growth (0.8 percent a year, attaining a level about 3.7 million fewer persons in 2005 than is projected in the moderate-growth scenario) and slower growth in capital per employee (1.5 percent per year, well below the expected annual rate of 1.7 percent in the moderate-growth alternative), as a result of investment slowdowns. Another significant factor lending itself to the sluggish economic performance in the low-growth projection is the inflation rate. Assumed to increase at an average annual rate of 3.5 percent between 1992 and 2005 in the moderate-growth alternative, the implicit GDP deflator is projected to grow at a higher rate of 4.2 percent each year in the low-growth scenario, reminiscent of the high-inflation, low-growth phenomenon of the 1970's.

Over the projection period, real consumer spending is expected to grow at an average annual rate of 1.7 percent in the low-growth alternative, compared with 2.2 percent in the moderate-growth scenario. Higher interest rates and lower income growth result in particularly adverse effects on durable goods spending. Purchases of motor vehicles and parts are projected to grow in real terms at a rate of 1.2 percent a year over the projection period, less than the moderate-growth scenario rate of 1.5 percent, and spending on other durable goods is projected to increase at a 3.3-percent annual pace, slower than the 4.0-percent yearly rise in the moderate-growth alternative, due to expected cutbacks in purchases of furniture and consumer electronics. Slowdowns in these categories are expected to be offset slightly by less-than-average slowdowns in purchases of clothing, one of the "subsistence" items of consumer spending and typically the last to be cut during slow economic periods.

In the low-growth alternative, purchases of food and beverages are projected to grow at an annual average rate of 0.8 percent over the 1994–2005 period, compared with an expected 1-percent annual growth in the moderate-growth sce-

nario. The 0.8-percent figure is almost as deep a slowdown as is projected for purchases of durable goods in the low-growth alternative.

Expenditures on housing and electricity are expected to grow by 0.7 percent and 1.6 percent, respectively, over the low-growth projection horizon, primarily in response to the overall climate of slower economic growth. By way of comparison, these two categories of consumer services grew at rates of 1.7 percent each between 1983 and 1994, a period that saw much stronger growth in demand for housing and related services.

Finally, consumer services are projected to increase less rapidly in the low-growth alternative than in the moderate-growth scenario, but they still would account for more than 55 percent of overall consumption by 2005, even higher than the share of services in each of the other alternatives. This represents a continuation of the trend exhibited over the entire post-World War II period.

Despite the sharp reduction in overall growth in the low-growth scenario, consumer spending is expected to maintain a continuing high share of GDP over the projection period, accounting for 67.5 percent of GDP by 2005 and thus continuing to exacerbate the problem of low consumer savings and its ultimate effect on investment and productivity growth. Increases in share are projected for expenditures on housing, energy, food, and other nondurable items.

The less favorable economic conditions in the low-growth projection slow investment spending relative to the moderate-growth projection, leaving overall investment growth at 1.5 percent per year between 1994 and 2005, considerably lower than the 1983–94 rate of 4.3-percent annual growth. Buildings and other nonresidential construction are projected to grow faster than they did over the past few decades as the working off of the office building glut from the 1980's rekindles some growth in this area.

Producers' durable equipment is expected to increase at a rate of 2.8 percent annually in the low-growth alternative, leading to a projected rise in capital per employee of 1.5 percent a year from 1994 to 2005. Residential construction is projected to grow over the period at a rate considerably slower than the pace expected in the moderate-growth projection, but the category still accounts for about the same share of gross investment (19.7 percent) in the two scenarios, as the other categories of investment are harder hit by slower economic growth in the low-growth alternative.

In the area of foreign trade, a higher valued dollar in the low- than in the moderate-growth alternative is expected to disrupt the growth in exports that began to materialize in the late 1980's. Although all end-use categories of exports are projected to grow slightly less rapidly than in the moderate-growth scenario, capital goods and autos and parts are expected to increase their share of overall exports of goods and

services somewhat relative to their share in the moderate-growth scenario, as the other end-use categories slow more rapidly than overall export growth. This is a typical response to slower growth in foreign economies, caused at least in part by the economic slowdowns in the United States that are examined in the low-growth alternative.

Import growth is also significantly lower in the low-growth than in the moderate-growth scenario. As a result, the small real trade deficit of \$15 billion in 2005 projected in the moderate-growth alternative is expected to grow only slightly, to \$49 billion, that same year in the low-growth scenario.

Slower economic growth in the low-growth alternative leads to much slower growth in Federal revenues—5.6 percent per year, on average, relative to the projected 6.1-percent per year in the moderate-growth scenario. Even with assumed offsets from slowdowns in Federal expenditure growth, the Federal budget deficit stays high over the entire projection period, reaching \$329 billion in nominal terms in 2005; at that level, the deficit accounts for 2.5 percent of nominal GDP in the low-growth projection in 2005, about the same as the deficit's share of nominal GDP in 1994.

All of these factors, resulting from a continuation of many current economic problems, lead to a projected employment growth of 0.7 percent annually in the low-growth scenario, an increase of 10.5 million employed persons between 1994 and 2005, or 950 thousand per year, on average. This figure compares with an average projected growth of 1.4 million employed persons per year in the moderate-growth alternative.

### High-growth alternative

In the high-growth scenario, output growth is spurred by higher population estimates and higher labor force participation rates, resulting in labor force growth of 1.4 percent annually between 1994 and 2005. A lower inflation rate in a dynamic, strengthened economy, stemming from both lower energy price increases and a better ability to respond to growing demand pressures, results in a much higher accumulation of capital per employee—a 2.0-percent annual growth rate over the projection period, compared with 1.7-percent average growth in the moderate-growth projection. Consequently, labor productivity is expected to increase by 1.8 percent a year, a pronounced pickup compared with its 1.3-percent growth rate between 1983 and 1994.

Personal consumption spending is projected to grow at a more rapid rate—2.8 percent annually over the forecast horizon—in the high-growth alternative than in the moderate-growth scenario, but the tendency to high consumption assumed in the low-growth alternative is not present in the high-growth scenario. Consumer spending accounts for a 65.6-percent share of GDP in 2005—an even lower share than in the moderate-growth projection—as income

growth keeps pace with the consumer's desire to spend extra income. Overall, consumption is higher in all categories in the high-growth alternative, but the greatest impact of high income growth is in durable goods, primarily autos and housing. Spending on motor vehicles and parts is expected to increase at an average annual rate of 2.4 percent over the projection period and to increase its share of total consumption spending to 5.6 percent. As in the moderate-growth alternative, in the high-growth scenario a better-off population of those in their prime earning years (45 to 54 years of age) is projected to buy more expensive automobiles, thus sharply offsetting any slowdowns in unit sales due to slower growth in new entrants to the driving-age population.

Fuel oil, gasoline and natural gas, food and other non-durables, and housing are all expected to account for slightly smaller shares of overall consumption in the high-growth than in the moderate-growth alternative, as higher income growth tends to go more toward luxury items than to basic subsistence items. Growth in consumer services is projected to be 0.5 percentage point higher in the high-growth than in the moderate-growth scenario, as past trends are continued.

Investment growth in the high-growth alternative is expected to be 3.6 percent a year over the projection period. Compared with the 1983–94 period, when much investment growth was centered on investments in office buildings and other structures with a smaller potential impact on labor productivity, in 1994–2005 a larger portion of the growth is projected to be focused on equipment spending. This strong growth in purchases of equipment—4.9 percent per year, about twice that projected in the low-growth scenario—together with its impact on the productive capital stock, is attributable primarily to the lower inflation, the sharp reduction in the Federal deficit, and the lower interest rates that prevail in the high-growth scenario.

These same factors also have a significant impact on exchange rates and the consequent growth in demand for exports. Overall, exports of goods and services are projected to increase at an average annual rate of 7.3 percent in the high-growth scenario, 1.5 percentage points higher than in the moderate-growth alternative. Exceeding this average rate of growth are exports of computers, as major new markets for these traditionally favorite exports are expected to be opened in Eastern Europe, China, and other areas of the world.

Although domestic demand for imported goods is expected to continue at a brisk pace in the high-growth alternative, export growth is still expected to outpace import growth over the projection period.

The lower value of the dollar results in sharply higher real export growth in the high-growth scenario. Stronger-than-average growth is projected for exports of capital goods and industrial supplies and materials. Imports are expected to continue to grow strongly, buoyed by strong income growth and demand

for many products not manufactured in the United States, but import growth is tempered, to a certain extent, by lower exchange rates and the consequent higher prices for imported goods.

The net effects of the high-growth alternative are a projected GDP growth of 3.0 percent per year from 1994 to 2005, exceeding that of the prior peak-to-peak period, and average annual increases in employed persons of 2.2 million per year.

IN SUM, BLS PROJECTIONS FOR THE 1994–2005 PERIOD ENCOMPASS a \$1.1 trillion spread in real GDP, a 14 million-person spread in employment, and some important differences in the potential distribution of GDP. The Bureau presents such a wide range of alternative projections to acquaint the public with the full potential of economic behavior over the coming 11-year period and to delineate those areas most subject to uncertainty. □

## Footnotes

<sup>1</sup> Previously published projections to the year 2005 appeared as a series of five articles in the *Monthly Labor Review*, November 1993. The series was entitled “The American work force: 1992–2005.”

<sup>2</sup> The projections have been prepared using the Data Resources, Inc., Comprehensive Model of the U.S. Economy, a relatively small-scale model designed to simulate long-term macroeconomic policy. (See Data Resources, Inc., *The U.S. Quarterly Model Documentation, Version US94B*, June 1994.)

<sup>3</sup> For a detailed description of the analytical methodology used, see Norman C. Saunders, “Sensitivity of BLS economic projections to exogenous variables,” *Monthly Labor Review*, December 1986, pp. 23–29. A like analysis has been carried out for the Data Resources, Inc., model, but the results have not been published.

<sup>4</sup> See “Population Projections of the United States, by Age, Sex, Race, and Hispanic Origin: 1995 to 2050,” *Current Population Reports*, Series P–25, No. 1130 (Bureau of the Census, 1995).

<sup>5</sup> See Howard N. Fullerton, Jr., “The 2005 labor force: growing, but slowly,” pp. 29–44.

<sup>6</sup> “Population Projections.”

<sup>7</sup> In this article, discussions of GDP and its demand components are couched in terms of real values, that is, growth with inflation removed from the equation. Recent research has indicated that there are serious shortcomings involved with the use of the Commerce Department’s traditional base-weighted implicit price deflators when the item being deflated is undergoing rapid price changes or rapid shifts in the underlying quality of the product. For a more detailed description of some of the problems associated with fixed-weight deflators and some possible

alternatives to such deflators, see the following two articles in the April 1992 issue of *Survey of Current Business*: Allan H. Young, “Alternative Measures of Change in Real Output and Prices,” pp. 32–48; and Jack E. Triplett, “Economic Theory and BEA’s Alternative Quantity and Price Indexes,” pp. 49–52.

About the time the articles in this issue of the *Monthly Labor Review* are published, the Commerce Department will replace its base-weighted constant-dollar measures of GDP with real production indexes based on the chain-weighted pricing scheme discussed in the preceding two references. While this new approach will address the problems connected with overstated real growth in products such as computers and electronic components, it will usher in new problems of noncomparability with previously published time series that underlie the projections presented in this article.

For a more complete discussion of the difficulties associated with, and implications of, the new system of price accounting, see “Mid-Decade Strategic Review of BEA’s Economic Accounts: An Update,” *Survey of Current Business*, April 1995, pp. 48–56; and “Suddenly, the Economy Doesn’t Measure Up,” *Business Week*, July 31, 1995, pp. 74–76.

<sup>8</sup> All references to Federal budget deficits in this article refer to the National Income and Product Accounts concept of the deficit, formulated on a calendar-year basis.

<sup>9</sup> For a complete review of the linkages proposed to exist between infrastructure investment and productivity growth, see Edward M. Gramlich, “Infrastructure Investment: A Review Essay,” *Journal of Economic Literature*, September 1994, pp. 1176–96; and Douglas Holtz-Eakin, “Public Sector Capital and the Productivity Puzzle,” *Review of Economics and Statistics*, February 1994, pp. 12–21.

<sup>10</sup> See Fullerton, “The 2005 labor force.”