

**SURVEY OF CURRENT BUSINESS**



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## U.S. Department of Commerce

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SURVEY OF CURRENT BUSINESS. Published monthly by the Bureau of Economic Analysis of the U.S. Department of Commerce, Editorial correspondence should be addressed to the Editor-in-Chief, Survey of Current Business, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, D.C. 20230.

*First-Class mail.*—Domestic only: Annual subscription \$46.00. Single copy: \$5.00.

*Second-class mail.*—Annual subscription: \$27.00 domestic; \$33.75 foreign. Single copy: \$3.75 domestic; \$4.70 foreign.

*Foreign air mail rates available upon request.*

Mail subscription orders and address changes to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Make checks payable to Superintendent of Documents.

Second-class postage paid at Washington, D.C. and at additional mailing offices.

The Secretary of Commerce has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget through September 1, 1983.

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# the BUSINESS SITUATION

THE economy weakened further in the third quarter. Real GNP declined  $\frac{1}{2}$  percent at an annual rate, after a  $1\frac{1}{2}$ -percent decline in the second quarter.<sup>1</sup> Estimates of components making up the four-fifths of GNP for which monthly source data are available indicate that real GNP has trended down since January–February.

Although the second- and third-quarter declines in real GNP were small, there were both large increases and large declines in the components (chart 1). This feature is brought into sharper focus by a separation of real GNP, final sales, and inventory change (CBI) into their motor vehicle and nonvehicle components (table 1). For motor vehicles, large changes in final sales and large changes in CBI tended to offset each other in their impact on the change in GNP. In the third quarter, final sales were up \$6 billion and CBI was down \$8 billion.<sup>2</sup> In the second quarter, it was

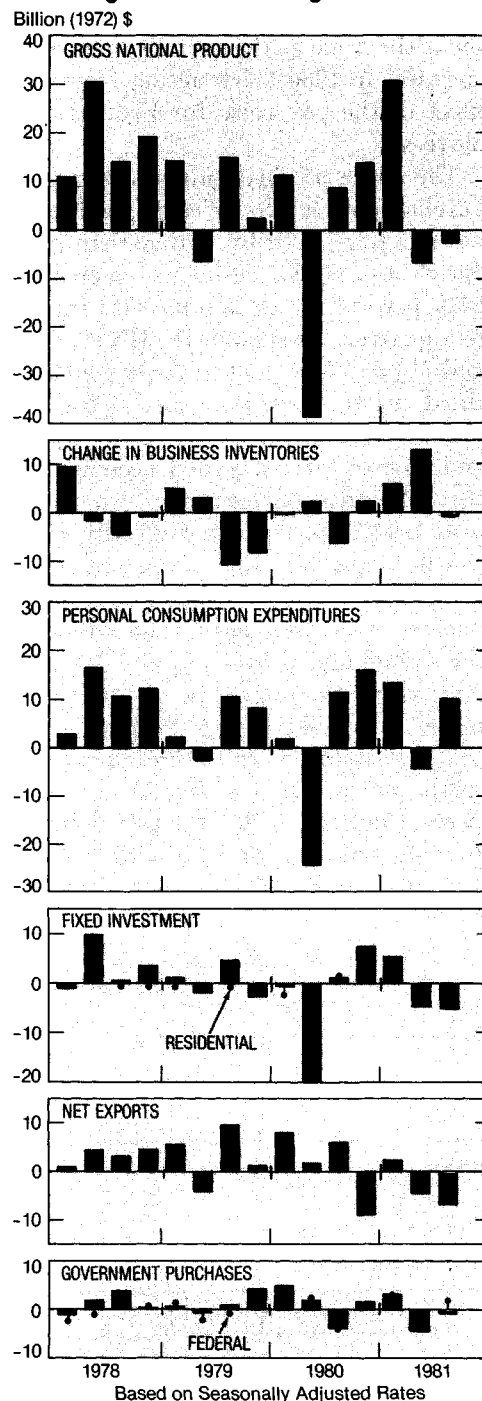
final sales that were down, \$11 billion, and it was CBI that was up, \$13 billion. For nonvehicle components, final sales declined in both quarters—the same amount, \$7 $\frac{1}{2}$  billion, and with the same pattern. Increases in nonvehicle personal consumption expenditures and nonresidential structures were more than offset by declines in each of the other nonvehicle components, i.e., producers' durable equipment, residential investment, net exports, and government purchases. In the third quarter, the decline in nonvehicle final sales was offset in its impact on the change in GNP by an increase in nonvehicle CBI; in the second quarter, the change in CBI was negligible.

These kinds of changes suggest that several strong causal factors—some countering each other, some reinforcing—have been at work. The impact of persistently high interest rates—whether a result of monetary policy or a reflection of inflation—can be seen in several GNP components: residential investment, motor vehicles (although strongly affected by other factors as well), consumer spending on items such as furniture and household equipment, and State and local government construction. Price changes, including auto rebates, help explain some components of consumer spending. Also, the appreciation of the dollar against foreign currencies had a strong impact on net exports. There is no evidence, however, that the new Federal fiscal policy has affected GNP in a major way. Although some categories of expenditure—most importantly, grants-in-aid to State and local governments—have turned down, most of the changes in expenditures are yet to be felt. The tax cuts enacted as part of the Economic Recovery Tax Act

1. The third-quarter GNP estimates are based on the following major source data: For *personal consumption expenditures* (PCE), retail sales, and unit auto and truck sales through September; for *nonresidential fixed investment*, the same information for autos and trucks as for PCE, manufacturers' shipments of machinery and equipment for July and August, July and August construction put in place, and investment plans for the quarter; for *residential investment*, July and August construction put in place, and housing starts for July and August; for *change in business inventories*, July and August book values for manufacturing and trade, and unit auto inventories through September; for *net exports of goods and services*, July and August merchandise trade, and fragmentary information on investment income for the quarter; for *government purchases of goods and services*, Federal unified budget outlays for July and August, State and local construction put in place for July and August, and State and local employment through September; and for *GNP prices*, the Consumer Price Index for July and August, the Producer Price Index through September, and unit value indexes for exports and imports for July and August. Some of these source data are subject to revision.

2. Quarterly estimates of the national income and product accounts are expressed at seasonally adjusted annual rates, and quarterly changes in them are differences between these rates.

CHART 1  
Real Product:  
Change From Preceding Quarter



of 1981 are unlikely to have as yet affected the spending and saving of investors or consumers.

*Prices.*—Food and energy price increases have continued to fluctuate widely and have largely accounted for changes in the rate of increase in the price of GNP. The fixed-weighted price index for GNP increased at annual rates of 10, 8, and 9 percent in the first three quarters of this year; the increase in the price of GNP less the food and energy components held fairly steady at around 9 percent (table 2). These increases were about the same as the average quarterly increases in 1980 (abstracting from the effect of the pay raise for Federal employees).

The price of final sales to domestic purchasers—i.e., the price of goods and services purchased by, rather than produced by, U.S. residents—increased 10½ percent at an annual rate in the first quarter, the same as the GNP price, and 7½ and 8 percent in the second and third quarters, less than the GNP price (table 3). The performance of export and import prices, which account for the difference between the two measures, both improved substantially after the first quarter. Export prices, after increasing 11½ percent in the first quarter, increased only moderately in the second and third—5½ and 4½ percent. However, import prices improved more. After increasing 12 percent in the first quarter, they showed only a small increase in the second and a 6-percent decline in the third. It is likely that the strong appreciation of the dollar since mid-1980 contributed to the

Table 1.—Real GNP and Motor Vehicle Output: Change From Preceding Quarter

[Billions of 1972 dollars, based on seasonally adjusted annual rates]

	1981		
	I	II	III
GNP.....	30.8	-6.0	-2.2
Less: Motor vehicle output.....	-7	1.8	-1.9
GNP less motor vehicle output.....	31.5	-7.8	-3
Final sales.....	25.1	-18.2	-1.7
Less: Motor vehicles.....	7.7	-10.9	5.9
Final sales less motor vehicles.....	17.4	-7.3	-7.6
Personal consumption expenditures less motor vehicles.....	7.9	3.4	5.2
Nonresidential structures.....	1.8	.8	.9
Producers' durable equipment less motor vehicles.....	2.3	-.6	-2.6
Residential investment.....	.4	-3.2	-4.6
Net exports less motor vehicles.....	1.0	-3.6	-6.2
Government purchases less motor vehicles.....	3.8	-4.0	-.4
Change in business inventories.....	5.8	12.2	-.5
Less: Motor vehicles.....	-8.4	12.8	-7.9
Change in business inventories less motor vehicles.....	14.2	-.6	7.4

NOTE.—Dollar levels are found in the National Income and Product Accounts Tables, as follows: GNP, table 1.1-1.2; motor vehicles, tables 1.14-1.15 (autos) and 1.16-1.17 (trucks).

improved performance of import prices. In addition, other factors were at work—mainly abundant crops, which affected prices of agricultural exports, and a lower price for imported petroleum. The average price of petroleum imports was \$34.63 per barrel in the first quarter and \$35.64 in the second, but dropped to about \$33.25 in the third.

Within final sales to domestic purchasers, some third-quarter price increases were larger than second-quarter increases and some were smaller, but most second- and third-quarter increases were smaller than first-quarter increases. The increase in the price of personal consumption expenditures (PCE) was among those that was larger in the third quarter than in the second quarter—8 percent at an annual rate, compared with 6½ percent.

PCE food prices contributed to the acceleration. They increased at an annual rate of 9 percent after increasing ½ percent in the second quarter. The acceleration was primarily due to a turnaround in the price of food consumed at home—especially meat and poultry—from a small decline to a 9-percent increase. Food consumed at home has a weight of about 75 percent in the fixed-weighted index for PCE food, and so the total food index moves closely with it. The price of restaurant meals, the other principal food component, increased 6½–7½ percent in both quarters. These increases were at lower end of the range, which extended to about 12 percent, within which increases in the price of restaurant meals have fluctuated over the last 2 years. The greater stability of this price than of the price of food con-

Table 2.—Selected Fixed-Weighted Price Indexes: Change From Preceding Quarter

[Percent change at annual rates; based on index numbers (1972=100), seasonally adjusted]

	1979				1980				1981		
	I	II	III	IV	I	II	III	IV	I	II	III
GNP.....	9.3	8.9	8.8	10.3	9.7	9.3	9.0	10.4	10.2	7.9	9.2
Food components <sup>2</sup> .....	15.3	6.6	5.0	7.9	3.2	4.1	17.1	18.6	7.3	.6	8.3
Energy components <sup>3</sup> .....	18.5	36.9	34.9	27.8	40.7	13.1	2.0	2.3	36.4	14.3	10.1
GNP less food components.....	8.3	9.4	9.5	10.8	10.8	10.2	7.8	9.1	10.7	9.2	9.3
GNP less energy components.....	8.8	7.6	7.5	9.3	8.0	9.1	9.5	10.9	8.6	7.5	9.1
GNP less food and energy components.....	7.6	7.8	7.9	9.5	8.9	9.9	8.3	9.8	8.9	8.9	9.3

1. Includes pay raises for Federal employees, which added 0.8 and 1.4 percentage points to the increase in GNP prices in the fourth quarters of 1979 and 1980, respectively.

2. Consists of all components for which separate estimates are prepared. The major component that is not included is purchases of food by the Federal Government other than transactions by the Commodity Credit Corporation that are treated like purchases.

3. Consists of all components for which separate estimates are prepared. The major components that are not included are (1) exports of energy, (2) the gasoline and motor oil portions of inventories of gasoline service stations, and (3) the energy portions of inventories of businesses that do not produce energy for sale.

NOTE.—Inasmuch as GNP is a sum of final products, the food and energy estimates in this table do not take into account the effect on the prices of final products of changes in the prices of the food and energy that are costs of production.

sumed at home—changes in the price of food consumed at home ranged from a small decline to an increase of about 20 percent—reflected the smaller weight of volatile farm prices.

PCE energy prices declined in the third quarter at an annual rate of 1/2 percent, after increases of 8 1/2 percent in the second quarter and 39 1/2 percent in the first. Third-quarter declines for gasoline and fuel oil—9 1/2 percent and 6 percent, respectively—more than offset continued price increases for electricity and natural gas (addendum to table 3). Sharp first-quarter increases for the petroleum products reflected the increased price of imports and the compression of the final phases of the decontrol of domestic crude oil and refined products into the first quarter. In the third quarter, reduced marketing margins were a factor in the price declines, which on a monthly basis began in the second quarter. Price changes for energy services fluctuated less than did those for gasoline and fuel oil, but rates of increase tended to remain high. Natural gas price increases reflected the phased deregulation of domestic supplies and higher prices of imports from Canada and Mexico.<sup>3</sup> Electricity prices reflected the automatic passthrough in many States of increased fuel costs. Additional fluctuations in both electric and gas rates were due to the timing of rate increases approved by State public utility commissions. For example, rate hikes were a major factor in driving up third-quarter electricity prices 30 percent—double the rate of increase registered in either of the two preceding quarters.

Prices of other PCE goods and services increased at an annual rate of 9 1/2 percent in the third quarter, higher than the increases of 7–9 percent registered over the past year. Prices of services were largely responsible for the step-up. Increases in the prices of rents, local

3. The increasing use of "lifeline" rate structures, which price a larger quantity of each residential customer's consumption at the lowest rate during the winter heating season, has not been fully removed through seasonal adjustment. The seasonally adjusted second-quarter increase thus reflected utilities' switch to their effectively higher summer rate schedule (and the fourth-quarter change will reflect their switch to the effectively lower winter rate schedule).

Table 3.—Fixed-Weighted Price Indexes: Change From Preceding Quarter

[Percent change at annual rates; based on index numbers (1972=100), seasonally adjusted]

	1981		
	I	II	III
<b>Gross national product</b> .....	10.2	7.9	9.2
Less: Change in business inventories.....			
<b>Equals: Final sales</b> .....	10.3	7.9	9.1
Less: Exports.....	11.7	5.6	4.3
Plus: Imports.....	11.8	.4	-6.1
<b>Equals: Final sales to domestic purchasers</b> .....	10.3	7.3	7.8
Personal consumption expenditures.....	10.9	6.5	8.2
Food.....	6.4	.5	8.8
Energy.....	39.2	8.3	-7
Other personal consumption expenditures.....	8.0	8.2	9.6
Other <sup>1</sup> .....	9.5	8.6	7.3
Nonresidential structures.....	9.0	8.1	8.2
Producers' durable equipment.....	9.9	11.8	8.4
Residential.....	10.1	6.0	6.3
Government purchases.....	9.3	8.6	7.2
<b>Addendum: Personal consumption expenditures, energy:</b>			
Nondurables:			
Gasoline and oil.....	45.0	2.3	-9.6
Fuel oil and coal.....	76.1	16.2	-6.0
Services:			
Electricity.....	15.7	12.1	30.2
Natural gas.....	12.4	21.3	10.2

1. Index number levels for the fourth quarter of 1980 through the third quarter of 1981 were: 203.1, 207.7, 212.0 and 215.9.

NOTE.—Index number levels are found in the National Income and Product Accounts Tables, tables 7.1-7.2.

Table 4.—Selected Labor Market Indicators

[Seasonally adjusted]

	1980		1981			Change from preceding quarter			
	III	IV	I	II	III	1980:IV	1981:I	1981:II	1981:III
<b>Household survey</b>									
Civilian labor force (thousands).....	104,982	105,173	105,800	106,768	106,434	191	627	968	-334
Employment.....	97,061	97,276	98,012	98,838	98,725	215	736	856	-143
Unemployment.....	7,921	7,897	7,788	7,900	7,709	-24	-109	112	-191
Job losers.....	4,357	4,232	3,883	4,041	3,986	-125	-369	178	-55
On layoff.....	1,758	1,538	1,275	1,338	1,265	-220	-283	63	-73
Other job losers.....	2,598	2,693	2,589	2,702	2,721	95	-104	113	19
Job leavers, reentrants, and new entrants.....	3,610	3,665	3,872	3,902	3,768	55	207	30	-134
Unemployment rate (percent):									
Total.....	7.5	7.5	7.4	7.4	7.2	0	-.1	0	-.2
Adult men.....	6.6	6.3	6.0	6.1	5.9	-.3	-.3	.1	-.2
Adult women.....	6.4	6.7	6.6	6.6	6.6	-.3	-.1	0	0
Teenagers.....	18.4	18.3	19.1	19.2	18.7	-.1	.8	.1	-.5
Civilian labor force participation rate:									
Total.....	63.8	63.7	63.9	64.3	63.8	-.1	.2	.4	-.5
Adult men.....	79.4	79.2	78.9	79.4	78.9	-.2	-.3	.5	-.5
Adult women.....	51.5	51.4	51.9	52.4	52.2	-.1	.5	.5	-.2
Teenagers.....	56.5	56.4	56.9	56.3	54.8	-.1	.5	-.6	-1.5
<b>Establishment survey</b>									
Employment, nonfarm payroll (thousands).....	90,213	90,820	91,232	91,546	91,895	607	412	314	349
Goods producing.....	25,306	25,594	25,670	25,741	25,943	288	76	71	202
Construction.....	4,319	4,385	4,398	4,345	4,266	66	13	-53	-79
Manufacturing:									
Durables.....	11,911	12,060	12,086	12,246	12,332	149	26	160	86
Nondurables.....	8,064	8,098	8,095	8,144	8,198	34	-3	49	54
Distributive <sup>1</sup> .....	25,529	25,585	25,721	25,842	26,016	56	136	121	174
Services <sup>2</sup> .....	23,177	23,399	23,619	23,849	25,042	222	220	230	193
Government.....	16,201	16,242	16,222	16,114	15,894	41	-20	-108	-220
Average weekly hours, private nonfarm:									
Total.....	35.2	35.3	35.3	35.3	35.1	.1	0	0	-.2
Manufacturing.....	39.4	39.8	39.9	40.2	39.7	.4	.1	.3	-.5

1. Transportation and public utilities, and wholesale and retail trade.

2. Services, and finance, insurance, and real estate.

Source: Bureau of Labor Statistics.

transit, telephone, and medical services were larger than in the second quarter.

*Employment and unemployment.*—It is difficult to obtain a consistent view of third-quarter labor market conditions, but, on balance, the indicators suggest weakening (table 4). The household measure of employment, which had increased an average of almost 800,000 in each of the two previous quarters, declined 143,000 in the third quarter. Unemployment also declined, and the unemployment rate declined 0.2 percentage points to 7.2 percent. The decline in the unemployment rate, however, was attributable to a decline of 334,000 in the civilian labor force, the largest decline in almost 3 decades. The labor force participation rate fell for each of the three major demographic groups—adult men, adult women, and teenagers. Short-term changes in the series derived from the household survey are often erratic.

The payroll measure of employment increased 349,000, about the same as in each of the two previous quarters. On a monthly basis, however, employment was flat from July to September. The third-quarter increase was in services (193,000), distributive industries (174,000), mining (142,000, largely because the coal strike had depressed employment in April and May), and manufacturing (139,000). Average weekly hours in the private nonfarm economy were down 0.2 to 35.1, and manufacturing hours were down 0.5 to 39.7. Part of the weakness in hours may have been due to the unusual occurrence of Labor Day in the September survey week.

Perspective on recent conditions can be obtained by tracing developments since the recession a year ago. (Although the household measure of employment hit its 1980 low in the second quarter, the payroll measure hit its low in the third, and the unemployment rate was higher in the third quarter than in the second.) The household measure of employment was 1,664,000 higher in the third quarter of 1981 than it had been a year earlier. Employment was up 1,131,000 among adult women and 938,000 among adult men; adult men had accounted for about three-fourths of the

drop in employment from the first to the second quarter of 1980. Largely because of declines in teenage population and labor force participation, employment among teenagers was 404,000 lower in the third quarter of 1981 than a year earlier.

At 7.2 percent in the third quarter of 1981, the unemployment rate was 0.3 percentage points lower than a year earlier. The decline was entirely among adult men, whose unemployment rate had risen from 4.1 to 6.6 percent over the previous year; in the third quarter of 1981 it stood at 5.9 percent. Other signs of weakness in the labor market recovery included the number of discouraged workers (1,050,000), which was almost 100,000 higher than a year earlier, and the number of workers on part-time schedule for economic reasons (4,316,000), which was 179,000 higher.

which was at its lowest level in over 3 years, and government, which was at its lowest level in over 2 years. Manufacturing employment was up 553,000. As shown in the accompanying tabulation, however, the recovery was less than one-half of the previous-year decline and in some industries was minimal.

*Costs and productivity.*—Table 5 adapts the information on real product, employment, and hours to focus on costs and productivity in the business economy other than farm and housing. Productivity—as measured by real gross product per hour—declined 3 percent at an annual rate after a ½-percent increase in the second quarter. In both quarters, real product declined and hours were weak. Compensation per hour increased at roughly the same rate in both quarters; if allowance is made for the two special factors that affected the first quarter—increases in the minimum wage and employer contributions for social insurance—the increase in compensation per hour has been about 8½ percent each quarter this year. The increase in unit labor cost has trended up over the year, even without allowance for the effect of the special factors.

**Table 5.—Real Gross Product, Hours, and Compensation in the Business Economy Other Than Farm and Housing: Change From Preceding Quarter**

(Percent change at annual rates; based on seasonally adjusted estimates)

	1981		
	I	II	III
Real gross product.....	8.2	-1.2	-2.0
Hours.....	3.1	-1.8	1.1
Compensation.....	15.5	6.9	9.6
Real gross product per hour.....	5.0	.6	-3.1
Compensation per hour.....	12.0	8.8	8.4
Unit labor cost.....	6.7	8.1	11.8

### Personal income and its disposition

Weakness in the economy was again visible in the components of personal income that are related to production. Wage and salary disbursements registered another moderate increase—\$31 billion (table 6). It was larger than the second-quarter increase mainly because of the effects of the coal strike: The

	[Thousands]		
	1981:III	Change from 1 year earlier	
		1980:III	1981:III
Manufacturing employment.....	20,529	-1,145	553
Durables.....	12,332	-931	421
Lumber and wood products.....	689	-100	18
Furniture and fixtures of stone, clay, and glass products.....	488	-44	33
Primary metal industries.....	658	-60	7
Fabricated metal products.....	1,146	-186	66
Machinery, except electrical.....	1,611	-161	49
Electric and electronic equipment.....	2,540	-63	80
Transportation equipment.....	2,166	-56	94
Instruments and related products.....	1,888	-237	47
Miscellaneous manufacturing.....	727	12	19
Nondurables.....	420	-34	8
Food and kindred products.....	8,198	-215	134
Tobacco manufacturers.....	1,678	-14	-35
Textile mill products.....	72	-2	3
Apparel and other textile products.....	853	-44	15
Paper and allied products.....	1,277	-37	18
Printing and publishing.....	700	-25	14
Chemicals and allied products.....	1,195	16	38
Petroleum and coal products.....	1,112	-12	13
Rubber and miscellaneous plastics products.....	212	-2	4
Leather and leather products.....	762	-82	56
	237	-13	8

The payroll measure of employment was 1,682,000 higher in the third quarter than it had been a year earlier. The increase in employment was spread across industries, except construction,

**Table 6.—Personal Income and Its Disposition: Change From Preceding Quarter**

[Billions of dollars; based on seasonally adjusted annual rates]

	1981		
	I	II	III
Wage and salary disbursements.....	45.1	24.1	30.9
Manufacturing.....	12.4	9.4	7.8
Other commodity-producing.....	4.9	2.6	4.5
Distributive.....	11.4	5.9	6.8
Services.....	12.5	8.0	7.7
Government and government enterprises.....	3.9	3.4	4.0
Proprietors' income.....	-1.9	2.0	1.2
Farm.....	-3.5	2.7	1.4
Nonfarm.....	1.6	-0.7	-0.2
Personal interest income.....	19.0	12.1	14.9
Transfer payments.....	5.7	4.6	18.5
Other income.....	6.8	6.7	7.8
Less: Personal contributions for social insurance.....	11.0	.8	1.8
<b>Personal income.....</b>	<b>63.6</b>	<b>48.7</b>	<b>71.5</b>
Less: Personal tax and nontax payments.....	12.8	10.9	17.0
Impact of legislation.....	-2.8	-1.4	.4
Other.....	15.6	12.3	16.6
<b>Equals: Disposable personal income.....</b>	<b>50.8</b>	<b>37.8</b>	<b>54.5</b>
Less: Personal outlays.....	59.5	20.1	60.9
<b>Equals: Personal saving.....</b>	<b>-8.7</b>	<b>17.7</b>	<b>-6.4</b>
Addenda: Special factors—			
Minimum wage.....	2.0		
Cost-of-living increases in Federal transfer payments.....	1.1	1.3	16.3
Social security (in personal contributions for social insurance):			
Base change.....	2.3		
Rate change.....	6.7		
Coal strike.....		-2.6	2.6

strike reduced second-quarter wages about \$2½ billion, and the resumption of coal mining added about \$2½ billion in the third quarter. The increase in manufacturing and in the services industries was a little smaller than in the second quarter and that in the distributive industries was a little larger, but, in each industry group, the second- and third-quarter increases were substantially smaller than the first-quarter increase. In government and government enterprises, the third-quarter increase included almost \$1 billion of lump-sum payments and one-time bonuses paid to employees of the U.S. Postal Service under an agreement signed in July.

Farm proprietors' income increased \$1½ billion in the third quarter. The increase was more than accounted for by farm production that went into in-

ventories. Cash receipts from farm marketings were actually down, reflecting mainly a large drop in crop prices.

At \$23 billion in the third quarter, farm proprietors' income remains far below its \$32½ billion peak in the second quarter of 1979 (chart 2). Over this period, the volumes of production and of purchases of intermediate products have changed little, but differential price movements have put a squeeze on gross farm product—i.e., on the GNP originating on farms.<sup>4</sup> Even though crop prices increased about 15 percent, the average price of marketings increased only about 6 percent because livestock prices declined. Prices of intermediate products increased about 20 percent, reflecting increases in the prices of fuel and fertilizer. Further, even though gross farm product was down over this period, incomes other than farm proprietors' income, especially net interest, that are part of gross farm product were up. Thus, farm proprietors' income, which is what remains after deduction of these incomes and other charges against gross farm product, was depressed.

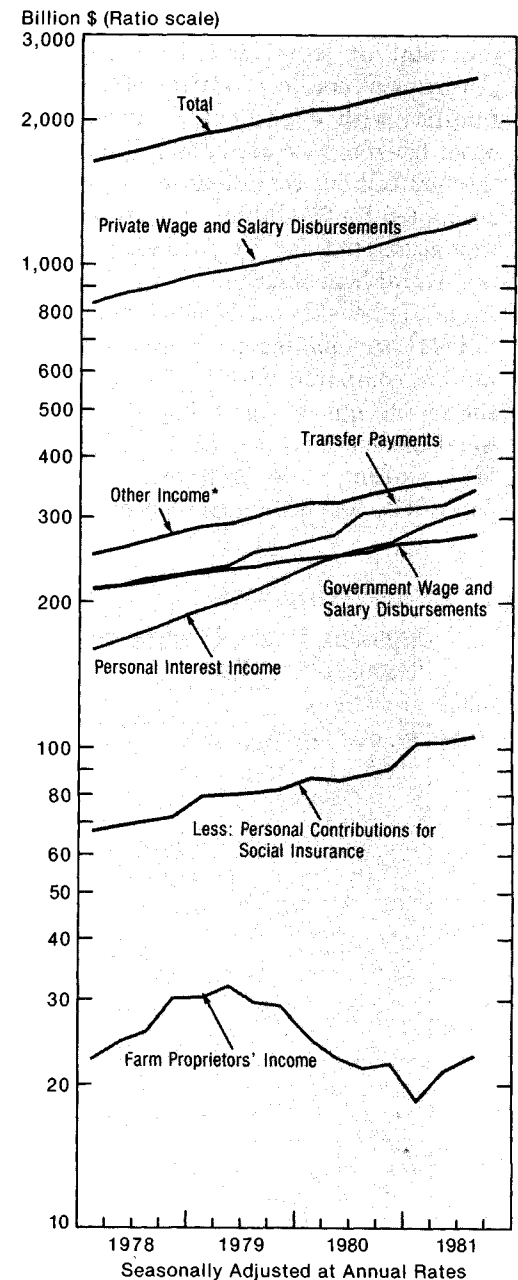
Personal interest income increased \$15 billion in the third quarter. This increase was larger than in the second quarter but fell short of that in the first. Personal interest income has been the fastest growing component of personal income in recent years. Increases in interest rates for particular types of assets and shifts of portfolios toward higher yielding assets, rather than increases in persons' holdings, have been the primary factors in the increase. (Personal interest income and the procedures used to estimate it were described in the Special Note to the "Business Situation" in the September 1981 issue of the SURVEY.)

Transfer payments, which are not related to production, increased \$18½ billion, accounting for about one-fourth of the third-quarter increase in personal income. An 11.2 percent cost-of-living

4. The relationship among the several measures of farm production and income is seen, for recent years, in tables 1.18 and 1.19 in *National Income and Product Accounts, 1976-79*, a special supplement to the SURVEY OF CURRENT BUSINESS. See also Shelby W. Herman, "The Farm Sector," SURVEY 58 (November 1978): 18-26.

CHART 2

## Personal Income



\*Other labor income, nonfarm proprietors' income, rental income of persons, and personal dividend income.

U.S. Department of Commerce, Bureau of Economic Analysis

81-10-2

adjustment to benefit payments under several Federal programs went into effect in July. The adjustment amounted to \$16½ billion, of which \$15 billion was in social security benefits.

In recent years, cost-of-living increases—which have amounted to \$1–2 billion each quarter except in the third quarter when social security increases become effective—have been a growing share of the increase in transfer pay-

ments. Over the last four quarters, transfer payments increased \$32 billion. (Although government unemployment insurance benefits declined \$4 billion, the total of social security, veterans, government employee retirement, aid to families with dependent children, and other benefits increased \$36 billion.) Of the \$32 billion, cost-of-living increases accounted for \$20 billion; the remainder was accounted for by increases in the number of beneficiaries and, to a smaller extent, in benefits per beneficiary.

Total personal income increased \$71½ billion, compared with \$48½ billion in the second quarter, and disposable personal income increased \$54½ billion, or 11½ percent at an annual rate, compared with \$38 billion, or 8 percent. The

third-quarter increase in income was smaller than that in outlays, so that saving declined and the saving rate moved down from 5.4 percent in the second quarter to 4.9 percent (chart 3). Changes in saving and the saving rate were probably affected by the large and abrupt changes in PCE on motor vehicles in the third and earlier quarters of the year. Also, because personal saving is measured as the difference between disposable personal income and personal outlays, saving and the saving rate are influenced by the procedures used to adjust income and outlays for seasonality. The cost-of-living increases in social security benefits are not seasonally adjusted; in contrast, outlays—of which expenditures made out of these benefit increases are an indistinguishable part—are seasonally adjusted.

In real terms, disposable income increased 2 percent at an annual rate, after an increase of 1½ percent in the second quarter. In contrast, in the three earlier quarters since the 1980 recession, increases in real disposable income were larger—in the range of 3–4 percent.

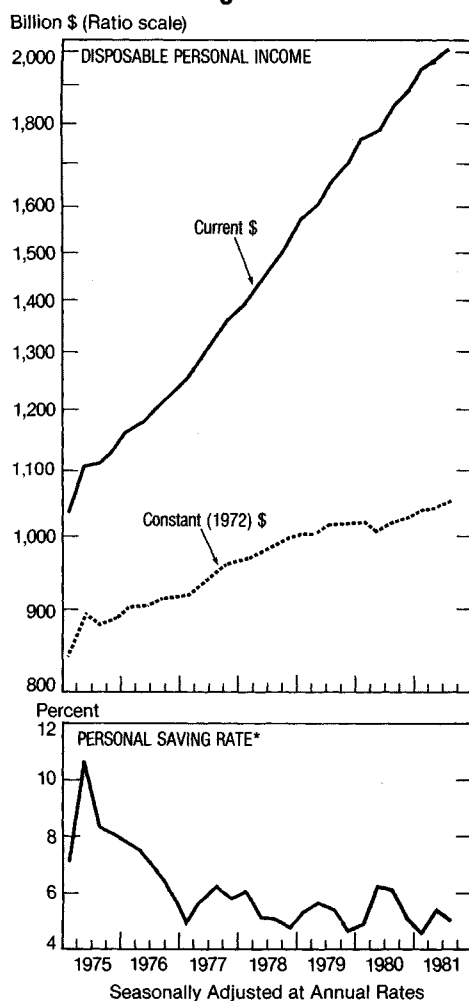
*Real PCE.*—In the third quarter, as earlier in the year, PCE on motor vehicles and parts registered on extraordinary large change (table 7). The pattern of these changes—increases of \$5–6 billion in the third and first quarters and a decline of \$9 billion in the second—can be traced to a large extent to the rebate and other price discount programs that were superimposed on economic and financial conditions that were generally adverse to motor vehicle purchases. These developments are discussed in more detail in “Motor Vehicles, Model Year 1981,” later in this issue.

Aside from motor vehicles and parts, PCE remained weak. After it had increased 3½ percent at an annual rate in the first quarter, it increased only 1½ percent in the second and 2 percent in the third. In goods, all major categories except energy either declined or were unchanged: Furniture and household equipment edged down after a second-quarter decline; food was unchanged after a substantial increase; and clothing and shoes declined again. In contrast, gasoline and oil increased—the

first strong increase in three quarters. In services, the increase, although larger than in the first and second quarters, continued below trend.

The effect on consumer spending of the third-quarter increase in personal income is particularly hard to assess, because little is known about the pattern of spending out of cost-of-living adjustments to transfer payments, which are one-shot step-ups, received largely by retirees, and expected because they are legislated. Although the pattern of increases in real disposable income over the past year helps explain the pattern of increases in PCE on other than motor vehicles, it appears that factors other than income were also at work. The

CHART 3  
Disposable Personal Income and Personal Saving Rate



\*Personal saving as a percentage of disposable personal income.

Table 7.—Real GNP: Change From Preceding Quarter

[Percent change at annual rates; based on billions of 1972 dollars, seasonally adjusted at annual rates]

	1981		
	I	II	III
<b>GNP</b> .....	8.6	-1.6	-0.6
Final sales.....	6.9	-4.7	-1.5
Personal consumption expenditures.....	5.8	-2.1	4.3
Durables.....	24.1	-23.3	15.3
Motor vehicles and parts.....	51.4	-47.1	47.1
Furniture and household equipment.....	9.3	-5.3	-1.4
Other durables.....	6.5	6.1	-1.8
Nondurables.....	4.6	2.7	1.4
Food.....	6.8	4.7	.2
Energy <sup>1</sup> .....	-24.2	-7.4	21.5
Clothing and shoes.....	10.5	-5.0	-8.3
Other nondurables.....	3.0	-2.0	-1.1
Services.....	1.4	1.6	3.5
Energy <sup>2</sup> .....	-13.1	9.9	7.3
Other services.....	2.3	1.2	3.3
Fixed investment.....	10.8	-7.6	-8.8
Nonresidential.....	13.3	-2.1	-4.4
Structures.....	16.6	6.7	6.8
Producers' durable equipment.....	11.8	-5.9	-3.6
Autos and trucks.....	22.0	-24.4	44.2
Other.....	10.0	-2.0	-10.7
Residential.....	3.6	-23.4	-33.3
Net exports of goods and services.....	13.6	-2.3	-8.7
Exports.....	16.4	-6.0	-20.5
Merchandise.....	52.9	-35.2	-25.4
Agricultural.....	8.4	3.4	-19.3
Nonagricultural.....	10.2	2.6	8.5
Other.....	10.3	14.2	11.0
Imports.....	6.0	16.0	11.3
Merchandise.....	2.1	-1.5	-32.3
Petroleum.....	6.3	17.7	15.9
Nonpetroleum.....	19.5	10.6	10.3
Government purchases of goods and services.....	5.4	-5.6	-1.5
Federal.....	14.8	-8.4	5.3
National defense.....	1.1	2.6	8.1
Nondefense.....	46.8	-26.4	0
Commodity Credit Corporation <sup>3</sup> .....	3.6	-6.5	-6.2
Other.....	.2	-3.8	-4.0
State and local.....			
Change in business inventories.....			

1. Gasoline and oil, and fuel oil and coal.

2. Electricity and gas.

3. Estimates, in billions of 1972 dollars, for the fourth quarter of 1980 through the third quarter of 1981 were: -1.4, 1.8, -0.4, and 0.7.

NOTE.—Dollar levels are found in the National Income and Product Accounts Tables, as follows: GNP and its major components, tables 1.1-1.2 and 1.3-1.4; personal consumption expenditures detail, tables 2.2-2.3; motor vehicles, tables 1.14-1.15 (autos) and 1.16-1.17 (trucks); and net exports details, tables 4.1-4.2 and 4.3-4.4.



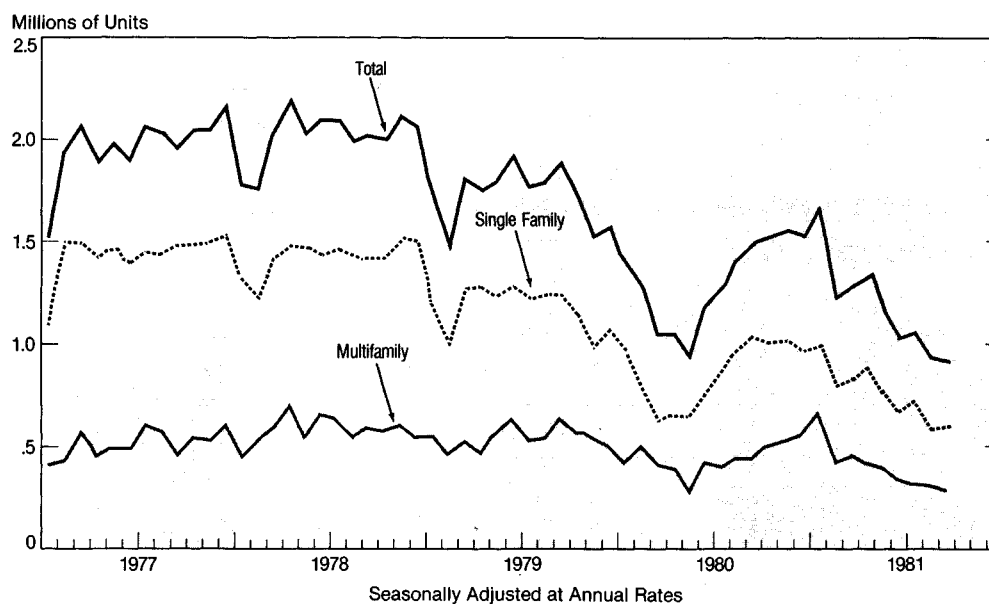
sharp decline of residential construction and high interest rates on consumer loans help explain the weakness in furniture and household equipment. The course of their prices helps explain food and energy: The third-quarter leveling in food purchases, after two quarters of increases, coincides with the acceleration of food prices, and the strong increase in gasoline coincides with the decline in its prices.

### Real investment

Nonresidential fixed investment leveled off in the third quarter after a 2-percent annual rate decline in the second. The weakness in both quarters was in producers' durable equipment (PDE). In PDE, the quarterly changes in motor vehicles were similar to those in PCE—an increase in the third quarter after a decline in the second. These changes in PDE were due to autos; trucks were unchanged (see "Motor Vehicles, Model Year 1981"). Other PDE, after a 2-percent decline in the second quarter, fell off sharply in the third. Computers and aircraft, which often show large quarter-to-quarter changes, were the major items in the decline.

Investment in nonresidential structures in the third quarter again ran counter to the course of most other categories of final sales, increasing again at a 6½–7 percent annual rate. Since its 1980 low, which lagged that of GNP by one quarter, it has increased 9½ percent. Office and industrial construction were the major factors in the third-quarter increase. Over the past year, both—but especially office construction—have increased sharply, although with some quarter-to-quarter irregularity. Construction of commercial structures other than offices was flat after a second-quarter decline. This construction, which roughly follows the pattern of residential investment, has increased only slightly over the past year. Petroleum exploration and drilling changed little in the third quarter. In contrast, in most of the recent quarters it has registered strong increases, reflecting the incentives provided by sharply rising petroleum prices, which in turn were due to decontrol of domestic crude oil

### Housing Starts



Data: Census  
U.S. Department of Commerce, Bureau of Economic Analysis

81-10-4

prices coupled with increasing international prices. Public utility construction was down. Over the past year electric utilities construction has been held down by a variety of factors, including energy conservation and regulatory restrictions.

*Residential investment.*—Residential investment, which had declined at a 23½-percent annual rate in the second quarter, declined 33½ percent in the third. Both single- and multi-family construction declined more than in the second quarter. The "other" component of residential investment, which includes additions and alterations, brokers' commissions on the sale of residences, and mobile homes, remained flat.

Single-family starts, which had declined 10 percent in the second quarter (not at an annual rate), declined 18 percent in the third (chart 4). Multi-family starts, which had declined 24 percent in the second quarter, declined 17 percent. Permits were down about 20 percent, as both single- and multi-family permits declined more than in the second quarter. Sales of existing homes, which had increased in the second quarter, declined 8 percent in July-August; the August (annual) rate of 2,260,000 was the lowest in over 6 years.

Sales of new homes, which had declined 13 percent in the second quarter, declined 12 percent in July-August.

Financial factors were unfavorable to residential investment in the second and third quarters of 1981, as they had been in the corresponding quarters of 1980. Last year, financial conditions, although unfavorable, improved during these quarters and set the stage for a moderate upturn. This year, in contrast, they worsened and indicate that an upturn is unlikely in the near term.

The prime rate—to which construction loans are tied—quickly rose from 17 percent in April to a 19½–20½ percent range, where it remained through September (chart 5). In 1980, in contrast, the prime had fallen during the corresponding period. The commitment interest rate on 25-year mortgages with a loan-to-price ratio of 75 percent rose from 15.05 percent in April 1981 to 17.20 percent in early September. During the corresponding period in 1980, the commitment rate fell from the then record level of 16.16 percent to 12.88 percent. Reflecting these interest rate patterns, mortgage commitments made in August of this year by insured savings and loan associations (S&L's) were about 40 percent lower than in April; last year com-

mitments in August were substantially higher than in April.

Higher mortgage rates and higher home prices raised the monthly principal and interest charges on the average mortgage for the purchase of a newly built house in the second and

third quarters of 1981 to about \$800, 24 percent more than a year earlier. Such an increase made it even more difficult for a potential purchaser to qualify for a mortgage.

The S&L's—major suppliers of mortgage funds—were buffeted in the

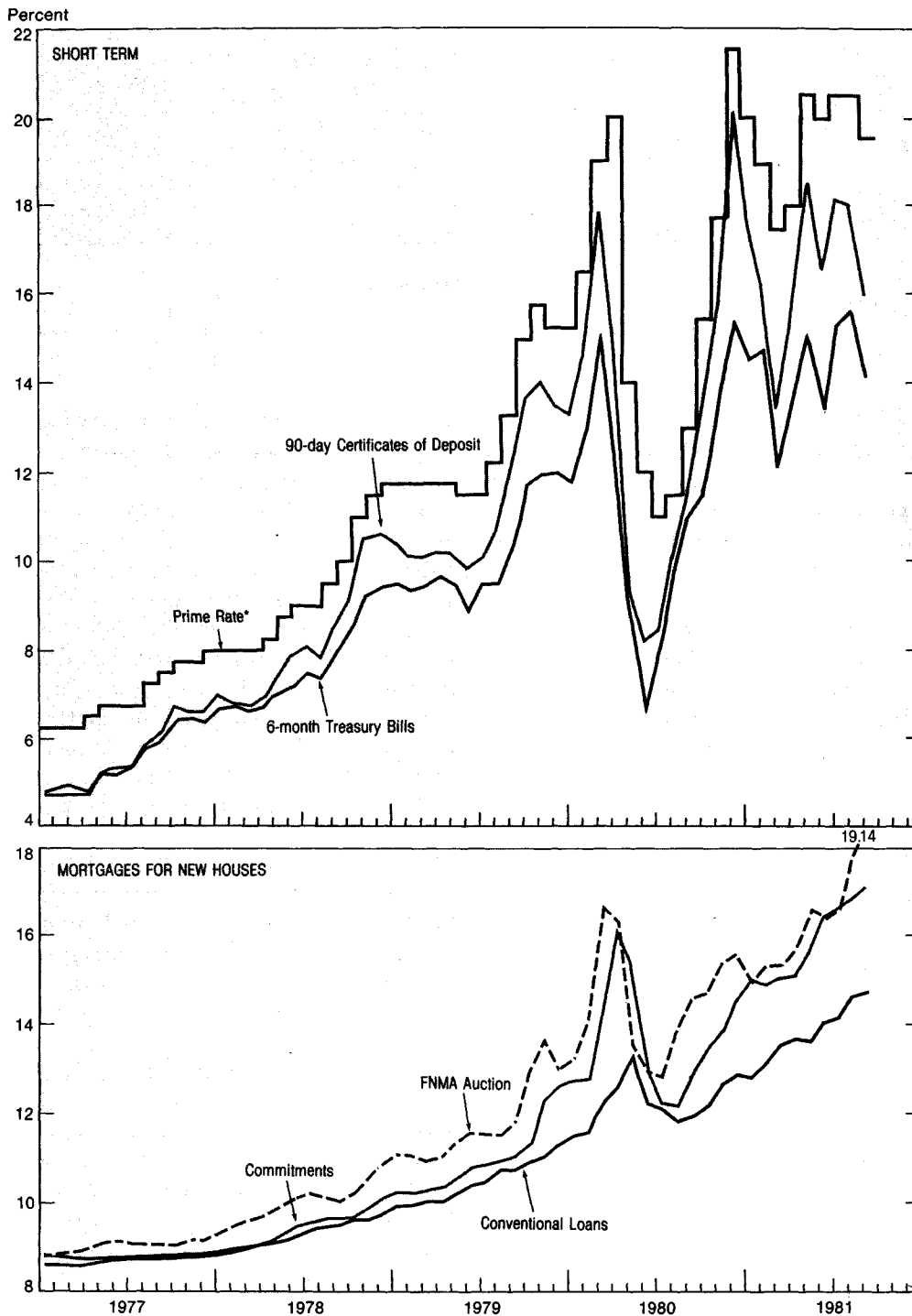
second and third quarters of this year. The inflow of funds deteriorated. Withdrawals exceeded new deposits every month during the April-to-August period, cumulating to a deposit loss (exclusive of interest credited) of \$19.3 billion, and net mortgage loan repayments were low. To offset these declines, S&L's borrowed heavily from the Federal Home Loan Banks (\$12.7 billion) and from other sources (\$6.1 billion). The high cost of both deposits and borrowings, coupled with the low levels of mortgage lending, was reflected in a \$2.1 billion decline in S&L's net worth—indicating an operating loss.

The introduction of All Savers Certificates (ASC's) on October 1 will reduce the cost of funds to S&L's and other depository institutions. ASC's—authorized by the Economic Recovery Tax Act of 1981—are 1-year certificates with a yield equal to 70 percent of the yield on 1-year Treasury bills. Interest on the certificates—up to a lifetime limit of \$1,000 for an individual and \$2,000 for a couple filing jointly—is exempt from Federal income tax. Although the ASC's will benefit S&L's, they are not likely to have much impact on construction. Preliminary indications are that many ASC's are being purchased by transfer of funds from other accounts at S&L's; thus the net deposit gain from the sale of ASC's may be relatively small. Moreover, S&L's may be reluctant to extend long-term mortgage loans with money raised from the sale of relatively short-term certificates; new 1-year securities issued by the Federal National Mortgage Association (FNMA) may be a more attractive investment to many S&L's. FNMA, in turn, is likely to use a large part of these proceeds to finance its existing portfolio of mortgages rather than to channel the funds into construction by buying large quantities of new mortgages in the secondary market.

*Change in business inventories.*—The rate of accumulation of business inventories was essentially the same in the third and second quarters, so that CBI contributed little to the third-quarter change in real GNP. In contrast, CBI had contributed substantially—\$12 bil-

### Selected Interest Rates

CHART 5



\*At end of the month.  
U.S. Department of Commerce, Bureau of Economic Analysis

Data: FRB, FHLBB  
81-10-5

lion—to the second-quarter GNP change.

Motor vehicle inventories accounted for a substantial part of CBI (table 8). In the first quarter, motor vehicle inventories were drawn down by design; rebates on a wide range of models were initiated for this purpose. In the second quarter, inventories accumulated, and at a substantial rate—on specific models early in the quarter and more widely spread late in the quarter as sales weakened. A second round of rebates and other price discounts in the third quarter helped reduce inventories, which built up sharply in the first part of the quarter. (See “Motor Vehicles, Model Year 1981.”)

Nonvehicle inventory changes are more difficult to interpret. In the first and second quarters, the rate of accumulation was roughly the same and was moderate. In the first quarter, accumulation was centered in manufacturing, and in the second it was somewhat more widespread. In the third quarter, the rate of accumulation was stepped up; the accumulation was widespread but there was some concentration in nondurable retail trade. These quarters of accumulation, in combination with generally weak sales in the second and third quarters, have pushed inventory-sales ratios up—but not to the high levels reached in the second quarter of 1980.

### Real net exports

Net exports dropped sharply in the third quarter, as they had in the second. The declines—\$6½ billion and \$4½ billion, respectively—were largely in merchandise trade. These declines were due to declines in exports in combination with continued increases in imports.

In merchandise exports, the changes have been large in two of the three quarters of this year. An increase of \$3½ billion in the first quarter was primarily due to an unusually large increase in agricultural products. In the second quarter, when a decline of \$1½ billion was registered, exports of agricultural products turned down, more than offsetting an increase in nonagricultural exports. The nonagricultural exports increase was largely in capital

**Table 8.—Real Change in Business Inventories**

[Billions of constant (1972) dollars, seasonally adjusted at annual rates]

	1981		
	I	II	III
Change in business inventories.....	-1.4	10.8	10.3
Motor vehicles.....	-6.0	6.8	-1.1
Autos.....	-5.7	6.6	-.1
Trucks.....	-.3	.2	-1.0
Other.....	4.6	4.0	11.4

NOTE.—Changes in motor vehicles inventories are from National Income and Product Accounts tables 1.14-1.15 (autos) and 1.16-1.17 (trucks).

goods and autos; the increase in capital goods was more than accounted for by a jump in shipments of aircraft. In the third quarter, a \$5 billion decline reflected a further drop in agricultural exports and widespread downturns in nonagricultural exports, to which aircraft contributed substantially. Exports in general were held down by the appreciation of the dollar. In addition, agricultural exports were affected by several specific factors, including abundant crops abroad, and nonagricultural exports were held down by depressed economic activity in many foreign countries.

In merchandise imports, petroleum changed little in the first and second quarters and resumed its downtrend in the third. An average of 6.0 million barrels per day was imported, compared with 6.1 million barrels a year ago and 8.6 million barrels 2 years ago. (Third-quarter imports included purchases for the strategic petroleum reserve, which were resumed in the fourth quarter of 1980.) Nonpetroleum imports were stimulated by the appreciation of the dollar. Increases each quarter—larger in the second and third than in the first—mainly reflected increases in industrial supplies and materials, capital goods, and consumer goods.

### Government

Real government purchases declined again, although much less than in the second quarter—½ percent at an annual rate compared with 5½ percent. In the second quarter, both Federal purchases and State and local purchases declined;

in the third, Federal purchases were up, but were more than offset by a continued decline in State and local purchases.

In Federal purchases, the third-quarter increase was in defense purchases; nondefense purchases were flat. The agricultural price support operations of the Commodity Credit Corporation, as they moved from net redemptions of loans to net extensions, resulted in a \$1 billion increase. This increase was offset in nondefense purchases by declines in the services categories. Purchases of the services of employees, i.e., employee compensation, which accounted for about 45 percent of Federal nondefense purchases, continued to edge down. Since the third quarter of 1980, they have declined 4 percent. Purchases of other services include research and development, travel, rent, utilities, and communications, and accounted for about 35 percent of nondefense purchases. They declined more than compensation in the third quarter, as they had in recent quarters; since the third quarter of 1980, they have declined 16 percent.

The declines in State and local purchases were due to structures and, in the third quarter, to compensation of employees. A major factor in both the second and third quarters was reduced Federal support. Employee compensation reflected the phasing out of employees hired previously under the Comprehensive Employment and Training Act, and structures reflected the limitation of growth in grants-in-aid supporting specific types of construction and the elimination of the State portion of general revenue sharing. In addition, construction was held down by the persistence of high interest rates.

*NIPA Federal sector.*—Changes in current-dollar Federal receipts and expenditures are shown in table 9. Expenditures increased \$28½ billion, compared with an increase of only \$4 billion in the second quarter. The major factor in the increase, and also in the step-up from the second quarter, was transfer payments. They increased \$17½ billion, of which \$16½ billion was due to the cost-of-living increases mentioned earlier. Purchases of goods and services in-

creased \$8 billion after a second-quarter decline of \$2 billion. Defense purchases accounted for some of the swing; as noted earlier, they increased more in the third quarter than in the second. Most of the swing, however, was due to the operations of the Commodity Credit Corporation. Net interest paid increased \$6 billion, roughly twice as much as in the second quarter, following the course of Federal interest paid. Grants-in-aid to State and local governments declined \$2½ billion, continuing the declines earlier in the year.

Receipts increased much more than in the second quarter. Corporate profits tax accruals probably changed little, but had declined \$10 billion in the second quarter, reflecting a decline in profits and the impact of the tax reductions under the Economic Recovery Tax Act of 1981. Personal taxes increased \$13½ billion and contributions for social insurance increased \$3 billion; both increases were larger than in the second quarter because of the larger increase in wages and salaries. Indirect business taxes, in contrast, declined. This decline, and their second-quarter increase,

**Table 9.—Federal Government Receipts and Expenditures, NIPA Basis: Change From Preceding Quarter**

[Billions of dollars, based on seasonally adjusted annual rates]

	1981		
	I	II	III
<b>Receipts</b> .....	<b>44.3</b>	<b>3.5</b>	<b>n. a.</b>
Personal tax and nontax receipts.....	10.4	9.8	13.4
Corporate profits tax accruals.....	2.0	-9.8	n. a.
Indirect business tax and nontax accruals.....	11.5	2.0	-1.4
Contributions for social insurance.....	20.3	1.5	3.2
<b>Expenditures</b> .....	<b>23.0</b>	<b>4.2</b>	<b>28.5</b>
Purchases of goods and services.....	9.6	-2.1	8.1
National defense.....	3.6	3.1	6.4
Nondefense.....	6.0	-5.2	1.7
Transfer payments.....	2.9	2.9	17.3
Grants-in-aid to State and local governments.....	-1.7	-6	-2.6
Net interest paid.....	12.5	2.7	5.8
Subsidies less current surplus of government enterprises.....	-4	1.3	-2
Less: Wage accruals less disbursements.....	0	0	.2
<b>Surplus or deficit (-), national income and product accounts</b> .....	<b>21.3</b>	<b>-6</b>	<b>n. a.</b>

n. a. Not available.

NOTE.—Dollar levels are found in the National Income and Product Accounts Tables, table 3. 2.

were accounted for by the windfall profits tax, which reflects changes in the price of domestic crude oil.

The statement that corporate profits tax accruals probably changed little was based on a residual calculation of corporate profits that assumes that the statistical discrepancy in the national

income and product account is the same as in the preceding quarter. On the basis of this calculation of profit tax accruals, it appears that the Federal deficit on a national income and product account basis was about \$13 billion larger than the \$47 billion recorded in the second quarter.

**National Income and Product Accounts Tables**

The tables that follow are presented in eight groups, and the table numbers reflect these groups. The table numbers will also be used in future publications presenting national income and product account estimates. The groups are:

- 1. National product and income
- 2. Personal income and outlays
- 3. Government receipts and expenditures
- 4. Foreign transactions
- 5. Saving and investment
- 6. Product and income by industry
- 7. Implicit price deflators and price indexes
- 8. Supplementary table: Percent change from preceding period for selected items

The abbreviations used in the tables are: CCA<sub>dj</sub> Capital consumption adjustment  
 IVA Inventory valuation adjustment  
 NIPA's National income and product accounts  
<sup>p</sup> Preliminary  
 r Revised

	1979	1980	1980			1981			1979	1980	1980			1981		
			II	III	IV	I	II	III <sup>p</sup>			II	III	IV	I	II	III <sup>p</sup>
			Seasonally adjusted at annual rates								Seasonally adjusted at annual rates					
Billions of dollars								Billions of 1972 dollars								

**Table 1.1-1.2.—Gross National Product in Current and Constant Dollars**

<b>Gross national product</b> .....	2,413.9	2,626.1	2,564.8	2,637.3	2,730.6	2,853.0	2,885.8	2,947.0	1,483.0	1,480.7	1,463.3	1,471.9	1,485.6	1,516.4	1,510.4	1,508.2
<b>Personal consumption expenditures</b> .....	1,510.9	1,672.8	1,626.8	1,682.2	1,751.0	1,810.1	1,829.1	1,888.6	930.9	935.1	919.3	930.8	946.8	960.2	955.1	965.2
Durable goods.....	212.3	211.9	194.4	208.8	223.3	238.3	227.3	240.0	146.6	135.8	126.2	132.6	139.1	146.8	137.4	142.4
Nondurable goods.....	602.2	675.7	664.0	674.2	703.5	720.0	735.3	750.1	354.6	358.4	356.6	354.9	300.4	304.5	367.0	368.2
Services.....	696.3	785.2	768.4	799.2	824.2	845.8	866.5	898.6	429.6	440.9	436.5	443.3	447.3	448.9	450.7	454.6
<b>Gross private domestic investment</b> .....	415.8	395.3	390.9	377.1	397.7	437.1	458.6	449.8	232.6	203.6	200.5	195.3	200.5	211.6	219.7	214.4
<b>Fixed investment</b> .....	398.3	401.2	383.5	393.2	415.1	432.7	435.3	432.2	222.5	206.6	199.2	200.2	207.6	213.1	208.9	204.1
Nonresidential.....	279.7	296.0	289.8	294.0	302.1	315.9	324.6	330.8	163.3	158.4	156.1	155.5	157.0	162.0	161.1	161.0
Structures.....	96.3	108.8	108.4	107.3	111.5	117.2	123.1	127.8	48.5	48.4	48.7	46.8	47.8	49.6	50.4	51.3
Producers' durable equipment.....	183.4	187.1	181.4	186.8	190.7	198.7	201.5	203.1	114.8	110.0	107.4	108.8	109.3	112.4	110.7	109.7
Residential.....	118.6	105.3	93.6	99.2	113.0	116.7	110.7	101.4	59.1	48.1	43.1	44.7	50.6	51.0	47.8	43.2
Nonfarm structures.....	113.9	100.3	88.9	94.5	107.6	111.4	105.4	95.8	56.2	45.2	40.3	41.9	47.5	48.0	44.8	40.2
Farm structures.....	1.8	2.0	1.8	1.7	2.2	2.2	2.1	2.3	.9	.9	.8	.7	1.0	.9	.9	1.0
Producers' durable equipment.....	2.9	3.0	2.9	3.0	3.1	3.2	3.2	3.2	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0
Change in business inventories.....	17.5	-5.9	7.4	-16.0	-17.4	4.5	23.3	17.6	10.2	-2.9	1.3	-5.0	-7.2	-1.4	10.8	10.3
Nonfarm.....	13.4	-4.7	6.1	-12.3	-14.0	6.8	21.5	13.9	7.8	-2.4	.6	-3.1	-5.6	-.3	9.9	8.4
Farm.....	4.1	-1.2	1.3	-3.7	-3.4	-2.4	1.8	3.8	2.4	-5	.7	-1.8	-1.5	-1.1	.9	1.9
<b>Net exports of goods and services</b> .....	13.4	23.3	17.1	44.5	23.3	29.2	20.8	18.0	37.7	52.0	51.7	57.6	48.5	50.9	44.2	39.5
Exports.....	281.3	339.8	333.3	342.4	346.1	367.4	368.2	362.8	146.9	161.1	160.5	160.5	157.4	162.5	161.5	157.9
Imports.....	267.9	316.5	216.2	297.9	322.7	338.2	347.5	344.8	109.2	109.1	108.9	102.8	108.9	111.6	115.4	118.4
<b>Government purchases of goods and services</b> .....	473.8	534.7	530.0	533.5	558.6	576.5	577.4	590.5	281.8	290.0	291.9	288.2	289.8	293.6	289.5	289.1
Federal.....	167.9	198.9	198.7	194.9	212.0	221.6	219.5	227.7	101.7	108.1	110.7	106.9	107.4	111.2	108.7	110.2
National defense.....	111.2	131.7	128.7	131.4	141.6	145.2	148.2	154.6	67.1	70.9	70.9	70.9	71.9	72.1	72.6	74.0
Nondefense.....	56.7	67.2	70.0	63.5	70.4	76.4	71.3	73.0	34.6	37.2	39.7	35.9	35.4	39.0	36.1	36.1
State and local.....	305.9	335.8	331.3	338.6	346.6	354.9	357.9	362.9	180.1	181.9	181.2	181.3	182.4	182.5	180.7	178.9

**Table 1.3-1.4.—Gross National Product by Major Type of Product in Current and Constant Dollars**

<b>Gross national product</b> .....	2,413.9	2,626.1	2,564.8	2,637.3	2,730.6	2,853.0	2,885.8	2,947.0	1,483.0	1,480.7	1,463.3	1,471.9	1,485.6	1,516.4	1,510.4	1,508.2
Final sales.....	2,396.4	2,632.0	2,557.4	2,653.4	2,748.0	2,848.5	2,862.5	2,929.4	1,472.9	1,483.6	1,462.0	1,476.9	1,492.7	1,517.8	1,499.6	1,497.9
Change in business inventories.....	17.5	-5.9	7.4	-16.0	-17.4	4.5	23.3	17.6	10.2	-2.9	1.3	-5.0	-7.2	-1.4	10.8	10.3
<b>Goods</b> .....	1,055.9	1,130.4	1,106.4	1,129.4	1,169.0	1,247.5	1,257.0	1,281.9	674.5	665.2	658.1	657.5	662.9	688.9	686.3	685.1
Final sales.....	1,038.5	1,136.3	1,099.0	1,145.4	1,186.3	1,243.1	1,223.7	1,264.3	664.3	668.1	656.8	662.4	670.1	69.3	675.5	674.9
Change in business inventories.....	17.5	-5.9	7.4	-16.0	-17.4	4.5	23.3	17.6	10.2	-2.9	1.3	-5.0	-7.2	-1.4	10.8	10.3
<b>Durable goods</b> .....	451.2	458.6	444.6	456.5	476.7	501.4	516.9	514.9	296.9	279.4	270.8	274.6	281.8	289.3	288.6	283.0
Final sales.....	439.7	462.6	441.3	464.9	476.0	505.5	498.3	505.3	290.2	281.3	270.1	278.4	281.5	292.5	279.7	278.9
Change in business inventories.....	11.5	-4.0	3.3	-8.4	-7.7	-4.2	18.5	9.6	6.7	-1.9	.7	-3.8	.3	-3.1	8.9	4.1
<b>Nondurable goods</b> .....	604.7	671.9	661.8	672.9	692.2	746.1	740.1	767.0	377.5	385.7	387.3	382.9	381.1	399.6	397.7	402.2
Final sales.....	598.8	673.7	657.7	680.5	710.3	737.5	735.3	758.9	374.1	386.8	386.7	384.0	388.6	397.9	395.8	396.0
Change in business inventories.....	6.0	-1.8	4.1	-7.7	-18.1	8.6	4.8	8.0	3.5	-1.1	.6	-1.1	-7.5	1.7	1.9	6.2
<b>Services</b> .....	1,097.2	1,229.6	1,205.6	1,249.0	1,285.3	1,317.1	1,344.7	1,388.0	678.0	695.7	690.6	699.9	701.7	703.6	704.7	708.6
<b>Structures</b> .....	260.8	266.0	252.8	258.9	276.4	288.4	284.1	277.1	130.6	119.8	114.6	114.5	121.0	123.9	119.4	114.4
<b>Addenda:</b>																
Gross domestic purchases <sup>1</sup> .....	2,400.5	2,602.8	2,547.7	2,592.8	2,707.3	2,823.8	2,865.1	2,929.0	1,445.3	1,428.7	1,411.6	1,414.3	1,437.1	1,465.6	1,464.2	1,468.6
Final sales to domestic purchasers <sup>1</sup> .....	2,383.0	2,608.7	2,540.3	2,608.8	2,724.6	2,819.3	2,841.8	2,911.4	1,435.1	1,431.7	1,410.4	1,419.2	1,444.2	1,466.9	1,453.5	1,458.4

1. Gross domestic purchases equals GNP less exports plus imports; final sales to domestic purchasers equals final sales less exports plus imports.



**Table 1.13.—Gross Domestic Product of Corporate Business in Current Dollars and Gross Domestic Product of Nonfinancial Corporate Business in Current and Constant Dollars**

	1979	1980	1980			1981				1979	1980	1980			1981														
			II	III	IV	I	II	III <sup>a</sup>				II	III	IV	I	II	III <sup>a</sup>												
			Seasonally adjusted at annual rates									Seasonally adjusted at annual rates																	
Billions of dollars															Billions of dollars														
Gross domestic product of corporate business.....	1,494.9	1,616.5	1,576.7	1,617.5	1,688.0	1,774.8	1,797.1	-----	Net domestic product.....	1,269.5	1,369.3	1,332.7	1,369.1	1,431.7	1,513.1	1,532.6	-----												
Capital consumption allowances with CCAdj.....	155.4	175.4	173.0	178.4	183.2	187.5	194.6	200.6	Indirect business tax and nontax liability plus business transfer payments less subsidies.....	133.6	152.5	147.7	155.4	165.1	179.2	182.1	185.0												
Net domestic product.....	1,339.5	1,441.1	1,403.7	1,439.0	1,504.8	1,587.3	1,602.5	-----	Domestic income.....	1,135.9	1,216.9	1,185.0	1,213.6	1,266.6	1,333.9	1,350.5	-----												
Indirect business tax and nontax liability plus business transfer payments less subsidies.....	139.6	159.3	154.4	162.4	172.5	187.2	190.2	193.3	Compensation of employees.....	954.0	1,037.2	1,018.0	1,034.8	1,078.5	1,121.3	1,140.6	1,166.8												
Domestic income.....	1,199.8	1,281.8	1,249.3	1,276.6	1,332.4	1,400.1	1,412.2	-----	Wages and salaries.....	798.9	864.2	847.9	860.9	898.2	930.7	946.5	967.9												
Compensation of employees.....	1,011.5	1,103.1	1,083.0	1,101.7	1,147.8	1,193.3	1,214.0	1,242.0	Supplements to wages and salaries.....	155.2	172.9	170.1	173.9	180.4	190.5	194.1	198.9												
Wages and salaries.....	845.9	917.9	900.8	915.2	954.6	989.1	1,006.0	1,028.9	Corporate profits with IVA and CCAdj.....	136.7	123.6	112.5	121.2	128.2	152.1	148.5	-----												
Supplements to wages and salaries.....	165.6	185.2	182.2	186.4	193.2	204.1	208.0	213.1	Profits before tax.....	193.4	183.8	158.6	177.9	191.3	202.9	181.9	-----												
Corporate profits with IVA and CCAdj.....	166.5	151.5	140.0	147.0	155.6	177.6	167.6	-----	Profits tax liability.....	69.7	63.1	52.0	60.3	65.9	68.1	57.8	-----												
Profits before tax.....	225.0	214.4	188.6	206.7	221.8	231.5	206.2	-----	Profits after tax.....	123.7	120.6	106.6	117.6	125.4	134.8	124.1	-----												
Profits tax liability.....	87.6	82.3	71.5	78.5	85.2	87.7	76.4	-----	Dividends.....	37.3	40.4	41.1	40.8	42.7	46.9	48.8	52.4												
Profits after tax.....	137.4	132.0	117.1	128.2	136.6	143.8	129.9	-----	Undistributed profits.....	86.3	80.3	65.5	76.8	82.7	87.9	75.4	-----												
Dividends.....	34.9	37.4	37.9	37.9	39.5	43.7	45.5	49.0	IVA.....	-42.6	-45.7	-31.1	-41.7	-48.4	-39.2	-24.0	-27.2												
Undistributed profits.....	102.5	94.6	79.3	90.3	97.1	100.1	84.3	-----	CCAdj.....	-15.9	-17.2	-17.6	-17.9	-14.7	-11.6	-11.4	-9.9												
IVA.....	-42.6	-45.7	-31.1	-41.7	-48.4	-39.2	-24.0	-27.2	Net interest.....	21.9	27.2	26.3	27.9	29.0	29.3	30.7	31.9												
CCAdj.....	-15.9	-17.2	-17.6	-17.9	-17.8	-14.7	-14.7	-13.4																					
Net interest.....	21.9	27.2	26.3	27.9	29.0	29.3	30.7	31.9																					
Gross domestic product of financial corporate business.....	77.9	81.3	80.4	79.7	83.3	84.7	80.8	-----	Billions of 1972 dollars																				
Gross domestic product of nonfinancial corporate business.....	1,417.0	1,535.2	1,496.3	1,537.7	1,604.7	1,690.1	1,716.3	-----	Gross domestic product of nonfinancial corporate business.....	873.3	867.2	853.2	860.4	876.9	901.0	901.2	-----												
Capital consumption allowances with CCAdj.....	147.5	165.9	163.6	168.6	173.0	177.1	183.7	189.2	Capital consumption allowances with CCAdj.....	84.6	88.1	87.6	88.5	89.4	90.4	91.2	92.1												
									Net domestic product.....	788.7	779.0	765.7	771.9	787.5	810.6	810.0	-----												
									Indirect business tax and nontax liability plus business transfer payments less subsidies.....	92.7	95.4	94.1	95.3	97.2	97.5	96.7	97.7												
									Domestic income.....	696.0	683.6	671.6	676.5	690.3	713.1	713.3	-----												

**Table 1.14-1.15.—Auto Output in Current and Constant Dollars**

	1979	1980	1980			1981				1979	1980	1980			1981														
			II	III	IV	I	II	III <sup>a</sup>				II	III	IV	I	II	III <sup>a</sup>												
			Seasonally adjusted at annual rates									Seasonally adjusted at annual rates																	
Billions of dollars															Billions of 1972 dollars														
Auto output.....	68.0	60.2	53.6	54.3	68.8	68.1	73.6	75.0	46.8	38.6	34.6	34.6	42.8	42.8	44.3	44.3													
Final sales.....	69.2	62.2	51.5	57.8	65.5	77.9	62.7	75.4	47.3	39.9	33.5	36.8	40.9	48.5	37.8	44.4													
Personal consumption expenditures.....	65.3	61.8	50.7	58.7	66.1	75.6	63.3	74.3	41.3	36.5	30.4	34.3	37.5	42.8	34.2	39.1													
Producers' durable equipment.....	13.2	12.4	11.0	13.3	12.5	13.7	12.9	15.2	9.9	8.5	7.3	8.6	8.9	9.9	8.8	10.4													
Net exports.....	-1.0	-1.2	-1.0	-1.5	-1.3	-1.2	-1.2	-1.4	-4.4	-5.5	-4.6	-6.6	-6.0	-4.7	-5.6	-5.5													
Government purchases.....	8.8	8.8	8.8	8.8	8.8	8.8	8.8	7.7	7.7	7.7	7.7	8.4	8.3	7.2	8.0	8.0													
Change in business inventories.....	-1.2	-1.9	2.0	-3.5	3.2	-9.8	10.9	-3.3	-5.5	-1.3	1.0	-2.2	1.9	-5.7	6.6	-1.1													
New.....	-1.0	-1.3	3.4	-3.8	3.5	-10.8	12.5	-9.9	-4.4	-9.9	1.8	-2.4	2.1	-6.2	7.3	-4.4													
Used.....	-0.2	-0.6	-1.4	0.3	-0.3	1.0	-1.6	0.6	-1.1	-0.3	-0.8	0.2	-0.1	0.4	-0.7	0.3													
Addenda:																													
Domestic output of new autos <sup>1</sup> .....	57.8	48.8	43.0	45.3	55.4	52.2	59.1	61.5	38.7	30.2	26.8	27.3	33.7	31.8	34.8	35.4													
Sales of imported new autos <sup>2</sup> .....	19.4	21.7	18.2	21.2	23.2	26.3	23.5	24.1	12.9	13.5	11.4	12.9	14.1	16.0	13.8	13.9													

**Table 1.16-1.17.—Truck Output in Current and Constant Dollars**

	1979	1980	1980			1981				1979	1980	1980			1981														
			II	III	IV	I	II	III <sup>a</sup>				II	III	IV	I	II	III <sup>a</sup>												
			Seasonally adjusted at annual rates									Seasonally adjusted at annual rates																	
Billions of dollars															Billions of 1972 dollars														
Truck output <sup>1</sup> .....	37.8	25.7	23.8	23.2	27.7	27.0	28.5	25.2	22.3	13.8	12.8	12.2	14.3	13.6	13.9	12.0													
Final sales.....	37.7	27.8	26.1	27.5	26.8	27.6	28.1	27.4	22.3	14.9	14.1	14.5	13.7	13.9	13.7	13.0													
Personal consumption expenditures.....	11.4	7.9	7.3	7.9	7.5	7.8	8.2	8.2	7.6	4.9	4.5	4.8	4.5	4.7	4.8	4.8													
Producers' durable equipment.....	23.7	17.6	16.1	18.0	16.8	16.9	17.4	17.8	13.3	9.1	8.4	9.1	8.2	8.0	8.0	8.0													
Net exports.....	-4.4	-1.1	-0.7	-1.9	-1.0	-0.7	-1.1	-2.5	-4.4	-8.8	-6.6	-1.2	-7.7	-6.6	-8.8	-1.4													
Government purchases.....	3.0	3.3	3.3	3.4	3.5	3.6	3.4	3.2	1.9	1.6	1.5	1.6	1.6	1.7	1.5	1.4													
Change in business inventories.....	0.1	-2.1	-2.2	-4.3	0.9	-0.6	0.4	-2.2	0.1	-1.2	-1.3	-2.2	0.5	-0.3	0.2	-1.0													

Table 1.14-1.15:

1. Consists of final sales and change in business inventories of new autos produced in the United States.  
2. Consists of personal consumption expenditures, producers' durable equipment, and government purchases.

Table 1.16-1.17:

1. Includes new trucks only.

	1979	1980	1980			1981		
			II	III	IV	I	II	III*
			Seasonally adjusted at annual rates					
Billions of dollars								

Table 2.1.—Personal Income and Its Disposition

Personal income.....	1,943.8	2,160.2	2,114.5	2,182.1	2,256.2	2,319.8	2,368.5	2,440.0
Wage and salary disbursements.....	1,236.1	1,343.7	1,320.4	1,341.8	1,397.8	1,442.9	1,467.0	1,497.8
Commodity-producing industries.....	437.9	465.4	456.0	460.1	484.0	501.3	508.1	520.4
Manufacturing.....	333.4	350.7	343.2	346.7	364.0	377.4	386.7	394.5
Distributive industries.....	303.0	328.9	323.2	329.2	340.6	351.9	357.8	364.7
Service industries.....	259.2	295.7	290.8	298.7	310.0	322.5	330.5	338.2
Government and government enterprises.....	236.1	253.6	250.5	253.9	263.3	267.1	270.5	274.6
Other labor income.....	118.6	137.1	135.1	139.1	143.5	148.0	151.8	156.3
Proprietors' income with IVA and CCAdj.....	131.6	130.6	124.9	129.7	134.0	132.1	134.1	135.4
Farm.....	30.8	23.4	23.3	22.1	22.5	18.9	21.7	23.1
Nonfarm.....	100.7	107.2	101.6	107.6	111.6	113.2	112.5	112.3
Rental income of persons with CCAdj.....	30.5	31.8	31.5	32.0	32.4	32.7	33.3	33.9
Personal dividend income.....	48.6	54.4	54.2	55.1	56.1	58.0	60.2	63.0
Personal interest income.....	209.6	256.3	253.6	261.8	269.7	288.7	300.9	315.8
Transfer payments.....	249.4	294.2	280.7	310.7	313.9	319.6	324.2	342.7
Old-age, survivors, disability, and health insurance benefits.....	131.8	153.8	144.7	163.2	165.3	169.8	172.0	188.5
Government unemployment insurance benefits.....	9.8	16.0	16.0	19.0	17.5	15.6	15.6	14.8
Veterans benefits.....	14.4	15.0	14.6	14.9	15.5	15.9	15.9	15.9
Government employees retirement benefits.....	37.0	42.8	42.3	43.1	45.7	46.7	48.5	48.9
Other transfer payments.....	56.4	66.7	63.0	70.5	69.9	71.7	72.3	74.7
Aid to families with dependent children.....	11.0	12.4	12.0	12.8	13.1	13.3	13.6	13.9
Other.....	45.4	54.3	51.0	57.7	56.8	58.3	58.7	60.8
Less: Personal contributions for social insurance.....	80.6	87.9	85.9	88.1	91.2	102.3	103.1	104.9
Less: Personal tax and nontax payments.....	302.0	338.5	330.3	341.5	359.2	372.0	382.9	399.9
Equals: Disposable personal income.....	1,641.7	1,821.7	1,784.1	1,840.6	1,897.0	1,947.8	1,985.6	2,040.1
Less: Personal outlays.....	1,555.5	1,720.4	1,674.1	1,729.2	1,799.4	1,858.9	1,879.0	1,939.9
Personal consumption expenditures.....	1,510.9	1,672.8	1,626.8	1,682.2	1,751.0	1,810.1	1,829.1	1,888.6
Interest paid by consumers to business.....	43.7	46.4	46.3	46.0	46.8	47.8	48.9	50.2
Personal transfer payments to foreigners (net).....	1.0	1.2	1.0	1.0	1.6	1.0	1.0	1.0
Equals: Personal saving.....	86.2	101.3	110.0	111.4	97.6	88.9	106.6	100.2
Addenda:								
Disposable personal income: Total, billions of 1972 dollars.....	1,011.5	1,018.4	1,008.2	1,018.5	1,025.8	1,033.3	1,036.8	1,042.6
Per capita:								
Current dollars <sup>1</sup> .....	7,293	8,002	7,848	8,074	8,299	8,504	8,651	8,865
1972 dollars <sup>1</sup> .....	4,493	4,473	4,435	4,468	4,488	4,511	4,517	4,530
Population (millions) <sup>1</sup> .....	225.1	227.7	227.3	228.0	228.6	229.1	229.5	230.1
Personal saving as percentage of disposable personal income.....	5.2	5.6	6.2	6.1	5.1	4.6	5.4	4.9

Table 3.14:

NOTE.—In this table interest and dividends received included in receipts; in tables 3.2 and 3.3 interest received and dividends received are netted against expenditures.

	1979	1980	1980			1981		
			II	III	IV	I	II	III*
			Seasonally adjusted at annual rates					
Billions of dollars								

Table 2.2-2.3.—Personal Consumption Expenditures by Major Type of Product in Current and Constant Dollars

Personal consumption expenditures.....	1,510.9	1,672.8	1,626.8	1,682.2	1,751.0	1,810.1	1,829.1	1,888.6
Durable goods.....	212.3	211.9	194.4	208.8	223.3	233.3	227.3	240.0
Motor vehicles and parts.....	95.5	89.9	77.5	87.0	94.6	105.4	93.4	105.2
Furniture and household equipment.....	81.1	84.6	81.3	84.6	88.9	92.3	92.4	93.2
Other.....	35.8	37.3	35.6	37.2	39.8	40.6	41.6	41.6
Nondurable goods.....	602.2	675.7	664.0	674.2	703.5	726.0	735.3	750.1
Food.....	312.1	345.7	338.4	347.7	360.4	372.5	377.8	386.6
Clothing and shoes.....	98.9	104.8	102.3	105.3	109.4	113.4	115.8	116.9
Gasoline and oil.....	68.4	89.0	90.9	85.3	90.5	93.5	92.4	95.3
Other nondurable goods.....	122.9	136.2	132.4	136.0	143.3	146.6	149.4	151.2
Fuel oil and coal.....	16.0	19.8	19.2	20.7	20.5	20.5	21.0	20.6
Other.....	106.9	116.4	113.1	115.3	122.7	126.1	128.4	130.6
Services.....	696.3	785.2	768.4	799.2	824.2	845.8	866.5	898.6
Housing.....	241.9	272.0	267.3	275.7	285.3	293.6	302.1	310.8
Household operation.....	98.7	111.6	109.3	116.1	116.9	118.1	123.4	130.7
Electricity and gas.....	47.3	55.7	54.5	59.3	58.8	58.4	61.5	66.2
Other.....	51.3	58.0	54.8	56.8	58.2	59.7	61.9	64.5
Transportation.....	57.2	64.1	61.6	65.8	67.5	67.6	67.9	70.3
Other.....	298.5	337.5	330.2	341.5	354.5	366.5	373.0	386.8
Billions of 1972 dollars								
Personal consumption expenditures.....	930.9	935.1	919.3	930.8	946.8	960.2	955.1	965.2
Durable goods.....	146.6	135.8	126.2	132.6	139.1	146.8	137.4	142.4
Motor vehicles and parts.....	61.7	53.8	47.0	51.5	54.6	60.6	51.7	58.9
Furniture and household equipment.....	59.8	58.9	57.0	58.4	60.7	62.1	61.2	61.0
Other.....	25.1	23.1	22.2	22.6	23.8	24.1	24.5	24.5
Nondurable goods.....	354.6	358.4	356.6	354.9	360.4	364.5	367.0	368.2
Food.....	176.7	181.5	182.2	180.1	179.9	182.9	185.0	185.1
Clothing and shoes.....	76.6	78.0	76.7	78.3	80.1	82.8	84.0	83.8
Gasoline and oil.....	28.1	26.2	26.4	25.2	26.3	24.9	24.4	25.8
Other nondurable goods.....	73.2	72.6	71.2	71.4	74.1	74.0	73.6	73.6
Fuel oil and coal.....	4.7	4.2	4.1	4.3	4.2	3.7	3.6	3.6
Other.....	68.5	68.4	67.2	67.0	69.8	70.3	70.0	70.0
Services.....	429.6	440.9	436.5	443.3	447.3	448.9	450.7	454.6
Housing.....	159.3	164.2	163.5	164.8	166.5	168.0	169.6	170.8
Household operation.....	59.6	61.5	61.3	62.6	62.1	61.4	62.4	63.2
Electricity and gas.....	23.1	23.3	23.1	24.1	23.4	22.6	23.2	23.6
Other.....	36.5	38.3	38.2	38.4	38.7	38.8	39.3	39.6
Transportation.....	35.5	34.8	34.1	34.7	35.1	34.8	34.5	35.0
Other.....	175.2	180.4	177.7	181.2	183.6	184.6	184.2	185.7
Billions of dollars								

Table 3.14.—State and Local Government Social Insurance Funds Receipts and Expenditures

Receipts.....	40.2	45.1	43.6	46.0	47.8	49.6	51.5	53.0
Contributions for social insurance.....	28.1	31.5	30.2	32.3	33.7	34.8	35.9	36.9
Employer contribution.....	7.5	7.7	7.0	8.1	8.4	8.6	8.8	8.9
Employee contributions.....	20.7	23.8	23.2	24.3	25.3	26.3	27.1	28.0
Government and government enterprises.....	18.3	21.0	20.5	21.4	22.4	23.2	24.0	24.7
Other.....	2.4	2.8	2.7	2.8	2.9	3.0	3.2	3.3
Interest and dividends received.....	12.1	13.6	13.4	13.7	14.1	14.8	15.6	16.0
Expenditures.....	16.4	18.2	17.9	18.3	18.8	19.2	19.8	20.3
Administrative expenses (purchases of goods and services). Transfer payments to persons.....	.5	.6	.5	.6	.6	.6	.6	.6
Surplus or deficit (—).....	23.9	26.9	25.7	27.7	29.0	30.4	31.7	32.7









Table 6.4.—National Income Without Capital Consumption Adjustment by Industry

Table with columns for years 1979, 1980, and 1981 (II, III, IV) and (I, II, III). Rows include National income without CCAdj, Domestic industries, Private industries, and Government and government enterprises. Units are billions of dollars.

Table 7.1-7.2.—Implicit Price Deflators and Fixed-Weighted Price Indexes, 1972 Weights, for Gross National Product

Table with columns for years 1979, 1980, and 1981 (II, III, IV) and (I, II, III). Rows include Gross national product, Personal consumption expenditures, and Government purchases of goods and services. Values are implicit price deflators (1972=100).

Table 6.20.—Corporate Profits by Industry

Table with columns for years 1979, 1980, and 1981 (II, III, IV) and (I, II, III). Rows include Corporate profits with IVA and CCAdj, Domestic industries, and Rest of the world. Units are billions of dollars.

Table with columns for years 1979, 1980, and 1981 (II, III, IV) and (I, II, III). Rows include Gross national product, Personal consumption expenditures, and Addenda. Values are fixed-weighted price indexes (1972=100).

Table 7.1-7.2: 1. Gross domestic purchases equals GNP less exports plus imports; final sales to domestic purchasers equals final sales less exports plus imports.







# Motor Vehicles, Model Year 1981

**S**ALES of new motor vehicles totaled 11.3 million in model year 1981, down from 11.9 million in 1980. The decline was the third in a row from the record 15.3 million in 1978. Sales of both new passenger cars and new trucks fell further in 1981, reflecting sharp increases in costs associated with the purchase and ownership of a new car as well as adverse general economic conditions. Early in the year, anticipated increases in domestic new car sales failed to materialize, and inventories built up. Price discounts were initiated to stimulate sales and to bring inventories back into line. When inventories again built up, another round of price discounts was initiated at the end of the model year. Sales of imported cars leveled off, but their market share edged up to a record high.

Production of domestic cars followed a smoother course than that of sales in 1981, but for the year was as weak as in 1980. Production of domestic trucks also remained weak.

## New Cars

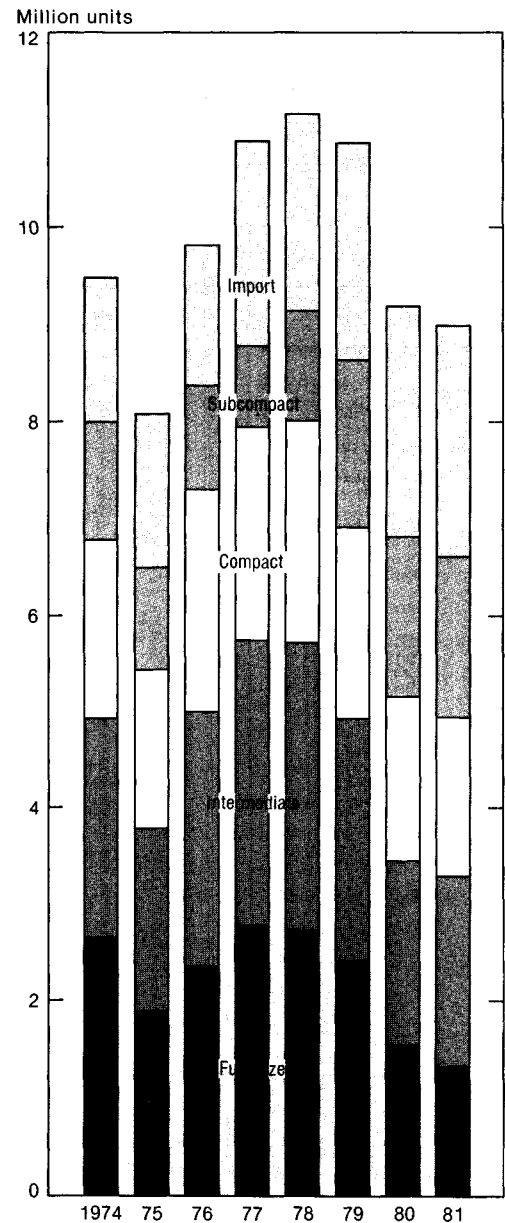
Retail sales of new passenger cars totaled 9.0 million in the 1981 model year, down slightly from 9.2 million in 1980, and far below the 11.0 million recorded in 1977-79 (chart 6). Sales of domestic cars fell from 6.8 million in 1980 to 6.6 million in 1981, and sales of imported cars were flat at 2.4 million. On a quarterly basis, new car sales were 9.1 million (seasonally adjusted annual rate) in the fourth quarter of 1980, increased to 10.1 million in the first quarter of 1981, plunged to 7.8 million in the second quarter, and returned to 9.1 million in the third.

Sharp increases in costs associated with the purchase and ownership of a new car and adverse general economic conditions were major factors in the weakness of new car sales in 1981, as in 1980. Among the adverse economic conditions, uncertainty about job security and income losses continued. The unemployment rate has hovered about 7½ percent since the second quarter of 1980. Also, monetized capital gains on existing residences, which had been available to support consumer purchases, were down, as increases in housing prices slowed and the volume of transactions declined.

The average unit sales price of a domestic car was almost \$9,000 in the third quarter of 1981, up 28 percent from the third quarter of 1979. Items tied to the sales price, such as taxes and insurance, were up sharply. Gasoline prices climbed 41 percent over the 2-year period. This large increase probably held down driving and prolonged the life of existing cars, but it probably also encouraged the trade-in of existing cars for the more fuel efficient new cars. The cost of new car financing was up substantially due to adverse financial conditions.

*Financial conditions.*—Inasmuch as almost three-fourths of all new cars are bought on credit, record-high interest rates and constraints on the availability of credit contributed to the weakness of new car sales in both 1980 and 1981. As can be seen from chart 7, the finance rate on selected consumer auto installment loans by commercial banks was stable at about 11-11½ percent prior to mid-1979. The rate increased rapidly during the 1980 model year, peaking at 15½ percent, before subsiding. The increase resumed in the fourth quarter of

CHART 6  
New Passenger Car Sales  
by Model Year



Note.—Based on October through September sales for each model year. Data: Motor Vehicle Manufacturers Association of the United States, Inc. and Ward's Automotive Reports.



1980 and reached a record 17 percent in the third quarter of 1981. On a 48-month \$6,000 loan, the increase in the finance rate since mid-1979 would translate into a 10-percent increase in the monthly payment for a new car. The combination of rising new car prices and finance rates kept some buyers from qualifying for auto loans.

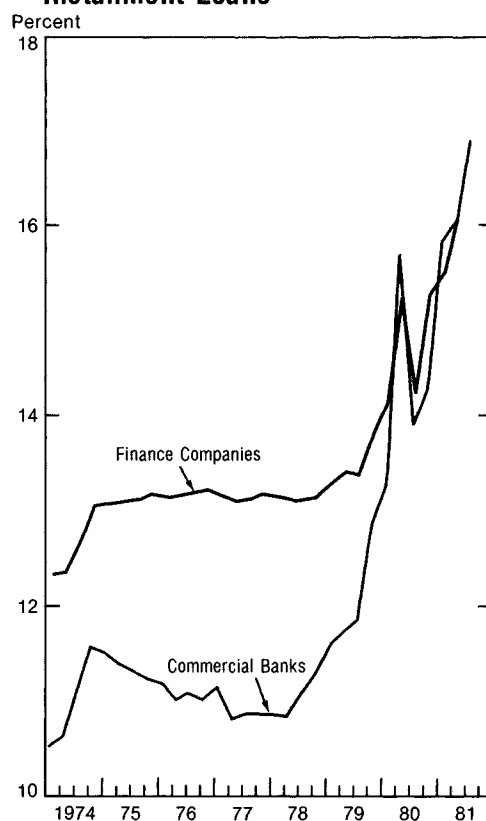
Commercial banks, which had been the principal source of auto loans in the 1970's, cut back sharply on their lending. Extensions of auto installment loans by commercial banks fell from \$4.39 billion (seasonally adjusted) in the third quarter of 1979 to \$3.36 billion in the third quarter of 1980. In July-August 1981, extensions averaged \$3.67 billion. The commercial bank share of total auto loan extensions fell sharply, from 55 percent in 1979 to 48 percent in 1980 and to 44 percent in July-August 1981.

As commercial bank lending dropped, finance companies—whose loans are dominated by automakers' subsidiaries—stepped-up their lending and held down their finance rates to support new car sales. Their share of loan extensions increased from 25 percent in the third quarter of 1979 to 32 percent in 1980 and to 37 percent in July-August 1981. Prior to 1980, the finance rate charged by these companies exceeded that charged by commercial banks by about 1-2 percentage points. As commercial bank finance rates soared, the gap was closed.

### Domestic and import sales

The weakness in new car sales in the 1981 model year, as in the 1980 model year, was pervasive; sales of all domestic size categories except subcompacts were well below their 1977-1979 levels. Full-size car sales fell from 1.6 million in 1980 to 1.3 million, and their share of total sales dropped from 17 percent to 15 percent, a record low. Despite improvements in fuel efficiency due to reductions in exterior size and weight—"downsizing"—and increased use of diesel engines, many buyers have traded down to smaller cars. The number of full-size models available continues to decline; several more models are being phased out in 1982.

**CHART 7**  
**Finance Rates on New Auto Installment Loans**



Note.—Most common finance rates (annual percentage rate) at reporting institutions.

Data: Federal Reserve Board.

U.S. Department of Commerce, Bureau of Economic Analysis 81-10-7

Intermediate car sales leveled off at 1.9 million and a 21 percent market share, after declining sharply the previous 2 years. As in the case of full-size cars, the declines had reflected the trading down to small cars. The introduction of several restyled models in 1982 and the phasing out of full-size models are likely to hold up intermediate sales in the near future.

After edging down for 2 years, compact car sales leveled off at 1.7 million, and they maintained an 18½ percent share of the market. In the face of declines in total sales, subcompact car sales were 1.7 million in each of the last 3 years, and their market share increased from 16 percent to 19 percent. Over this period, several new and downsized subcompact models were introduced, and additional models are planned. The new models are smaller, lighter, and considerably more fuel efficient than their predecessors. The trading

down to smaller cars is likely to continue.

Imported car sales were unchanged at 2.4 million, after 2 years of strong increase. The increase had been almost entirely in sales of Japanese subcompacts, which accounted for nearly 80 percent of import sales and 21 percent of total new car sales in 1981. These cars are among the most fuel efficient available. The flattening out of sales in 1981 can be attributed to the factors that generally weakened the new car market. The Japanese auto agreement probably did not have much impact on the yearly total. Effective for the year beginning April 1, 1981, Japan agreed to limit shipments of cars to the United States to 1.68 million, compared with 1.82 million in the year-earlier period. If new car sales pick up in 1982, the Japanese share of the market could be held down by the limitation of shipments. The first Japanese-owned car plant to be located in the United States is scheduled to open within a year and a half; sales of these cars will be considered domestic sales.

### New car prices

The uneven quarterly pattern in new car sales largely reflected the timing of price increases and of discounts on domestic cars. At the beginning of the 1981 model year, domestic manufacturers raised list prices an average of 4-5½ percent, roughly the same as they had in the previous 2 years. In the fourth quarter of 1980, new car sales showed less strength than the rest of the economy. Nevertheless, new car prices were raised about 1-1½ percent in the beginning of January. In mid-February, in response to stagnating sales and mounting inventories, domestic manufacturers announced extensive cash rebates. The rebates, which included many high-volume intermediate and compact cars, were advertised at about 10 percent of the list price. Dealers were required to contribute a portion of the rebate; because they resisted cutting into their margins, the effective discount to the buyer was probably less than advertised. The rebates, which lasted through most of March, substantially boosted first-quarter sales. An

undetermined portion of the sales boost represented "borrowing" from future periods; buyers who were considering the purchase of a new car took advantage of the temporarily discounted prices. The "borrowing" of sales, an increase in new car prices in April and May that ranged from 2-3½ percent per unit, and record finance rates all contributed to the second-quarter plunge in sales to their lowest level since the recession a year earlier. In mid-August, manufacturers initiated another round of price discounts. The discounts, which consisted of various cash rebates, dealer incentives, and finance subsidies, were designed to clear out excess inventories of old, 1981 models. Price increases on the 1982 domestic models were first announced to be in the range of 5-7½ percent, which would have been somewhat larger than in previous years, but were subsequently scaled back to 4-6 percent.

Prices of imported cars were raised about the same amount as domestics at the beginning of the 1981 model year, and were raised throughout the year. Some price discounting occurred in response to the domestic manufacturers' programs. Over the past year, the appreciation of the dollar against the Japanese yen and the German mark did not lead to a price decrease; the expected effect of appreciation may have counterbalanced strong upward pressures from a tight market for imported cars. Several leading foreign manufacturers have announced increases of 5-7½ percent in the prices of their new, 1982 models.

### Production and inventories

Domestic production in the 1981 model year totaled 6.6 million, about the same as in 1980. Production was weak throughout the year. Many plants operated below capacity: Production lines often ran at less than optimal speeds, single work shifts were common, and temporary closings were frequent. The number of hourly workers on indefinite layoff remained high, beginning the year at 215,000, and ending it at about 160,000.

The large fluctuations in domestic new car sales caused wide swings in inventories and uncertainties in scheduling production in the 1981 model year. At the beginning of the year, domestic inventories were 1,390,000 (seasonally adjusted), and the inventory/sales (I/S) ratio was 2.6, somewhat above the 2.0 level generally preferred by the industry. In the fourth quarter of 1980, domestic production exceeded sales, and inventories edged up to 1,440,000. As a result of the first-quarter rebates, inventories were slashed to 1,090,000, the lowest level in more than a decade, and the I/S ratio plunged to 1.8. Supplies of many models were so low that an increase in production was scheduled in the second quarter despite uncertainty about the course of sales. The second-quarter sales slump resulted in a quick inventory buildup to 1,470,000, and the I/S ratio jumped to 3.2. Initially most of the buildup was in specific models: Stocks of some models that had been depleted were rebuilt; stocks of several intermediate models were added to in preparation for major model changeovers in the third quarter; and stocks of new subcompact models were built up prior to their May introduction. As the sales slump continued, however, the inventory accumulation became more widespread.

### Recent developments and outlook

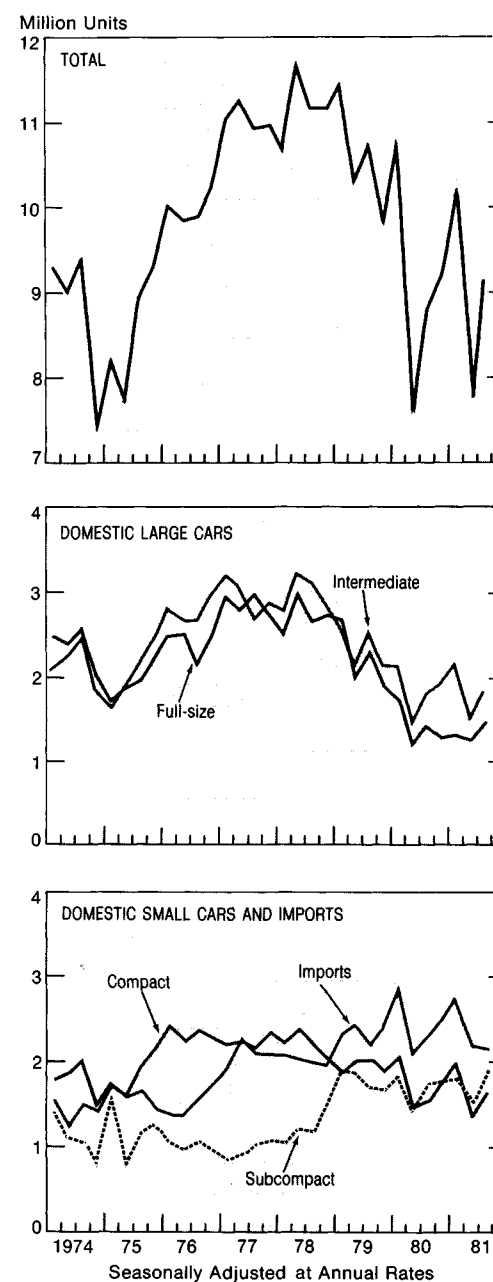
New car sales were weak at the beginning and end of the third quarter, but were boosted in August and early September by the price discount programs. Domestic new car sales totaled 6.9 million for the quarter as a whole, compared with 5.6 million in the second quarter. Sales of all size categories were up: Full-size car sales increased to 1.5 million from 1.3 million, intermediate sales to 1.9 from 1.6 million, compacts to 1.6 from 1.3 million, and subcompacts to 1.9 from 1.5 million (chart 8). Sales of imported cars—at 2.2 million—were unchanged from the second quarter, and their market share fell to 24 percent, the lowest in 2 years.

Inventories of domestic cars were about 1,430,000 (seasonally adjusted), down slightly from the end of the sec-

ond quarter; inventories were run up sharply during the first part of the third quarter and down sharply during the second. The I/S ratio dropped to 2.5, but was still above the preferred level. Inventories of imported cars, especially those of popular Japanese models, were very low by the end of the third quarter.

The near-term outlook for new car sales is not promising. The economy continues to be weak, and interest rates

CHART 3  
Retail Sales of New Passenger Cars



Note.—The components may not add to the total because each category was separately adjusted for seasonal variation.

Data: Motor Vehicle Manufacturers Association of the United States, Inc. and Ward's Automotive Reports; seasonal adjustment by BEA.

U.S. Department of Commerce, Bureau of Economic Analysis.

81-10-6

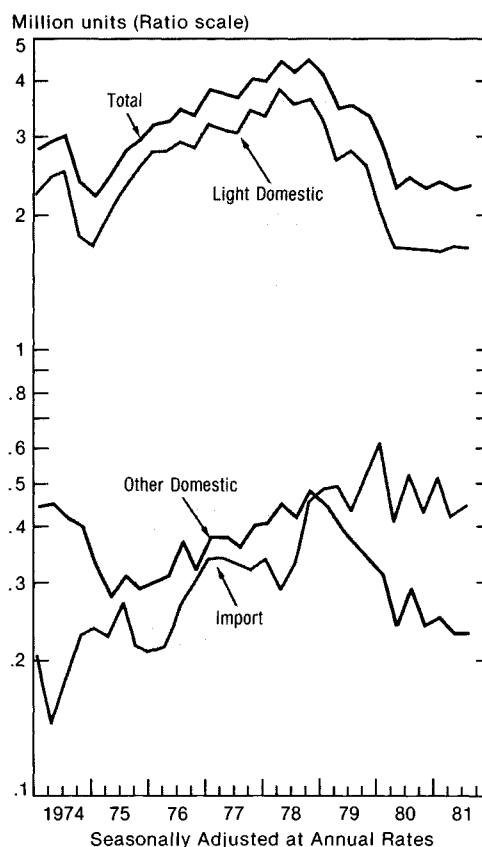
remain high. Despite the price discount programs, sales of domestic cars fell off at the end of the third quarter. Production schedules for the fourth quarter have been reduced to well below the 6.9 million (seasonally adjusted annual rate) produced in the third, indicating that domestic manufacturers expect a slow start in the 1982 model year. Sales of imported cars will be limited by tight supplies of Japanese cars: Inventories are low, and shipments will be restricted by the auto agreement.

### New Trucks

Retail sales of new trucks totaled 2.3 million in the 1981 model year, down from 2.7 million in 1980. Sales of domestic light, domestic "other," and imported trucks all declined. On a quarterly basis, new truck sales fluctuated within 2.3–2.4 million (seasonally adjusted annual rates) from the fourth quarter of 1980 through the third quarter of 1981 (chart 9).

Sales of domestic light trucks (up to 10,000 pounds) fell from 1.9 million in 1980 to 1.6 million in 1981. At 1.6 million, sales were less than one-half their record high of 3.4 million in 1978. Most light trucks are pickups and vans, more than one-half of which are purchased by consumers for personal use. These purchases were affected by the same cost and general economic factors that dampened purchases of new cars. Another reason for the 3-year plunge in domestic light truck sales was their relatively low fuel efficiency: Fuel efficiency improvements for new cars outpaced those for new domestic light trucks; domestic conventional pickups weighed considerably more than imported compact pickups and used much larger engines; and, some domestic trucks are four-wheel drives, which are less fuel efficient. Concerns about fuel efficiency slowed the switch from cars to domestic pickups or vans for personal use, and accelerated the switch from do-

CHART 9  
Retail Sales of New Trucks



Note.—Retail sales of domestic new trucks are classified by gross vehicle weight as light-up to 10,000 pounds, and other-over 10,000 pounds. Import trucks include imports by U.S. manufacturers.  
Data: Motor Vehicle Manufacturers Association of the United States, Inc. and Ward's Automotive Reports; seasonally adjusted by BEA.  
U.S. Department of Commerce, Bureau of Economic Analysis 81-10-9

domestic conventional to imported compact pickups.

Sales of imported trucks declined from a record 0.50 million in the 1980 model year to 0.45 million in 1981, but their share of total light truck sales edged up from 20½ percent to a record 21 percent. A major factor in the decline in sales of imported trucks, which are nearly all Japanese compact pickups, was a change in tariff rulings at the beginning of the model year. Effective August 20, 1980, the U.S. Customs Service reclassified imported trucks without cargo boxes—the form in which virtually all Japanese pickups enter this

country—from "cab chassis," dutiable at 4 percent, to "unfinished trucks," dutiable at 25 percent. This change added nearly \$1,000 to the sales price of these units in model year 1981.

In coming years, domestic manufacturers should be able to increase their share of the light truck market. Continued downsizing of conventional pickups will improve fuel efficiency. Further, domestic compact pickups, comparable to the imports, will be introduced in 1982 and 1983. The first Japanese-owned truck plant to be located in the United States is scheduled to start producing light trucks for the 1983 model year; sales of these trucks will be considered domestic sales.

Sales of "other" trucks (over 10,000 pounds) were weak throughout the 1981 model year. This broad category consists of medium-duty trucks, mostly general delivery trucks and buses, and of heavy-duty trucks, mainly large van trucks and diesel tractors designed to pull trailers. Sales of these trucks fell from 0.30 million in 1980 to 0.24 million in 1981, their lowest level in more than a decade. The decline reflected the generally uncertain economic conditions and high interest rates, which deterred business investment. Imported trucks have begun to make inroads in both the medium- and heavy-duty truck markets.

Production of trucks was weak throughout the 1981 model year, and inventories showed little change. Production of domestic trucks totaled 1.8 million, up only slightly from the 13-year low of 1.7 million registered in 1980. At the beginning of the 1981 model year, inventories of domestic new trucks were 524,000 (seasonally adjusted), and the I/S ratio was 3.3. By the end of the fourth quarter of 1980, inventories had increased to 591,000, and the I/S ratio was up to 3.8. Both declined as production was held down in the first half of 1981. At the end of the third quarter, inventories were 516,000, and the I/S ratio was back down to 3.3.

# State Personal Income, Second Quarter 1981

STATE personal income increased 2.1 percent in the second quarter of 1981. Reflecting the second-quarter weakening in production, nonfarm personal income increased 2.0 percent, after an increase of 3.0 percent in the first. Nonfarm income decelerated in 45 States and accelerated in only 4 States; in Missouri, first- and second-quarter increases were equal.

The deceleration in nonfarm income was large (2.0 percentage points or more compared with a national deceleration

of 1.0 percentage point) in 11 States. Three of these were in the Southeast, four were in New England, and four were in the West (table 1). In all except West Virginia, wage and salary disbursements (payrolls) in construction and trade contributed to the decelerations, and, reflecting these payrolls, so did nonfarm proprietors' income. In all except Idaho and Wyoming, payrolls in services, the finance-insurance-real estate group, and durables manufacturing contributed. In West Virginia and Kentucky, which were the only two States

with second-quarter declines in nonfarm income, the coal strike was a major factor.

Accelerations in nonfarm income occurred in Delaware, Michigan, Alaska, and Illinois. In each, both durables and nondurables manufacturing payrolls contributed. In addition, payrolls in construction and trade (except in Alaska) decelerated less than they did in the United States. In Delaware and Michigan, a second-quarter increase in motor vehicle production after a first-quarter decline was a major factor.

Table 1.—Change in Nonfarm Personal Income and Selected Components

Rank	Nonfarm personal income		Private wage and salary disbursements (payrolls)									Nonfarm proprietors' income	
			Mining	Construction	Trade	Services	Finance, insurance, and real estate	Durables manufacturing	Nondurables manufacturing	Transportation, communication, and public utilities			
	Percent change		Deceleration (-) or acceleration (+) (in percentage points) <sup>1</sup>										
	1980: IV-1981: I	1981: I-1981: II											
United States.....	3.0	2.0	-1.0	-11.9	-5.1	-2.5	-1.7	-1.3	-1.0	-0.9	-0.1	-2.0	
<b>States with large deceleration:</b>													
1 West Virginia.....	2.8	-4.5	-7.3	-65.5	9.4	-7.0	-4.4	-5.7	-6.4	0	-5.0	-1.4	
2 Kentucky.....	3.2	-1.6	-4.8	-57.9	-8.8	-8.0	-9	-3.1	-6.4	2.1	-4.3	-2.9	
3 New Hampshire.....	4.1	.7	-3.4	-27.4	-22.4	-5.0	-3.9	-2.6	-4.7	-13.6	.1	-5.4	
4 Idaho.....	3.9	.8	-3.1	.3	-26.1	-5.6	.3	-1.4	-3.4	-5.2	-4.3	-7.4	
5 Wyoming.....	3.2	.5	-2.7	1.1	-14.5	-7.8	-6.2	-6.4	8.3	-2.7	-1.7	-4.8	
6 Washington.....	3.7	1.1	-2.6	11.6	-15.4	-4.1	-1.5	-1.7	-7.6	2.9	-.5	-3.8	
7 Alabama.....	3.0	.5	-2.5	-45.3	-12.9	-4.2	-3.1	-2.6	-2.1	.6	-2.6	-3.4	
8 Colorado.....	3.8	1.4	-2.4	-.8	-24.0	-5.3	-1.9	-.7	-4.4	-.4	1.0	-4.2	
9 Connecticut.....	3.8	1.6	-2.2	-7.4	-7.1	-4.0	-3.3	-1.6	-3.7	-5.1	-1.4	-2.2	
10 Vermont.....	3.4	1.3	-2.1	11.7	-5.5	-5.7	-3.8	-5.9	-5.6	-3.7	3.3	-2.9	
11 Rhode Island.....	3.7	1.6	-2.1	-7.4	-18.4	-6.0	-2.6	-.6	-2.9	-3.8	2.7	-4.0	
Average.....	3.5	.3	-3.2	-17.0	-13.3	-4.3	-2.8	-2.9	-3.5	-2.7	-1.1	-3.9	
<b>States with acceleration:</b>													
1 Delaware.....	.6	3.3	2.7	-7.4	.1	-.4	-1.3	-4.2	26.0	5.4	.3	-1.4	
2 Michigan.....	2.3	3.1	.8	3.4	-4.0	-.7	-2.5	-2.3	2.6	2.2	-1.8	-2.1	
3 Alaska.....	2.9	3.5	.6	11.4	-2.8	-6.0	-1.2	-1.8	16.7	39.4	-4.2	-2.3	
4 Illinois.....	2.4	2.6	.2	-31.2	-1.3	-.3	.2	-.1	1.5	2.2	-1.4	-1.2	
Average.....	2.0	3.1	1.1	-6.0	-2.0	-1.8	-1.2	-2.1	11.7	12.3	-1.8	-1.8	

1. The difference between the percent change, 1981: I-1981: II, and the percent change, 1980: IV-1981: I.

NOTE.—The industries for which private payrolls are shown (columns 4-11) are ranked by

their decelerations in payrolls in the United States, and the States within the two groupings (large deceleration and acceleration) are ranked by their decelerations or accelerations in nonfarm personal income (column 3).

## State Personal Income

Table 1.—Total Personal Income, States and Region

[Millions of dollars, seasonally adjusted at annual rates]

State and region	1980				1981	
	I	II	III	IV	III	IV
<b>United States</b> .....	<b>2,062,761</b>	<b>2,088,490</b>	<b>2,155,782</b>	<b>2,228,277</b>	<b>2,292,539</b>	<b>2,340,535</b>
<b>New England</b> .....	<b>118,554</b>	<b>120,092</b>	<b>123,984</b>	<b>127,221</b>	<b>131,661</b>	<b>134,118</b>
Connecticut.....	34,335	34,856	35,903	36,672	38,048	38,661
Maine.....	8,340	8,529	8,778	9,126	9,411	9,592
Massachusetts.....	55,406	56,061	58,057	59,447	61,398	62,783
New Hampshire.....	8,108	8,132	8,393	8,674	9,033	9,097
Rhode Island.....	8,490	8,593	8,827	9,089	9,428	9,576
Vermont.....	3,880	3,921	4,026	4,213	4,343	4,409
<b>Mideast</b> .....	<b>409,837</b>	<b>415,781</b>	<b>427,948</b>	<b>440,875</b>	<b>452,942</b>	<b>461,032</b>
Delaware.....	5,814	5,869	6,134	6,453	6,482	6,692
District of Columbia.....	7,251	7,361	7,700	7,900	8,065	8,189
Maryland.....	41,276	42,570	43,992	45,515	46,499	47,344
New Jersey.....	76,782	77,642	79,842	81,940	84,670	86,205
New York.....	171,553	174,377	180,006	184,694	190,075	194,004
Pennsylvania.....	107,162	107,961	110,274	114,373	117,152	118,597
<b>Great Lakes</b> .....	<b>395,121</b>	<b>395,879</b>	<b>408,729</b>	<b>423,178</b>	<b>433,304</b>	<b>443,830</b>
Illinois.....	116,227	119,008	123,234	125,688	128,645	132,031
Indiana.....	48,226	47,717	48,844	51,331	52,903	53,603
Michigan.....	89,863	87,810	90,769	95,463	97,507	100,584
Ohio.....	98,563	98,777	102,034	105,575	108,025	110,198
Wisconsin.....	42,241	42,567	43,848	45,121	46,225	47,414
<b>Plains</b> .....	<b>153,708</b>	<b>153,795</b>	<b>158,134</b>	<b>162,250</b>	<b>166,315</b>	<b>169,847</b>
Iowa.....	26,355	26,281	26,844	27,340	27,935	28,521
Kansas.....	22,721	22,974	23,693	24,467	24,992	25,536
Minnesota.....	38,009	37,964	39,001	39,978	41,091	41,913
Missouri.....	42,509	42,390	43,780	44,927	46,189	47,272
Nebraska.....	13,687	13,641	14,122	14,352	14,694	14,994
North Dakota.....	5,404	5,493	5,536	5,902	5,996	6,119
South Dakota.....	5,024	5,052	5,159	5,284	5,418	5,491
<b>Southeast</b> .....	<b>407,503</b>	<b>414,702</b>	<b>429,948</b>	<b>446,075</b>	<b>459,295</b>	<b>467,380</b>
Alabama.....	28,153	28,271	29,104	30,329	31,126	31,375
Arkansas.....	16,007	15,899	16,640	17,058	17,574	17,981
Florida.....	82,026	84,697	88,819	92,235	95,308	98,288
Georgia.....	41,734	42,156	43,720	45,355	46,765	47,551
Kentucky.....	27,380	27,490	28,274	29,339	30,260	30,926
Louisiana.....	33,190	33,984	35,277	36,698	38,065	39,090
Mississippi.....	15,927	15,964	16,522	16,975	17,413	17,710
North Carolina.....	44,083	45,042	46,388	48,162	49,191	50,560
South Carolina.....	22,283	22,456	23,362	24,227	24,905	25,443
Tennessee.....	34,017	34,798	35,759	37,004	38,052	38,809
Virginia.....	48,035	49,173	50,822	52,888	54,388	55,123
West Virginia.....	14,668	14,772	15,261	15,807	16,248	15,525
<b>Southwest</b> .....	<b>187,372</b>	<b>191,314</b>	<b>198,696</b>	<b>206,347</b>	<b>213,449</b>	<b>219,641</b>
Arizona.....	22,557	23,134	23,720	24,672	25,665	26,099
New Mexico.....	9,946	10,127	10,412	10,750	11,108	11,397
Oklahoma.....	26,468	26,597	27,478	28,484	29,568	30,584
Texas.....	128,402	131,456	137,086	142,441	147,108	151,561
<b>Rocky Mountain</b> .....	<b>56,545</b>	<b>57,772</b>	<b>59,508</b>	<b>61,992</b>	<b>64,243</b>	<b>65,156</b>
Colorado.....	27,580	28,144	29,005	30,146	31,350	31,808
Idaho.....	7,304	7,502	7,777	8,145	8,487	8,567
Montana.....	6,326	6,547	6,659	6,944	7,164	7,313
Utah.....	10,567	10,695	11,001	11,421	11,740	11,939
Wyoming.....	4,768	4,884	5,066	5,338	5,502	5,529
<b>Far West</b> .....	<b>320,272</b>	<b>325,265</b>	<b>334,369</b>	<b>345,193</b>	<b>355,823</b>	<b>363,672</b>
California.....	247,223	251,276	257,838	266,252	274,178	280,754
Nevada.....	8,109	8,115	8,451	8,819	9,182	9,394
Oregon.....	24,061	24,146	24,741	25,506	26,185	26,753
Washington.....	40,879	41,728	43,340	44,616	46,277	46,771
Alaska.....	4,824	4,754	4,990	5,296	5,450	5,638
Hawaii.....	9,024	9,136	9,477	9,849	10,057	10,221
<b>Census regions</b>						
New England.....	118,554	120,092	123,984	127,221	131,661	134,118
Middle Atlantic.....	355,496	359,981	370,121	381,007	391,896	398,806
East North Central.....	395,121	395,879	408,729	423,178	433,304	443,830
West North Central.....	153,708	153,795	158,134	162,250	166,315	169,847
South Atlantic.....	307,169	314,096	326,199	338,541	347,851	354,716
East South Central.....	105,478	106,523	109,658	113,646	116,851	117,820
West South Central.....	204,066	207,936	216,481	224,681	232,315	239,216
Mountain.....	97,157	99,149	102,091	106,233	110,198	112,046
Pacific.....	326,011	331,040	340,385	351,520	362,147	370,137

1. Detail may not add to higher level totals because of rounding. The personal income shown for the United States differs from that in the national income and product accounts, primarily because it omits income received by Federal Government employees overseas.

2. The quarterly estimates have not yet been revised to incorporate revisions to the national income accounts and are not consistent with annual State estimates presented in the July issue.

NOTE.—The quarterly estimates of State personal income were prepared by Francis G. McFaul with the aid of Thelma E. Harding, under the supervision of Robert L. Brown. The table was prepared by Eunice F. James and Kathy A. Albetzki.

# The Realization of Plans Reported in the BEA Plant and Equipment Survey

PLANS reported in BEA's plant and equipment survey have long provided important indicators of future expenditures on new plant and equipment (P&E). Examination of the relation of these plans to actual expenditures is especially useful at this time because the last comprehensive examination is more than ten years old and because an extensive revision of the P&E survey data was completed in 1980.<sup>1</sup>

The examination undertaken in this article is in two sections. The first section presents summary measures of errors in P&E expenditure (henceforth, investment) plans—defined for this article as discrepancies between plans and subsequently reported actual investment.<sup>2</sup> For two time periods—1957–69 and 1970–80—it analyzes errors by industry-group, by length of planning horizon (one-quarter-ahead, two-quarters-ahead, and year-ahead), and at cy-

clical turning points. The second section reports on regression relationships of actual investment to plans and to variables that may influence the realization of plans. The latter include constant-dollar (real) final sales, after-tax profits, and investment goods prices.

Most of the data used in the article have been corrected for systematic bias. Comparison of plans with actual investment shows well-established patterns of differences by time of year the survey is taken, by size of firm, and by planning horizon. Corrections for such systematic bias are based on median ratios in the preceding 8 years of plans (uncorrected) to actual investment. The median ratio is calculated separately for each industry, for each planning horizon, and for each quarter.<sup>3</sup> Corrected plans are equal to uncorrected plans divided by the appropriate median ratio. The data have also been seasonally adjusted, using the X-11 procedure. Plans (after bias correction) are seasonally adjusted by the factors used for actual investment.<sup>4</sup>

## Errors in investment plans

Both planned and actual investment have had strong uptrends throughout the last 35 years, partly due to real growth and partly due to inflation. Because of these trends, a comparison of dollar levels of plans with actual in-

vestment shows a correlation that is extremely close but that is not helpful in understanding short-term movements in investment. Therefore, the comparisons in this article are based not on dollar levels, but on percent changes from lagged actual investment.<sup>5</sup> Transforming dollar levels into percent changes reduces correlations, but facilitates meaningful comparisons among industries of different size and among time-periods in which dollar levels differ.

*Results for total nonfarm business.*—Planned and actual investment for total nonfarm business, in percent change form, appear in chart 10. The top panel shows one-quarter-ahead plans and actuals as percent changes from actual investment one quarter earlier. The middle panel shows two-quarters-ahead plans and actuals as percent changes from the actual two quarters earlier. The bottom panel shows planned annual investment, as reported in February of the plan year, and actual annual investment as percent changes from the actual one year earlier.

It is clear from the chart that there are positive correlations between planned percent changes and actual percent changes in total nonfarm business investment for the entire 1957–80 period and for the two subperiods. For one-quarter-ahead plans, the simple correlation coefficient of the two series for the entire period is 0.70. For two-quarters-ahead plans, the correlation is

1. The 1980 revision, which affected both planned and actual expenditures, is described in George R. Green and Marie P. Hertzberg, "Revised Estimates of New Plant and Equipment Expenditures in the United States, 1947–77," *SURVEY OF CURRENT BUSINESS* 60 (October 1980): 24–59. For a thorough examination of the accuracy of plans through 1966, see Lawrence Bridge, "The Realization of Plant and Equipment Anticipations by U.S. Businessmen," paper presented at C.I.R.E.T. Conference, Paris, 1967 (unpublished). A more recent study, by Michael J. McKelvey, "The Realization of Investment Plans: A Microeconomic Approach" (Ph.D. dissertation, University of Pennsylvania, 1980), analyzes P&E expenditure plans for individual companies in three industries for 1967–77. Other studies of plans include Murray F. Foss and Vito Natrella, "The Structure and Realization of Business Investment Anticipations," in A. G. Hart, ed., *The Quality and Economic Significance of Anticipations Data* (Princeton: Princeton University Press, 1960), pp. 387–405 and Irwin Friend and Jean Bronfenbrenner, "Plant and Equipment Programs and Their Realization," in *Short-Term Economic Forecasting* (Princeton: Princeton University Press, 1955), pp. 53–111.

2. Investment as measured by actual P&E expenditures differs from the nonresidential fixed investment component of GNP. For a discussion of the relationship between these two measures, see Green and Hertzberg, pp. 38–39.

3. In the 1980 revision of the P&E survey data, the procedure to correct for systematic bias in the early years covered by the P&E survey used data for future—as well as for past—years, because data were not available prior to 1952 for manufacturing and 1954 for nonmanufacturing. The first year for which the influence of future years on the correction factors was negligible was 1957, and, accordingly, this is the starting date of the analysis in this article.

4. For a more complete description of the plans data, including the procedure for bias correction, see Green and Hertzberg, pp. 35–36.

5. For example, if in quarter 1 actual investment is \$100 and planned investment one quarter ahead is \$103, and if in quarter 2 actual investment turns out to be \$104, then the comparison in this article is of the 3-percent increase planned in quarter 1 and the 4-percent increase realized in quarter 2. If in quarter 1 planned investment two quarters ahead is \$105, and if in quarter 3 actual investment turns out to be \$107, the comparison is of the planned 5-percent increase and the realized 7-percent increase.

0.74; for year-ahead plans, it is 0.93. Furthermore, correlations are also positive at or near turning points in investment, represented in the chart by periods in which the solid line moves from

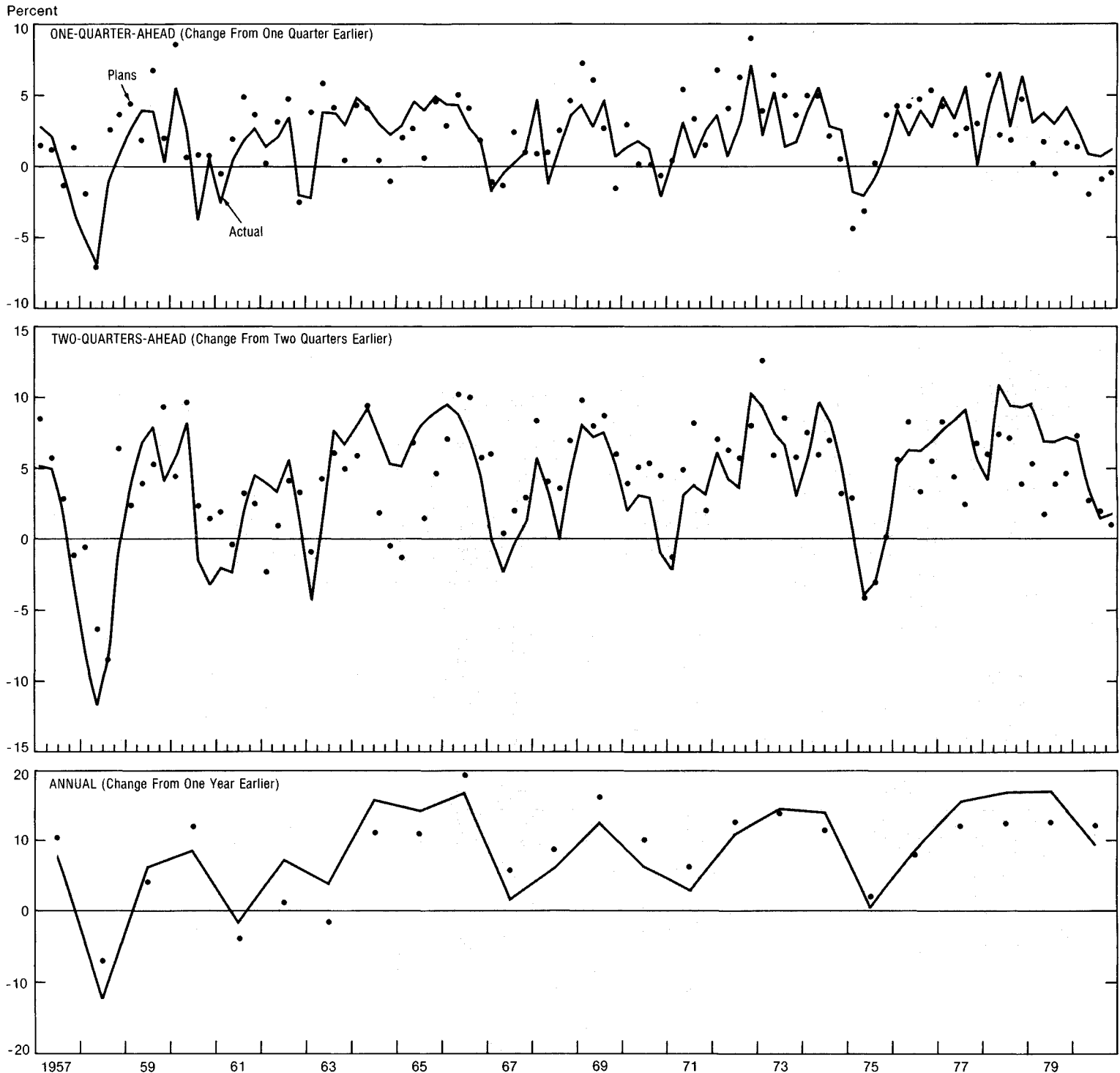
above zero (investment growing) to below zero (investment declining) or the reverse.

Nevertheless, the chart indicates that errors in plans are at times sizeable.

Actual increases substantially exceeded planned increases in 1964-65 and in the late 1970's. The annual changes in the bottom of the chart show understatements (planned below actual) of 5.9,

CHART 10

**Planned and Actual Investment, Total Nonfarm Business, 1957-80**



Note.—One-quarter-ahead and two-quarters-ahead actual investment and plans are seasonally adjusted. All plans are corrected for systematic bias (see text).

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5.4, 4.6, and 3.5 percentage points in the years 1962, 1963, 1964, and 1965, respectively; and they show understatements of 4.3 and 4.4 percentage points in 1978 and 1979. In contrast, planned investment changes exceeded actual changes in 1958, 1968, 1971, and 1972.

*Comparisons with mechanical projections.*—It is useful to compare the errors in plans with the errors that arise from mechanical methods of projecting investment expenditures. The simplest such method is based on a “no-change” assumption—that is, the assumption that future investment will equal current investment. A second method is based on a “same-change” assumption—that is, the assumption that the percent change from the current level will equal the most recently observed percent change in actual investment.

Errors in investment plans are generally smaller than errors arising from these mechanical projection methods

for total nonfarm business and for manufacturing and nonmanufacturing. Table 1 presents this finding, using the root-mean-square error (RMSE) as a measure of error.<sup>6</sup> For total nonfarm business, the RMSE's of plans range from 2.17 percent for one-quarter-ahead plans in 1970–80 to 3.93 percent for year-ahead plans in 1957–69. RMSE's of plans are generally larger for manufacturing and for nonmanufacturing than for total nonfarm business. The RMSE's of mechanical projection methods for total nonfarm business range from 2.53 percent for “same-change” projections one quarter ahead in 1970–80 to 11.83

6. A root-mean-square error is calculated by (a) squaring the error for each observation, (b) adding all the squared errors, (c) dividing the sum of squared errors by the number of observations to obtain the mean squared error, and (d) taking the square root of the mean squared error. The RMSE resembles an arithmetic mean of errors without respect to sign; the difference is that dispersion in the size of errors around their mean increases the RMSE but does not increase the arithmetic mean without respect to sign.

percent for “no-change” projections one year ahead in 1970–80.

The table also shows ratios of the RMSE's of investment plans to the RMSE's arising from mechanical projection methods.<sup>7</sup> The lower these ratios, the more accurate plans are relative to mechanical projection methods. The ratios tend to be lowest for year-ahead plans. While errors in plans are generally somewhat larger for year-ahead plans than for one-quarter- or two-quarters-ahead plans, errors in mechanical projections are very much larger for year-ahead plans; therefore, improvement of plans over mechanical projections is largest for the year-ahead horizon. Improvement over mechanical projections is smallest for one-quarter-ahead plans; in fact, during 1970–80,

7. These ratios, known as U statistics, have been analyzed extensively by Henri Theil in *Applied Economic Forecasting* (Amsterdam: North Holland Publishing Company, 1966), chap. 2.

Table 1.—Root-Mean-Square Errors (RMSE) in Investment Projections: Total Nonfarm Business, Manufacturing and Nonmanufacturing

	One-quarter-ahead projections					Two-quarters-ahead projections					Year-ahead projections				
	RMSE			Ratios of RMSE's		RMSE			Ratios of RMSE's		RMSE			Ratios of RMSE's	
	Investment plans	“No-change” projections	“Same-change” projections	Plans to “no-change” projections	Plans to “same-change” projections	Investment plans	“No-change” projections	“Same-change” projections	Plans to “no-change” projections	Plans to “same-change” projections	Investment plans	“No-change” projections	“Same-change” projections	Plans to “no-change” projections	Plans to “same-change” projections
<b>Total nonfarm business:</b>															
1957–69.....	2.26	3.18	2.72	0.71	0.83	3.47	5.83	5.32	0.59	0.65	3.93	10.07	11.13	0.39	0.35
1970–80.....	2.17	3.30	2.53	.66	.86	2.73	6.19	4.14	.44	.66	2.94	11.83	6.67	.25	.44
Peaks.....	2.11	3.21	2.82	.66	.75	2.42	6.12	3.63	.40	.67					
Troughs.....	1.95	2.50	2.62	.78	.74	3.21	4.27	5.38	.75	.60					
<b>Manufacturing:</b>															
1957–69.....	3.75	4.72	3.76	.79	.99	5.58	8.68	7.90	.64	.71	6.05	14.75	18.22	.41	.33
1970–80.....	3.41	4.27	3.04	.80	1.12	4.13	8.13	5.59	.51	.74	5.20	15.33	11.15	.34	.47
Peaks.....	2.24	4.53	2.90	.49	.77	2.48	9.44	4.98	.26	.50					
Troughs.....	4.11	4.80	3.67	.86	1.12	7.99	9.00	8.05	.89	.99					
<b>Nonmanufacturing:</b>															
1957–69.....	2.77	3.06	3.34	.91	.83	4.20	5.20	5.44	.81	.77	4.50	8.46	8.25	.53	.55
1970–80.....	2.05	3.22	2.78	.64	.74	3.12	5.90	4.16	.53	.75	2.66	11.23	5.88	.24	.45
Peaks.....	2.88	2.93	3.17	.98	.91	3.60	4.97	4.08	.52	.78					
Troughs.....	1.75	2.62	2.98	.67	.59	2.80	3.76	5.63	.74	.50					

1. See footnote 7 for definitions of peaks and troughs.

NOTE.—Formulas for RMSE's are as follows:

$$\text{Investment plans } \sqrt{\frac{1}{n} \sum \frac{I_{t-\theta} - I_t^2}{I_{t-\theta}}}$$

$$\text{No-change projections } \sqrt{\frac{1}{n} \sum \frac{I_t - I_{t-\theta}^2}{I_{t-\theta}}}$$

$$\text{Same-change projections } \sqrt{\frac{1}{n} \sum \left[ \left( \frac{I_t - I_{t-\theta}}{I_{t-\theta}} \right) - \left( \frac{I_{t-\theta} - I_{t-2\theta}}{I_{t-2\theta}} \right) \right]^2}$$

where n=number of observations;  $\theta$ =length of lags (one quarter for one-quarter-ahead projections, two quarters for two-quarter-ahead projections, and one year for year-ahead projections). See text for definitions of  $I_{t-\theta}$  and  $I_{t-\theta}$ .



plans for manufacturing do not represent any improvement, on the average, over "same-change" projections, as the ratio of 1.12 shows. Errors in year-ahead plans during 1970-80, in contrast, have a ratio to "same-change" errors of only 0.47.

Comparison of the 1970-80 and 1957-69 periods shows no overall pattern of higher or lower ratios of RMSE's of investment plans to the RMSE's arising from mechanical projection methods. RMSE's of plans fall from 1957-69 to 1970-80 in every case, but in some cases RMSE's of mechanical projection methods fall even more. For nonmanufacturing, the ratios are all lower during 1970-80, but for manufacturing and total nonfarm business, the results are mixed.

The table shows separately the errors and ratios of errors for selected quarters designated as peaks and troughs in investment.<sup>8</sup> These results resemble the results for all quarters. RMSE's are of roughly the same size, and ratios of RMSE's for turning points are generally below 1.0, indicating smaller errors for plans than for mechanical projections. For manufacturing, improvement over mechanical projections is larger for peaks than for troughs; for nonmanufacturing, improvement over mechanical projections is larger for troughs.

*Results for individual industries.*—For individual industries, RMSE's of investment plans do not compare as favorably with "no-change" projections as they do for total nonfarm business or for manufacturing and nonmanufacturing.<sup>9</sup> For one-quarter-ahead plans, as shown in table 2, most ratios of er-

rors in individual industry plans to errors in "no-change" projections tend to fall in the 0.90 to 1.10 range, both for 1957-69 and for 1970-80. Half of the ratios exceed 1.0, indicating no improvement over mechanical projections. In contrast, the ratios for total nonfarm business are 0.71 for 1957-69 and 0.66 for 1970-80. For two-quarters-ahead plans the individual industry error ratios are more favorable, but still high compared with the total nonfarm business ratios. The individual ratios tend to fall in the 0.60 to 1.00 range, compared to 0.59 (1957-69) and 0.44 (1970-80) for total nonfarm business. For year-ahead plans, individual ratios tend to fall in the 0.30 to 0.70 range, compared to 0.39 (1957-69) and 0.25 (1970-80) for total nonfarm business. The ratios for total nonfarm business tend to be lower mainly because errors in investment plans have some tendency to cancel out between industries.

Rates of growth of investment are highly variable at the industry level. As a result, "same-change" projections tend to have much larger errors than "no-change" projections and, as table 2 shows, ratios of RMSE's of plans to RMSE's of "same-change" projections are generally lower than ratios of RMSE's of plans to RMSE's of "no-change" projections. "Same-change" projections are not nearly as exacting a standard against which to measure plans at the individual industry levels as they are for broad aggregates.

*Summary.*—Planned changes in investment have high correlations with subsequently reported actual changes. For total nonfarm business as well as for manufacturing and nonmanufacturing, errors in plans are usually smaller than errors arising from mechanical projections of past expenditures. This result generally holds for peaks and troughs in investment and for 1970-80 as well as 1957-69. One exception is for one-quarter-ahead plans for manufacturing during 1970-80. In contrast, for individual industries one-quarter-ahead plans tend not to be any more accurate than "no-change" projections; but two-quarters-ahead and year-ahead plans generally remain more accurate than "no-change" projections.

### *Investment plans and other investment determinants*

*The investment realization function.*—Many investment forecasts use plans in combination with other determinants of investment. This section reports on results for a number of such "realization functions," with special attention to the years since 1970 and to predictions for 1980.

The idea underlying the investment realization functions reported here is that actual investment reflects not only previously reported plans but also unexpected developments that have affected the demand for capital goods since the plans were formulated. For example, actual investment might tend to exceed plans when actual sales exceed sales expectations.<sup>10</sup> Unexpected movements in profits, in investment goods prices, or in financing costs might also cause actual investment to deviate from plans. In mathematical terms, this hypothesis about realization of plans states that:

$$(1) \quad I_t = {}_tI_{t-\theta} + c(X_t - {}_tX_{t-\theta})$$

where:

- $I_t$  = actual investment in period  $t$ ;
- ${}_tI_{t-\theta}$  = investment planned for period  $t$ , as of period  $t-\theta$ , with  $\theta$  = one quarter for one-quarter-ahead plans,  $\theta$  = two quarters for two-quarter-ahead plans, and  $\theta$  = one year for year-ahead plans;
- $X_t$  = the value of some determinant of investment, e.g., sales or a price index for investment goods;
- ${}_tX_{t-\theta}$  = the value of  $X$  expected for period  $t$ , as of period  $t-\theta$ , with  $\theta$  defined as above.

Actual investment, according to the equation, is equal to planned investment plus some function of the difference between the actual value of an investment determinant and the previously ex-

8. Peak quarters were defined as the quarters at, immediately preceding, and immediately following peaks in real total nonfarm business investment. Peaks in real investment were in 1957:2, 1960:2, 1966:4, 1969:3, 1974:2, and 1980:1. Trough quarters were defined as the quarters at, immediately preceding, and immediately following troughs in real total nonfarm business investment. Troughs in real investment were in 1958:4, 1961:2, 1967:4, 1971:1, and 1975:4. Peaks and troughs were not defined for annual investment.

9. The term "individual industries" refers to those in table 2, a mix of Standard Industrial Classification 2-digit and 3-digit groupings of manufacturing and nonmanufacturing activities. Each firm in the P&E survey sample is assigned to one industry on the basis of its principal activity (measured by sales).

10. Two examples of the use of realization functions are in Robert Eisner, "Realization of Investment Anticipations," in J. Duesenberry, G. Fromm, L. Klein, and E. Kuh, eds., *The Brookings Quarterly Econometric Model of the United States* (Amsterdam: North Holland Publishing Company, 1965), p. 97 and F. G. Adams and V. Duggal, "Anticipations Variables in an Econometric Model: Performance of the Anticipations Version of Wharton Mark III," *International Economic Review* 15 (June 1974): 267-284. The theory underlying realization functions is developed in Franco Modigliani and Kalman J. Cohen, "The Significance and Uses of Ex Ante Data," in M. J. Bowman, ed., *Expectations, Uncertainty, and Business Behavior* (New York: Social Science Research Council, 1958), pp. 151-64.

pected value of that determinant. The equation is written in terms of only one investment determinant, but three such determinants will be tested—namely, real final sales, after-tax profits, and the price of investment goods.

The widely used neoclassical theory of investment demand focuses on sales and the user cost of capital as determinants of investment. The user cost of capital depends on the price of investment goods, on interest rates and

other rates of return, and on the tax treatment of investment. Some tests of long-term interest rates showed that, given investment plans, unexpected interest rates were either unrelated to actual investment or related in a way opposite of that suggested by neoclassical theory. Consequently, interest rates were dropped from the analysis. The tax treatment of investment was not incorporated because there did not seem to be any realistic way to construct a quar-

terly measure of the tax treatment that was expected at the time plans were reported (and therefore, presumably, incorporated in plans). Realized profits are not a determinant of investment in the neoclassical theory; they were tested on the grounds that unexpectedly high or low after-tax profits affect the availability of internal funds, and hence might influence the timing of investment even if they do not influence the level of investment over long periods.

Table 2.—RMSE in Investment Projections, Individual Industries

	Time period	One-quarter-ahead projections			Two-quarters-ahead projections			Year-ahead projections		
		RMSE	Ratios of RMSE's:		RMSE	Ratios of RMSE's:		RMSE	Ratios of RMSE's:	
			Investment plans	Plans to "no-change" projections		Plans to "same-change" projections	Investment plans		Plans to "no-change" projections	Plans to "same-change" projections
<b>Total nonfarm business</b> .....	1957-69.....	2.26	0.71	0.83	3.47	0.59	0.65	3.93	0.39	0.35
	1970-80.....	2.17	.66	.86	2.73	.44	.66	2.94	.25	.44
Blast furnaces.....	1957-69.....	11.47	.84	.63	16.39	.75	.60	14.16	.46	.31
	1970-80.....	9.68	.97	.84	12.55	.75	.73	11.69	.43	.46
Nonferrous metals.....	1957-69.....	12.61	1.12	1.07	15.29	.74	.72	10.82	.29	.25
	1970-80.....	9.45	.86	.59	13.28	.87	.81	6.55	.28	.27
Other primary metals.....	1957-69.....	11.06	.68	.49	12.47	.42	.31	13.07	.36	.24
	1970-80.....	12.12	1.02	.70	18.47	1.12	.76	11.10	.62	.58
Fabricated metal.....	1957-69.....	10.39	.91	.60	14.34	.99	.70	11.51	.71	.52
	1970-80.....	7.79	1.32	1.08	8.99	.98	.82	9.12	.71	.83
Electrical machinery.....	1957-69.....	9.69	1.19	1.14	11.76	.82	.85	8.74	.35	.34
	1970-80.....	6.41	.92	.84	8.29	.68	.73	7.78	.38	.42
Machinery, except electrical.....	1957-69.....	8.97	1.09	1.01	12.36	.88	.81	14.61	.69	.59
	1970-80.....	8.95	1.00	.84	12.78	.87	.72	11.97	.58	.51
Motor vehicles.....	1957-69.....	12.17	1.66	1.44	15.85	1.29	1.25	17.83	.92	.67
	1970-80.....	12.20	1.49	1.62	14.05	.94	.98	8.07	.32	.28
Aircraft.....	1957-69.....	11.29	.81	.66	15.39	.68	.63	18.71	.49	.37
	1970-80.....	11.63	.91	.80	18.77	.82	.80	22.32	.56	.67
Other transportation equipment.....	1957-69.....	13.01	.61	.39	13.74	.55	.38	14.07	.48	.37
	1970-80.....	20.61	1.08	.69	27.45	1.16	.83	20.53	.77	.57
Stone, clay, and glass.....	1957-69.....	10.57	1.01	.75	12.36	.80	.56	9.10	.50	.30
	1970-80.....	8.13	.93	.68	13.66	1.05	.96	9.16	.43	.38
Other durable goods.....	1957-69.....	7.45	1.04	.83	10.02	.89	.69	9.26	.57	.56
	1970-80.....	6.32	1.04	.84	9.71	1.01	.81	7.19	.51	.39
Food and beverage.....	1957-69.....	7.01	1.16	.84	8.32	.97	.81	6.52	.57	.52
	1970-80.....	7.03	1.36	.97	8.93	1.13	.89	7.02	.58	.62
Textiles.....	1957-69.....	9.47	.97	.95	10.03	.58	.57	9.14	.35	.26
	1970-80.....	7.76	1.09	.92	8.43	.74	.50	8.44	.66	.43
Paper.....	1957-69.....	10.49	1.19	.91	11.17	.83	.76	9.43	.49	.33
	1970-80.....	8.14	1.04	1.00	7.68	.56	.60	6.61	.27	.27
Chemicals.....	1957-69.....	6.86	.98	1.00	9.76	.79	.71	8.26	.44	.34
	1970-80.....	6.29	1.01	1.12	8.10	.71	.89	9.62	.45	.53
Petroleum.....	1957-69.....	6.13	1.07	.77	8.63	1.06	.89	7.23	.64	.48
	1970-80.....	8.04	1.00	.84	8.94	.68	.68	9.42	.41	.47
Rubber.....	1957-69.....	11.34	1.03	.70	15.40	1.03	.86	10.18	.50	.38
	1970-80.....	6.34	.69	.58	12.24	.82	.84	10.65	.44	.37
Other nondurable goods.....	1957-69.....	9.71	1.22	.84	11.25	.99	.77	9.94	.67	.58
	1970-80.....	7.43	.89	.67	10.28	.80	.63	6.76	.37	.68
Mining.....	1957-69.....	6.05	1.00	.73	8.60	.98	.67	7.83	.83	.58
	1970-80.....	6.98	.88	.75	7.74	.60	.74	6.22	.27	.46
Transportation.....	1957-69.....	4.33	.45	.37	10.38	.68	.51	9.13	.48	.33
	1970-80.....	7.15	.91	.57	10.68	1.13	.77	11.99	1.18	1.05
Public utilities.....	1957-69.....	4.34	.96	.81	6.06	.81	.71	5.19	.42	.55
	1970-80.....	4.19	1.05	.88	4.43	.68	.77	4.44	.38	.71
Wholesale and Retail Trade.....	1957-69.....	4.55	.88	.63	7.11	.98	.82	12.02	1.27	.95
	1970-80.....	5.11	.92	.69	6.44	.76	.67	5.75	.42	.49

1. Includes lumber, furniture, instruments, ordnance, and miscellaneous manufacturing.  
2. Includes tobacco, apparel, printing and publishing, and leather manufacturing.

NOTE.—For formulas for RMSE's and ratios, see note to table 1.

No attempts were made to represent supply bottlenecks that may result in unexpected shortages or delays in the completion of investment projects, because earlier econometric studies have not found that supply conditions play a significant role in realization functions.

Consistent with the use of percent changes elsewhere in this study, it is appropriate to subtract lagged investment,  $I_{t-\theta}$ , from both sides of equation (1) and divide by  $I_{t-\theta}$ :

$$(2) \quad \frac{I_t - I_{t-\theta}}{I_{t-\theta}} = \frac{I_{t-\theta} - I_{t-\theta}}{I_{t-\theta}} + c \frac{X_t - X_{t-\theta}}{I_{t-\theta}}$$

In this form, the equation says that the percent change in actual investment is equal to the percent difference between planned investment and lagged investment plus a function of the difference between actual and expected values of the determinants of investment.<sup>11</sup>

*Evidence of systematic bias in plans.*—One of the premises underlying equations (1) and (2) is that investment plans represent, as of the time they are formulated, an unbiased forecast of what investment will actually be. The uncorrected plans, however, reveal that there are discrepancies between planned and actual investment that are so regular and pervasive that they effectively refute the premise of unbiasedness. Consideration of this evidence will lead to a modification of equation (2).

Some of this evidence appears in table 3. One piece of the evidence is the systematic bias in investment plans for firms of different size; large firms almost always invest less than planned, and small firms almost always invest more than planned. Table 3 shows a sizeable difference in average bias between large and small firms. During 1970–80 for one-quarter-ahead plans, for example, large firms spent an average of 11.2 percent less than planned,

and small firms spent an average of 5.0 percent more than planned. The middle of table 3 shows the pervasiveness of this bias. In only 5.4 percent of the quarters (5 out of 92) did large firms invest more than they planned. Small firms, on the other hand, invested more than they planned in 71.8 percent of the quarters.

Another piece of evidence is persistent seasonal discrepancies between uncorrected plans and actual investment. Actual investment generally falls short of plans in the first three quarters of the year but exceeds plans in the fourth quarter. The bottom part of table 3 shows that, for one-quarter-ahead plans during 1957–80, the shortfall of actual investment below plans averaged 7.8, 4.1, and 7.3 percent during the first three quarters. If the plans reported in the P&E survey actually represent forecasts, it hardly seems possible that respondents would remain unaware of these regularly recurring discrepancies and fail to correct them.

An interpretation of these discrepancies is that the reported plans are not forecasts but rather are annual targets for major capital additions underway that are divided into quarters with little regard for seasonal influences on investment.<sup>12</sup> For those firms with comprehensive capital planning (this group includes many large firms), the principal source of systematic discrepancies between plans and actual investment is that the targets are not always met. For firms without comprehensive capital planning, a major cause of systematic discrepancies is the regular emergence of needs for replacement of, or for additions to, the capital stock that are not incorporated in plans.

If these are important causes of discrepancies between plans and actual investment, then it is unlikely that investment will respond to plans percentage-point for percentage-point, as assumed in equation (2). Furthermore, it is likely that some of the change in investment is neither reflected in plans nor due to unexpected movements of investment determinants. Accordingly, it is probably more realistic to estimate

**Table 3.—Uncorrected, Not Seasonally Adjusted Investment Plans: Evidence of Systematic Bias**

	Time Period	One-quarter-ahead plans	Two-quarter-ahead plans
<b>By size of firm:<sup>1</sup></b>			
Average percent difference (actual less plans):			
All firms.....	1959-69	-4.0	1.1
	1970-80	-4.8	0.3
Large firms.....	1959-69	-9.5	-8.0
	1970-80	-11.2	-8.1
Medium firms.....	1959-69	-8.4	-1.0
	1970-80	-0.2	7.6
Small firms.....	1959-69	4.0	12.7
	1970-80	5.0	14.4
Percent of quarters actual exceeds plans:			
All firms.....	1959-80	22.9	54.3
Large firms.....	1959-80	5.4	9.8
Medium firms.....	1959-80	31.8	55.4
Small firms.....	1959-80	71.8	95.7
<b>By quarter:</b>			
Average percent difference (actual less plans):			
All quarters.....	1957-80	-4.3	0.5
First quarters.....	1957-80	-7.8	-2.6
Second quarters.....	1957-80	-4.1	-1.1
Third quarters.....	1957-80	-7.3	-1.4
Fourth quarters.....	1957-80	2.0	7.0

1. The period starts in 1959 because earlier breakdowns by size of firm are not available.

the strength of the response of investment to plans empirically, and to add a constant term to represent the average percent change in investment due to developments not reflected in plans.

These comments apply to uncorrected, not seasonally adjusted data. They are less applicable to corrected, seasonally adjusted data, because systematic discrepancies are largely eliminated by the correction and seasonal adjustment procedures. These procedures are only approximate, however. Because they fail to remove all systematic discrepancies, it is desirable to allow for a response to plans other than one-for-one and for investment due to developments not reflected in plans. Equation (2) is therefore rewritten as:

$$(3) \quad \frac{I_t - I_{t-\theta}}{I_{t-\theta}} = a + b \frac{I_{t-\theta} - I_{t-\theta}}{I_{t-\theta}} + c \frac{X_t - X_{t-\theta}}{I_{t-\theta}}$$

According to equation (3), the percent change in actual investment depends on a constant term, on the planned percent change in investment (with a coefficient to be estimated), and on a function of the difference between actual and expected values of the determinants of investment.

*Investment determinants.*—Equation (3) lists only one determinant of investment, labeled X; but the tests below

11. The final term in the equation is the ratio of the unexpected value of an investment determinant to the level of investment. This form is used for some of the investment determinants; for others, the ratio of the unexpected value to the level of the investment determinant itself is used, i.e.,

$$c \left( \frac{X_t - X_{t-\theta}}{X_{t-\theta}} \right)$$

This alternative form permits the coefficient c to be interpreted as an elasticity.

12. This is the point of view developed in Bridge, pp. 22–24.

Table 4.—Estimates of Realization Functions

[Dependent variable: percent change in actual investment]

	Constant term	Plans <sup>1</sup>	"Unexpected" Value Of			R <sup>2</sup>	SEE	D-W
			Sales <sup>2</sup>	Profits <sup>3</sup>	Investment goods prices <sup>4</sup>			
<b>Total nonfarm business</b>								
One-quarter-ahead plans:								
1957-79.....	0.853 (3.6)	0.436 (6.3)	0.676 (3.5)	0.175 (3.3)	0.932 (3.3)	0.62	1.61	1.81
1957-69.....	.502 (1.7)	.454 (5.3)	.959 (3.3)	.174 (2.4)	.426 (1.0)	.69	1.55	1.68
1970-79.....	1.309 (3.2)	.385 (3.4)	.530 (1.7)	.121 (1.5)	.935 (2.1)	.47	1.64	2.11
Two-quarters-ahead plans:								
1957-79.....	2.868 (5.2)	.552 (7.2)	1.329 (4.5)	.373 (5.0)	.934 (2.8)	.72	2.39	1.08
1957-69.....	1.872 (2.6)	.600 (6.0)	1.412 (3.5)	.410 (3.7)	-.604 (-.9)	.73	2.52	1.02
1970-79.....	3.890 (4.8)	.483 (4.3)	1.620 (3.6)	.378 (4.3)	1.460 (3.8)	.72	2.00	1.99
Year-ahead plans:								
1957-79.....	1.073 (1.2)	.786 (6.9)	.454 (.8)	.637 (3.6)	.372 (1.4)	.88	2.54	.95
<b>Manufacturing</b>								
One-quarter-ahead plans:								
1957-79.....	1.007 (2.5)	.387 (4.3)	.635 (3.0)	.154 (3.4)	1.383 (2.9)	.53	2.80	1.15
1957-69.....	.205 (.4)	.557 (4.2)	1.200 (3.4)	.078 (1.1)	-.166 (-.2)	.58	2.92	1.14
1970-79.....	1.489 (2.6)	.316 (2.4)	.401 (1.3)	.148 (2.3)	1.554 (2.8)	.48	2.49	1.80
Two-quarters-ahead plans:								
1957-79.....	1.334 (1.6)	.773 (7.5)	1.019 (3.2)	.221 (3.3)	1.022 (1.7)	.65	4.34	.76
1957-69.....	-.047 (-.1)	.915 (7.2)	1.741 (3.9)	.188 (2.0)	-3.450 (-2.8)	.73	4.20	1.04
1970-79.....	2.943 (2.5)	.564 (3.8)	1.093 (2.3)	.301 (3.7)	2.261 (3.4)	.68	3.51	1.06
Year-ahead plans:								
1957-79.....	-1.679 (-.9)	1.161 (8.3)	.099 (.2)	.440 (2.9)	.547 (1.2)	.88	4.19	.94
<b>Nonmanufacturing</b>								
One-quarter-ahead plans:								
1957-79.....	1.150 (5.1)	.397 (6.4)	.732 (3.7)	.195 (1.9)	.707 (2.5)	.52	1.73	2.15
1957-69.....	1.111 (3.6)	.347 (4.3)	.700 (2.2)	.317 (2.1)	.661 (1.5)	.52	1.83	2.10
1970-79.....	1.226 (3.2)	.455 (4.4)	.780 (2.6)	.017 (.1)	.791 (1.8)	.47	1.62	2.09
Two-quarters-ahead plans:								
1957-79.....	4.487 (9.3)	.326 (4.8)	1.708 (5.9)	.433 (3.0)	.852 (2.8)	.59	2.50	1.18
1957-69.....	4.161 (6.2)	.269 (3.0)	1.534 (3.8)	.512 (2.4)	.750 (1.3)	.56	2.71	1.20
1970-79.....	4.677 (6.6)	.436 (4.0)	2.002 (4.3)	.377 (2.0)	1.043 (2.4)	.61	2.14	1.40
Year-ahead plans:								
1957-79.....	3.125 (3.4)	.522 (4.1)	1.218 (2.1)	.491 (1.6)	.268 (1.0)	.78	2.71	1.33

1. The form of the plans variable is described in the text.

2. The variable is  $((S_t - S_t^e)/S_t) * 100$ , where  $S_t$  is real final sales and  $S_t^e$  is the expected value of  $S_t$ .3. For one-quarter-ahead plans and two-quarters-ahead plans, the variable is  $((PP_{t-1} - PR_t^e - I_{t-1}) * 100$ , where  $PR_t$  is after-tax profits,  $PR_t^e$  is the expected value of  $PR_t$ , and  $I_t$  is actual investment. For year-ahead plans the variable is  $((PR_t - PR_t^e)/I_t) * 100$ .4. The variable is  $(D_t - D_t^e)$ , where  $D_t$  is the percent change in the implicit price deflator for plant and equipment expenditures and  $D_t^e$  is the expected value of  $D_t$ .

NOTE.—For definitions of variables and derivation of expected values, see appendix. The t-statistics are in parentheses below the coefficients.

will use three investment determinants—real final sales, after-tax profits, and the implicit price deflator for business fixed investment.<sup>13</sup> The coefficients of the first two variables are expected to be positive; the coefficient of the deflator can be either positive (indicating that some or all of the unexpected price shows up in current-dollar investment) or negative (indicating that the reduction in demand in response to the unexpected price more than offsets its effect on current-dollar investment).

In order to apply equation (3), it is necessary to construct an “expected” value for each of the determinants of investment. The approach used here is to assume that the expected value of each determinant depends on its past values and on a time trend, with coefficients determined by a time-series regression analysis. For sales and profits, this model is applied to levels. For prices, the model is applied to ratios of the current implicit price deflator to last quarter’s deflator. The difference between the treatment of sales and profits, on the one hand, and prices, on the other, implies that businesses form expectations about levels of sales and profits but about rates of change of prices. The appendix to this article describes in detail the procedure for, and results of, calculating expected values.

*Regression results.*—Results of the realization equations are reported for total nonfarm business, for manufacturing, and for nonmanufacturing in table 4. The table shows results for one-quarter-ahead, two-quarters-ahead, and year-ahead plans, with the former two shown by subperiod as well as for the entire period.<sup>14</sup>

Overall, the realization equations perform as expected. The coefficients for sales and profits have the expected signs and usually have t-ratios of 2 or above. (Because, as mentioned earlier, the coefficients of prices can be either positive or negative, their signs do not provide a test of the realization func-

tion approach.) Standard errors of estimates (SEE’s in the tables) of the equations can be compared to the RMSE’s measuring the discrepancy between investment and plans in table 1. The standard errors of estimates are always lower than the RMSE’s; generally they are a great deal lower.

Most of the constant terms of the 21 equations reported in table 4 are positive and have t-ratios of 2 or above. Evidently, some portion of the growth in investment is best summarized as a constant rate rather than an amount associated with investment plans or with unexpected values of sales, profits, or prices.

Coefficients of planned changes in investment all have t-ratios greater than 2. Of the 21 coefficients for planned changes in investment, 20 are less than 1, and 10 are less than 0.5. Evidently, a 1-percent addition to plans is typically associated with something less than a 1-percent increase in investment. One of the lowest coefficients for plans applies to one-quarter-ahead plans for manufacturing in 1970–79. Heavy discounting of these one-quarter-ahead plans is consistent with their poor performance relative to mechanical projections, which was reported in the first section of this article.

Coefficients for unexpected real sales and unexpected after-tax profits are all positive and in many cases have t-ratios of 2 or above. The sales coefficients are larger for two-quarters-ahead plans than for other planning horizons. The profits coefficients tend to increase with the length of the planning horizon.

Coefficients for prices are almost all larger than zero, but vary a great deal from one equation to another. Because the dependent variable in these regressions is the percent change in current-dollar investment, a coefficient of 1.0 for the unexpected price variable implies that changes in prices are reflected fully in current-dollar investment, with no reduction in real investment. A price coefficient less than 1.0 implies that an unexpected increase in prices causes some reduction in real investment.<sup>15</sup> A

price coefficient of more than 1.0 implies, implausibly, that real investment increases in response to a price increase. There are some price coefficients of more than 1.0; but the excess of these coefficients over 1.0 is never statistically significant.<sup>16</sup>

Comparison of the 1970–79 regressions with the 1957–69 regressions reveals a number of systematic differences: (1) all constant terms are higher in 1970–79, (2) most plans coefficients are lower in 1970–79, and (3) all price coefficients are higher in 1970–79.

The higher constant terms probably reflect the high rate of inflation in the 1970’s. An interpretation of the constant terms, as mentioned earlier, is that some portion of investment growth is best summarized by a constant term. If this portion of investment growth refers to real growth, as seems plausible, then the constant term should reflect the average rate of inflation necessary to translate it into current-dollar investment growth, the dependent variable in the equation. The constant term for each subperiod, under these conditions, will tend to be larger the higher the average rate of inflation during that subperiod.

The lower coefficients for investment plans in 1970–79 imply that a 1 percentage-point change in plans was associated with a smaller change in actual investment in the 1970’s than in the 1957–69 period. The higher coefficients for prices imply less reduction in real investment in response to unexpectedly high investment goods prices. The reasons for these changes in coefficients are not clear.

*Using the regression results.*—The results of these realization equations can be used to predict future investment in two ways. The simplest way is to assume that actual sales, profits, and prices will equal expected values of these variables during the forecast period, and hence the unexpected terms in the equation will be zero. Predicted investment is then derived from plans by

13. The exact variables used in the regression equations are described in the appendix.

14. There are not enough annual observations to estimate usable year-ahead results by subperiod. The equations were estimated through 1979, so that they could be used to provide estimates for 1980 (see below).

15. The elasticity of real purchases with respect to prices is equal to the price coefficients reported in the tables minus 1.0. A negative price coefficient therefore implies a price elasticity less than  $-1.0$ .

16. The test for the significance of a coefficient compared to 1.0 (rather than the usual tests compared to zero) is performed by calculating a ratio whose numerator is the coefficient minus 1 and whose denominator is the coefficient divided by its t-statistic. If this ratio exceeds 2, then the coefficient is significantly different from 1.0 at a 95 percent level of confidence.

Table 5.—Errors in Investment Predictions, 1970-79 and 1980

	One-quarter-ahead and two-quarters-ahead plans				Year-ahead plans			
	RMSE of investment plans 1970-79	RMSE of investment plans 1980	Standard error of realization equations 1970-79	RMSE of equation predictions 1980	RMSE of investment plans 1970-79	Actual minus planned investment change 1980	Standard error of realization equations 1957-79	Actual minus predicted investment change 1980
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>One-quarter-ahead plans:</b>								
Total nonfarm business.....	2.20	1.93	1.64	0.46				
Manufacturing.....	3.45	3.01	2.49	1.65				
Nonmanufacturing.....	2.12	1.28	1.62	.52				
<b>Two-quarter-ahead plans:</b>								
Total nonfarm business.....	2.86	.67	2.00	2.31				
Manufacturing.....	4.25	2.67	3.51	2.44				
Nonmanufacturing.....	3.24	1.36	2.14	4.28				
<b>Year-ahead plans:</b>								
Total nonfarm business.....					2.96	-2.70	2.54	-1.20
Manufacturing.....					5.45	-.50	4.19	-1.64
Nonmanufacturing.....					2.48	-4.00	2.70	-3.02

1. The entries in columns 6 and 8 are single numbers rather than RMSE's because there is only one annual prediction for 1980.

using the constant term and the coefficient of the plans variable in the relevant equation.

A more complete use of the realization equations is possible if the user has independent forecasts of real final sales, profits, and investment goods prices. These forecasts may be used as if they were actual values. Expected values of sales, profits, and prices may be estimated using the formulas for expected values explained in the appendix of this article. The entire realization equation can then be used to forecast investment.

This article reports on 1980 predictions using the simpler method. For one-quarter-ahead and two-quarters-ahead predictions, predictions are based on the equations for 1970-79 reported in table 4. For year-ahead predictions, where no equations are reported for 1970-79, predictions are based on equations for the entire 1957-79 period.

The results, shown in table 5, indicate that the equations lead to fairly accurate predictions in 1980. For one-quarter-ahead plans, the RMSE's of equation-based predictions (column 4) are smaller than other errors in the table—the 1970-79 RMSE's of plans (column 1), the 1980 RMSE's of plans (column 2), and the standard error of the 1970-79 realization equations (column 3). For two-quarters-ahead plans, the 1980 predictions are less successful; the prediction errors in column 4 are sometimes larger than and sometimes smaller than other errors. Year-ahead pre-

dictions are more successful than two-quarters-ahead predictions. Prediction errors for 1980 (column 8) are smaller than 1970-79 errors in plans (column 5) and standard errors of realization equations for total nonfarm business and manufacturing (column 7). The predictions from the annual equations are considerably better than the plans (column 6) for total nonfarm business and nonmanufacturing but not for manufacturing.

*Summary.*—Investment realization equations, relating actual investment changes to planned changes and to unexpected movements in sales, after-tax

profits, and prices, performed well for total nonfarm business, manufacturing, and nonmanufacturing. Coefficients relating actual investment changes to planned changes were almost always less than 1.0, indicating that a 1-percent addition to plans is typically associated with less than a 1-percent increase in actual investment. Coefficients for sales, after-tax profits, and prices were generally positive. Predictions for 1980 based on use of truncated realization equations were fairly accurate, more so for one-quarter-ahead plans and year-ahead plans than for two-quarters-ahead plans.

#### APPENDIX: Estimating Unexpected Values of Investment Determinants

ESTIMATES of the unexpected value of each investment determinant were derived from the equations relating expected value to a weighted average of past values and a time trend. After these equations were estimated, the unexpected value of each investment determinant was calculated as the actual value less the expected value.

The investment determinants for which expected and unexpected values were constructed were real final sales, profits, and investment goods prices. The variables were:

- *for total nonfarm business:* final sales in constant (1972) dollars, domestic profits after tax of nonfinancial corporations, and implicit price deflator

for P&E expenditures by total nonfarm business.<sup>17</sup>

- *for manufacturing:* final sales of goods in constant (1972) dollars, domestic profits after tax of manufacturing corporations, and implicit price deflator for P&E expenditures by manufacturing industries.<sup>17</sup>

- *for nonmanufacturing:* final sales in constant (1972) dollars domestic profits after tax of nonfinancial non-manufacturing corporations, and implicit price deflator for P&E expenditures by nonmanufacturing industries.<sup>17</sup>

17. The price series used was a preliminary version of the one published in Michael J. McKelvey, "Constant-Dollar Estimates of New Plant and Equipment Expenditures in the United States, 1947-80" in the September 1981 SURVEY.

The estimating equation for each investment determinant expresses the value of a variable,  $X$ , as a function of past values and a time trend, as follows:

$$(A1) \quad {}_tX^e_{t-1} = a_0 + b_1 X_{t-1} + \lambda^2 X_{t-2} + \lambda^3 X_{t-3} + \dots$$

where:

${}_tX^e_{t-1}$  = the value of  $X$  expected in period  $t$ , as of period  $t-1$ ;

$e$  = the base of natural logarithms,  
 $t$  = time, with 1 in 1952:1, 2 in the following quarter, etc.,

$X_{t-i}$  = the actual value of  $X$  in period  $t-i$ ; with  $i=1, 2, 3$ , etc.,

$a, b, \lambda$  = parameters to be estimated.

The value of  $a$  is expected to be positive and  $\lambda$  is expected to lie between 0 and 1.0. The weights for past values of  $X$  decline the longer the lag; the dots at the end of the equation indicate continuing lagged values with higher powers of  $\lambda$  as exponents.

To estimate equation A1, the actual value of  $X_t$  is substituted for the expected value ( ${}_tX^e_{t-1}$ ) and an error term,  $U_t$ , is added to the equation. This substitution rests on the assumption that expectations are formed in a manner that avoids bias. Making the substitution and taking logarithms of both sides leads to:

$$(A2) \quad \ln X_t = \ln a + bt + \lambda \ln X_{t-1} + \lambda^2 \ln X_{t-2} + \lambda^3 \ln X_{t-3} + \dots + \ln U_t$$

where  $\ln$  denotes the natural logarithm of a variable. Writing this equation for the previous period and multiplying each term by  $\lambda$  gives:

$$(A3) \quad \lambda \ln X_{t-1} = \lambda \ln a + \lambda b(t-1) + \lambda^2 \ln X_{t-2} + \lambda^3 \ln X_{t-3} + \dots + \lambda \ln U_{t-1}$$

Subtracting (A3) from (A2) leads to:

$$(A4) \quad \ln X_t = (1-\lambda) \ln a + \lambda b + (1-\lambda)bt + 2\lambda \ln X_{t-1} + V_t$$

where  $V_t$  is equal to  $\ln U_t - \lambda \ln U_{t-1}$  and is assumed to have zero mean and to be serially independent.

Equation (A4) was estimated separately for each investment determinant, using ordinary least squares. For real final sales and for after-tax profits,  $X$

Table 6.—Equations for Estimating Expected Values of Sales, Profits, and Price Change

	Estimated coefficients			Derived parameters			R <sup>2</sup>
	(1-λ)lna+λb	(1-λ)b	2λ	a	1000b	λ	
Real final sales: <sup>1</sup>							
Total.....	0.628 (1.6)	0.000390 (1.5)	0.953 (32.1)	3.32	0.74	0.48	0.999
Goods.....	.794 (2.0)	.000504 (1.9)	.937 (28.8)	4.45	.95	.47	.997
Profits after-tax: <sup>1</sup>							
Nonfinancial corporations.....	.934 (2.8)	.002029 (3.2)	.900 (25.4)	5.45	3.69	.45	.984
Manufacturing corporations.....	1.063 (2.8)	.002059 (3.1)	.881 9(21.1)	6.67	3.68	.44	.968
Nonmanufacturing nonfinancial corporations.....	.711 (2.6)	.002080 (3.1)	.915 (27.6)	3.70	3.83	.46	.989
Investment goods prices: <sup>1, 2</sup>							
Total nonfarm business.....	-.000061 (.1)	.000062 (3.2)	.643 (9.8)	1.00	.09	.32	.577
Manufacturing.....	.000101 (.1)	.000049 (2.4)	.710 (10.6)	1.00	.08	.36	.637
Nonmanufacturing.....	-.000535 (.4)	.000079 (3.2)	.547 (6.9)	1.00	.11	.27	.497

1. For definitions and variables, see appendix.  
 2. For the price equations, the dependent variable is the ratio of current to lagged price level and the coefficient 2λ applies to last period's ratio.

NOTE.—The estimation period is 1952-1979.

and  $X^e$  refer to actual and expected levels. For prices,  $X$  and  $X^e$  refer to ratios of the current value to last quarter's value.

Regression results are shown in table 6. The constant term in these regression equations is an estimate of

$$(1-\lambda) \ln a + \lambda b;$$

the coefficient of time, an estimate of  $(1-\lambda)b$ ; and the coefficient of  $\ln X_{t-1}$ , an estimate of  $2\lambda$ .

To use the results to estimate expected values of  $X_t$ , or  ${}_tX^e_{t-1}$ , it was assumed that actual and expected values were equal in an initial quarter—the fourth quarter of 1951. Then the logarithm of the expected value was generated sequentially by applying the formula:

$$(A5) \quad \ln {}_tX^e_{t-1} = ((1-\lambda) \ln a + \lambda b) + (1-\lambda)bt + \lambda \ln {}_{t-1}X^e_{t-2} + \lambda \ln X_{t-1}$$

which can be derived from (A1) by the algebraic procedure used to transform (A2) into (A4).

For the one-quarter-ahead realiza-

tion equations, unexpected values of sales, profits, and prices were calculated as actual sales, profits, and prices less the expected values generated by the equations in table 6. For the two-quarters-ahead realization equations, expected values two quarters ahead were generated by applying equation (A5) twice, the first time to generate expected values one quarter ahead and the second time, letting expected values one quarter ahead serve as both lagged expected values and lagged actual values, to generate expected values two quarters ahead. Unexpected values were calculated as actual values less two-quarters-ahead expected values.<sup>18</sup> For the year-ahead realization equations, expected values were generated by applying equation (A5) four times and then averaging the four expected values to obtain year-ahead averages.

18. For profits, one-quarter-ahead unexpected values were much more closely related to investment than two-quarters-ahead values. Consequently, as noted in table 4, the two-quarters-ahead realization equations make use of unexpected profits one quarter ahead rather than two quarters ahead.

# A Profile of U.S. Multinational Companies in 1977

**T**HIS article presents a profile of U.S. multinational companies (MNC's), based on data from BEA's 1977 benchmark survey of U.S. direct investment abroad.<sup>1</sup> It discusses industry characteristics of the MNC's, their size, the location of their operations, the U.S. parents' percentage ownership in their foreign affiliates, and the form of organization of parents and affiliates. Forthcoming studies will discuss, in greater depth, specific aspects of the MNC's, such as their growth since the last benchmark survey of 1966, sales, gross product, employment, technology, sources and uses of funds, and U.S. merchandise trade.

U.S. direct investment abroad exists when one U.S. person (U.S. parent) has a direct or indirect ownership interest of 10 percent or more in a foreign business enterprise (foreign affiliate). U.S. MNC's are U.S. companies that have direct investment abroad. An MNC consists of the U.S. parent and all of its foreign affiliates.

The 1977 benchmark survey was a census, i.e., it was intended to cover the universe of U.S. MNC's. Reports were received for 3,540 U.S. parents and their 24,666 foreign affiliates. Although a large number of very small affiliates were exempted from the survey in order to ease the reporting burden, coverage

NOTE.—Arnold Gilbert programmed the tables, with assistance from Richard Mauery.

1. The April 1981 SURVEY OF CURRENT BUSINESS gave a brief description of the benchmark survey and highlights of the data. See International Investment Division, "1977 Benchmark Survey of U.S. Direct Investment Abroad," SURVEY 61 (April 1981): 29-37. Detailed data and a more complete methodology of the survey were published in *U.S. Direct Investment Abroad, 1977*; copies may be obtained from the Superintendent of Documents, U.S. GPO, Washington, D.C. 20402, price \$10.00, stock number 003-010-00079-1.

of the universe in terms of values was virtually complete.

The benchmark survey covered parents and affiliates in all industries. However, this article will cover only nonbank MNC's. A nonbank MNC consists of a nonbank U.S. parent that has at least one nonbank foreign affiliate, and its nonbank affiliate(s). In the 1977 benchmark survey, much more data were collected for nonbank parents and affiliates than for bank parents and affiliates, because the latter already were required to report most of the information needed for policy purposes to other U.S. Government agencies.

The 3,425 nonbank parents of nonbank affiliates accounted for 97 percent of both the number and employment, but only 73 percent of the total assets, of all U.S. parents; similarly, the 23,641 nonbank affiliates of nonbank parents accounted for 96 percent of the number and 98 percent of the employment, but only 59 percent of the total assets, of all affiliates. Assets of nonbank parents and affiliates tended to be lower, on average, than those of bank parents and affiliates, because the assets of the latter included substantial financial claims arising from their lending activities. (Their liabilities tended to be high also, because of their sizable borrowing activities and customers' deposits.) In the remainder of this article and in all accompanying tables, the term "U.S. MNC's" refers only to nonbank MNC's, as defined above. "U.S. parents" refers only to nonbank parents of nonbank affiliates, and "foreign affiliates" refers only to nonbank affiliates of nonbank parents.

The characteristics of U.S. MNC's could be described using a number of different items, such as total assets,

sales, or employment. For simplicity, most of the discussion here is in terms of a single item—total assets. (One exception is in the discussion of industrial diversity, where some of the necessary data are available only for sales.) However, the number, sales, and employment, as well as the total assets, of MNC's are presented in most of the tables and are mentioned in the text, to the extent that they add to the discussion of a given characteristic.

Highlights of this article are:

- U.S. MNC's had worldwide consolidated assets of \$1,818.2 billion in 1977; 42 percent were in manufacturing, 23 percent in finance (except banking), insurance, and real estate, 16 percent in petroleum, and 13 percent in "other industries" (mainly transportation, communication, and public utilities). The remaining 6 percent were in trade and mining.

- A majority of affiliates were classified in the same industries as their U.S. parents, or in industries that complemented or were closely related to those of their parents.

- Industry specialization ratios—the percentage of an MNC's total sales that were in the MNC's own industry of classification—ranged from 72 percent in mining to almost 90 percent in petroleum and trade.

- The distribution of sales by MNC industry of classification did not differ significantly from that by industry of the sales themselves.

- The distribution of worldwide consolidated assets of U.S. MNC's was highly skewed toward the large MNC's. The 62 largest—those with assets of at least \$5 billion each—accounted for less than 2 percent of the number, but for 50 percent of the assets, of all MNC's.



● Affiliates accounted for 24 percent of the aggregated assets of U.S. parents and affiliates. By industry of MNC, affiliates' shares of aggregated assets ranged from 38 percent in petroleum to 10 percent in finance (except banking), insurance, and real estate.

● Almost three-fourths of affiliates' assets—\$359.6 billion out of \$490.2 billion—were in developed countries. Assets of affiliates in Canada, at \$86.2 billion, were the largest for any single country. Assets of European affiliates were \$206.6 billion and were mainly in the European Communities (9). Almost two-thirds of the assets of affiliates in developing countries were in Latin America.

● Nearly one-half of U.S. MNC's had affiliates in only 1 country. Only 4 percent had affiliates in more than 20 countries.

● Eighty-three percent of affiliates were majority-owned (i.e., owned more than 50 percent) by their U.S. parents; of these, 86 percent were wholly owned.

● Globally, majority-owned affiliates accounted for nearly three-fourths of total affiliate assets. Their shares of assets were significantly less in countries—such as South Korea, Japan, India, Spain, and Mexico—that maintained restrictions on majority ownership by foreign investors.

● Most U.S. parents and foreign affiliates were incorporated. Incorporated parents accounted for 99 percent of the assets of all parents, and incorporated affiliates accounted for 87 percent of the assets of all affiliates.

● Sixty-one percent of affiliates were single-establishment enterprises. Only 6 percent had 11 or more establishments.

### Industry Characteristics of MNC's

#### *Distribution of MNC assets by industry*

In the 1977 benchmark survey, data were collected for, and an industry code assigned to, the U.S. parent and each of its foreign affiliates separately; the codes were based on the industry in which the individual parent's or affil-

iate's sales were largest. Because an MNC-wide industry code (i.e., a code based on the worldwide consolidated activities of the MNC as a whole) was not available from the survey, in what follows, each MNC is classified by industry of U.S. parent. In a majority of cases, however, the U.S. parent's industry was probably also the MNC-wide industry, because, as will be discussed later, U.S. parents normally accounted for a much larger share of total MNC operations than did their foreign affiliates, and a majority of affiliates were classified in the same industries as their parents.

Table 1 presents selected data for U.S. MNC's by industry of U.S. parent. For MNC's worldwide, total assets are shown two ways—aggregated and consolidated. Aggregated assets are the sum of the assets of U.S. parents and of their foreign affiliates, which were reported separately in the 1977 benchmark survey. This sum contains duplication because of intercompany positions between a parent and an affiliate or between two affiliates of the same parent; these positions give rise to assets on the books of both the parent and the affiliate, or of the two affiliates, involved. Consolidated assets are assets after elimination of the duplication of intercompany positions. Worldwide consolidated assets of MNC's were not reported in the 1977 benchmark survey, but the data needed to remove most of the duplication were reported. (For derivation and further explanation, see the technical note.) In 1977, consolidated assets of the MNC's were roughly approximated to be \$1,818.2 billion, compared with aggregated assets of \$2,033.4 billion. Thus, a little over 10 percent of aggregated assets were eliminated by consolidation.

By industry of U.S. parent, manufacturing accounted for 42 percent, finance (except banking), insurance, and real estate for 23 percent, petroleum for 16 percent, and "other industries" (mainly transportation, communication, and public utilities) for 13 percent, of MNC worldwide consolidated assets. The share of trade was 5 percent and that of mining less than 1 percent.

Of the manufacturing total, 21 percent was in transportation equipment, 15 percent in chemicals, 14 percent in metals, and 13 percent in nonelectrical machinery. In finance (except banking), insurance, and real estate, MNC's in insurance had the largest share of assets.

The distribution of MNC aggregated assets by industry of U.S. parent was virtually the same as that of MNC consolidated assets. However, the distributions of MNC sales and employment by industry each differed significantly from that of either asset measure.

U.S. MNC's had worldwide (aggregated) sales of \$2,060.3 billion and worldwide employment of 26,081,000 in 1977.<sup>2</sup> MNC's in manufacturing and trade accounted for larger shares, and MNC's in finance (except banking), insurance, and real estate for smaller shares, of both sales and employment than they did of assets (chart 11). In the latter industry, ratios of sales to assets, and of employment to assets, are usually significantly lower than those in other industries; assets of enterprises in this industry often include very sizable investment portfolios, which, on average, generate lower "sales" (in this case, mainly dividend and interest receipts) and support fewer employees than other types of assets.

Petroleum MNC's accounted for a larger share of sales, but a much smaller share of employment, than of assets. Their larger share of sales probably reflected the substantial duplication in their sales data because of intercompany transactions. Before being sold to final customers, petroleum is typically resold several times within the MNC—for example, by extractive affiliates to refining affiliates, and then by refining affiliates to marketing or distribution affiliates. The smaller share of employment accounted for by petroleum MNC's mainly reflected the relatively high capital (and low labor) intensity of the petroleum industry.

2. Only aggregated, not consolidated, worldwide MNC sales are shown in the tables and discussed in this article. A forthcoming study will estimate consolidated worldwide MNC sales.

Table 1.—Selected Data of U.S. MNC's, 1977, by Industry of U.S. Parent

Industry of U.S. parent	Number of:		Total assets of:				Sales by:			Employment of:			Affiliates as a percentage of MNC's worldwide		
	MNC's (=number of U.S. parents)	Affiliates	MNC's worldwide		U.S. parents	Affiliates	MNC's worldwide <sup>3</sup>	U.S. parents	Affiliates	MNC's worldwide	U.S. parents	Affiliates	Total assets, aggregated <sup>4</sup> (=col. 6+col. 4)	Sales (=col. 7)	Employment (=col. 12+col. 10)
			Consolidated <sup>1</sup>	Aggregated <sup>2</sup>											
			Millions of dollars						Number of employees						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
<b>All industries</b> .....	<b>3,425</b>	<b>23,641</b>	<b>1,818,173</b>	<b>2,033,418</b>	<b>1,543,240</b>	<b>490,178</b>	<b>2,060,263</b>	<b>1,412,293</b>	<b>647,969</b>	<b>26,081,327</b>	<b>18,884,636</b>	<b>7,196,691</b>	<b>24.1</b>	<b>31.5</b>	<b>27.6</b>
Mining.....	29	122	10,162	11,511	7,489	4,022	6,866	4,986	1,880	106,484	65,342	41,142	34.9	27.4	38.6
Metal mining.....	11	46	4,562	5,259	2,894	2,365	2,672	1,467	1,205	48,368	21,796	26,572	45.0	45.1	54.9
Iron.....	2	19	1,470	(D)	(D)	(D)	(D)	(D)	(D)	9,858	(D)	(D)	55.5	36.7	(D)
Copper, lead, zinc, gold, and silver.....	6	23	3,024	3,504	(D)	(D)	1,850	(D)	(D)	38,292	(D)	(D)	(D)	(D)	(D)
Bauxite, other ores, and services.....	3	4	68	(D)	(D)	(D)	(D)	(D)	(D)	218	(D)	(D)	37.4	81.6	(D)
Coal and other nonmetallic minerals.....	18	76	5,600	6,252	4,590	1,657	4,194	3,519	675	58,116	43,546	14,570	26.5	16.1	25.1
Petroleum.....	158	2,227	296,312	354,536	218,756	135,780	474,634	221,757	252,878	1,315,506	890,511	424,995	38.3	53.3	32.3
Oil and gas extraction.....	85	305	14,281	16,370	12,448	3,922	8,547	6,181	2,416	85,147	68,964	16,183	24.0	28.3	19.0
Crude petroleum (no refining) and gas.....	58	199	11,003	12,722	9,471	3,251	6,140	4,144	1,996	46,405	37,340	9,065	25.6	32.5	19.5
Oil and gas field services.....	27	106	3,228	3,647	2,976	671	2,407	1,987	420	38,742	31,624	7,118	18.4	17.5	18.4
Petroleum and coal products.....	43	1,625	249,354	299,611	181,603	118,008	411,457	181,568	229,889	1,079,385	717,685	361,700	39.4	55.9	33.5
Integrated refining and extraction.....	36	1,608	248,160	298,365	180,455	117,910	409,123	179,389	229,734	(D)	709,020	(D)	39.5	56.2	33.7
Refining without extraction.....	2	3	755	(D)	(D)	(D)	(D)	(D)	(D)	1,670	(D)	(D)	.9	4.0	(D)
Petroleum and coal products, nec.....	5	14	440	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	536	18.8	12.0	(D)
Petroleum wholesale trade.....	19	188	18,216	22,513	11,572	10,941	42,252	22,321	19,980	95,915	57,638	38,277	48.6	47.2	39.9
Other.....	11	109	14,511	16,042	13,174	2,909	12,379	11,736	642	55,059	46,224	8,835	18.1	5.2	16.0
Manufacturing.....	1,841	15,316	769,310	892,447	633,416	259,031	1,087,157	739,460	297,697	17,097,913	11,775,931	5,322,882	29.0	28.7	31.1
Food and kindred products.....	112	1,388	56,296	65,095	48,359	16,736	110,762	83,422	27,340	1,500,662	1,016,702	483,960	25.7	24.7	32.2
Grain mill and bakery products.....	20	238	9,451	10,619	8,182	2,437	19,132	14,407	4,635	276,985	199,016	77,969	23.0	24.2	28.1
Beverages.....	16	206	9,082	10,834	7,847	2,987	12,958	9,679	3,279	183,559	122,782	60,777	27.6	25.3	33.1
Other.....	78	944	37,783	43,641	32,329	11,312	78,672	59,245	19,426	1,040,118	694,904	345,214	25.9	24.7	33.2
Chemicals and allied products.....	194	3,494	119,050	144,553	97,410	47,143	145,821	96,474	49,347	1,954,780	1,207,675	747,114	32.6	33.8	38.2
Industrial chemicals and synthetics.....	61	1,280	69,243	82,346	54,958	27,388	80,203	53,985	26,218	997,058	652,827	344,231	33.3	32.7	34.5
Drugs.....	32	1,204	28,581	31,160	20,258	10,902	27,464	16,423	11,042	479,357	253,902	225,455	35.0	40.2	47.0
Soap, cleaners, and toilet goods.....	42	615	13,981	16,962	11,515	5,447	23,729	14,780	8,939	302,106	167,368	134,743	32.1	37.7	44.6
Agricultural chemicals.....	7	62	5,551	6,179	4,720	1,460	4,966	3,303	702	26,985	21,277	5,708	23.6	18.8	21.2
Other.....	52	333	6,694	7,905	5,959	1,946	10,380	7,974	2,386	149,283	112,306	36,977	25.6	23.0	24.8
Primary and fabricated metals.....	277	1,544	105,605	117,064	87,073	29,991	119,689	94,563	25,076	1,942,214	1,484,236	457,978	25.6	21.0	23.6
Primary metal industries.....	75	788	79,242	87,161	64,312	22,849	82,575	66,152	16,423	1,275,533	990,625	284,908	26.2	19.9	22.3
Ferrous.....	44	373	47,408	50,825	41,180	9,645	52,897	46,902	5,996	855,365	732,657	122,678	19.0	11.3	14.3
Nonferrous.....	31	415	31,775	36,336	23,182	13,204	29,678	19,250	10,428	420,198	257,968	162,230	36.3	35.1	38.6
Fabricated metal products.....	202	756	26,362	29,902	22,760	7,142	37,064	28,411	8,652	666,681	493,611	173,070	23.9	23.3	26.0
Machinery, except electrical.....	322	2,452	103,403	126,959	82,777	44,182	126,403	80,174	46,228	2,308,887	1,546,343	762,544	34.8	36.6	33.0
Farm and garden machinery and equipment.....	15	68	7,687	8,537	6,276	2,261	9,178	6,559	2,619	126,924	90,583	36,341	26.5	28.5	28.6
Construction and related machinery.....	53	511	20,181	24,300	17,069	7,231	27,025	18,211	8,814	456,057	312,997	143,060	29.8	32.6	31.4
Office and computing machines.....	46	701	42,492	56,450	32,629	23,821	47,858	23,950	23,909	860,638	502,823	357,815	42.2	50.0	41.6
Other.....	208	1,172	33,043	37,672	26,804	10,869	42,342	31,455	10,887	865,268	639,940	225,328	28.9	25.7	26.0
Electric and electronic equipment.....	223	1,556	60,025	67,859	46,749	21,110	87,103	62,631	24,472	1,932,685	1,274,090	658,595	31.1	28.1	34.1
Household appliances.....	22	258	7,230	8,440	5,842	2,598	11,928	8,436	3,493	281,556	169,644	111,912	30.8	29.3	39.7
Radio, television, and communication equipment.....	44	303	13,512	15,180	12,628	2,552	20,442	16,723	3,719	409,987	320,321	89,666	16.8	18.2	21.9
Electronic components and accessories.....	80	366	5,582	6,641	4,956	1,686	9,176	6,247	2,929	263,910	157,109	106,801	25.4	31.9	40.5
Other.....	77	629	33,701	37,598	23,323	14,275	45,557	31,225	14,332	977,232	627,016	350,216	38.0	31.5	35.8
Transportation equipment.....	85	1,141	164,801	186,201	132,478	53,723	240,716	165,681	75,085	3,372,146	2,289,002	1,083,144	28.9	31.2	32.1
Motor vehicles and equipment.....	47	679	123,203	139,484	95,842	43,642	181,105	115,877	65,228	2,200,811	1,356,856	843,955	31.3	36.0	38.3
Other.....	38	462	41,598	46,717	36,636	10,081	59,611	49,804	9,807	1,171,335	932,146	239,189	21.6	16.5	20.4
Other manufacturing.....	628	3,741	160,130	184,716	138,571	46,145	206,713	156,516	50,198	4,086,530	2,956,983	1,129,547	25.0	24.3	27.6
Tobacco manufactures.....	9	158	12,857	15,001	11,229	3,772	14,559	10,845	3,715	174,893	97,993	76,900	25.1	25.5	44.0
Textile products and apparel.....	98	550	23,457	27,969	21,410	6,559	30,054	25,342	4,712	825,108	667,753	157,355	23.4	15.7	19.1
Lumber, wood, furniture, and fixtures.....	50	158	16,306	17,372	15,292	2,080	20,493	18,218	2,276	323,930	268,438	55,492	12.0	11.1	17.1
Paper and allied products.....	54	389	26,473	30,098	22,207	7,891	31,496	22,570	8,927	505,811	341,630	164,181	26.2	28.3	32.5
Printing and publishing.....	66	297	12,311	13,623	11,532	2,091	16,071	13,734	2,337	300,467	253,418	47,049	15.3	14.5	15.7
Rubber products.....	27	302	17,311	20,334	12,981	7,354	25,256	16,401	8,854	526,346	293,693	232,653	36.2	35.1	44.2
Miscellaneous plastics products.....	37	164	2,960	3,437	2,677	760	4,122	3,251	872	33,657	67,268	16,389	22.1	21.1	19.6
Glass products.....	12	147	6,985	7,902	5,033	2,869	8,868	6,053	2,815	201,082	131,090	69,992	36.3	31.7	34.8
Stone, clay, cement, and concrete.....	33	320	12,507	14,565	10,901	3,665	13,912	10,409	3,503	250,370	170,639	79,731	25.2	25.2	31.8
Instruments and related products.....	138	911	20,823	25,319	18,031	7,288	28,832	19,087	9,745	595,920	414,688	181,232	28.8	33.8	30.4
Other.....	104	345	8,140	9,095	7,278	1,817	13,049	10,607	2,442	298,946	250,373	48,573	20.0	18.7	16.2
Trade.....	375	1,419	94,863	103,243	84,260	18,983	228,750	183,706	45,044	2,925,779	2,471,642	454,137	18.4	19.7	15.5
Wholesale trade.....	205	1,100	32,696	37,276	27,209	10,067	108,215	77,683	30,532	377,044	270,993	106,051	27.0	28.2	28.1
Durable goods.....	181	569	15,887	18,065	13,382	4,683	37,516	29,252	8,264	176,495	129,879	46,616	25.9	22.0	26.4
Nondurable goods.....	114	531	16,808	19,211	13,826	5,384	70,699	48,431	22,268	200,549	141,114	59,435	28.0	31.5	29.6
Retail trade.....	80	319	62,167	65,967	57,052	8,916	120,536	106,023	14,513	2,548,735	2,200,649	348,086	13.5	12.0	13.7
Finance (except banking), insurance, and real estate.....	600														

**Comparison of affiliate and parent industries**

A majority of foreign affiliates were classified in the same industries as their U.S. parents, or in industries that complemented or were closely related to those of their U.S. parents. This suggests that the classification of a U.S. MNC by industry of U.S. parent, in most cases, provided an adequate description of the major industrial activity of the MNC as a whole.

Table 2 shows total assets of foreign affiliates disaggregated by industry of U.S. parent, cross-classified by industry of the affiliate itself. Affiliates classified in the same industries as their U.S. parents accounted for more than one-half of the assets of all affiliates of U.S. parents in each of the six major industries shown in table 2. Their shares of assets ranged from 84 percent in mining to 52 percent in "other industries."

Affiliates classified in manufacturing accounted for 66 percent of the assets of all affiliates of manufacturing parents. Most of the remaining assets were accounted for by affiliates in trade and in finance (except banking), insurance, and real estate (which includes holding companies); in general, these affiliates' activities complemented the MNC's manufacturing operations—by selling the goods produced, or by obtaining financing for, or holding equity interests in, the manufacturing operations.

Affiliates in petroleum accounted for 79 percent of the assets of all affiliates of petroleum parents. As in manufacturing, most of the remaining assets were accounted for by affiliates in complementary or related industries; affiliates in finance (except banking), insurance, and real estate—mainly finance and holding companies—accounted for 9 percent, and affiliates in chemical manufacturing—particularly in petrochemicals—for 4 percent.

Within manufacturing, the shares of total affiliate assets accounted for by affiliates classified in the same industries as their parents ranged from 69 percent in foods to 34 percent in electrical machinery. In each industry except metals, the remaining assets were largely accounted for by affiliates in

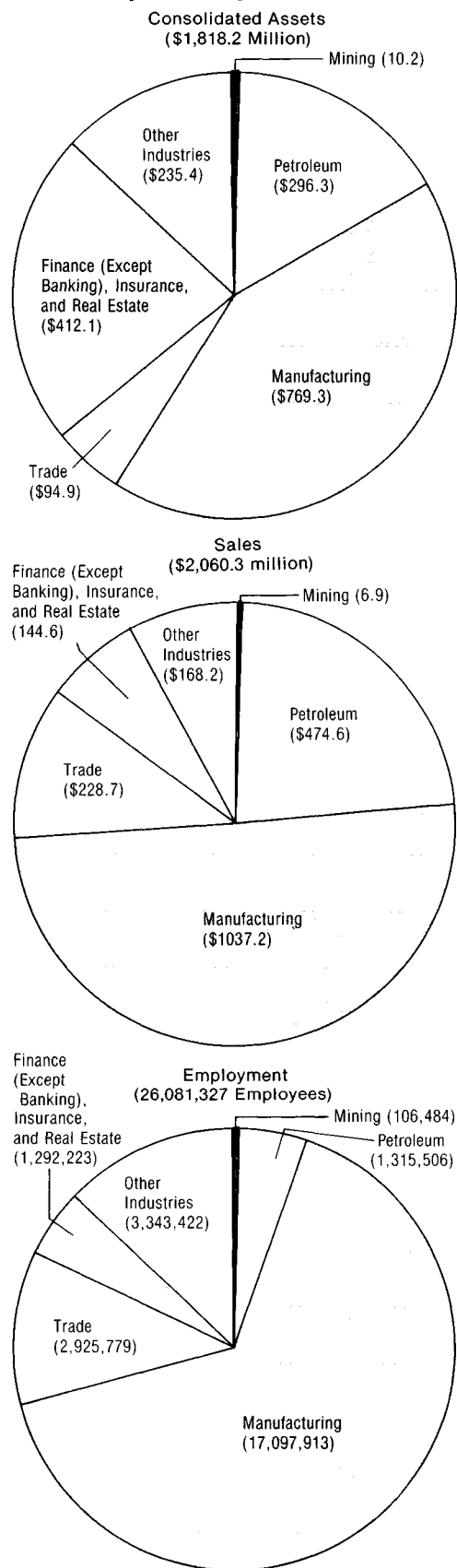
trade and in finance (except banking), insurance, and real estate; in metals, they were largely accounted for by mining affiliates. The share of remaining assets accounted for by finance affiliates was particularly large in transportation equipment, where most MNC's have established separate affiliates to handle the financing of their sales, both to final customers and to dealers. Sales financing is needed in this industry more than in most others, because of the sizeable per-unit expenditure involved in purchases of transportation equipment. In addition, a large portion of final sales are to individuals, who, compared with businesses, tend to rely more heavily on financing provided by sellers. The share of remaining assets accounted for by trade affiliates was particularly large in electrical and nonelectrical machinery.<sup>3</sup>

In most industries, affiliates classified in the same industries as their parents accounted for higher percentages of both the sales and employment, than they did of the assets, of all affiliates. The major exception was in finance (except banking), insurance, and real estate, where affiliates in the same industries as their parents accounted for 40 percent of sales and 17 percent of employment, compared to 67 percent of assets. In all other major industries, affiliates in the same industries as their parents accounted for at least 68 percent of the sales and 75 percent of the employment of all affiliates.

Although, in value terms, a majority of affiliates were classified in the same industries as their parents, many affiliates were not. As a result, the distribution of affiliate assets by industry of U.S. parent (first column of table 2) differed significantly from the distribution of those same assets by industry of the affiliates themselves (first row of table 2). When disaggregated by indus-

3. In electrical machinery, the relatively small share of total affiliate assets accounted for by affiliates in electrical machinery, and the relatively large share of remaining assets accounted for by affiliates in trade, may have been partly due to classification problems involving a large, highly diversified, minority-owned affiliate. When this affiliate's report was filed, information from its U.S. parent indicated that it was a trade affiliate; information obtained after publication of the 1977 benchmark survey results indicated that the affiliate probably should have been classified in electrical machinery manufacturing.

**CHART 11**  
**Worldwide Consolidated Assets, Sales, and Employment of U.S. MNC's, by Industry**



try of U.S. parent, affiliate assets were more concentrated in manufacturing and, to some extent, petroleum, and less concentrated in mining, trade, and finance (except banking), insurance, and real estate, than they were when disaggregated by industry of affiliate.

### Industrial diversity of MNC's

In the 1977 benchmark survey, each U.S. parent and foreign affiliate was required to disaggregate its sales by the industry of the sales themselves. As noted earlier, a parent or affiliate was classified in the one industry in which its sales were largest, even though it may have had significant sales outside that industry.

Table 3 shows, for MNC's, and for parents and affiliates separately, sales that were in their own industries of classification and sales that were in other industries. It also gives industry specialization ratios—defined as the ratio, in percentage terms, of sales in an MNC's, parent's, or affiliate's industry of classification to total sales by the MNC, parent, or affiliate. The higher the ratio, the more specialized are the enterprises classified in the industry.

For MNC's as a whole, specialization ratios in the six major industries shown in table 3 ranged from 72 percent in mining to almost 90 percent in petroleum and trade. In manufacturing, the ratio was 83 percent; however, the ratio was well below this in each manufactur-

ing subindustry. Industry specialization ratios depend, at least in part, on the level of industry aggregation used for data presentation—the ratio will tend to be higher the more aggregated the industry structure used (and hence the larger the number of subindustries included in a subtotal). Accordingly, care should be taken in comparing the ratios, as shown in table 3, for industries that are at different levels of aggregation.

Foreign affiliates had higher specialization ratios than their U.S. parents in nearly every industry shown in table 3. For the six major industries, parent ratios ranged from 67 percent in mining to 91 percent in trade, whereas all affiliate ratios exceeded 92 percent.

Table 2.—Total Assets of Foreign Affiliates, 1977, Industry of U.S. Parent by Industry of Affiliate

Industry of U.S. parent	Industry of affiliate													Other industries
	All industries	Mining	Petroleum	Manufacturing								Trade	Finance (except banking), insurance, and real estate	
				Total	Food and kindred products	Chemicals and allied products	Primary and fabricated metals	Machinery, except electrical	Electric and electronic equipment	Transportation equipment	Other manufacturing			
Millions of dollars														
All industries.....	490,178	18,286	114,400	190,868	14,176	38,782	21,406	28,352	17,118	32,108	38,926	56,101	76,775	33,746
Mining.....	4,022	3,387	261	(D)	0	0	4	2	0	0	(D)	21	(D)	73
Petroleum.....	135,780	1,609	107,428	5,687	(D)	4,770	413	122	(D)	3	(D)	851	12,206	7,999
Manufacturing, total.....	259,031	11,189	2,246	171,453	12,868	33,582	18,864	27,399	10,847	31,218	36,707	40,821	26,015	7,307
Food and kindred products.....	16,736	0	(D)	12,837	11,583	624	37	54	(D)	(D)	429	1,291	1,468	(D)
Chemicals and allied products.....	47,143	560	959	35,653	925	29,825	1,009	312	(D)	(D)	2,206	5,681	3,944	345
Primary and fabricated metals.....	29,991	8,430	181	16,967	(D)	(D)	14,294	520	504	286	649	1,409	1,897	1,108
Machinery, except electrical.....	44,182	(D)	211	26,806	0	243	1,669	21,562	(D)	(D)	1,479	12,957	2,499	(D)
Electric and electronic equipment.....	21,110	(D)	111	9,166	0	(D)	301	621	7,121	151	(D)	8,553	1,077	(D)
Transportation equipment.....	53,723	(D)	(D)	35,398	(D)	805	613	3,045	578	29,911	(D)	5,631	10,948	841
Other manufacturing.....	46,145	156	110	34,826	335	1,148	941	1,283	136	241	30,742	5,298	4,181	1,574
Trade.....	18,983	(D)	242	(D)	829	279	605	126	58	(D)	532	12,095	2,866	870
Finance (except banking), insurance, and real estate.....	44,117	1,589	306	8,048	392	(D)	1,067	540	(D)	(D)	674	1,696	29,753	2,724
Other industries.....	28,246	(D)	3,917	3,170	(D)	(D)	453	163	(D)	(D)	671	616	(D)	14,775
Assets of affiliates in each industry as a percentage of assets of all affiliates of parents in a given industry														
All industries.....	100.0	3.8	23.3	38.9	2.9	7.9	4.4	5.8	3.5	6.6	7.9	11.5	15.7	6.9
Mining.....	100.0	84.2	6.5	(D)	0	0	0.1	0.1	0	0	(D)	0.5	(D)	1.8
Petroleum.....	100.0	1.2	79.1	4.2	(D)	3.5	0.3	0.1	(D)	(*)	(D)	0.6	9.0	5.9
Manufacturing, total.....	100.0	4.3	0.9	68.2	5.0	13.0	7.3	10.6	4.2	12.1	14.2	15.8	10.0	2.8
Food and kindred products.....	100.0	0	(D)	76.7	69.2	3.7	0.2	0.3	(D)	(D)	2.6	7.7	8.8	(D)
Chemicals and allied products.....	100.0	1.2	2.0	75.6	2.0	63.3	2.1	0.7	(D)	(D)	4.7	12.1	8.4	0.7
Primary and fabricated metals.....	100.0	28.1	0.6	56.6	(D)	(D)	47.7	1.7	1.7	1.0	2.2	4.7	6.3	3.7
Machinery, except electrical.....	100.0	(D)	0.5	60.2	0	0.6	3.8	48.8	(D)	(D)	3.4	29.3	5.7	(D)
Electric and electronic equipment.....	100.0	(D)	0.5	43.4	0	(D)	1.4	2.9	33.7	0.7	(D)	40.5	5.1	(D)
Transportation equipment.....	100.0	(D)	(D)	65.9	(D)	1.5	1.1	5.7	1.1	55.7	(D)	10.5	20.4	1.6
Other manufacturing.....	100.0	0.3	0.2	75.5	0.7	2.5	2.0	2.8	0.3	0.5	66.6	11.5	9.1	3.4
Trade.....	100.0	(D)	1.3	(D)	4.4	1.5	3.2	0.7	0.3	(D)	2.8	63.7	15.1	4.6
Finance (except banking), insurance, and real estate.....	100.0	3.6	0.7	18.2	0.9	(D)	2.4	1.2	(D)	(D)	1.5	3.8	67.4	6.2
Other industries.....	100.0	(D)	13.9	11.2	(D)	(D)	1.6	0.6	(D)	(D)	2.4	2.2	(D)	52.3

(\*) Less than 0.05 percent.

(D) Suppressed to avoid disclosure of data of individual companies.

NOTE.—In this table, data for affiliates are only for nonbank affiliates of nonbank parents.

Table 3.—Sales by U.S. MNC's Worldwide, and by U.S. Parents and Foreign Affiliates, 1977, by Industry: Total, Amount in Industry of Classification, and Amount in Other Industries

(Millions of dollars)

Industry of MNC, U.S. parent, or affiliate	MNC's worldwide					U.S. parents					Affiliates				
	Total sales	Sales in industry of MNC <sup>1,2,3</sup>	Sales in other specified industries <sup>2</sup>	Sales in unspecified industries <sup>2</sup>	Sales in industry of MNC as percentage of total <sup>1</sup>	Total sales	Sales in industry of U.S. parent <sup>1,2</sup>	Sales in other specified industries <sup>2</sup>	Sales in unspecified industries <sup>2</sup>	Sales in industry of U.S. parent as percentage of total	Total sales <sup>4</sup>	Sales in industry of affiliate <sup>1,2,4</sup>	Sales in other specified industries <sup>2,4</sup>	Sales in unspecified industries <sup>2,4</sup>	Sales in industry of affiliate as percentage of total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<b>All industries.....</b>	<b>2,060,263</b>	<b>2,025,634</b>	<b>0</b>	<b>34,629</b>	<b>98.3</b>	<b>1,412,293</b>	<b>1,378,756</b>	<b>0</b>	<b>33,537</b>	<b>97.6</b>	<b>647,969</b>	<b>646,877</b>	<b>0</b>	<b>1,092</b>	<b>99.8</b>
Mining.....	6,866	4,952	1,914	0	72.1	4,986	3,356	1,630	0	67.3	9,611	8,911	700	(*)	92.7
Metal mining.....	2,672	2,241	431	0	83.9	1,467	1,118	348	0	76.3	7,662	7,118	544	0	92.9
Iron.....	(D)	(D)	(D)	0	81.3	(D)	(D)	(D)	0	77.7	2,154	(D)	(D)	0	(D)
Copper, lead, zinc, gold, and silver.....	1,850	(D)	(D)	0	58.2	(D)	(D)	(D)	0	53.5	2,788	(D)	(D)	0	(D)
Bauxite, other ores, and services.....	(D)	(D)	1	0	94.8	(D)	(D)	(D)	0	73.8	2,720	2,472	248	0	90.9
Coal and other nonmetallic minerals.....	4,194	2,209	1,985	0	52.7	3,519	2,151	1,368	0	61.1	1,949	1,713	236	(*)	87.9
Petroleum.....	474,634	421,783	51,951	900	88.9	221,757	192,303	28,558	895	86.7	237,346	234,413	2,930	4	98.8
Oil and gas extraction.....	8,547	6,297	2,250	0	73.7	6,131	5,055	1,076	0	82.5	20,962	30,577	385	0	98.8
Crude petroleum (no refining) and gas.....	6,140	4,157	1,983	0	67.7	4,144	3,400	745	0	82.0	27,806	27,561	245	0	99.1
Oil and gas field services.....	2,407	1,732	675	0	71.9	1,987	1,413	573	0	71.1	3,156	3,016	140	0	95.6
Petroleum and coal products.....	411,457	250,616	159,978	863	60.9	181,568	151,182	29,528	858	83.3	112,877	107,503	5,374	4	95.2
Integrated refining and extraction.....	409,123	215,136	193,124	863	52.6	179,389	149,219	29,312	858	83.2	69,089	67,485	1,604	4	97.7
Refining without extraction.....	(D)	(D)	(D)	0	93.7	(D)	(D)	(D)	0	97.6	43,032	39,297	3,735	0	91.3
Petroleum and coal products, nec.....	(D)	(D)	(*)	0	66.8	(D)	(D)	(D)	0	73.3	757	722	34	(*)	95.4
Petroleum wholesale trade.....	42,252	24,384	17,868	0	57.7	22,321	17,382	4,940	0	77.9	76,587	74,474	2,113	0	97.2
Other.....	12,379	7,736	4,604	38	62.5	11,736	7,699	3,999	38	65.6	16,920	14,950	1,971	0	88.4
Manufacturing.....	1,037,157	862,948	145,394	28,816	83.2	739,460	649,942	61,709	27,810	87.9	246,325	233,730	11,593	1,003	94.9
Food and kindred products.....	110,762	83,716	22,909	4,137	75.6	83,422	63,417	15,789	4,126	76.0	25,604	24,505	1,076	24	95.7
Grain mill and bakery products.....	19,132	12,301	6,400	432	64.3	14,497	9,565	4,508	430	66.0	6,641	5,678	961	3	85.5
Beverages.....	12,958	8,804	(D)	(D)	67.9	9,679	6,187	(D)	(D)	63.9	3,413	3,164	(D)	(D)	92.7
Other.....	78,672	50,140	(D)	(D)	63.7	59,245	39,147	(D)	(D)	66.1	15,550	13,645	(D)	(D)	87.8
Chemicals and allied products.....	145,821	94,457	47,388	3,976	64.8	96,474	63,594	28,943	3,937	65.9	43,328	40,003	3,286	37	92.3
Industrial chemicals and synthetics.....	80,203	42,417	34,625	3,160	52.9	53,985	30,002	20,853	3,129	55.6	20,103	17,351	2,735	17	86.3
Drugs.....	27,464	14,616	12,341	507	53.2	16,423	8,430	(D)	(D)	51.3	7,930	7,045	(D)	(D)	88.8
Soap, cleaners, and toilet goods.....	23,729	13,255	10,281	194	55.9	14,790	7,966	6,631	194	53.9	7,365	6,331	1,034	(*)	86.0
Agricultural chemicals.....	4,066	2,005	(D)	(D)	49.3	3,303	1,704	(D)	(D)	51.6	2,238	1,855	(D)	(D)	82.9
Other.....	10,360	6,543	(D)	(D)	63.2	7,974	4,922	(D)	(D)	61.7	5,690	5,053	(D)	(D)	88.8
Primary and fabricated metals.....	119,639	79,444	37,662	2,537	66.4	94,563	66,318	25,741	2,503	70.1	20,935	18,106	1,835	94	90.4
Primary metal industries.....	82,575	49,254	31,055	2,266	59.6	66,152	42,724	21,185	2,243	64.6	9,857	9,126	729	3	92.6
Ferrous.....	52,897	33,394	18,589	914	63.1	46,902	31,717	14,271	814	67.6	3,153	2,840	310	3	90.1
Nonferrous.....	29,678	14,243	14,083	1,351	48.0	19,250	9,826	8,096	1,329	51.0	6,705	6,282	423	0	93.7
Fabricated metal products.....	37,064	21,664	15,129	271	58.5	28,411	17,414	10,736	260	61.3	10,177	8,790	1,296	92	86.4
Machinery, except electrical.....	126,403	79,869	42,754	3,779	63.2	80,174	56,884	19,657	3,633	71.0	33,046	29,834	3,013	199	90.3
Farm and garden machinery and equipment.....	9,178	5,635	3,543	0	61.4	6,559	4,416	2,142	0	67.3	3,446	2,892	554	0	83.9
Construction and related machinery.....	27,025	14,952	11,198	875	55.3	18,211	11,112	6,245	854	61.0	7,169	6,621	541	8	92.3
Office and computing machines.....	47,858	28,935	18,621	303	60.5	23,950	17,643	6,274	233	73.7	14,116	11,839	2,115	163	83.9
Other.....	42,342	23,266	16,475	2,601	54.9	31,455	18,657	10,252	2,546	59.3	8,315	7,067	620	28	92.2
Electric and electronic equipment.....	87,103	47,062	35,235	4,805	54.0	62,631	37,369	20,696	4,566	59.7	22,326	20,345	1,713	268	91.1
Household appliances.....	11,928	6,895	4,886	147	57.8	8,436	5,161	3,127	147	61.2	3,962	2,845	919	198	71.8
Radio, television, and communication equipment.....	20,442	8,966	11,290	186	43.9	16,723	8,254	8,284	185	49.4	7,594	6,832	762	0	90.0
Electronic components and accessories.....	9,176	6,062	3,048	66	66.1	6,247	4,201	1,981	66	67.2	5,115	4,486	629	0	87.7
Other.....	45,557	14,963	26,188	4,406	32.8	31,225	12,536	14,522	4,167	40.1	5,656	4,718	867	71	83.4
Transportation equipment.....	240,716	178,013	58,315	4,387	74.0	165,681	131,418	30,023	4,240	79.3	57,788	49,102	8,576	111	85.0
Motor vehicles and equipment.....	181,105	143,062	37,240	803	79.0	115,877	100,381	14,798	697	86.6	54,884	46,152	8,627	105	84.1
Other.....	59,611	29,290	26,736	3,585	49.1	49,804	27,047	19,215	3,542	54.3	2,904	2,806	92	6	96.6
Other manufacturing.....	206,713	150,101	51,420	5,193	72.6	156,516	117,085	34,626	4,805	74.8	44,200	40,689	3,241	270	92.1
Tobacco manufactures.....	14,559	7,809	6,676	75	53.6	5,870	4,900	75	75	54.1	2,114	2,109	5	0	99.7
Textile products and apparel.....	30,054	20,646	7,343	2,065	68.7	25,342	18,150	5,127	2,065	71.6	4,004	3,782	220	2	94.5
Lumber, wood, furniture, and fixtures.....	20,493	10,829	8,290	375	52.8	18,218	9,673	8,171	374	51.1	2,295	1,873	383	39	81.6
Paper and allied products.....	31,496	19,824	10,940	733	62.9	22,570	14,551	7,625	394	64.5	8,101	6,966	1,077	57	86.0
Printing and publishing.....	16,071	12,096	3,922	53	75.3	13,734	11,032	2,649	52	80.3	1,527	1,359	167	1	89.0
Rubber products.....	25,256	16,331	8,410	515	64.7	16,401	10,274	5,629	499	62.6	7,459	6,453	989	17	86.5
Miscellaneous plastics products.....	4,122	2,317	1,315	490	56.2	3,251	1,778	982	490	54.7	1,585	1,448	135	2	91.3
Glass products.....	8,868	5,902	2,955	12	66.6	6,053	3,843	2,199	12	63.5	2,828	2,550	270	8	90.2
Stone, clay, cement, and concrete.....	13,912	7,625	6,083	205	54.8	10,409	5,568	4,638	203	53.5	3,183	2,767	394	21	86.9
Instruments and related products.....	28,832	16,086	12,110	637	55.8	19,087	11,937	6,541	609	62.5	7,192	5,869	1,205	118	81.6
Other.....	13,049	7,341	5,674	34	56.3	10,607	5,960	4,615	32	56.2	3,913	3,665	244	4	93.7
Trade.....	228,750	204,890	22,334	1,527	89.6	183,706	166,618	15,580	1,508	90.7	102,997	99,001	3,934	62	96.1
Wholesale trade.....	108,215	89,658	17,084	1,473	82.9	77,683	64,830	11,399	1,454	83.5	84,733	80,792	3,879	62	95.3
Durable goods.....	37,516	28,409	8,624	482	75.7	29,252	22,730	6,045	478	77.7	45,139	41,554	3,527	59	92.1
Nondurable goods.....	70,699	54,835	14,873	991	77.6	48,431	37,024	10,431	976	76.4	39,594	35,865	3,725	4	90.6
Retail trade.....	120,536	109,992	10,489	54	91.3	106,023	97,475	8,494	54	91.9	18,263	17,382	881	(*)	95.2
Finance (except banking), insurance, and real estate.....	144,650	117,449	24,407	2,794	81.2	119,596	107,502	9,350	2,743	89.9	14,746	14,660	86	0	99.4
Finance, except banking.....	11,178	6,300	(D)	(D)	56.4	9,051	5,665	(D)	(D)	62.6	3,682	3,627	55	0	98.5
Insurance.....	123,446	101,888	18,796	2,761	82.5	108,088	95,804	9,374	2,711	88.6	10,072	10,069	3	0	100.0
Real estate.....	587	448	139	0	76.4	517	425	92	0	82.2	195	190	5	0	97.6</

Table 4.—Sales by U.S. MNC's Worldwide, and by U.S. Parents and Foreign Affiliates, 1977, by Industry of Classification and by Industry of Sales

Industry	Millions of dollars						Percentage distribution					
	MNC's worldwide		U.S. parents		Affiliates		MNC's worldwide		U.S. parents		Affiliates	
	Sales, by industry of MNC <sup>1</sup>	Sales, by industry of sales <sup>2</sup>	Sales, by industry of U.S. parent	Sales, by industry of sales <sup>2</sup>	Sales, by industry of affiliate	Sales, by industry of sales <sup>2</sup>	Sales, by industry of MNC <sup>1</sup>	Sales, by industry of sales <sup>2</sup>	Sales, by industry of U.S. parent	Sales, by industry of sales <sup>2</sup>	Sales, by industry of affiliate	Sales, by industry of sales <sup>2</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<b>All industries</b> .....	<b>2,060,263</b>	<b>2,060,263</b>	<b>1,412,293</b>	<b>1,412,293</b>	<b>647,969</b>	<b>647,969</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Mining.....	6,866	20,697	4,986	11,467	9,611	9,170	.3	1.0	.4	.8	1.5	1.4
Metal mining.....	2,672	11,314	1,467	3,857	7,662	7,371	.1	.5	.1	.3	1.2	1.1
Iron.....	(D)	2,863	(D)	719	2,154	2,117	(D)	.1	(D)	.1	.3	.3
Copper, lead, zinc, gold, and silver.....	1,850	4,661	(D)	2,121	2,788	2,517	.1	.2	(D)	.2	.4	.4
Bauxite, other ores, and services.....	(D)	3,790	4	1,017	2,720	2,738	(D)	.2	0	.1	.4	.4
Coal and other nonmetallic minerals.....	4,104	9,383	3,519	7,611	1,949	1,988	.2	.5	.2	.5	.3	.3
Petroleum.....	474,634	452,658	221,757	214,110	237,346	236,423	23.0	22.0	15.7	15.2	36.6	36.5
Oil and gas extraction.....	8,547	42,611	6,131	11,412	30,962	30,806	.4	2.1	.4	.8	4.8	4.8
Crude petroleum (no refining) and gas.....	6,140	35,110	4,144	7,034	27,806	27,700	.3	1.7	.3	.5	4.3	4.3
Oil and gas field services.....	2,407	7,501	1,987	4,378	3,156	3,106	.1	.4	.1	.3	.5	.5
Petroleum and coal products.....	411,457	272,907	181,568	164,263	112,877	108,140	20.0	13.2	12.9	11.6	17.4	16.7
Integrated refining and extraction.....	409,123	228,067	179,389	160,535	69,089	67,625	19.9	11.1	12.7	11.4	10.7	10.4
Refining without extraction.....	(D)	42,034	(D)	1,721	43,032	39,715	(D)	2.0	(D)	.1	6.6	6.1
Petroleum and coal products, nec.....	(D)	2,806	(D)	2,007	757	800	(D)	.1	(D)	.1	.1	.1
Petroleum wholesale trade.....	42,252	106,624	22,321	26,667	76,587	78,932	2.1	5.2	1.6	1.9	11.8	12.2
Other.....	12,379	30,516	11,736	11,768	16,920	18,545	.6	1.5	.8	.8	2.6	2.9
Manufacturing.....	1,037,157	944,472	739,460	707,970	246,325	237,841	50.3	45.8	52.4	50.1	38.0	36.7
Food and kindred products.....	110,762	108,396	83,422	83,063	25,604	25,526	5.4	5.3	5.9	5.9	4.0	3.9
Grain mill and bakery products.....	19,132	25,014	14,497	18,042	6,641	6,992	.9	1.2	1.0	1.3	1.0	1.1
Beverages.....	12,958	13,327	9,679	10,037	3,413	3,310	.6	.6	.7	.7	.5	.5
Other.....	78,672	70,054	59,245	54,984	15,550	15,224	3.8	3.4	4.2	3.9	2.4	2.3
Chemicals and allied products.....	145,821	135,157	96,474	92,112	43,326	43,033	7.1	6.6	6.8	6.5	6.7	6.6
Industrial chemicals and synthetics.....	80,203	68,529	53,985	49,238	20,103	19,241	3.9	3.3	3.8	3.5	3.1	3.0
Drugs.....	27,464	18,430	16,423	10,894	7,930	7,497	1.3	.9	1.2	.8	1.2	1.2
Soap, cleaners, and toilet goods.....	23,729	18,923	14,790	11,779	7,365	7,118	1.2	.9	1.0	.8	1.1	1.1
Agricultural chemicals.....	4,066	10,218	3,303	7,665	2,238	2,568	.2	.5	.2	.5	.3	.4
Other.....	10,360	19,057	7,974	12,536	5,690	6,509	.5	.9	.6	.9	1.0	1.0
Primary and fabricated metals.....	119,639	106,581	94,563	87,132	20,035	19,760	5.8	5.2	6.2	6.2	3.1	3.0
Primary metal industries.....	82,575	62,051	66,152	52,390	9,857	9,878	4.0	3.0	4.7	3.7	1.5	1.5
Ferrous.....	52,897	39,898	46,902	36,942	3,153	3,169	2.6	1.9	3.3	2.6	.5	.5
Nonferrous.....	29,678	22,152	19,250	15,449	6,705	6,710	1.4	1.1	1.4	1.1	1.0	1.0
Fabricated metal products.....	37,064	44,530	28,411	34,742	10,177	9,882	1.8	2.2	2.0	2.5	1.6	1.5
Machinery, except electrical.....	126,403	117,471	80,174	84,141	33,046	33,410	6.1	5.7	5.7	6.0	5.1	5.2
Farm and garden machinery and equipment.....	9,178	13,964	6,559	9,740	3,446	4,228	.4	.7	.5	.7	.5	.7
Construction and related machinery.....	27,025	24,800	18,211	17,247	7,169	7,559	1.3	1.2	1.3	1.2	1.1	1.2
Office and computing machines.....	47,858	33,441	23,950	20,804	14,116	12,590	2.3	1.6	1.7	1.5	2.2	1.9
Other.....	42,342	45,267	31,455	36,351	8,315	9,033	2.1	2.2	2.2	2.6	1.3	1.4
Electric and electronic equipment.....	87,103	77,705	62,631	55,972	22,326	21,789	4.2	3.8	4.4	4.0	3.4	3.4
Household appliances.....	11,928	12,293	8,436	9,041	3,962	3,266	.6	.6	.6	.6	.6	.5
Radio, television, and communication equipment.....	20,442	24,721	16,233	17,547	7,594	7,186	1.0	1.2	1.2	1.2	1.2	1.1
Electronic components and accessories.....	9,176	14,722	6,247	9,141	5,115	5,561	.4	.7	.4	.6	.9	.8
Other.....	45,557	25,970	31,225	20,247	5,656	5,777	2.2	1.3	2.2	1.4	8.9	7.7
Transportation equipment.....	240,716	196,736	165,861	147,191	57,788	49,817	11.7	9.5	11.7	10.4	8.9	7.7
Motor vehicles and equipment.....	181,105	155,713	115,877	109,118	54,884	46,647	8.8	7.6	8.2	7.7	8.5	7.2
Other.....	59,611	41,023	49,984	38,073	2,904	3,170	2.9	2.0	3.5	2.7	.4	.5
Other manufacturing.....	206,713	202,426	156,516	158,355	44,200	44,505	10.0	9.8	11.1	11.2	6.8	6.9
Tobacco manufactures.....	14,559	8,872	10,845	6,705	2,114	2,180	.7	.4	.8	.5	.3	.3
Textile products and apparel.....	30,054	27,836	25,342	24,010	4,004	3,935	1.5	1.4	1.8	1.7	.6	.6
Lumber, wood, furniture, and fixtures.....	20,493	18,592	18,218	16,301	2,295	2,339	1.0	.9	1.3	1.2	.4	.4
Paper and allied products.....	31,496	35,318	22,570	27,283	8,101	8,103	1.5	1.7	1.6	1.9	1.3	1.3
Printing and publishing.....	16,071	15,655	13,734	14,197	1,527	1,535	.8	.8	1.0	1.0	.2	.2
Rubber products.....	25,256	18,239	16,401	11,470	7,459	6,747	1.2	.9	1.2	.8	1.2	1.0
Miscellaneous plastics products.....	4,122	9,418	3,251	7,177	1,585	2,258	.2	.5	.2	.5	.4	.3
Glass products.....	8,868	8,944	6,053	6,309	2,828	2,638	.4	.4	.4	.4	.4	.4
Stone, clay, cement, and concrete.....	13,912	12,305	10,409	9,132	3,183	3,188	.7	.6	.7	.6	.5	.5
Instruments and related products.....	28,832	27,464	19,087	20,541	7,192	6,961	1.4	1.3	1.4	1.5	1.1	1.1
Other.....	13,049	19,783	19,267	15,230	3,913	4,590	.6	1.0	.8	1.1	.6	.6
Trade.....	228,750	316,316	183,706	205,980	102,997	110,096	11.1	15.4	13.0	14.6	15.9	17.0
Wholesale trade.....	108,215	182,544	77,683	90,741	84,733	91,043	5.3	8.9	5.5	6.4	13.1	14.1
Durable goods.....	37,516	92,182	29,252	39,346	45,139	52,310	1.8	4.5	2.1	2.8	7.0	8.1
Nondurable goods.....	70,699	90,362	48,431	51,396	39,594	38,733	3.4	4.4	3.4	3.6	6.1	6.0
Retail trade.....	120,536	133,772	106,023	115,239	18,263	19,054	5.9	6.5	7.5	8.2	2.8	2.9
Banking.....	0	1,218	0	1,223	0	0	.1	.1	.1	.1	0	0
Finance (except banking), insurance, and real estate.....	144,650	130,065	119,596	115,739	14,746	14,914	7.0	6.3	8.5	8.2	2.3	2.3
Finance, except banking.....	11,178	14,195	9,051	10,365	3,682	3,844	.5	.7	.6	.7	.6	.6
Insurance.....	123,446	109,832	108,088	100,295	10,072	10,090	6.0	5.3	7.7	7.1	1.6	1.6
Real estate.....	587	2,967	517	2,770	195	214	.0	.1	.0	.2	.0	.0
Holding companies.....	5,118	3,071	1,940	2,309	797	767	.2	.1	.1	.2	.1	.1
Individuals, estates, and trusts <sup>3</sup> .....	4,321	0	0	0	0	0	.2	.0	.0	.0	0	0
Other industries.....	168,204	194,835	142,789	155,804	36,945	39,523	8.2	9.5	10.1	11.0	5.7	6.1
Agriculture, forestry, and fishing.....	(D)	3,991	1,533	2,407	1,463	1,577	(D)	.2	.1	.1	.2	.2
Construction.....	(D)	27,434	17,105	17,239	10,021	10,160	(D)	1.3	1.2	1.2	1.5	1.6
Transportation, communication, and public utilities.....	108,710	112,095	100,314	99,487	13,205	13,109	5.3	5.4	7.1	7.0	2.0	2.0
Transportation.....	39,217	37,679	35,202	34,229	3,403	3,596	1.9	1.8	2.5	2.4	.5	.6
Communication and public utilities.....	69,493	74,416	65,112	65,217	9,803	9,513	3.4	3.6	4.6	4.6	1.5	1.5
Services.....	29,752	51,316	23,777	36,671	12,256	14,677	1.4	2.5	1.7	2.6	1.9	2.3

MNC = multinational company.  
<sup>1</sup> Suppressed to avoid disclosure of data of individual companies.  
 1. For an MNC as a whole, the industry of classification in this article is the industry of the U.S. parent.  
 2. For each U.S. parent and foreign affiliate, a distribution of sales by 3-digit BEA industry was required in the 1977 benchmark survey. However, only the 8 largest industry categories for U.S. parents, and the 5 largest for foreign affiliates, had to be specified. If a given parent (or affiliate) had sales in more than the 8 (or 5) 3-digit categories specified, its reported distribution of sales would have covered less than 100 percent of its total sales. In columns 2, 4, and 6,

sales for which no industry was specified were allocated among industries in the same proportion as the shares of these industries in sales for which an industry was specified. The unspecified sales were thus given the same distribution as the specified sales.  
 3. See footnote 5, table 1.

NOTE.—In this table, data for U.S. MNC's are only for nonbank MNC's; data for U.S. parents are only for nonbank parents of nonbank affiliates; and data for affiliates are only for nonbank affiliates of nonbank parents.

Within manufacturing, most parent ratios ranged from 50 to 80 percent, whereas nearly all affiliate ratios exceeded 80 percent. The higher affiliate ratios partly reflected the fact that, as discussed in the next section, affiliates tended to be much smaller than their U.S. parents. Smaller companies are generally less diversified than larger ones, because, in most cases, only the larger ones can simultaneously produce a number of different products on an economically efficient scale. In addition, the types of capital, labor, and natural resources available for production—and thus the types of goods that can be profitably produced by a given company—are more limited in many foreign countries than in the United States.

The higher specialization ratios for affiliates also partly reflected the lower level of consolidation permitted, in the 1977 benchmark survey, for affiliates than for their U.S. parents. In general, for a multi-industry enterprise, the lower the level of consolidation, the higher the ratio. In the benchmark survey, affiliates in a given country could be consolidated only if they were in the same industry or were integral parts of the same business operation. In contrast, U.S. parents were defined as fully consolidated domestic enterprises, and corporations required to be consolidated with the parents were not limited as to industry classification.<sup>4</sup>

Because of industrial diversity, analyses of the industry distribution of MNC's based solely on data disaggregated by industry of classification may be misleading. The extent to which this is the case is indicated by comparing the distribution of MNC sales by industry of classification with that by industry of the sales themselves. For MNC's as a whole, and for U.S. parents and foreign affiliates separately, the distribution of sales by industry of classification did not differ significantly from

that by industry of sales, at least for most major industries (table 4). In general, industries that had large percentage differences in sales between the two distributions accounted for small shares of total sales. For most other industries, gains and losses of sales due to redistribution of sales from industries of classification to industries of the sales themselves were largely offsetting.

For MNC's as a whole, manufacturing accounted for 50 percent of total sales by industry of classification and 46 percent of total sales by industry of sales; the comparable percentages for trade MNC's were 11 and 15 percent, respectively. The shares for petroleum MNC's were virtually identical—23 percent and 22 percent, respectively. Among petroleum subindustries, however, there were significant, but nearly offsetting, differences in shares between the two distributions. The share of petroleum and coal products was higher—20 percent compared to 13 percent—and the shares of petroleum wholesale trade, oil and gas extraction, and "other petroleum" somewhat lower, when sales were distributed by industry of classification rather than by industry of sales.

### Size of MNC's

#### *MNC's as a whole*

The distribution of the worldwide consolidated assets of U.S. MNC's by asset size class was highly skewed—a small number of MNC's accounted for a disproportionately large share of assets (table 5 and chart 12). The 62 largest MNC's—those with worldwide consolidated assets of at least \$5 billion each—accounted for less than 2 percent of the number, but for 50 percent of the consolidated assets, of all MNC's. At the other end of the distribution, 54 percent of MNC's had consolidated assets below \$50 million each, but they accounted for less than 2 percent of total MNC consolidated assets. For all MNC's, average consolidated assets were about \$530 million, while median consolidated assets were under \$50 million.

The asset size distribution of U.S. MNC's was skewed in each major industry as well. In manufacturing, MNC's with consolidated assets of at

least \$5 billion accounted for 1 percent of the number, but for 32 percent of the consolidated assets, of all manufacturing MNC's. In finance (except banking), insurance, and real estate, MNC's with at least \$5 billion of consolidated assets accounted for 4 percent of the number, but for 72 percent of the consolidated assets, of all MNC's. In petroleum, they accounted for 10 percent of the number, but 78 percent of the consolidated assets.

Of total consolidated assets of the 62 largest MNC's, finance (except banking), insurance, and real estate—mainly insurance—accounted for about one-third. The relatively large assets of insurance MNC's reflected the sizable financial investments that these companies made with the revenues obtained from policy premiums. (However, in most cases, these companies' liabilities, which consist primarily of expected claims against policies, were almost as large as their assets, so that net assets tended to be small.)

Manufacturing and petroleum each accounted for about one-fourth of the consolidated assets of the 62 largest MNC's. Of the manufacturing total, 46 percent was in transportation equipment, 15 percent in nonelectrical machinery, 13 percent in chemicals, and 12 percent in metals.

The 62 largest MNC's accounted for 42 percent of the sales and 29 percent of the employment—compared with 50 percent of the consolidated assets—of all MNC's. Their much smaller share of employment reflected the fact that many of these MNC's were classified either in finance (except banking), insurance, and real estate or in petroleum, which are industries with relatively low ratios of employment to total assets.

#### *U.S. parents and foreign affiliates*

The asset size distributions of U.S. parents and of foreign affiliates were also highly skewed toward the larger parents or affiliates (table 6).

For U.S. parents, the distribution was roughly similar to that for the MNC's as a whole. There were 50 parents with assets of at least \$5 billion each; they accounted for 1 percent of the number, but 47 percent of the assets,

4. In addition, if a U.S. corporation was normally excluded from full consolidation in reports to stockholders because its operations were largely unrelated to those of the owning enterprise, the benchmark survey nevertheless required it to be consolidated (or aggregated, if consolidation would have caused an undue burden) with the owning enterprise. See technical note for further explanation.

of all U.S. parents. In addition, the distribution was skewed in each major industry, as shown in table 6. Parents with assets of at least \$5 billion accounted for 1 percent of the number, but 26 percent of the assets, of all manufacturing parents; 4 percent of the number, but 74 percent of the assets, of all parents in finance (except banking), insurance, and real estate; and 7 percent of the number, but 66 percent of the assets, of all petroleum parents. Of the assets of the 50 largest parents, finance (except banking), insurance, and real estate accounted for 39 percent, manufacturing for 23 percent, and petroleum for 20 percent.

Primarily because foreign affiliates served smaller markets than their U.S. parents, the average asset size of affiliates was considerably smaller than that of parents—\$21 million compared with \$451 million. As a result, foreign affiliates were much more highly concentrated in the smaller size classes shown in table 6. Only 1 affiliate out of 23,641 had assets of at least \$5 billion. Nevertheless, the skewness of the affiliates' asset size distribution is evident. There were 837 affiliates with assets of \$100 million or more each. They accounted for 4 percent of the number, but 59 percent of the assets, of all affiliates. By industry, they accounted for 3 percent of the number, but 48 percent of the assets, of all manufacturing affiliates; 12 percent of the number, but 81 percent of the assets, of all petroleum affiliates; and 6 percent of the number, but 65 percent of the assets, of all affiliates in finance (except banking), insurance, and real estate. Of the assets of the 837 largest affiliates, petroleum and manufacturing each accounted for 32 percent; finance (except banking), insurance, and real estate and "other industries" each accounted for about 18 percent.

## Location of MNC Operations

### U.S. and foreign operations compared

In terms of assets, U.S. MNC's generally had significantly larger operations in the United States than abroad. Of total MNC aggregated assets of \$2,033.4 billion, U.S. parents accounted for 76 percent and foreign affiliates 24

percent (table 1). Aggregated rather than consolidated assets are used in this discussion because of the difficulty in calculating shares based on the latter. As noted above, intercompany positions between a parent and affiliate give rise to assets on the books of both enterprises; a decision to remove these assets from the books of one enterprise or the other to calculate the parents' and affiliates' respective shares of the totals, would have been highly arbitrary.

When MNC aggregated assets were classified by industry of U.S. parent, the affiliate shares of the industry totals so obtained were highest—38 and 35 percent, respectively—in petroleum and mining. In these industries, companies often need to operate abroad in order to secure natural resource supplies.

Affiliate shares were lowest—11 and 10 percent, respectively—in finance (except banking), insurance, and real estate and in "other industries." In the

**Table 5.—Selected Data of U.S. MNC's Worldwide, 1977, Industry of U.S. Parent by Size of MNC's Worldwide Consolidated Assets**

Industry of U.S. parent and size of MNC's worldwide consolidated assets	Number of MNC's	Worldwide total assets		Worldwide sales <sup>3</sup>	Worldwide employment
		Consolidated <sup>1</sup>	Aggregated <sup>2</sup>		
		Millions of dollars			
<b>All industries</b> .....	<b>3,425</b>	<b>1,818,173</b>	<b>2,033,418</b>	<b>2,060,263</b>	<b>26,081,327</b>
Under \$10 million.....	860	3,457	4,018	6,083	155,231
\$10 million under \$25 million.....	536	8,830	9,842	14,667	291,364
\$25 million under \$50 million.....	459	16,651	18,694	27,317	558,539
\$50 million under \$100 million.....	401	29,320	32,788	48,660	959,842
\$100 million under \$250 million.....	406	64,706	71,791	96,876	1,797,994
\$250 million under \$500 million.....	257	90,113	100,974	131,926	2,199,782
\$500 million under \$1.0 billion.....	186	130,840	145,889	188,004	2,850,279
\$1.0 billion under \$2.5 billion.....	184	304,592	344,764	384,635	5,819,648
\$2.5 billion under \$5.0 billion.....	74	251,612	283,633	290,950	3,984,507
\$5.0 billion and over.....	62	918,053	1,021,026	871,146	7,464,141
<b>Petroleum</b> .....	<b>158</b>	<b>296,312</b>	<b>354,536</b>	<b>474,634</b>	<b>1,315,506</b>
Under \$10 million.....	20	89	127	114	1,046
\$10 million under \$25 million.....	11	189	222	136	2,282
\$25 million under \$50 million.....	15	511	641	258	4,598
\$50 million under \$100 million.....	22	1,792	2,007	1,439	14,906
\$100 million under \$250 million.....	27	4,733	5,252	5,742	33,164
\$250 million under \$500 million.....	17	6,073	7,053	7,650	44,754
\$500 million under \$1.0 billion.....	12	8,755	9,954	9,832	39,533
\$1.0 billion under \$2.5 billion.....	10	15,845	18,194	16,773	81,969
\$2.5 billion under \$5.0 billion.....	8	26,232	29,767	36,313	120,033
\$5.0 billion and over.....	16	232,093	281,319	396,378	973,223
<b>Manufacturing</b> .....	<b>1,841</b>	<b>769,310</b>	<b>892,447</b>	<b>1,037,157</b>	<b>17,097,913</b>
Under \$10 million.....	285	1,564	1,781	2,801	64,371
\$10 million under \$25 million.....	337	5,577	6,179	9,220	202,252
\$25 million under \$50 million.....	290	10,620	11,894	17,396	350,240
\$50 million under \$100 million.....	242	17,425	19,432	27,075	559,554
\$100 million under \$250 million.....	251	39,679	44,223	60,164	1,183,655
\$250 million under \$500 million.....	158	54,897	62,559	82,905	1,640,653
\$500 million under \$1.0 billion.....	104	72,843	83,246	109,177	1,879,896
\$1.0 billion under \$2.5 billion.....	118	194,044	225,282	273,245	4,683,381
\$2.5 billion under \$5.0 billion.....	36	123,164	144,090	152,147	2,432,923
\$5.0 billion and over.....	20	249,496	293,760	302,427	4,100,988
<b>Finance (except banking), insurance, and real estate</b> .....	<b>600</b>	<b>412,126</b>	<b>424,064</b>	<b>144,650</b>	<b>1,292,223</b>
Under \$10 million.....	360	829	965	806	23,408
\$10 million under \$25 million.....	52	866	971	855	11,045
\$25 million under \$50 million.....	30	1,066	1,065	722	18,275
\$50 million under \$100 million.....	28	1,967	2,286	1,293	21,311
\$100 million under \$250 million.....	30	5,091	5,490	2,434	27,161
\$250 million under \$500 million.....	24	8,726	9,052	3,831	49,135
\$500 million under \$1.0 billion.....	21	15,147	16,019	5,168	50,673
\$1.0 billion under \$2.5 billion.....	23	41,288	41,920	15,575	126,785
\$2.5 billion under \$5.0 billion.....	11	39,866	41,400	15,778	130,093
\$5.0 billion and over.....	21	297,331	304,865	98,186	834,332
<b>Other industries</b> .....	<b>826</b>	<b>340,424</b>	<b>362,372</b>	<b>403,821</b>	<b>6,375,685</b>
Under \$10 million.....	195	974	1,145	2,362	66,406
\$10 million under \$25 million.....	136	2,197	2,470	4,456	75,734
\$25 million under \$50 million.....	124	4,514	5,064	8,241	155,431
\$50 million under \$100 million.....	109	8,136	9,064	18,253	364,069
\$100 million under \$250 million.....	98	15,203	16,825	28,536	554,014
\$250 million under \$500 million.....	58	20,417	22,310	37,559	465,240
\$500 million under \$1.0 billion.....	49	34,094	36,670	63,826	880,172
\$1.0 billion under \$2.5 billion.....	33	53,405	59,368	79,041	927,513
\$2.5 billion under \$5.0 billion.....	19	62,351	68,375	86,710	1,301,458
\$5.0 billion and over.....	5	139,132	141,082	74,155	1,555,598

MNC = multinational company.

1. See footnote 1, table 1.

2. Equals sum of total assets of U.S. parents and of their foreign affiliates, as reported in the 1977 benchmark survey. This sum contains duplication of assets that reflect intercompany positions between a parent and its affiliate or between 2 affiliates of the same parent. See text for further discussion.

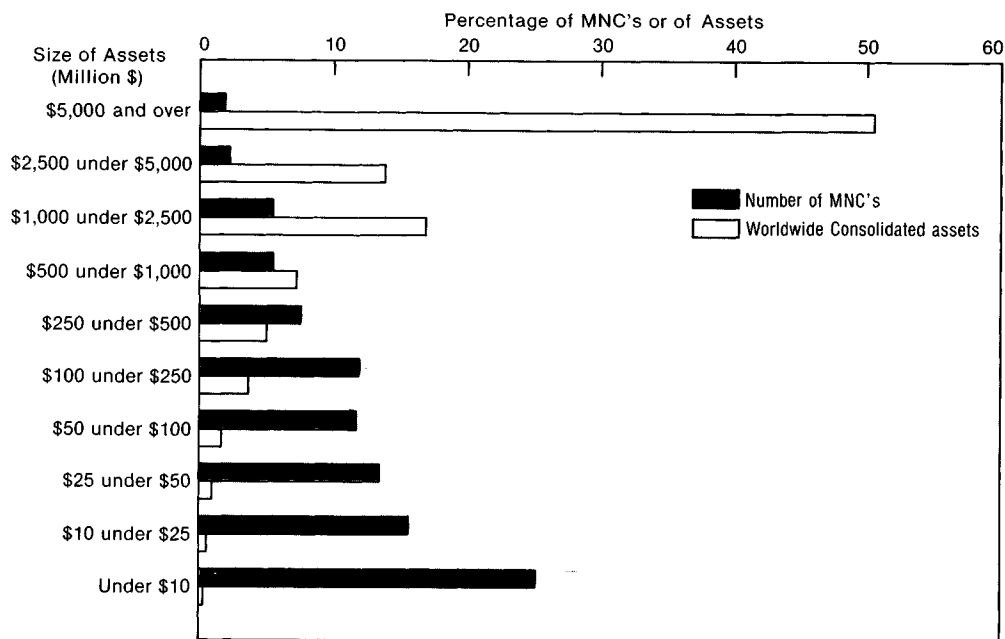
3. Equals sum of sales of U.S. parents and of their foreign affiliates, as reported in the 1977 benchmark survey. This sum contains duplication because of intercompany sales.

NOTE.—In this table, data for U.S. MNC's are only for nonbank MNC's.



CHART 12

### Number and Worldwide Consolidated Assets of U.S. MNC's, by Asset Size



U.S. Department of Commerce, Bureau of Economic Analysis

81-10-12

former, the low share was mainly attributable to affiliates of MNC's in insurance. Insurance MNC's have tended to concentrate their overseas efforts on reinsuring policies written by unaffiliated foreign companies, rather than on establishing affiliates to write insurance policies directly. In some countries, foreign ownership of insurance companies is restricted or prohibited. In addition, per capita purchases of insurance generally have been lower abroad than in the United States. In "other industries," the affiliate share was particularly low in transportation, communication, and public utilities—industries that are often government owned or controlled abroad, so that opportunities for foreign investment are relatively limited.

The affiliate share of MNC assets in manufacturing, which accounted for 44 percent of all MNC aggregated assets, was 29 percent. Among the major industries within manufacturing, the affiliate shares were highest in nonelectrical machinery (35 percent) and lowest in food, metals, and "other manufacturing" (about 25 percent each).

In general, large U.S. parent com-

panies tended to have relatively large total foreign operations, as measured by the combined assets of each parent's foreign affiliates; conversely, small U.S. parent companies tended to have relatively small total foreign operations (table 7). For example, of the 281 U.S. parents in the three largest size classes—i.e., parents with assets of \$1 billion or more each—79 percent had foreign operations with combined assets of \$100 million or more, whereas 8 percent had foreign operations with combined assets of under \$25 million; a majority of the large parents with large foreign operations were in manufacturing. In contrast, of the 1,955 U.S. parents in the 3 smallest size classes—i.e., parents with assets under \$50 million each—less than 1 percent had foreign operations with combined assets of \$100 million or more, whereas 95 percent had foreign operations with combined assets of under \$25 million.

#### Area distribution of the foreign operations

By area, more U.S. MNC's had foreign affiliates in developed countries

than in developing countries; 2,592 MNC's had affiliates in developed countries and 1,870 had affiliates in developing countries (table 8). There were 187 MNC's with affiliates in "international"—i.e., with affiliates whose operations spanned more than one country and that were engaged in oil and gas drilling, petroleum shipping, other water transportation, or petroleum trading. (If an MNC had affiliates in more than one area, the MNC was counted once in each area. Thus, the sum of MNC's with affiliates in the three major areas exceeds the total number of MNC's. For the same reason, the number of MNC's in the other country or industry cells in table 8 may not add to the subtotals or totals of those countries or industries.)

By country, Canada was host to the largest number of U.S. MNC's—1,907. The United Kingdom was second with 1,238. Other countries where a large number of U.S. MNC's had affiliates were Germany (821), France (689), and Mexico (660).

In terms of assets, the foreign operations of U.S. MNC's were also more heavily concentrated in developed countries than in developing countries. Almost three-fourths of affiliates' assets—\$359.6 billion out of \$490.2 billion—were in these countries (tables 9 and 10). Of the developed countries total, manufacturing affiliates accounted for 42 percent, petroleum affiliates for 21 percent, and affiliates in trade and in finance (except banking), insurance, and real estate for about 13 percent each. Assets of Canadian affiliates at \$86.2 billion, were larger than those of affiliates in any other single country. Manufacturing accounted for about one-third of their assets, and petroleum and finance (except banking), insurance, and real estate for about one-fifth each. In Europe, affiliates had assets of \$206.6 billion. The European Communities (9) accounted for about 80 percent of the assets, of which over one-half were in manufacturing; the United Kingdom, Germany, and France had the largest shares. Japanese affiliates had assets of \$41.8 billion.

Assets of affiliates in developing countries were \$115.8 billion. These assets were less concentrated in manufac-

turing and trade, and more concentrated in finance (except banking), insurance, and real estate, than were assets of affiliates in developed countries. The greater concentration of assets in finance (except banking), insurance, and real estate largely reflected the tendency of MNC's to locate their finance and holding company affiliates in certain developing countries—Bermuda, the Netherlands Antilles, and Panama, in particular—in response to incentives, such as tax benefits, offered by the countries. Almost two-thirds of all assets in developing countries were in Latin America; assets were largest in Brazil

and Bermuda—with just over \$17 billion each. Most of the assets in Brazil were in manufacturing, while most of those in Bermuda were in finance (except banking), insurance, and real estate.

The number, sales, and employment, as well as the assets, of affiliates were heavily concentrated in developed countries; affiliates in these countries accounted for 66 percent of the number, and 69 percent of both the sales and the employment, of all affiliates.

The geographical diversity of individual U.S. MNC's is reflected in table 11, which shows the number of MNC's

with affiliates in various numbers of countries. Overall, MNC's were not highly diversified geographically. Of the 3,425 MNC's, 49 percent had affiliates in only 1 country and 31 percent in only 2 to 5 countries; in contrast, 10 percent of the MNC's had affiliates in 6 to 10 countries, 7 percent in 11 to 20 countries, and 4 percent in more than 20 countries. The single most geographically diversified MNC had affiliates in 86 countries.

Among the industries shown in table 11, the geographical diversity of MNC's varied considerably. MNC's in chemical manufacturing were the most diversified. Compared with other industries, the percentage of MNC's that had affiliates in only 1 country was the lowest—26 percent—in this industry. Also in this industry, the percentage of MNC's that had affiliates in more than 20 countries was the highest—19 percent. Other industries in which MNC's were highly diversified geographically were food and transportation equipment manufacturing, and petroleum.

MNC's in finance (except banking), insurance, and real estate and in trade were the least geographically diversified. Compared with other industries, the percentages of MNC's that had affiliates in only 1 country were the highest—77 and 59 percent, respectively—and the percentages that had affiliates in more than 20 countries were the lowest—about 1 percent each—in these industries.

### U.S. Parent's Percentage Ownership of Foreign Affiliates

As noted previously, ownership by a U.S. person of 10 percent or more of the voting securities, or the equivalent, of a foreign business enterprise is considered evidence of the lasting interest, in or degree of influence over the management of, the enterprise that characterizes U.S. direct investment abroad. However, U.S. parents may not have actual *control* over the operations of a foreign business enterprise until their ownership exceeds 50 percent. A foreign affiliate in which the combined ownership of all U.S. parents exceeds 50 percent is referred to as a majority-owned foreign affiliates (MOFA).

**Table 6.—Number and Total Assets of U.S. Parents and of Foreign Affiliates, 1977, Industry of U.S. Parent or Affiliate by Size of Total Assets**

Industry and size of total assets of U.S. parent or affiliate	U.S. parents		Affiliates	
	Number of U.S. parents	Total assets (millions of dollars)	Number of affiliates	Total assets (millions of dollars)
<b>All industries</b> .....	<b>3,425</b>	<b>1,543,240</b>	<b>23,641</b>	<b>490,178</b>
Under \$10 million.....	1,002	3,025	17,525	48,189
\$10 million under \$25 million.....	516	8,592	3,090	48,820
\$25 million under \$50 million.....	437	15,858	1,342	46,474
\$50 million under \$100 million.....	369	26,989	847	59,466
\$100 million under \$250 million.....	391	62,344	529	80,844
\$250 million under \$500 million.....	243	84,557	176	60,521
\$500 million under \$1.0 billion.....	186	132,167	87	59,339
\$1.0 billion under \$2.5 billion.....	169	278,179	39	60,765
\$2.5 billion under \$5.0 billion.....	62	211,355	5	(D)
\$5.0 billion and over.....	50	720,175	1	(D)
<b>Petroleum</b> .....	<b>158</b>	<b>218,756</b>	<b>1,927</b>	<b>114,400</b>
Under \$10 million.....	22	84	1,148	3,158
\$10 million under \$25 million.....	15	274	280	4,588
\$25 million under \$50 million.....	14	493	160	5,650
\$50 million under \$100 million.....	17	1,337	117	8,305
\$100 million under \$250 million.....	30	5,096	120	18,977
\$250 million under \$500 million.....	16	5,653	57	19,893
\$500 million under \$1.0 billion.....	12	8,158	29	20,686
\$1.0 billion under \$2.5 billion.....	11	18,706	13	(D)
\$2.5 billion under \$5.0 billion.....	10	34,291	3	(D)
\$5.0 billion and over.....	11	144,664	0	0
<b>Manufacturing</b> .....	<b>1,841</b>	<b>633,416</b>	<b>9,702</b>	<b>190,868</b>
Under \$10 million.....	326	1,726	6,701	22,502
\$10 million under \$25 million.....	340	5,676	1,605	25,424
\$25 million under \$50 million.....	288	10,544	683	23,536
\$50 million under \$100 million.....	233	16,756	405	28,378
\$100 million under \$250 million.....	245	38,725	212	32,171
\$250 million under \$500 million.....	150	50,916	55	19,066
\$500 million under \$1.0 billion.....	110	78,820	28	18,961
\$1.0 billion under \$2.5 billion.....	107	171,832	13	20,829
\$2.5 billion under \$5.0 billion.....	28	94,457	0	0
\$5.0 billion and over.....	14	163,963	0	0
<b>Finance (except banking), insurance, and real estate</b> .....	<b>600</b>	<b>379,947</b>	<b>2,353</b>	<b>76,775</b>
Under \$10 million.....	425	205	1,514	4,114
\$10 million under \$25 million.....	22	361	366	5,937
\$25 million under \$50 million.....	21	746	193	6,733
\$50 million under \$100 million.....	15	1,178	137	9,806
\$100 million under \$250 million.....	25	4,363	88	13,289
\$250 million under \$500 million.....	24	8,809	32	11,334
\$500 million under \$1.0 billion.....	18	13,161	15	9,485
\$1.0 billion under \$2.5 billion.....	20	37,280	6	(D)
\$2.5 billion under \$5.0 billion.....	9	31,413	2	(D)
\$5.0 billion and over.....	21	282,431	0	0
<b>Other industries</b> .....	<b>826</b>	<b>311,121</b>	<b>9,659</b>	<b>108,134</b>
Under \$10 million.....	229	1,010	8,162	18,415
\$10 million under \$25 million.....	139	2,282	839	12,872
\$25 million under \$50 million.....	114	4,074	306	10,555
\$50 million under \$100 million.....	104	7,719	188	12,978
\$100 million under \$250 million.....	91	14,161	109	16,407
\$250 million under \$500 million.....	53	19,179	32	10,228
\$500 million under \$1.0 billion.....	46	32,028	15	10,207
\$1.0 billion under \$2.5 billion.....	31	50,360	7	(D)
\$2.5 billion under \$5.0 billion.....	15	51,193	0	0
\$5.0 billion and over.....	4	129,116	1	(D)

<sup>D</sup> Suppressed to avoid disclosure of data of individual companies.

NOTE.—In this table, data for U.S. parents are only for nonbank parents of nonbank affiliates and data for affiliates are only for nonbank affiliates of nonbank parents.

Of the 23,641 affiliates, 19,524—or 83 percent—were majority owned; 4 percent were owned at least 10 but under 25 percent, 8 percent were owned at least 25 but under 50 percent, and 5 percent were owned exactly 50 percent (table 12).<sup>5</sup> MFA's accounted for 74 percent of total affiliates assets. Their shares of sales and employment were 80 and 78 percent, respectively. Wholly owned affiliates—those owned 100 per-

cent by their U.S. parents—accounted for 86 percent of the number and 79 percent of the assets of all MOFA's. Their share of sales was 82 percent and of employment 75 percent.

The remainder of this section discusses data only for the larger MOFA's—those with assets, sales, or net income over \$3 million (see addendum to table 12). In the 1977 benchmark survey, much more detailed data were collected for this group of affiliates than for any other. The larger MOFA's accounted for 61 percent of the number, but for almost all of the value, of all MOFA's. As a result, their

shares of the assets, sales, and employment of all affiliates, regardless of ownership—72, 78, and 75 percent, respectively—were only slightly lower than the corresponding shares for all MOFA's.

By industry, the shares of total affiliate assets accounted for by the larger MOFA's were lowest in mining (49 percent) and metal manufacturing (47 percent) (tables 9 and 13). In many countries, mining and the primary metal industries were subject either to government restrictions on, or to strong national sentiment against, ma-

(Text continued on p. 53)

Table 7.—Number of U.S. Parents in Various Asset Size Classes, 1977, Industry of U.S. Parent by Size of the Combined Assets of the U.S. Parent's Foreign Affiliates

Industry and size of total assets of U.S. parent	Number of U.S. parents, total	Number of U.S. parents having affiliates whose combined assets are:							
		Under \$10 million	\$10 million under \$25 million	\$25 million under \$50 million	\$50 million under \$100 million	\$100 million under \$250 million	\$250 million under \$500 million	\$500 million under \$1.0 billion	\$1.0 billion and over
<b>All industries</b> .....	3,425	2,003	465	270	212	193	106	84	92
Under \$10 million.....	1,002	908	55	21	7	7	1	0	1
\$10 million under \$25 million.....	516	445	52	11	2	0	0	0	0
\$25 million under \$50 million.....	437	289	103	28	13	2	1	0	1
\$50 million under \$100 million.....	369	175	97	62	28	5	2	0	0
\$100 million under \$250 million.....	391	117	88	75	65	38	7	1	0
\$250 million under \$500 million.....	243	37	38	42	45	57	16	7	1
\$500 million under \$1.0 billion.....	186	20	21	19	23	52	35	13	3
\$1.0 billion under \$2.5 billion.....	169	10	4	8	16	22	36	44	29
\$2.5 billion under \$5.0 billion.....	62	2	5	2	5	4	4	14	26
\$5.0 billion and over.....	50	0	2	2	2	4	4	5	31
<b>Petroleum</b> .....	158	63	22	18	12	9	8	9	17
Under \$10 million.....	22	21	1	0	0	0	0	0	0
\$10 million under \$25 million.....	15	10	3	1	1	0	0	0	0
\$25 million under \$50 million.....	14	7	2	2	3	0	0	0	0
\$50 million under \$100 million.....	17	12	2	3	0	0	0	0	0
\$100 million under \$250 million.....	30	7	8	7	4	3	1	0	0
\$250 million under \$500 million.....	16	3	4	3	1	1	2	2	0
\$500 million under \$1.0 billion.....	12	2	2	2	0	3	1	1	1
\$1.0 billion under \$2.5 billion.....	11	1	0	0	2	2	1	4	1
\$2.5 billion under \$5.0 billion.....	10	0	0	0	0	0	2	2	6
\$5.0 billion over.....	11	0	0	0	1	0	1	0	9
<b>Manufacturing</b> .....	1,841	1,013	259	153	124	111	74	52	55
Under \$10 million.....	326	319	7	0	0	0	0	0	0
\$10 million under \$25 million.....	340	306	29	4	1	0	0	0	0
\$25 million under \$50 million.....	288	193	74	17	3	0	1	0	0
\$50 million under \$100 million.....	233	105	71	39	18	0	0	0	0
\$100 million under \$250 million.....	245	69	51	54	46	21	3	1	0
\$250 million under \$500 million.....	150	14	20	25	33	45	11	2	0
\$500 million under \$1.0 billion.....	110	7	6	8	15	34	29	9	2
\$1.0 billion under \$2.5 billion.....	107	0	1	5	6	10	29	34	22
\$2.5 billion under \$5.0 billion.....	28	0	0	1	2	1	1	6	17
\$5.0 billion and over.....	14	0	0	0	0	0	0	0	14
<b>Finance (except banking), insurance, and real estate</b> .....	600	415	71	35	27	25	6	12	9
Under \$10 million.....	425	360	34	17	8	5	0	0	1
\$10 million under \$25 million.....	22	14	4	0	3	1	0	0	0
\$25 million under \$50 million.....	21	10	5	2	2	1	0	0	1
\$50 million under \$100 million.....	15	4	3	5	0	1	2	0	0
\$100 million under \$250 million.....	25	9	7	1	6	2	0	0	0
\$250 million under \$500 million.....	24	9	5	3	3	2	1	1	0
\$500 million under \$1.0 billion.....	18	2	6	2	4	2	0	2	0
\$1.0 billion under \$2.5 billion.....	20	7	3	2	0	6	1	1	0
\$2.5 billion under \$5.0 billion.....	9	0	2	1	1	1	0	3	1
\$5.0 billion and over.....	21	0	2	2	0	4	2	5	6
<b>Other industries</b> .....	826	512	113	64	49	48	18	11	11
Under \$10 million.....	229	208	13	4	1	2	1	0	0
\$10 million under \$25 million.....	139	115	16	6	1	1	0	0	0
\$25 million under \$50 million.....	114	79	22	7	5	1	0	0	0
\$50 million under \$100 million.....	104	54	21	15	10	4	0	0	0
\$100 million under \$250 million.....	91	32	22	13	9	12	3	0	0
\$250 million under \$500 million.....	53	11	9	11	8	9	2	2	1
\$500 million under \$1.0 billion.....	46	9	7	7	4	13	5	1	0
\$1.0 billion under \$2.5 billion.....	31	2	0	1	8	4	5	5	6
\$2.5 billion under \$5.0 billion.....	15	2	3	0	2	2	1	3	2
\$5.0 billion and over.....	4	0	0	0	1	0	1	0	2

NOTE.—In this table, data for U.S. parents are only for nonbank parents of nonbank affiliates.

Table 8.—Number of U.S. MNC's That Had Foreign Affiliates in Given Countries and Industries, 1977, Country by Industry of Affiliate<sup>1</sup>

Country of affiliate	All industries	Mining	Petroleum	Manufacturing								Trade	Finance (except banking), insurance, and real estate	Other industries
				Total	Food and kindred products	Chemicals and allied products	Primary and fabricated metals	Machinery, except electrical	Electric and electronic equipment	Transportation equipment	Other manufacturing			
				(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
All countries.....	3,425	106	271	1,861	162	302	389	412	270	128	815	1,292	745	924
Developed countries.....	2,592	56	155	1,475	106	251	301	364	197	94	620	1,063	458	585
Canada.....	1,907	53	158	1,004	80	162	199	157	113	65	405	584	222	291
Europe.....	2,412	25	146	1,404	95	235	283	343	187	88	583	976	412	519
European Communities (9).....	2,199	19	123	1,313	88	220	265	326	176	81	540	876	316	450
Belgium.....	510	1	14	241	13	61	31	46	20	6	78	206	34	106
Denmark.....	151	0	11	34	7	8	4	2	6	1	10	83	4	28
France.....	689	2	11	342	26	80	58	71	31	21	115	297	50	131
Germany.....	821	1	27	414	27	80	67	92	47	22	147	364	46	117
Ireland.....	142	2	11	102	13	18	11	15	9	3	37	19	10	71
Italy.....	439	0	16	244	17	60	27	48	30	14	69	155	15	71
Luxembourg.....	47	0	5	13	1	2	1	7	1	0	4	6	24	3
Netherlands.....	501	0	29	215	21	54	36	42	13	6	70	203	61	97
United Kingdom.....	1,238	3	62	710	43	124	122	169	91	34	257	392	152	230
Other Europe.....	828	7	52	371	36	86	52	53	34	23	142	374	167	182
Austria.....	124	0	4	37	7	10	4	5	3	1	10	70	7	17
Greece.....	73	1	5	33	3	11	3	0	3	0	13	24	7	9
Norway.....	124	2	26	25	1	8	3	0	2	0	11	53	4	23
Portugal.....	61	0	4	33	3	14	2	1	3	2	8	22	3	5
Spain.....	305	2	14	188	24	57	22	20	13	13	57	73	19	49
Sweden.....	222	0	5	76	4	19	12	16	4	4	21	119	8	37
Switzerland.....	464	0	16	93	3	18	7	16	14	0	38	237	126	101
Turkey.....	28	1	6	13	3	3	0	2	2	0	3	5	0	7
Other.....	93	0	5	17	0	4	3	1	2	0	7	53	12	16
Japan.....	540	0	15	293	26	88	39	51	34	12	88	242	24	89
Australia, New Zealand, and South Africa.....	702	37	35	374	34	92	51	67	36	24	132	273	73	124
Australia.....	599	27	25	302	27	73	34	53	25	20	105	197	56	104
New Zealand.....	140	2	9	66	10	25	5	4	7	3	13	50	10	13
South Africa.....	276	11	7	148	12	52	21	22	13	9	33	97	17	33
Developing countries.....	1,870	73	177	1,009	109	195	188	185	157	76	410	590	474	478
Latin America.....	1,465	63	124	831	96	177	159	151	111	70	331	445	426	338
South America.....	776	40	90	506	61	137	91	102	61	46	193	273	130	151
Argentina.....	200	1	11	143	13	50	14	14	9	16	37	34	11	25
Brazil.....	472	14	22	316	25	80	38	60	34	23	95	88	53	70
Chile.....	57	1	7	27	3	12	4	2	2	1	5	12	3	9
Colombia.....	165	3	23	99	9	41	8	8	7	4	27	26	11	21
Ecuador.....	61	0	10	28	7	7	3	0	3	2	7	16	4	8
Peru.....	105	6	13	43	6	15	4	3	4	3	8	33	3	11
Venezuela.....	277	1	19	161	23	54	14	12	11	15	44	71	24	47
Other.....	70	6	19	28	7	9	5	2	2	4	13	9	12	12
Central America.....	870	24	32	578	61	123	92	78	76	44	197	199	110	155
Mexico.....	660	17	12	512	47	115	82	45	70	40	162	112	38	71
Panama.....	168	1	10	22	8	10	0	0	1	0	5	56	66	38
Other.....	197	6	14	114	27	36	6	4	11	5	37	43	12	50
Other Western Hemisphere.....	531	13	49	132	24	27	17	11	14	6	51	112	299	128
Bahamas.....	100	2	9	8	2	2	0	0	1	0	3	26	44	30
Bermuda.....	227	0	9	3	0	0	0	0	0	0	2	21	185	29
Netherlands Antilles.....	112	1	10	6	2	2	0	0	0	0	2	6	82	10
Trinidad and Tobago.....	55	0	14	17	4	6	1	0	3	0	3	7	4	17
Other.....	155	8	7	65	19	14	4	2	7	1	21	39	31	36
Other Africa.....	219	15	52	73	10	13	11	10	6	3	29	42	26	56
Saharan.....	83	0	39	20	4	4	3	3	1	0	5	10	3	18
Egypt.....	43	0	25	1	0	1	0	0	0	0	0	4	1	12
Libya.....	23	0	17	2	0	0	0	1	0	0	1	2	0	3
Other.....	51	0	22	16	4	2	3	2	1	0	4	9	2	7
Sub-Saharan.....	184	15	37	64	8	11	10	7	6	3	27	38	24	45
Liberia.....	32	4	3	1	0	0	0	0	0	0	1	3	14	12
Nigeria.....	59	0	20	14	1	7	1	0	2	0	3	14	1	14
Other.....	128	13	25	56	7	11	10	6	5	3	21	26	11	24
Middle East.....	289	3	53	90	12	25	11	9	11	7	26	56	26	107
Israel.....	67	0	2	41	5	11	4	2	7	3	14	11	10	15
OPEC.....	214	3	46	50	6	15	5	8	5	3	10	40	13	91
Iran.....	111	2	27	33	3	12	4	5	4	2	4	19	4	40
Other.....	139	1	32	16	3	3	1	2	1	1	5	24	9	67
Other.....	36	0	9	8	2	0	1	1	1	1	2	9	5	9
Other Asia and Pacific.....	652	10	84	338	27	70	39	50	75	12	98	219	69	132
Hong Kong.....	224	0	6	64	2	14	4	6	20	1	19	106	31	47
India.....	117	0	8	90	2	32	11	22	11	4	21	7	2	7
Indonesia.....	114	5	45	40	3	18	3	1	4	1	11	6	4	25
Malaysia.....	83	2	11	39	4	9	3	2	16	1	6	26	3	10
Philippines.....	168	1	15	94	18	30	7	2	8	3	29	38	16	28
Singapore.....	170	0	19	59	6	10	10	10	12	2	10	65	13	30
South Korea.....	61	0	5	37	5	12	1	2	8	3	6	7	5	11
Taiwan.....	105	0	9	69	4	14	1	1	33	4	13	24	5	13
Thailand.....	82	4	8	38	8	12	4	0	5	1	10	28	4	11
Other.....	69	2	18	28	2	15	1	3	4	1	7	12	4	14
International.....	187	1	55	19	2	2	1	3	2	1	8	19	6	109
Addendum—OPEC <sup>2</sup> .....	531	6	77	228	31	61	27	22	16	17	73	132	47	148

MNC = multinational company.

1. A U.S. MNC that had affiliates in more than one country or industry is counted once in each country or industry in which it had affiliates. Thus, the numbers appearing in individual country/industry cells do not add to the subtotals and totals.

2. Members of the Organization of Petroleum Exporting Countries (OPEC) are: Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigerian, Qatar, Saudi Arabia, Venezuela, and United Arab Emirates.

NOTE.—In this table, data for U.S. MNC's are only for nonbank MNC's.





(Text continued from p. 49)

majority ownership by foreign investors. The shares of assets accounted for by the larger MOFA's were highest in food and non-electrical machinery (84 percent each) and in electrical machinery (81 percent).

By area, the larger MOFA's accounted for nearly the same shares of assets in the developed and developing countries—71 and 72 percent, respectively. Among the individual countries shown in tables 9 and 13, however, the shares of the larger MOFA's varied widely. They were highest—99 and 98 percent, respectively—in Libya and Egypt, countries in which most of the assets were in petroleum. They were lowest—7 percent—in South Korea. Other countries where MOFA shares of assets were relatively low were Japan, India, Spain, and Mexico.

Each of the countries with low MOFA shares maintained restrictive policies, as of 1977, toward majority ownership by foreign investors. In South Korea, investments had to be approved by the Government. Foreign equity usually could not exceed 50 percent except in very capital intensive or high technology industries, or in certain industries that did not compete with existing South Korean firms.

In Japan, as in South Korea, all foreign investments were subject to Government approval. Until the early 1970's, foreign equity participation was limited to 50 percent in new, and 25 percent in existing, companies. Although these limits were raised to 100 percent by 1977, approval of investment proposals with up to 100-percent foreign participation was not assured.

In India, firms were required to dilute foreign equity participation to no more than 40 percent, with exceptions in high priority, high technology, and export industries. Large firms, and firms that had not reached the required equity dilution, needed Government consent before significant capital expansion could be undertaken. In Spain, Government approval was generally required for investments with 50-percent-or-more foreign ownership. Exceptions were made, especially for firms that

**Table 11.—Number of U.S. MNC's Having Affiliates in Various Numbers of Countries, 1977, by Industry of U.S. Parent**

Industry of U.S. parent	Number of MNC's, total	Number of MNC's having affiliates in:				
		Only 1 country	2 to 5 countries	6 to 10 countries	11 to 20 countries	More than 20 countries
<b>All industries</b> .....	<b>3,425</b>	<b>1,686</b>	<b>1,049</b>	<b>327</b>	<b>226</b>	<b>137</b>
Mining.....	29	15	9	5	0	0
Petroleum.....	158	60	60	13	10	15
<b>Manufacturing</b> .....	<b>1,841</b>	<b>732</b>	<b>623</b>	<b>221</b>	<b>168</b>	<b>97</b>
Food and kindred products.....	112	35	38	13	15	11
Chemicals and allied products.....	194	50	49	34	25	36
Primary and fabricated metals.....	277	133	91	29	16	8
Machinery, except electrical.....	322	128	107	43	31	13
Electric and electronic equipment.....	223	83	83	28	23	6
Transportation equipment.....	85	24	28	14	13	6
Other manufacturing.....	628	279	227	60	45	17
Trade.....	375	221	113	24	14	3
Finance (except banking), insurance, and real estate.....	600	463	110	15	3	9
Other industries.....	422	195	134	49	31	13

MNC = multinational company.

NOTE.—In this table, data for U.S. MNC's are only for nonbank MNC's.

**Table 12.—Selected Data of Foreign Affiliates, 1977, by U.S. Parent's Percentage Ownership in Affiliate<sup>1</sup>**

U.S. parent's percentage ownership in affiliate	Number of affiliates	Total assets	Sales	Employment
		Millions of dollars		Number of employees
<b>1. All affiliates</b> .....	<b>23,641</b>	<b>490,178</b>	<b>647,969</b>	<b>7,196,691</b>
2. Owned 10 percent under 25 percent.....	995	46,795	40,519	537,062
3. Owned 25 percent under 50 percent.....	1,972	56,129	57,960	777,647
4. Owned 50 percent.....	1,150	26,815	33,534	253,268
5. Owned over 50 percent.....	19,524	360,440	515,957	5,628,714
6. Owned over 50 percent under 75 percent.....	1,178	29,759	30,265	543,230
7. Owned 75 percent under 100 percent.....	1,642	46,237	60,709	864,369
8. Owned 100 percent.....	16,704	284,445	424,982	4,221,115
<b>Addendum:</b>				
9. Affiliates owned over 50 percent with assets, sales, or net income greater than \$3 million <sup>2</sup> .....	11,909	352,357	507,019	5,368,826

1. In cases where more than one U.S. parent has ownership of 10 percent or more in a foreign affiliate, this table shows the ownership of all of the U.S. parents combined.

2. In the 1977 benchmark survey, the most extensive and detailed data were obtained for this group of affiliates. Thus, in the benchmark survey publication *U.S. Direct Investment Abroad, 1977* and in tables 9 and 13 of this article, data for "majority-owned foreign affiliates" are for these affiliates, rather than for all affiliates owned over 50 percent.

NOTE.—In this table, data for affiliates are only for nonbank affiliates of nonbank parents.

created at least 100 jobs or favorably affected Spain's balance of payments. In Mexico, a 1973 law restricted foreign ownership of new investments in most industries to 49 percent.

### Form of Organization of Parents and Affiliates

#### Legal form of organization

Of the 3,425 U.S. parents, 3,001, with assets of \$1,534.7 billion, were incorporated and 74, with assets of \$8.5 billion, were unincorporated (mainly partnerships). The remaining 350 parents were individuals, estates, and trusts that directly owned foreign affiliates. Because

these parents did not have to report financial and operating data in the 1977 benchmark survey, their U.S. assets were considered zero.<sup>6</sup>

Of the 23,641 foreign affiliates, 20,498, with assets of \$428.1 billion, were incorporated and 3,143, with assets of \$62.1 billion, were unincorporated (table 14). Branches accounted for nearly all—89 and 93 percent, respectively—of both the number and total

6. However, if a U.S. individual, estate, or trust held its investments abroad indirectly through a U.S. business enterprise, the U.S. business enterprise, rather than the individual, estate, or trust, was considered the U.S. parent; in this case, the enterprise's domestic assets were reported and were classified according to the enterprise's form of organization.





assets of unincorporated affiliates; partnerships accounted for most of the remainder.

By industry, incorporated affiliates' shares of the assets of all affiliates were highest—97 and 94 percent, respectively—in manufacturing and trade, and were lowest—69 and 75 percent, respectively—in mining and petroleum. Within manufacturing, these affiliates' shares were consistently high—over 90 percent—in each industry. The relatively low share in petroleum was almost entirely attributable to affiliates engaged in oil and gas extraction. Incorporated affiliates accounted for only 44 percent of the assets of these affiliates, compared with 87 percent of the assets of affiliates in petroleum and coal products. In the past, tax advantages encouraged the organization of affiliates engaged in petroleum extraction as branches. Al-

though these advantages had been largely eliminated by 1977, their elimination apparently did not result in the reorganization of a significant number of affiliates.

By area, incorporated affiliates accounted for a larger share of the assets of all affiliates in developed countries than in developing countries—91 percent compared with 74 percent. Among developing countries, incorporated affiliates' shares of assets were lowest in countries where petroleum extraction and mining were the dominant affiliate industries.

#### Number of affiliate establishments

A given affiliate may consist of more than one establishment. A question in the 1977 benchmark survey asked the "number of separate (noncontiguous)

physical locations where business is conducted, goods are produced, or services or industrial operations are performed" by the affiliate. Of the 97 percent of affiliates from which responses were obtained, 61 percent were single-establishment enterprises; 28 percent had 2 to 5 establishments, 5 percent had 6 to 10 establishments, and 6 percent had 11 or more establishments (table 15).

By major industry, the percentage of affiliates that were single-establishment enterprises was lowest (48 percent) in mining; most other affiliates in that industry had two to five establishments. The percentage was highest (78 percent) in finance (except banking), insurance, and real estate, which includes holding companies (92 percent of which had only one establishment).

Among major industries, petroleum had the highest percentage of affiliates

Table 14.—Number and Total Assets of Foreign Affiliates, 1977, Industry and Country of Affiliate by Form of Organization

Industry or country of affiliate	All affiliates		Incorporated affiliates		Unincorporated affiliates					
	Number of affiliates	Total assets	Number of affiliates	Total assets	Total		Branches		Other	
		Millions of dollars		Millions of dollars	Number of affiliates	Total assets Millions of dollars	Number of affiliates	Total assets Millions of dollars	Number of affiliates	Total assets Millions of dollars
<b>Total</b> .....	<b>23,641</b>	<b>490,178</b>	<b>20,498</b>	<b>428,082</b>	<b>3,143</b>	<b>62,096</b>	<b>2,805</b>	<b>57,988</b>	<b>338</b>	<b>4,108</b>
<b>By industry</b>										
Mining.....	292	18,286	193	12,546	99	5,740	81	5,077	18	663
Petroleum.....	1,927	114,400	1,125	85,882	802	28,518	756	27,227	46	1,291
Manufacturing.....	9,702	190,868	9,214	185,801	488	5,067	437	4,453	51	614
Food and kindred products.....	845	14,176	768	13,437	77	738	72	707	5	31
Chemicals and allied products.....	2,263	38,782	2,106	37,383	157	1,398	147	1,235	10	163
Primary and fabricated metals.....	1,120	21,406	1,089	20,700	31	706	25	535	6	171
Machinery, except electrical.....	1,275	28,352	1,214	27,319	61	1,034	55	(D)	6	(D)
Electric and electronic equipment.....	990	17,118	946	16,870	44	248	39	203	5	45
Transportation equipment.....	473	32,108	462	31,931	11	177	10	(D)	1	(D)
Other manufacturing.....	2,736	38,926	2,629	38,161	107	766	89	649	18	117
Trade.....	5,797	56,101	5,111	52,705	686	3,396	671	3,299	15	97
Finance (except banking), insurance, and real estate.....	2,353	76,775	2,033	61,859	320	14,916	290	14,401	30	515
Other industries.....	3,570	33,748	2,822	29,288	748	4,460	570	3,532	178	928
<b>By area</b>										
Developed countries.....	15,603	359,583	14,037	328,860	1,566	30,723	1,382	28,696	184	2,028
Canada.....	3,271	86,223	2,931	76,613	340	9,610	313	9,404	27	206
Europe.....	9,940	206,603	9,031	189,529	909	17,076	781	15,387	128	1,689
European Communities (9).....	7,686	164,950	6,958	151,937	728	13,014	629	11,616	99	1,398
Other Europe.....	2,254	41,655	2,073	37,592	181	4,063	152	3,772	29	291
Japan.....	870	41,776	728	40,884	142	892	129	854	13	38
Australia, New Zealand, and South Africa.....	1,522	24,979	1,347	21,834	175	3,145	159	3,050	16	95
Developing countries.....	7,627	115,822	6,067	85,826	1,580	29,997	1,411	(D)	149	(D)
Latin America.....	4,804	75,041	4,101	61,800	703	13,241	626	12,510	77	731
Other Africa.....	683	9,716	445	5,819	238	3,896	223	(D)	15	(D)
Middle East.....	544	14,576	300	4,740	244	9,836	212	9,240	32	596
Other Asia and Pacific.....	1,596	16,489	1,221	13,467	375	3,023	350	2,714	25	309
International.....	411	14,773	394	13,397	17	1,376	12	(D)	5	(D)
Addendum: OPEC <sup>1</sup> .....	1,211	25,524	803	12,012	408	13,512	362	12,651	46	862

<sup>D</sup> Suppressed to avoid disclosure of data of individual companies.

1. See footnote 2, table 8.

NOTE.—In this table, data for affiliates are only for nonbank affiliates of nonbank parents.

with 11 or more establishments—14 percent. Within petroleum, affiliates with 11 or more establishments accounted for particularly large proportions of all affiliates in petroleum and coal products (which includes integrated refining and extraction) and petroleum wholesale trade. In the major industries outside petroleum, affiliates with 11 or more establishments accounted for 6 percent or less of all affiliates. However, in a few individual industries, such as retail trade, office and computing machines, and rubber products, the percentages were much higher—well over 20 percent each.

### Technical Note

For this article, MNC worldwide consolidated assets were roughly approximated as the sum of total assets of U.S. parents and of their foreign affiliates, as reported in the 1977 benchmark survey and as shown in table 1, column 4, less: (1) U.S. parents' receivables from, and equity investment in, foreign affiliates, (2) affiliates' receivables from U.S. parents, and (3) affiliates receivables from, and equity investment in, other foreign affiliates of their U.S. parents.

For several reasons, the worldwide consolidated assets of a given MNC, as calculated for this article, may be higher than they would have been if calculated by the MNC itself. First, the assets of all foreign business enterprises owned at least 10 percent by their U.S. parent have been included in MNC worldwide consolidated assets in this article in order to conform to U.S. direct investment concepts. In contrast, under U.S. generally accepted accounting principles (GAAP), only MOFA's—affiliates owned more than 50 percent by their U.S. parent—would be included in a U.S. company's worldwide consolidation.

Second, a given MNC's worldwide consolidated assets, as calculated here, may be higher than under GAAP because of the consolidation rules applied to U.S. parents in the 1977 benchmark survey. In the survey, a U.S. parent was defined as a fully consolidated U.S. business enterprise. According to the survey rules, the U.S. enterprise, under certain circumstances, had to include U.S. subsidiaries in its consolidation that would normally have been excluded under GAAP. Specifically, if a U.S. subsidiary was owned more than 50 percent by the enterprise, but was normally excluded from full consolidation in reports to stockholders—because, for

**Table 15.—Number of Affiliates Having Operations at 1, 2 to 5, 6 to 10, or 11 or More Physical Locations, 1977, by Industry of Affiliate**

Industry of affiliate	Number of affiliates, total	Number of affiliates for which response to question on number of physical locations was obtained:				
		Total	With 1 location	With 2 to 5 locations	With 6 to 10 locations	With 11 or more locations
	(1)	(2)	(3)	(4)	(5)	(6)
<b>All industries.....</b>	<b>23,641</b>	<b>22,992</b>	<b>14,135</b>	<b>6,355</b>	<b>1,154</b>	<b>1,348</b>
Mining.....	292	276	133	121	9	13
Metal mining.....	215	201	99	87	4	11
Iron.....	38	36	18	15	1	2
Copper, lead, zinc, gold, and silver.....	83	76	34	35	1	6
Bauxite, other ores, and services.....	94	89	47	37	2	3
Coal and other nonmetallic minerals.....	77	75	34	34	5	2
Petroleum.....	1,927	1,853	980	520	103	250
Oil and gas extraction.....	999	963	557	294	45	67
Crude petroleum (no refining) and gas.....	631	609	383	164	16	46
Oil and gas field services.....	368	354	174	130	29	21
Petroleum and coal products.....	180	175	76	49	7	43
Integrated refining and extraction.....	30	28	4	8	1	15
Refining without extraction.....	100	97	40	29	4	24
Petroleum and coal products, nec.....	50	50	32	12	2	4
Petroleum wholesale trade.....	478	466	206	118	39	103
Other.....	270	249	141	59	12	37
Manufacturing.....	9,702	9,473	5,421	3,073	534	445
Food and kindred products.....	845	821	388	311	65	57
Grain mill and bakery products.....	176	174	68	70	19	17
Beverages.....	148	138	59	55	14	10
Other.....	521	509	261	186	32	30
Chemicals and allied products.....	2,222	2,222	1,239	810	103	70
Industrial chemicals and synthetics.....	676	664	332	276	31	25
Drugs.....	636	629	395	196	25	13
Soap, cleaners, and toilet goods.....	405	397	232	143	17	5
Agricultural chemicals.....	101	98	51	36	3	8
Other.....	445	434	229	159	27	19
Primary and fabricated metals.....	1,120	1,081	713	297	43	28
Primary metal industries.....	277	265	147	97	9	12
Ferrous.....	145	135	76	51	4	4
Nonferrous.....	132	130	71	46	5	8
Fabricated metal products.....	843	816	566	200	34	16
Machinery, except electrical.....	1,275	1,249	750	336	81	82
Farm and garden machinery and equipment.....	57	57	32	18	3	4
Construction and related machinery.....	282	277	154	80	24	19
Office and computing machines.....	113	112	51	23	5	33
Other.....	823	803	513	215	49	28
Electric and electronic equipment.....	990	972	560	298	62	52
Household appliances.....	99	93	43	29	8	13
Radio, television, and communication equipment.....	161	158	72	54	14	18
Electronic components and accessories.....	358	355	262	76	11	6
Other.....	372	366	183	130	29	15
Transportation equipment.....	473	460	285	132	33	30
Motor vehicles and equipment.....	414	406	232	114	32	28
Other.....	59	54	33	18	1	2
Other manufacturing.....	2,736	2,668	1,506	889	117	126
Tobacco manufactures.....	61	60	22	24	6	8
Textile products and apparel.....	355	345	203	120	19	3
Lumber, wood, furniture, and fixtures.....	153	144	74	57	6	7
Paper and allied products.....	302	296	143	117	21	15
Printing and publishing.....	192	190	119	60	5	6
Rubber products.....	161	154	46	47	25	36
Miscellaneous plastics products.....	222	217	144	61	11	3
Glass products.....	91	89	57	25	4	3
Stone, clay, cement, and concrete.....	198	191	81	82	7	11
Instruments and related products.....	497	490	292	154	20	24
Other.....	504	492	325	142	13	12
Trade.....	5,797	5,710	3,662	1,424	270	354
Wholesale trade.....	5,277	5,194	3,466	1,287	233	298
Durable goods.....	3,412	3,353	2,172	848	170	153
Nondurable goods.....	1,865	1,841	1,294	439	63	45
Retail trade.....	520	516	196	137	37	146
Finance (except banking), insurance, and real estate.....	2,353	2,247	1,764	304	75	104
Finance, except banking.....	581	566	436	80	17	33
Insurance.....	699	683	434	147	42	60
Real estate.....	179	172	135	28	4	5
Holding companies.....	894	826	759	49	12	6
Other industries.....	3,570	3,433	2,175	913	163	182
Agriculture, forestry, and fishing.....	253	239	145	81	9	4
Construction.....	411	403	231	134	22	16
Transportation, communication, and public utilities.....	611	563	336	161	29	37
Transportation.....	505	460	281	136	18	25
Communication and public utilities.....	106	103	55	25	11	2
Services.....	2,295	2,228	1,463	537	103	12

NOTE.—In this table, data for affiliates are only for nonbank affiliates of nonbank parents.

example, it was a finance company, but the owning enterprise was a manufacturer, or its operations were otherwise unrelated to those of the owning enterprise—the benchmark survey nevertheless required its data to be consolidated (or aggregated, if consolidation would have caused an undue burden) with those of the enterprise. It should be noted that, if the subsidiary in question were aggregated, rather than consolidated, the U.S. parent's assets would be further overstated because, in aggregation, the duplication caused by intercompany assets would not be eliminated. (In addition, this consolidation (or aggregation) would affect the distribu-

tion of U.S. parent (and, hence, MNC) data by industry, if the corporation being consolidated (or aggregated) were in a different industry from the owning enterprise.)

Third, MNC worldwide consolidated assets, as calculated here, may include the assets of some foreign affiliates that, even if majority owned, are not normally included in an MNC's worldwide consolidation. For example, affiliates whose activities are unrelated to those of their U.S. parents, or whose status is in doubt because of unstable conditions in foreign host countries, may not normally be consolidated by the MNC.

Finally, some intercompany assets of U.S.

parents and their foreign affiliates that normally would be eliminated in consolidation were not separately identified in the 1977 benchmark survey. Thus, the duplication caused by these intercompany assets, which was probably small, could not be entirely eliminated in deriving MNC worldwide consolidated assets for this article.

Affiliates' receivables from other foreign affiliates were reported only for MOFA's. Thus, consolidated worldwide assets, as defined here, are overstated to the extent minority-owned affiliates had receivables due from other foreign affiliates of their U.S. parents.

# Capital Expenditures by Majority-Owned Foreign Affiliates of U.S. Companies, 1981 and 1982

MAJORITY-owned foreign affiliates of U.S. companies plan to increase capital expenditures 6 percent in 1982, to \$53.3 billion, following a planned 18-percent increase this year. In 1980, spending increased a record 30 percent (table 1 and chart 13).<sup>1</sup>

Slowdowns in spending growth this year and in 1982, following 2 years of rapid expansion, are widespread by industry and area. Many affiliates are reducing their capital spending in response to slack demand and continued high interest rates in most developed countries.

Petroleum affiliates plan a 14-percent increase, to \$21.5 billion, in 1982, following a 28-percent increase this year. Manufacturing affiliates plan a 2-percent increase, to \$22.7 billion, following a 14-percent increase. In contrast, affiliates in trade plan a somewhat faster increase next year—10 percent, to \$4.4 billion—compared with 6 percent in 1981.

By area, affiliates in developed countries plan a 7-percent increase in 1982, to \$38.7 billion, following a 13-percent

NOTE.—Earl F. Holmes, Jr. supervised the data collection and assisted in the preparation of the estimates. Smith W. Allnut III designed the computer programs for data retrieval and analysis.

1. Capital expenditure estimates are for nonbank foreign affiliates of nonbank U.S. parents. Capital expenditures are expenditures that are made to acquire, add to, or improve property, plant, and equipment, and that are charged to capital accounts. They are on a gross basis; sales and other dispositions of fixed assets are not netted against them. Capital expenditures are reported to BEA in current dollars; they are not adjusted for price changes in host countries or for changes in the value of foreign currencies, because the data needed for the adjustments are unavailable.

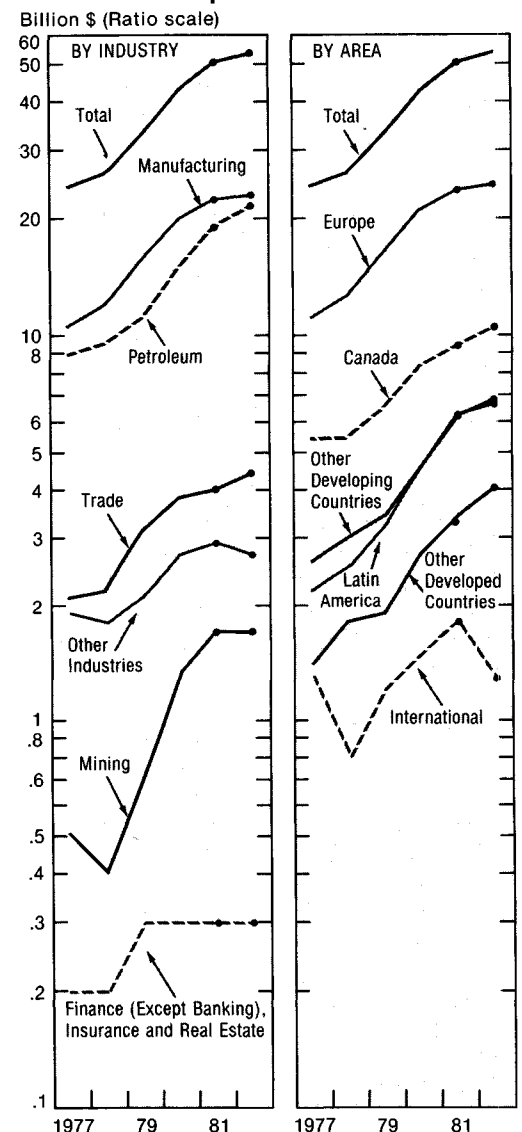
increase this year. In developing countries, a 9-percent increase, to \$13.4 billion, is planned, compared with a 36-percent increase. Affiliates in “international”—those whose operations span more than one country and are engaged in oil and gas drilling, petroleum shipping, other water transportation, or petroleum trading—plan a 29-percent increase, to \$1.3 billion, following a 19-percent increase.

In addition to the estimates of planned expenditures for 1981 and 1982, this article presents revised estimates of actual spending for 1977–80 (tables 2–5). The estimates for all years incorporate the results of BEA’s 1977 benchmark survey of U.S. direct investment abroad.<sup>2</sup> Previously published estimates were linked to the 1966 benchmark survey. A technical note at the end of this article summarizes the major differences in definitions, concepts, and presentation between the previous and revised series, and describes the procedure used to expand sample data to universe estimates for intercensal years.

In the past, spending estimates were adjusted in an attempt to eliminate or reduce bias caused by systematic overpredicting or underpredicting of actual expenditures by reporters. Beginning with this article, the estimates will no longer be adjusted. The technical note explains the previous bias adjustment procedure and the reasons for its discontinuation.

2. Detailed findings and a methodology of the 1977 benchmark survey were published in *U.S. Direct Investment Abroad, 1977*, U.S. Department of Commerce, Bureau of Economic Analysis. Copies may be obtained from the Superintendent of Documents, U.S. GPO, Washington, D.C. 20402, price \$10.00, stock number 003-010-00079-1.

CHART 13  
Capital Expenditures by Majority-Owned Foreign Affiliates of U.S. Companies



● Planned  
Note.— Estimates are for nonbank foreign affiliates of nonbank U.S. parents.  
U.S. Department of Commerce, Bureau of Economic Analysis 81-10-13

**Petroleum**

Petroleum affiliates plan to increase spending 14 percent, to \$21.5 billion, compared with a 28-percent increase this year. (The 1982 estimates may be substantially revised in later surveys because several major U.S. companies could not provide reliable estimates so far in advance of actual expenditures.) Much of the increase is in Canada, Australia, and "other Africa." The size of the increase was moderated by slower growth in the United Kingdom and "other Asia and Pacific."

In developed countries, affiliates plan to increase spending 15 percent, to \$14.0 billion, following a 23-percent increase

in 1981 (tables 6 and 7). Canadian affiliates plan to step-up spending 32 percent, to \$4.3 billion, after a 5-percent increase this year. The sharp 1982 increase is mainly for improvement of downstream facilities, including modernization and expansion of refineries and new petrochemical facilities. It is planned despite the year-old Canadian National Energy Program (NEP), which calls for increased Canadian ownership of the domestic oil and gas industry, the provision of new incentives to encourage exploration by Canadian-controlled companies, and increased federal energy taxes. Although the NEP appeared to be an important factor in recent decisions by several U.S. com-

panies to sell Canadian oil and gas properties, it does not seem to be dampening affiliates' investment in downstream facilities in Canada.

In the North Sea area, British affiliates plan to maintain spending at \$4.9 billion in 1982. Norwegian affiliates plan a 16-percent increase, to \$1.6 billion, following a similar increase this year; the 1982 increase is for continued development of offshore oilfields and gasfields. After doubling expenditures this year, Australian affiliates plan a further 44-percent increase in 1982. The increases are for development of both offshore and shale oil reserves, and re-

(Text continued on p. 66)

**Table 1.—Capital Expenditures by Majority-Owned Foreign Affiliates of U.S. Companies, 1977-82**

	Percent change from preceding year					Billions of dollars					
	Actual expenditures			Latest plans <sup>1</sup>		Actual expenditures				Latest plans <sup>1</sup>	
	1978	1979	1980 <sup>1</sup>	1981	1982	1977	1978	1979	1980 <sup>1</sup>	1981	1982
<b>Total</b> .....	9	25	30	18	6	24.1	26.1	32.6	42.4	50.1	53.3
<b>By industry</b>											
Mining.....	-14	51	89	33	2	.5	.4	.7	1.3	1.7	1.7
Petroleum.....	7	16	34	28	14	8.9	9.5	11.0	14.8	19.0	21.5
Manufacturing.....	14	29	27	14	2	10.5	12.0	15.4	19.5	22.2	22.7
Food and kindred products.....	17	25	28	12	-2	.8	.9	1.2	1.5	1.7	1.7
Chemicals and allied products.....	-8	38	14	19	15	2.0	1.9	2.6	3.0	3.5	4.1
Primary and fabricated metals.....	7	11	37	27	19	.5	.6	.6	.9	1.1	1.3
Machinery except electrical.....	22	31	18	-4	7	3.0	3.6	4.7	5.6	5.3	5.7
Electric and electronic equipment.....	23	26	24	8	9	.7	.9	1.1	1.4	1.5	1.6
Transportation equipment.....	18	54	49	34	-13	1.6	1.9	2.9	4.4	5.9	5.1
Other manufacturing.....	16	3	29	12	-1	1.8	2.1	2.2	2.8	3.2	3.2
Trade.....	9	37	25	6	10	2.1	2.2	3.1	3.8	4.0	4.4
Finance (except banking), insurance and real estate.....	-10	49	7	-12	(*)	.2	.2	.3	.3	.3	.3
Other industries.....	-6	22	28	7	-9	1.9	1.8	2.1	2.7	2.9	2.7
<b>By area</b>											
Developed countries.....	10	25	29	13	7	18.0	19.8	24.8	31.9	36.1	38.7
Canada.....	1	20	29	13	11	5.4	5.4	6.5	8.3	9.4	10.4
Europe.....	13	30	27	11	4	11.2	12.6	16.4	20.8	23.2	24.2
European Communities (9) <sup>2</sup> .....	13	28	27	7	4	9.6	10.9	14.0	17.8	19.1	19.8
France.....	1	26	23	-3	5	1.4	1.4	1.8	2.2	2.1	2.2
Germany.....	34	28	17	1	2	2.0	2.6	3.4	3.9	4.0	4.0
United Kingdom.....	20	27	33	10	5	3.9	4.7	6.0	8.0	8.8	9.2
Other.....	-7	31	28	14	1	2.4	2.2	2.9	3.7	4.2	4.3
Other.....	9	42	26	35	8	1.5	1.7	2.4	3.0	4.1	4.4
Japan.....	32	15	42	(*)	13	.4	.6	.6	.9	.9	1.0
Australia, New Zealand and South Africa.....	20	7	40	37	18	1.0	1.2	1.3	1.8	2.5	3.0
Developing countries.....	16	20	38	36	9	4.8	5.5	6.6	9.0	12.2	13.4
Latin America.....	17	27	42	35	7	2.2	2.5	3.2	4.6	6.2	6.6
Other Africa.....	14	12	44	38	43	.7	.8	.9	1.3	1.8	2.5
Middle East.....	-10	-27	-10	-29	15	1.2	1.1	.8	.7	.5	.6
Other Asia and Pacific.....	56	52	47	54	-5	.7	1.1	1.7	2.5	3.8	3.7
International.....	-38	51	22	19	-29	1.3	.8	1.2	1.5	1.8	1.3
Addenda European Communities (10) <sup>3</sup> .....					4					19.2	19.9
OPEC <sup>4</sup> .....	10	-2	13	28	17	1.7	1.9	1.9	2.1	2.7	3.2

\* Less than 0.5 percent (±).

1. Based on the BEA survey taken in June 1981.

2. European Communities (9) consists of Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, Netherlands, and the United Kingdom.

3. European Communities (10) consists of European Communities (9) and Greece.

4. OPEC consists of Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, Venezuela, and the United Arab Emirates.

NOTE.—Estimates are for nonbank foreign affiliates of nonbank U.S. parents.









Table 5.—Capital Expenditures by Majority-Owned Foreign Affiliates of U.S. Companies in 1980<sup>1</sup>

[Millions of dollars]

Table with 15 columns: Country/Region, All industries, Mining, Petroleum, Total, Food and kindred products, Chemicals and allied products, Primary and fabricated metals, Machinery except electrical, Electric and electronic equipment, Transportation equipment, Other manufacturing, Trade, Finance (except banking, insurance, and real estate), Other industries. Rows include All countries, Developed countries (Canada, Europe, Japan, etc.), and Developing countries (Latin America, Africa, etc.).

\* Less than \$500,000.

† Suppressed to avoid disclosure of data of individual companies.

1. Based on the BEA survey taken in June 1981.

2. See footnote 2, table 2.

NOTE.—Estimates are for nonbank foreign affiliates of nonbank U.S. parents.

Table 6.—Capital Expenditures by Majority-Owned Foreign Affiliates of U.S. Companies in 1981<sup>1</sup>

[Millions of dollars]

	All industries	Mining	Petroleum	Manufacturing								Trade	Finance (except banking), insurance, and real estate	Other industries
				Total	Food and kindred products	Chemicals and allied products	Primary and fabricated metals	Machinery except electrical	Electric and electronic equipment	Transportation equipment	Other manufacturing			
<b>All countries</b> .....	50,087	1,671	18,969	22,217	1,699	3,524	1,126	5,340	1,453	5,881	3,195	4,016	295	2,918
<b>Developed countries</b> .....	36,071	1,245	12,202	17,685	1,108	2,715	743	4,877	922	4,798	2,522	3,212	250	1,477
<b>Canada</b> .....	9,429	560	3,250	4,408	227	701	230	615	191	1,400	1,045	438	86	687
<b>Europe</b> .....	23,208	10	8,277	11,826	768	1,806	469	3,702	652	3,785	1,354	2,270	144	683
European Communities (9).....	19,129	4	6,666	10,168	707	1,614	438	3,574	554	2,029	1,252	1,583	(D)	(D)
Belgium.....	999	(*)	123	701	13	183	14	(D)	(D)	310	60	153	(D)	20
Denmark.....	281	0	139	26	13	2	1	(*)	7	1	1	109	(D)	(D)
France.....	2,135	0	(D)	1,409	86	178	45	755	86	84	175	368	3	(D)
Germany.....	3,968	(*)	591	3,071	97	299	127	1,104	160	927	358	257	3	44
Ireland.....	247	(*)	(D)	181	16	51	3	26	(D)	(D)	(D)	19	(D)	(D)
Italy.....	1,309	0	209	922	57	129	35	(D)	(D)	(D)	75	142	(*)	36
Luxembourg.....	43	0	4	39	0	3	0	6	(D)	0	(D)	(*)	(*)	(*)
Netherlands.....	1,370	0	449	771	123	241	29	263	15	3	97	89	4	58
United Kingdom.....	8,776	1	4,895	3,048	302	530	184	776	182	649	426	448	76	308
Other Europe.....	4,079	5	1,611	1,658	61	192	31	128	98	1,046	102	686	(D)	(D)
Austria.....	402	0	(D)	284	4	3	5	(D)	2	(D)	(D)	83	(*)	(D)
Greece.....	55	(*)	9	30	4	22	1	(*)	1	0	3	15	1	(*)
Norway.....	1,518	5	1,405	44	0	2	(D)	(*)	(D)	11	(D)	(D)	(D)	1
Portugal.....	89	0	(D)	34	1	5	(*)	1	3	15	8	(D)	0	3
Spain.....	1,294	0	64	1,032	45	134	(D)	(D)	(D)	(D)	(D)	173	(*)	25
Sweden.....	268	0	50	151	3	20	3	(D)	(D)	2	(D)	58	(*)	10
Switzerland.....	368	0	14	79	4	5	3	6	19	(*)	41	226	(D)	(D)
Turkey.....	11	1	1	2	(*)	2	0	0	0	0	(*)	6	0	1
Other.....	75	0	24	2	0	(*)	0	0	1	0	2	48	(*)	(*)
<b>Japan</b> .....	905	0	(D)	643	(D)	76	(D)	(D)	45	(D)	14	177	3	(D)
<b>Australia, New Zealand and South Africa</b> .....	2,529	675	(D)	809	(D)	133	(D)	(D)	34	(D)	109	327	17	(D)
Australia.....	2,088	647	549	593	68	100	(D)	60	23	(D)	67	211	16	72
New Zealand.....	99	(*)	(D)	38	3	8	0	(D)	2	(D)	12	27	(*)	(D)
South Africa.....	341	28	(D)	177	(D)	25	15	(D)	9	46	30	89	(*)	(D)
<b>Developing countries</b> .....	12,265	427	5,556	4,532	591	809	383	463	530	1,083	673	805	45	900
<b>Latin America</b> .....	6,160	325	1,215	3,780	472	662	363	412	233	1,059	579	527	31	281
South America.....	4,353	291	1,003	2,654	302	557	283	379	124	612	398	321	11	72
Argentina.....	854	(D)	211	581	77	129	(D)	(D)	9	(D)	75	(D)	(*)	8
Brazil.....	1,805	1	50	1,641	121	334	207	(D)	94	408	(D)	78	9	24
Chile.....	271	(D)	12	12	2	6	2	0	(*)	(*)	2	(D)	0	21
Colombia.....	415	9	297	68	16	25	3	(*)	4	(D)	(D)	36	1	4
Ecuador.....	65	0	24	28	9	5	2	0	2	0	9	13	0	(*)
Peru.....	402	(D)	287	14	2	5	2	(*)	2	(*)	2	(D)	1	1
Venezuela.....	383	0	54	227	53	52	12	3	12	61	33	88	(*)	14
Other.....	160	2	68	84	23	(*)	(D)	(*)	(*)	1	(D)	5	(*)	(*)
Central America.....	1,515	12	54	1,100	159	98	79	34	108	447	175	200	9	139
Mexico.....	1,318	(*)	13	1,064	142	92	79	34	102	447	169	183	3	56
Panama.....	72	0	3	14	(D)	(D)	0	0	(*)	0	(*)	9	6	40
Other.....	125	12	39	22	(D)	(D)	1	0	6	(*)	6	8	(*)	43
Other Western Hemisphere.....	292	22	157	26	11	7	(*)	0	1	0	6	6	11	71
Bahamas.....	51	2	11	(D)	1	(D)	0	0	0	0	0	(*)	(D)	(D)
Bermuda.....	11	0	(*)	(*)	0	0	0	0	0	0	(*)	1	(D)	(D)
Netherlands Antilles.....	34	(*)	(D)	(*)	0	(*)	0	0	0	0	0	(D)	(D)	(D)
Trinidad and Tobago.....	110	0	(D)	(D)	(*)	(D)	0	0	(*)	0	4	(D)	(D)	(D)
Other.....	86	19	14	17	10	3	(*)	0	1	0	2	(D)	(D)	26
Other Africa.....	1,780	23	1,635	75	25	(D)	15	(*)	(D)	4	9	28	2	17
Saharan.....	611	0	585	8	1	(*)	1	(*)	(*)	4	1	10	0	9
Egypt.....	365	0	347	4	0	(*)	0	0	0	0	0	6	0	0
Libya.....	189	0	188	(*)	0	0	0	(*)	0	0	0	1	0	0
Other.....	58	0	50	3	1	0	1	0	(*)	0	1	4	0	0
Sub-Saharan.....	1,169	23	1,051	68	24	(D)	14	0	(D)	(*)	8	18	2	3
Liberia.....	12	(D)	(*)	1	1	0	0	0	0	0	0	(D)	(*)	7
Nigeria.....	358	(*)	339	13	2	(D)	8	(*)	(*)	0	3	5	(*)	1
Other.....	799	(D)	711	53	21	(D)	14	0	(D)	(*)	5	(D)	1	1
<b>Middle East</b> .....	496	2	284	35	6	(D)	(*)	7	(D)	0	(*)	(D)	2	(D)
Israel.....	96	0	7	32	5	(D)	0	5	(D)	0	(*)	(D)	2	(D)
OPEC.....	366	2	249	3	1	(*)	(*)	2	0	0	0	47	(*)	65
Other.....	35	0	28	(*)	(*)	(*)	0	(*)	0	0	0	5	(*)	2
<b>Other Asia and Pacific</b> .....	3,828	77	2,421	641	88	128	5	44	272	20	85	(D)	10	(D)
Hong Kong.....	600	0	(D)	30	(*)	7	(*)	8	7	0	8	(D)	44	(D)
India.....	30	0	0	30	0	8	0	5	(D)	0	(D)	(*)	0	(*)
Indonesia.....	1,334	76	1,224	22	1	3	2	(*)	(D)	0	(D)	7	0	7
Malaysia.....	606	(*)	(D)	(D)	(*)	(D)	1	(*)	59	(D)	16	12	(*)	(*)
Philippines.....	311	0	112	161	72	23	(*)	(*)	39	(D)	24	(D)	(D)	(D)
Singapore.....	437	0	308	101	(*)	3	2	18	69	(D)	(D)	17	(D)	(D)
South Korea.....	72	0	(*)	(D)	5	(D)	0	7	14	0	3	(D)	0	(*)
Taiwan.....	128	0	2	101	4	(D)	22	2	62	0	11	25	0	(*)
Thailand.....	235	1	(D)	(D)	4	(D)	8	0	3	(*)	3	(D)	0	(*)
Other.....	75	0	50	15	2	8	(*)	0	4	0	1	(*)	0	9
<b>International</b> .....	1,752		1,211											541
Addenda—European Communities (10) <sup>2</sup> .....	19,184	4	6,675	10,198	711	1,636	439	3,575	555	2,029	1,255	1,598	(D)	(D)
OPEC <sup>3</sup> .....	2,716	78	2,099	293	66	69	17	3	(D)	61	(D)	160	1	85

\* Less than \$500,000.

D Suppressed to avoid disclosure of data of individual companies.

NOTE.—Estimates are for nonbank foreign affiliates of nonbank U.S. parents.

1. Based on the BEA survey taken in June 1981.

2. Consists of European Communities (9) and Greece.

3. See footnote 2, table 2.

Table 7.—Capital Expenditures by Majority-Owned Foreign Affiliates of U.S. Companies in 1982 <sup>1</sup>

[Millions of dollars]

	All industries	Mining	Petroleum	Manufacturing									Trade	Finance (except banking), insurance, and real estate	Other industries
				Total	Food and kindred products	Chemicals and allied products	Primary and fabricated metals	Machinery except electrical	Electric and electronic equipment	Transportation equipment	Other manufacturing				
<b>All countries</b> .....	53,295	1,699	21,548	22,662	1,669	4,065	1,342	5,738	1,577	5,106	3,166	4,424	294	2,667	
<b>Developed countries</b> .....	38,680	1,343	14,018	17,903	1,074	3,112	785	5,233	1,045	4,199	2,456	3,511	247	1,657	
<b>Canada</b> .....	10,418	374	4,296	4,397	243	798	296	697	245	1,038	1,081	468	86	797	
<b>Europe</b> .....	24,247	10	8,804	12,020	705	2,072	451	3,942	715	2,891	1,244	2,476	147	790	
European Communities (9).....	19,810	4	6,948	10,362	656	1,765	411	3,806	613	1,987	1,123	1,699	(D)	(D)	
Belgium.....	832	1	134	516	12	192	15	64	45	136	52	164	1	16	
Denmark.....	305	0	151	30	18	1	1	(*)	8	1	1	118	(D)	(D)	
France.....	2,244	0	258	1,459	84	218	19	780	78	105	174	377	3	147	
Germany.....	4,035	3	740	2,990	75	264	121	1,125	165	957	284	254	(D)	(D)	
Ireland.....	221	(*)	38	144	9	38	3	(D)	(D)	(D)	40	34	(*)	4	
Italy.....	1,353	0	173	969	33	107	(D)	(D)	51	(D)	(D)	177	(*)	34	
Luxembourg.....	27	0	4	23	0	5	0	2	(D)	0	(D)	(*)	(*)	(*)	
Netherlands.....	1,558	0	560	826	108	349	30	264	18	3	54	102	(D)	(D)	
United Kingdom.....	9,236	1	4,891	3,405	316	591	(D)	920	238	(D)	412	473	82	384	
<b>Other Europe</b> .....	4,437	6	1,856	1,658	49	308	39	136	102	904	121	778	(D)	(D)	
Austria.....	427	0	61	260	(D)	2	5	(D)	(D)	(D)	(D)	96	(*)	11	
Greece.....	64	(*)	12	36	4	25	1	(*)	(*)	0	6	16	1	(*)	
Norway.....	1,775	5	1,634	51	0	2	(D)	(*)	(D)	0	13	(D)	(D)	1	
Portugal.....	115	0	20	37	(*)	2	(*)	3	3	21	7	57	0	1	
Spain.....	1,215	0	28	1,016	33	237	(D)	(D)	(D)	(D)	(D)	141	(*)	31	
Sweden.....	298	0	56	162	(D)	21	3	(D)	(D)	1	5	68	(*)	11	
Switzerland.....	451	0	(D)	91	4	16	3	6	16	(*)	46	286	(D)	(D)	
Turkey.....	13	1	(D)	2	(*)	2	0	0	(*)	0	(*)	(D)	0	(*)	
Other.....	78	0	27	2	0	(*)	(*)	0	1	0	2	48	(*)	1	
<b>Japan</b> .....	1,023	0	(D)	698	(D)	71	15	(D)	46	(D)	19	229	(*)	(D)	
<b>Australia, New Zealand and South Africa</b> .....	2,991	959	(D)	787	(D)	170	24	(D)	38	(D)	112	338	14	(D)	
Australia.....	2,558	932	788	571	68	133	14	49	30	200	76	224	13	31	
New Zealand.....	92	(*)	(D)	33	(D)	7	0	1	2	(D)	5	30	(*)	(D)	
South Africa.....	341	27	(D)	183	(D)	30	9	(D)	7	(D)	31	84	(*)	(D)	
<b>Developing countries</b> .....	13,363	356	6,605	4,760	595	953	558	505	533	907	709	913	46	683	
<b>Latin America</b> .....	6,595	273	1,459	4,014	487	803	529	453	233	890	619	617	32	200	
<b>South America</b> .....	4,764	225	1,099	3,018	306	661	453	424	117	652	406	354	15	52	
Argentina.....	802	5	245	491	50	134	2	(D)	8	(D)	48	49	(*)	11	
Brazil.....	2,174	1	83	1,974	152	402	344	(D)	(*)	445	288	86	(D)	(D)	
Chile.....	209	132	16	19	2	11	3	0	(*)	(*)	3	34	0	8	
Colombia.....	468	(D)	344	74	19	25	6	(*)	3	(D)	(D)	(D)	(D)	(D)	
Ecuador.....	62	0	27	23	9	3	1	0	2	0	8	12	0	(*)	
Peru.....	399	(D)	274	20	1	10	1	(*)	4	(*)	4	(D)	1	1	
Venezuela.....	487	0	60	313	52	75	(D)	3	(D)	109	35	104	(*)	10	
Other.....	164	3	51	104	20	(*)	(D)	(*)	(*)	5	(D)	6	(*)	(*)	
<b>Central America</b> .....	1,370	10	42	969	172	135	76	29	115	238	204	256	8	85	
Mexico.....	1,242	1	15	931	155	129	75	29	109	238	197	235	3	57	
Panama.....	40	0	3	15	(D)	(D)	0	0	(*)	0	(*)	13	5	3	
Other.....	89	9	25	22	(D)	(D)	(*)	0	7	(*)	7	8	(*)	25	
<b>Other Western Hemisphere</b> .....	461	38	317	28	9	8	(*)	0	1	0	9	7	8	63	
Bahamas.....	44	(D)	9	3	1	2	0	0	0	0	0	1	1	(D)	
Bermuda.....	7	0	(*)	(*)	0	0	0	0	0	0	(*)	1	2	4	
Netherlands Antilles.....	38	(D)	34	(*)	(*)	0	0	0	0	0	0	2	(*)	(D)	
Trinidad and Tobago.....	268	0	259	7	(*)	2	0	0	(*)	0	5	(*)	(*)	2	
Other.....	104	35	15	18	8	4	(*)	0	1	0	4	3	5	29	
<b>Other Africa</b> .....	2,546	19	2,398	87	21	(D)	24	(*)	(D)	1	18	25	2	15	
Saharan.....	711	0	694	4	(*)	(*)	1	(*)	(*)	1	1	9	0	4	
Egypt.....	474	0	465	1	0	(*)	0	0	0	1	0	5	0	4	
Libya.....	185	0	184	1	0	0	0	(*)	0	0	0	1	0	0	
Other.....	52	0	45	3	(*)	(*)	1	0	(*)	0	1	4	0	(*)	
<b>Sub-Saharan</b> .....	1,835	19	1,704	83	21	(D)	23	0	(*)	(*)	16	16	2	11	
Liberia.....	16	(D)	(*)	1	1	0	0	0	0	0	0	(D)	(*)	10	
Nigeria.....	611	(*)	590	15	2	9	1	0	(*)	0	4	(*)	(*)	(*)	
Other.....	1,208	(D)	1,114	66	18	(D)	23	0	(D)	(*)	13	(D)	1	1	
<b>Middle East</b> .....	570	2	359	39	6	(D)	(*)	7	(D)	0	(*)	80	2	88	
Israel.....	109	0	8	35	5	(D)	0	5	(D)	0	(*)	(D)	2	(D)	
OPEC.....	421	2	319	3	1	(*)	(*)	2	0	0	0	38	(*)	59	
Other.....	41	0	32	1	(*)	1	0	(*)	0	0	0	(*)	(*)	(D)	
<b>Other Asia and Pacific</b> .....	3,653	63	2,389	620	80	130	4	44	272	16	73	190	10	380	
Hong Kong.....	427	0	17	29	(*)	9	(*)	8	5	0	7	(D)	(D)	(D)	
India.....	34	0	0	34	0	7	0	(D)	(D)	0	3	0	0	(*)	
Indonesia.....	1,387	62	1,294	19	1	3	1	(*)	(D)	0	(D)	7	(*)	5	
Malaysia.....	615	(*)	(D)	(D)	(*)	(D)	(*)	(D)	51	(D)	18	8	(*)	2	
Philippines.....	287	0	(D)	148	71	18	1	(D)	40	(D)	15	21	(*)	(D)	
Singapore.....	289	0	183	75	(*)	(D)	2	21	38	(D)	16	(D)	(D)	(D)	
South Korea.....	69	0	(*)	(D)	1	(D)	0	3	18	0	3	(D)	0	(*)	
Taiwan.....	161	0	3	126	4	17	0	1	92	0	12	32	0	(*)	
Thailand.....	274	1	236	12	2	4	(*)	4	(*)	4	3	25	0	(*)	
Other.....	111	0	94	8	2	3	(*)	0	2	0	1	(*)	0	9	
<b>International</b> .....	1,252		925											327	
<b>Addenda—European Communities (10) <sup>2</sup></b> .....	19,874	4	6,960	10,398	660	1,790	412	3,807	613	1,987	1,129	1,715	(D)	(D)	
<b>OPEC <sup>3</sup></b> .....	3,163	64	2,485	373	64	91	(D)	6	(D)	109	166	1	1	74	

\* Less than \$500,000.

D Suppressed to avoid disclosure of data of individual companies.

1. Based on the BEA survey taken in June 1981.

2. Consists of European Communities (9) and Greece.

3. See footnote 2, table 2.

NOTE.—Estimates are for nonbank foreign affiliates of nonbank U.S. parents.

(Text continued from p. 59)

reflect Australia's drive for energy self-sufficiency.

In developing countries, affiliates plan a 19-percent increase, to \$6.6 billion, after a 42-percent increase in 1981. The increase is centered in "other Africa"—particularly Nigeria, the Ivory Coast, and Cameroon—where affiliates plan to continue exploration, partly to secure supplies from sources other than the Middle East. In Latin America, a large spending increase is planned by affiliates in Trinidad and Tobago for development of offshore natural gasfields. After nearly doubling expenditures for offshore oilfield and gasfield development this year, affiliates in "other Asia and Pacific"—mainly in Indonesia and Malaysia—plan to maintain their spending at \$2.4 billion in 1982.

Affiliates in "international" are planning to reduce spending 24 percent, to \$0.9 billion, in 1982, following a 27-percent increase in spending this year. The reduction reflects a decline in demand for tankers resulting from reduced demand for Middle East crude oil and some shift to pipeline transportation, mainly in the Middle East.

### **Manufacturing**

Manufacturing affiliates plan to increase spending 2 percent, to \$22.7 billion, compared with a 14-percent increase this year. Smaller increases, or declines, are expected in all industries within manufacturing except nonelectrical machinery and electric and electronic equipment. A particularly large decline is expected in transportation equipment.

After 3 years of rapid growth, affiliates in transportation equipment plan a 13-percent decrease in spending, to \$5.1 billion, in 1982. The decrease partly reflects near-completion of several projects involving construction of assembly and parts production facilities for development of "world cars." Plans for further expansion have been dampened by recent weak worldwide demand for autos. Affiliates in food products and "other manufacturing" also plan cuts in spending—2 percent and 1 percent, respectively—after 12-percent increases

in each industry in 1981. The cuts reflect completion of several new plants and expansion projects.

Affiliates in chemicals plan a 15-percent increase in spending, to \$4.1 billion, compared with this year's 19-percent increase; most of the increase in both years is for construction of petrochemical plants. Affiliates in primary and fabricated metals also plan a strong, but smaller, increase next year. In contrast, affiliates in nonelectrical machinery plan to step up spending 7 percent, to \$5.7 billion, compared with a 4-percent cut this year. The step-up is mainly for increased capitalization of computer equipment for rental. Affiliates in electric and electronic equipment plan a 9-percent increase, to \$1.6 billion, about the same increase as this year.

In developed countries, manufacturing affiliates plan a 1-percent increase, to \$17.9 billion, following a 9-percent increase in 1981. Canadian affiliates plan to maintain spending at \$4.4 billion for 1982. A large decline in spending by transportation equipment affiliates is expected to offset increases in every other manufacturing industry. The decline follows 3 years of programs to expand and modernize assembly and parts facilities and, in part, reflects sluggish North American demand for autos.

In Europe, German affiliates plan a 3-percent decrease in spending, to \$3.0 billion, following a 5-percent decrease this year; most of the decrease is in "other manufacturing" and reflects completion of a cigarette manufacturing plant this year. British affiliates plan a 12-percent increase, to \$3.4 billion. The increase is centered in nonelectrical machinery, mainly reflecting the increased capitalization of computer equipment for rental, and in transportation equipment, reflecting modernization of passenger car assembly facilities. French affiliates plan a 4-percent increase, to \$1.6 billion; affiliates in chemicals, machinery, and transportation equipment account for most of the increase. In "other Europe," affiliates plan no increase in 1982, following a doubling of expenditures, to \$1.7 billion, this year. Much of this year's particularly large increase is by transporta-

tion equipment affiliates in Spain and Austria for construction of assembly plants and parts facilities.

In developing countries, affiliates plan a 5-percent increase, to \$4.8 billion, following a 34-percent increase in 1981. The largest increase is in Brazil, where affiliates in primary and fabricated metals plan to explore for and develop bauxite reserves, and affiliates in chemicals plan to construct industrial gas plants. The increase in Brazil is partly offset by a moderate decline in Mexico, where cuts in spending are planned in transportation equipment, as a result of the completion of a new engine plant and assembly facilities.

### **Other industries**

Mining affiliates plan to increase spending 2 percent, to \$1.7 billion, following 3 years of sizable increases. Declines in spending in Canada and Chile, reflecting completion of major expansion projects, will be offset by an increase in Australia, where affiliates are attracted by cheap, abundant power, plentiful bauxite supplies, and a favorable investment climate.

Trade affiliates plan a 10-percent increase, to \$4.4 billion, following a 6-percent increase this year. The 1982 increase is spread among several European countries, Japan, and Mexico; most of the spending is by affiliates that market information systems.

Spending by affiliates in finance (except banking), insurance, and real estate will remain at \$0.3 billion in 1982, reflecting small offsetting increases and decreases among several countries.

Affiliates in "other industries"—agriculture, construction, transportation, communication, public utilities, and other services—plan to cut spending 9 percent, to \$2.7 billion, compared with a 7-percent increase this year. Large cuts are expected by affiliates in "international," reflecting the purchase of new and used bulk ore and grain carriers this year, and in Hong Kong, where an electric power plant is to be completed this year. In contrast, a moderate increase is planned in Canada, mainly for modernization of communication equipment.

### Technical Note

Beginning with 1977, estimates of capital expenditures by foreign affiliates have been revised to incorporate the results of the 1977 benchmark survey of U.S. direct investment abroad. The 1977 survey was a census, which, in terms of value, covered virtually the entire direct investment universe; reports for 14,727 majority-owned nonbank foreign affiliates of nonbank U.S. parents were received. The revisions to the expenditure estimates resulted primarily from "benchmarking" reported sample data from the capital expenditures survey (BE-133C) to the universe data from the 1977 survey.

Previously published estimates for 1977 forward were linked to the last benchmark survey, which covered 1966. Table 8 shows capital expenditures for 1977 on both bases—as reported in the 1977 benchmark survey and as previously estimated by linking to the 1966 benchmark survey. In the table, data on the two bases are not strictly comparable because of differences in definition, classification, and presentation, as summarized below. Present estimates for 1967-76 continue to be linked to the 1966 benchmark survey.

#### Changes in definition, classification, and presentation

**Definition of majority ownership.**—Prior to the 1977 benchmark survey, a majority-owned foreign affiliate was defined as an affiliate in which a single U.S. parent had an ownership interest of at least 50 percent. In the revised series, an affiliate is defined as majority-owned if the combined ownership of all U.S. parents exceeds 50 percent. Thus, the definition changed in two ways. First, the combined ownership interest of all U.S. parents, rather than the interest of a single parent, now determines majority-ownership. This change had little impact on the data because there are very few foreign affiliates with more than one U.S. parent. Second, for an affiliate to be considered majority-owned, U.S. ownership in it must now exceed 50 percent, rather than be 50 percent or more. This change had a major impact on the data, because of the significant number and size of foreign affiliates that were exactly 50 percent owned. Exclusion of these affiliates from the revised series accounts for nearly one-half of the difference between the 1977 estimate linked to the 1966 base and that linked to the 1977 base. By country, the largest changes were for Japan, the United Kingdom, the Netherlands, Germany, France, and Brazil.

**Industry classification.**—In the previous series, the industry classification of a given affiliate was based on the affiliate's description of its operations and the products it sold, and other data from the 1966 benchmark sur-

**Table 8.—Capital Expenditures in 1977 as Estimated by Linking to the 1966 Benchmark Survey and as Reported in the 1977 Benchmark Survey**

[Billions of dollars]		
	Estimated by linking to the 1966 survey	Reported in the 1977 survey
<b>Total</b> .....	<b>27.5</b>	<b>24.1</b>
<b>By industry</b>		
Mining.....	.6	.5
Petroleum.....	9.3	8.9
Manufacturing.....	12.7	10.5
Trade.....	1.8	2.1
Other industries <sup>1</sup> .....	3.1	1.9
<b>By area</b>		
<b>Developed countries</b> .....	<b>20.4</b>	<b>18.0</b>
Canada.....	6.2	5.4
Europe.....	12.4	11.2
Japan.....	.8	.4
Australia, New Zealand and South Africa.....	1.1	1.0
<b>Developing countries</b> .....	<b>5.6</b>	<b>4.8</b>
Latin America.....	2.6	2.2
Other Africa.....	.7	.7
Middle East.....	1.4	1.2
Other Asia and Pacific.....	.8	.7
<b>International</b> .....	<b>1.5</b>	<b>1.3</b>

1. Consists of finance (except banking), insurance, and real estate; agriculture; construction; transportation; communication; public utilities; and services.

vey. In the revised series, each affiliate is classified in the industry in which its sales or gross operating revenues were largest. For 1977, the classification was based on the affiliate's sales distribution, as reported in the 1977 benchmark survey. If, after 1977, an affiliate's major activity significantly changed, its industry classification was changed accordingly.

**Format of published tables.**—The detail by industry in tables 2-7 differs slightly from that published previously. "Paper and allied products" and "rubber products," which previously were shown separately, are now part of "other manufacturing." "Finance (except banking), insurance, and real estate," previously part of "other industries," is now shown separately.

The detail by country has been expanded from that in previously published tables. Also, Latin American countries are now grouped strictly along geographical lines; that is, according to whether they are located in South America, Central America, or "other Western Hemisphere." "Other Africa" is now divided into "Saharan" and "Sub-Saharan."

Table 1 previously showed "earlier plans" as well as "latest plans." In this article, these references to, and estimates of, "earlier plans" have been omitted, because those estimates were based on the 1966 benchmark survey and would not be comparable to the estimates of "latest plans," which are based on the 1977 benchmark survey.

### Estimation procedure

For 1977, the data are those reported in the benchmark survey. The data cover majority-owned nonbank affiliates of nonbank U.S. parents. For years beginning with 1978, universe estimates were obtained by extrapolating forward the 1977 benchmark survey data, based on annual sample data collected in those years. Universe estimates were generally obtained as the sum of three components: (1) current-year data for a matched sample of affiliates—that is, for affiliates that reported in both the prior and current years, (2) current-year data for affiliates new to the sample, and (3) an estimate of current-year data for affiliates that existed in both years, but were not in the matched sample. The third component was obtained as the product of two factors: (1) the prior-year universe estimate, adjusted to exclude data for affiliates sold or liquidated since the prior year, less prior-year data for affiliates in the matched sample, and (2) the ratio of current-to-prior-year data for the matched sample. The first factor is an estimate of prior-year data for affiliates existing in both periods, but not in the matched sample. Its multiplication by the second factor assumed that the data for these affiliates grew in the current year at the same rate as the data for affiliates in the matched sample. Adjustments were made where this assumption appeared to be invalid.

Beginning with the June 1981 sample survey, U.S. respondents have increased from approximately 325 to 1,335; as a result, majority-owned foreign affiliates covered by the survey have increased from 5,000 to nearly 8,000. The sample size was increased to raise the percentage of the universe covered by the matched sample, thereby permitting more accurate estimation. This increase was necessary because, in recent years, the deterioration of the sample had lowered the coverage significantly—to 66 percent for the 1981 estimate published last March. The increased coverage will only affect the estimates for 1981 on, because 1981 is the first year for which both current-and-prior year data are available for these additional affiliates. For the 1981 estimate, the percentage of the universe covered by the sample has been raised to 88 percent.

### Bias adjustment

For a given year, four estimates of projected spending are made: the A and B estimates are prepared from data reported in June and December, respectively, of the preceding year, and the C and D estimates are prepared from data reported in June and December, respectively, of the current year.

Prior to this article, the estimates of projected spending were adjusted to eliminate or reduce bias—that is, the systematic overpredicting or underpredicting of actual expenditures by reporters. For the C and D estimates, the bias adjustment procedure in-

volved calculating ratios of planned spending to actual spending (i.e., to the final, or E, estimate) for each of the previous 5 years, for each country-industry data cell shown in the tables. The adjustment for the A and B estimates involved calculating these same ratios for the first 5 of the previous 6 years; no ratio was calculated for the immediately preceding year, because actual data for that year would not yet have been available. An adjustment was made in a country-industry data cell if there was a deviation of planned from actual spending in the same direction in at least 4 of the 5 years. Cells were not adjusted when

data were below \$10 million. When an adjustment was necessary, the median ratio of planned spending to actual spending over the 5-year period was applied as an adjustment factor.

Beginning with this article, the adjustment for bias will no longer be made. Even though bias may exist, it is increasingly difficult to separate it from changes in plans due, for example, to changes in economic or operating conditions. In addition, there was a substantial amount of subjective judgment exercised by data editors as to whether or not to apply the adjustment factor. In recent years, the

adjustments have become larger in proportion to the unadjusted estimates of projected spending. Also, the adjustment to a given estimate (i.e., the A, B, C, or D) of projected spending for successive years has shown significantly more variability than in the past. At times, this resulted in large changes in the estimates at the global level, which were difficult to explain. Also, as mentioned earlier, U.S. respondents have increased from approximately 325 to 1,335. The bias adjustment procedure could not be employed for the 1,010 new respondents because data for prior years are unavailable.

# CURRENT BUSINESS STATISTICS

THE STATISTICS here update series published in the 1979 edition of BUSINESS STATISTICS, biennial statistical supplement to the SURVEY OF CURRENT BUSINESS. That volume (available from the Superintendent of Documents for \$8.50, stock no. 003-010-00089-9) provides a description of each series, references to sources of earlier figures, and historical data as follows: For all series, monthly or quarterly, 1975 through 1978, annually, 1947-78; for selected series, monthly or quarterly, 1947-78 (where available).

The sources of the series are given in the 1979 edition of BUSINESS STATISTICS; they appear in the main descriptive note for each series, and are also listed alphabetically on pages 171-172. Series originating in Government agencies are not copyrighted and may be reprinted freely. Series from private sources are provided through the courtesy of the compilers, and are subject to their copyrights.

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1978	1979	1980	1978	1979					1980				1981			
	Annual total			IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	
<b>GENERAL BUSINESS INDICATORS—Quarterly Series</b>																	
<b>NEW PLANT AND EQUIPMENT EXPENDITURES †</b>																	
<b>Unadjusted quarterly or annual totals:</b>																	
Total nonfarm business .....	231.24	270.46	295.63	67.57	57.26	66.81	68.39	77.99	65.18	74.02	74.12	82.31	69.75	79.60	'80.42	'91.73	
Manufacturing .....	79.72	98.68	115.81	24.45	19.65	23.65	24.93	30.42	24.10	28.86	28.98	33.87	26.90	31.39	31.84	36.66	
Durable goods industries †	40.43	51.07	58.91	12.46	10.04	12.31	12.99	15.73	12.54	14.79	14.49	17.09	13.24	15.83	15.59	18.26	
Nondurable goods industries †	39.29	47.61	56.90	12.00	9.61	11.37	11.94	14.69	11.56	14.06	14.50	16.78	13.66	15.56	16.25	18.40	
Nonmanufacturing .....	151.52	171.77	179.81	43.12	37.61	43.13	43.47	47.57	41.08	45.16	45.13	48.44	42.85	48.21	48.58	55.07	
Mining .....	10.21	11.38	13.51	2.90	2.59	2.81	2.87	3.11	2.74	3.27	3.50	4.01	3.69	4.28	4.05	4.45	
Railroad .....	3.48	4.03	4.25	0.98	0.86	1.00	1.04	1.12	0.99	1.06	1.00	1.20	0.96	1.12	1.05	1.30	
Air transportation .....	3.09	4.01	4.01	0.83	0.80	1.19	0.91	1.10	0.90	1.27	0.93	0.91	0.88	0.97	0.65	1.09	
Other transportation .....	4.10	4.31	3.82	1.22	0.82	1.08	1.18	1.23	0.84	0.98	1.07	0.94	0.74	1.03	1.04	1.31	
Public utilities.....	29.95	33.96	35.44	8.83	7.19	8.58	8.80	9.38	8.01	8.84	8.97	9.62	7.95	9.47	9.28	10.21	
Electric .....	24.63	27.65	28.12	7.28	6.15	7.05	7.03	7.42	6.64	7.07	6.89	7.53	6.36	7.37	7.21	7.89	
Gas and other .....	5.32	6.31	7.32	1.55	1.05	1.53	1.77	1.96	1.37	1.77	2.08	2.10	1.59	2.10	2.07	2.32	
Trade and services.....	68.66	79.26	81.79	19.47	17.63	19.76	19.87	22.01	19.08	20.23	20.38	22.09	19.41	21.44	21.52	24.93	
Communication and other.....	32.02	34.83	36.99	8.90	7.72	8.70	8.79	9.62	8.52	9.52	9.28	9.67	9.23	9.90	10.99	11.78	
<b>Seas. adj. quarterly totals at annual rates:</b>																	
Total nonfarm business .....				247.36	255.55	265.24	273.15	284.30	291.89	294.36	296.23	299.58	312.24	316.73	'322.96	'332.69	
Manufacturing .....				86.15	90.75	94.71	100.11	106.57	111.77	115.69	116.40	118.63	124.50	125.49	128.72	128.11	
Durable goods industries †				43.88	46.38	49.25	52.13	55.03	58.28	59.38	58.19	59.77	61.24	63.10	63.07	64.06	
Nondurable goods industries †				42.27	44.37	45.47	47.97	51.55	53.49	56.32	58.21	58.86	63.27	62.40	65.65	64.05	
Nonmanufacturing .....				161.21	164.80	170.52	173.04	177.73	180.13	178.66	179.83	180.95	187.74	191.24	194.23	204.58	
Mining .....				11.03	11.23	11.01	11.40	11.86	11.89	12.81	13.86	15.28	16.20	16.80	16.12	16.70	
Railroad .....				3.68	3.90	3.83	4.13	4.24	4.46	4.06	3.98	4.54	4.23	4.38	4.22	4.84	
Air transportation .....				3.41	3.49	4.03	3.95	4.55	3.90	4.27	4.06	3.77	3.85	3.29	2.84	4.44	
Other transportation .....				4.36	4.04	4.16	4.60	4.41	4.11	3.76	4.18	3.39	3.66	4.04	4.00	4.60	
Public utilities.....				32.13	32.40	34.02	35.05	34.08	36.26	35.03	35.58	34.96	36.05	37.84	36.79	37.00	
Electric .....				26.65	26.85	27.88	28.71	27.16	28.98	27.91	28.14	27.54	27.69	29.32	29.41	28.84	
Gas and other .....				5.48	5.55	6.14	6.35	6.92	7.28	7.12	7.44	7.41	8.36	8.53	7.38	8.16	
Trade and services.....				73.32	76.03	79.03	78.86	82.69	82.17	81.07	81.19	82.91	84.43	85.88	86.55	92.68	
Communication and other.....				33.28	33.71	34.44	35.05	35.90	37.34	37.66	36.97	36.11	40.32	39.02	43.70	44.31	
<b>U.S. INTERNATIONAL TRANSACTIONS</b>																	
<i>Quarterly Data Are Seasonally Adjusted (Credits +; debits —)</i>																	
<b>Exports of goods and services (excl. transfers under military grants) .....</b> mil. \$.																	
Merchandise, adjusted, excl. military .....	221,021	228,925	344,667	61,041	65,424	68,890	74,718	79,894	85,764	83,617	86,655	88,636	94,431	94,845	.....	.....	
Transfers under U.S. military agency sales contracts.....	8,090	6,609	8,231	2,056	1,894	1,705	1,599	1,411	1,738	2,085	2,272	2,136	2,131	2,279	.....	.....	
Receipts of income on U.S. assets abroad .....	43,265	66,700	75,936	12,795	14,111	15,582	18,055	18,952	20,465	16,860	18,850	19,764	21,566	22,235	.....	.....	
Other services.....	27,614	31,145	36,536	7,286	7,833	7,769	7,828	8,164	8,663	9,005	9,281	9,587	9,636	9,854	.....	.....	
<b>Imports of goods and services .....</b> do.																	
Merchandise, adjusted, excl. military .....	-230,030	-281,917	-333,888	-60,606	-62,885	-68,188	-72,265	-78,582	-85,981	-82,830	-80,177	-84,902	-89,641	-92,242	.....	.....	
Direct defense expenditures .....	-175,813	-211,819	-249,308	-45,715	-46,766	-51,117	-54,210	-59,726	-65,024	-62,411	-59,154	-62,719	-65,775	-67,391	.....	.....	
Payments of income on foreign assets in the U.S. ....	-7,352	-8,556	-10,746	-2,045	-2,028	-2,029	-2,164	-2,334	-2,656	-2,512	-2,727	-2,851	-2,699	-2,865	.....	.....	
Other services.....	-21,865	-33,236	-43,174	-6,315	-7,352	-7,949	-8,734	-9,203	-10,629	-10,342	-10,697	-11,507	-12,513	-13,587	.....	.....	
U.S. official reserve assets, net .....	-25,000	-28,307	-30,660	-6,531	-6,739	-7,093	-7,157	-7,319	-7,672	-7,565	-7,600	-7,825	-8,654	-8,398	.....	.....	
<b>Unilateral transfers (excl. military grants), net .....</b> mil. \$.																	
U.S. Government grants (excl. military) .....	-5,067	-5,593	-7,056	-1,318	-1,311	-1,381	-1,401	-1,501	-1,878	-1,332	-1,503	-2,344	-1,527	-1,530	.....	.....	
Other .....	-3,183	-3,536	-4,659	-800	-854	-911	-881	-890	-1,336	-787	-912	-1,624	-977	-994	.....	.....	
U.S. assets abroad, net .....	-1,884	-2,058	-2,397	-518	-457	-470	-520	-611	-542	-545	-591	-720	-550	-536	.....	.....	
<b>U.S. assets abroad, net .....</b> do.																	
U.S. official reserve assets, net .....	-61,070	-62,639	-84,776	-30,593	-8,057	-15,639	-24,942	-14,003	-12,639	-24,837	-19,302	-27,995	-22,397	-21,521	.....	.....	
U.S. Gov't assets, other than official reserve assets, net .....	732	-1,133	-8,155	182	-3,585	322	2,779	-649	-3,268	502	-1,109	-4,279	-4,529	-905	.....	.....	
U.S. private assets, net .....	-4,644	-3,767	-5,165	-991	-1,093	-971	-778	-925	-1,456	-1,187	-1,427	-1,094	-1,395	-1,475	.....	.....	
Direct investments abroad .....	-57,159	-57,739	-71,456	-29,784	-3,379	-14,990	-26,943	-12,429	-7,915	-24,152	-16,766	-22,622	-16,473	-19,141	.....	.....	
Foreign assets in the U.S., net .....	-16,056	-23,949	-18,546	-4,812	-5,496	-7,097	-6,214	-5,142	-4,863	-2,710	-3,851	-7,122	-1,552	-3,627	.....	.....	
<b>Foreign assets in the U.S., net .....</b> do.																	
Foreign official assets, net .....	63,748	38,946	50,261	27,964	2,259	7,007	24,345	5,335	7,509	7,232	11,651	23,870	7,140	12,810	.....	.....	
Other foreign assets, net .....	33,561	-13,757	15,492	18,434	-8,688	-9,785	6,011	-1,295	-7,462	7,557	7,686	7,711	5,503	-3,009	.....	.....	
Direct investments in the U.S. ....	30,187	52,703	34,769	9,530	10,948	16,792	18,334	6,630	14,971	-326	3,965	16,158	1,637	15,819	.....	.....	
Allocation of special drawing rights .....	7,897	11,877	10,854	1,608	1,553	3,353	3,382	3,588	2,221	3,884	2,690	2,060	2,487	2,877	.....	.....	
Statistical discrepancy .....		1,139		1,139				1,152					1,093		.....	.....	
Memoranda:																	
Balance on merchandise trade .....	11,398	21,140	29,640	3,513	3,430	9,309	-455	8,857	6,073	18,151	2,676	2,736	10,901	7,637	.....	.....	
Balance on goods and services .....																	
Balance on goods, services, and remittances .....	-33,759	-27,346	-25,342	-6,811	-4,730	-7,283	-6,974	-8,359	-10,126	-6,744	-2,902	-5,570	-4,677	-6,914	.....	.....	
Balance on current account .....	-9,008	7,008	10,779	435	2,539	702	2,453	1,312	-217	787	6,478	3,734	4,790	2,603	.....	.....	
	-10,892	4,950	8,382	-83	2,082	232	1,933	701	-759	242	5,887	3,014	4,240	2,067	.....	.....	
	-14,075	1,414	3,723	-883	1,228	-679	1,052	-189	-2,095	-545	4,975	1,390	3,263	1,073	.....	.....	

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980	1980						1981							
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
<b>GENERAL BUSINESS INDICATORS—Monthly Series</b>																
<b>PERSONAL INCOME BY SOURCE †</b>																
Seasonally adjusted, at annual rates: †																
Total personal income .....	1,943.8	2,160.2	2,179.4	2,205.7	2,234.3	2,257.6	2,276.6	2,300.7	2,318.2	2,340.4	2,353.8	2,367.4	2,384.3	*2,418.2	*2,441.0	2,460.6
Wage and salary disbursements, total .....	1,236.1	1,343.7	1,342.4	1,356.8	1,381.7	1,400.4	1,411.2	1,433.1	1,442.8	1,452.8	1,459.6	1,467.3	1,473.9	*1,484.9	*1,499.5	1,509.1
Commodity-producing industries, total .....	437.9	465.4	460.0	467.7	475.8	485.2	491.1	500.5	500.3	503.2	504.8	508.1	511.5	*517.0	*520.9	523.4
Manufacturing .....	333.4	350.7	346.7	352.5	358.8	366.2	369.9	375.6	377.2	379.4	383.7	387.8	388.8	*391.7	*394.4	397.5
Distributive industries .....	303.0	328.9	329.4	332.6	338.6	341.4	341.7	348.4	352.6	354.8	357.0	357.7	357.7	*360.7	*365.3	368.0
Service industries .....	259.2	295.7	298.9	301.7	305.6	310.5	313.7	318.3	322.6	326.5	328.4	330.9	332.2	*334.4	*339.7	340.5
Govt. and gov't. enterprises .....	236.1	253.6	254.1	254.7	261.7	263.3	264.8	265.9	267.2	268.4	269.4	270.5	271.7	*272.8	*273.6	277.5
Other labor income .....	118.6	137.1	139.1	140.4	141.9	143.5	145.0	146.6	148.0	149.5	150.9	151.6	153.0	154.8	156.3	157.8
Proprietors' income: ‡																
Farm .....	30.8	23.4	22.0	21.9	22.2	22.6	22.6	19.9	18.7	18.2	20.2	21.7	23.2	*23.4	*23.3	22.5
Nonfarm .....	100.7	107.2	106.3	111.4	111.5	111.5	111.6	112.8	112.6	114.2	113.0	112.2	112.2	*112.2	*112.4	112.4
Rental income of persons with capital consumption adjustment .....	30.5	31.8	32.0	32.2	32.3	32.4	32.5	32.5	32.7	32.9	33.1	33.3	33.5	33.7	33.9	34.1
Dividends .....	48.6	54.4	55.2	55.4	55.5	55.9	56.7	57.4	58.2	58.3	59.4	60.2	61.1	62.4	63.0	63.5
Personal interest income .....	209.6	256.3	261.7	263.2	265.6	269.4	274.1	281.8	289.1	295.2	297.9	300.6	304.1	*309.2	*315.7	322.3
Transfer payments .....	249.4	294.2	309.0	313.4	313.8	313.2	314.7	318.4	318.4	321.9	322.5	323.5	326.5	*341.9	*342.0	344.2
Less: Personal contrib. for social insur. ....	80.6	87.9	88.3	89.1	90.4	91.4	91.9	101.9	102.3	102.6	102.9	103.1	103.3	*104.3	*105.1	105.4
Total nonfarm income .....	1,892.9	2,112.6	2,132.7	2,158.7	2,186.8	2,209.7	2,228.5	2,254.8	2,273.2	2,295.4	2,306.4	2,318.1	2,333.1	*2,366.4	*2,388.9	2,408.9
<b>DISPOSITION OF PERSONAL INCOME *</b>																
Seasonally adjusted, at annual rates:																
Total personal income .....	1,943.8	2,160.2	2,179.4	2,205.7	2,234.3	2,257.6	2,276.6	2,300.7	2,318.2	2,340.4	2,353.8	2,367.4	2,384.3	*2,418.2	*2,441.0	2,460.6
Less: Personal tax and nontax payments .....	302.0	338.5	341.7	346.5	354.1	359.9	363.5	369.3	371.6	375.1	378.2	382.5	388.0	*393.7	*400.5	405.3
Equals: Disposable personal income .....	1,641.7	1,821.7	1,837.7	1,859.2	1,880.2	1,897.7	1,913.1	1,931.4	1,946.6	1,965.4	1,975.6	1,984.9	1,996.3	*2,024.5	*2,040.5	2,055.3
Less: Personal outlays .....	1,555.5	1,720.4	1,730.3	1,742.4	1,778.1	1,800.3	1,819.7	1,847.8	1,855.6	1,873.2	1,869.6	1,875.5	1,891.9	*1,915.3	*1,952.4	1,951.8
Personal consumption expenditures .....	1,510.9	1,672.8	1,683.4	1,695.2	1,729.9	1,752.0	1,771.0	1,799.3	1,806.9	1,824.1	1,820.0	1,825.7	1,841.6	*1,864.7	*1,901.1	1,900.1
Durable goods .....	212.3	211.9	210.5	205.2	222.3	223.4	224.2	236.6	237.7	240.5	229.4	226.4	226.1	*230.0	*250.8	239.3
Nondurable goods .....	602.2	675.7	674.4	680.9	690.5	706.8	713.1	721.5	729.6	739.9	733.9	731.5	740.6	*746.8	*750.6	752.9
Services .....	696.3	785.2	798.4	809.1	817.1	821.9	833.7	841.2	842.4	853.9	856.6	867.9	874.9	*887.9	*899.8	908.0
Interest paid by consumers to business .....	43.7	46.4	45.9	46.2	46.5	46.7	47.1	47.4	47.7	48.2	48.6	48.8	49.3	49.6	*50.3	50.7
Personal transfer payments to foreigners (net) .....	1.0	1.2	1.0	1.0	1.6	1.6	1.6	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Equals: personal saving .....	86.2	101.3	107.4	116.8	102.1	97.4	93.3	83.6	91.0	92.2	106.0	109.4	104.4	*109.2	*88.0	103.5
Personal saving as percentage of disposable personal income % .....	5.2	5.6	6.1	5.8	5.6	5.1	4.9	4.6	4.6	4.9	5.2	5.4	5.4	*5.0	4.9	.....
Disposable personal income in constant (1972) dollars .....	1,011.5	1,018.4	1,018.2	1,018.6	1,023.6	1,026.4	1,027.4	1,030.4	1,034.1	1,035.3	1,036.8	1,036.5	1,037.3	*1,041.4	1,044.0	.....
Personal consumption expenditures in constant (1972) dollars .....	930.9	935.1	932.7	928.8	941.8	947.6	951.1	959.9	959.8	960.9	955.1	953.4	956.9	*959.2	972.7	.....
Durable goods .....	146.6	135.8	133.6	129.3	139.1	139.0	139.2	146.0	146.8	147.7	139.6	136.6	136.0	*137.0	148.6	.....
Nondurable goods .....	354.6	358.4	356.2	353.2	356.0	362.4	362.8	364.8	363.1	366.5	365.5	366.9	368.9	*368.7	369.2	.....
Services .....	429.6	440.9	442.8	446.3	446.7	446.2	449.1	449.1	447.6	450.1	449.0	451.3	452.0	453.4	454.8	.....
Implicit price deflator for personal consumption expenditures .....	162.3	178.9	180.5	182.5	183.7	184.9	186.2	187.4	188.3	189.8	190.6	191.5	192.5	194.4	195.5	.....
<b>INDUSTRIAL PRODUCTION</b>																
<i>Federal Reserve Board Index of Quantity Output</i>																
<b>Not Seasonally Adjusted</b>																
Total index .....	152.5	147.0	143.7	148.9	150.0	149.3	145.8	146.4	151.7	152.7	151.5	152.6	156.5	*150.8	*154.9	*156.5
By market groupings:																
Products, total .....	150.0	146.7	147.4	152.6	151.7	148.7	143.5	143.9	149.3	150.2	149.5	150.9	*156.0	*151.3	*155.5	*158.3
Final products .....	147.2	145.3	145.6	151.3	150.2	147.4	141.9	142.7	148.0	148.9	148.0	149.5	*155.0	*149.8	*154.0	*157.9
Consumer goods .....	150.8	145.4	147.5	154.1	152.5	147.4	138.1	140.8	147.0	148.1	147.2	148.4	*154.4	*147.2	*153.8	*157.3
Durable consumer goods .....	155.8	136.7	122.0	139.3	148.4	144.9	132.1	134.1	142.8	148.3	148.3	150.5	*153.6	*134.8	*136.7	*143.6
Nondurable consumer goods .....	148.8	148.9	157.7	160.0	154.1	148.5	140.5	143.5	148.7	148.0	146.7	147.6	*154.8	*152.1	*160.5	*162.8
Equipment .....	142.2	145.2	143.0	147.4	147.1	147.3	147.0	145.3	149.4	149.9	149.1	151.0	*155.9	*153.3	*154.4	*158.6
Intermediate products .....	160.5	151.9	153.8	157.7	157.4	153.6	149.7	148.1	154.1	155.1	155.2	155.9	*159.7	*157.0	*160.8	*159.6
Materials .....	156.4	147.6	138.1	143.2	147.3	150.3	149.6	150.4	155.4	156.7	154.5	155.1	157.2	*150.1	*154.0	*153.9
By industry groupings:																
Mining and utilities .....	144.7	149.5	156.0	151.4	144.9	148.0	153.1	158.6	158.1	154.4	145.2	145.5	*155.6	*161.4	*164.1	*159.6
Manufacturing .....	153.6	146.7	142.0	148.6	150.7	149.5	144.9	144.8	150.7	152.5	152.4	153.4	156.6	*149.3	*153.6	*155.9
Nondurable manufactures .....	164.0	161.2	162.2	168.3	168.1	164.0	156.5	156.9	164.3	164.8	165.3	166.1	*170.5	*163.6	*171.5	*174.1
Durable manufactures .....	146.4	136.7	128.1	134.9	138.6	139.5	137.0	136.4	141.3	144.1	143.4	144.7	*147.0	*139.5	*141.2	*143.4
<b>Seasonally Adjusted</b>																
Total index .....	152.5	147.0	142.2	144.4	146.6	149.2	150.4	151.4	151.8	152.1	151.9	152.7	152.9	*153.8	*153.3	*152.1
By market groupings:																
Products, total .....	150.0	146.7	144.5	145.6	147.1	148.7	149.4	149.9	150.2	150.7	151.3	152.3	152.2	*152.8	*152.3	*151.4
Final products .....	147.2	145.3	143.3	144.1	145.7	147.4	147.8	147.8	148.2	149.0	149.9	151.3	151.4	*151.9	*151.3	*151.0
Consumer goods .....	150.8	145.4	142.9	144.5	146.3	148.1	147.1	146.9	147.8	148.3	148.9	150.7	*150.3	*150.2	*149.0	*148.5
Durable consumer goods .....	155.8	136.7	128.3	133.5	139.0	143.4	141.3	140.1	141.2	143.6	144.3	147.3	*147.9	*146.4	*142.0	*141.3
Automotive products .....	167.7	132.8	120.7	131.2	140.9	146.1	139.0	130.4	133.9	132.9	142.9	151.8	*153.1	*147.9	*137.0	*137.9
Autos and utility vehicles .....	154.3	110.1	93.1	106.5	119.2	125.4	116.2	102.7	108.5	116.1	120.2	129.1	131.4	123.0	*107.7	*109.9
Autos .....	136.7	103.6	90.1	98.9	109.7	115.4	105.9	93.3	101.1	107.8	113.2	120.0	122.2	118.1	*103.9	*103.4
Auto parts and allied goods .....	201.5	190.4	190.9	193.9	196.1	198.6	197.0	200.8	198.4	197.5	200.8	209.5	208.0	*211.2	*209.0	.....
Home goods .....	149.2	138.9	132.6	134.7	137.8	141.8	142.6	145.6	145.2	146.1	145.0	144.8	*145.0	*145.6	*144.9	*143.2
Appliances, air cond., and TV .....	127.4	117.3	113.5	115.8	122.2	128.4										



	1980													1981				
	1979	1980												1981				
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	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.			
<b>GENERAL BUSINESS INDICATORS—Continued</b>																		
<b>INDUSTRIAL PRODUCTION—Continued</b>																		
<b>Seasonally Adjusted—Continued</b>																		
<b>By market groupings—Continued</b>																		
Intermediate products..... 1967=100..	160.5	151.9	148.9	151.2	152.4	153.4	155.4	157.5	157.7	157.1	156.3	156.1	'154.9	'156.3	'155.7	*153.0		
Construction supplies .....	158.0	140.9	134.1	138.5	140.6	142.6	145.2	148.4	148.9	149.0	147.9	146.5	'143.4	'144.1	'143.0	*138.2		
Business supplies..... do.....	163.1	162.8	163.6	163.7	164.1	164.2	165.5	166.6	166.4	165.1	164.7	165.6	'166.2	'168.3	'168.3	.....		
Materials..... do.....	156.4	147.6	138.8	142.5	145.9	150.1	152.2	153.8	154.3	154.4	152.9	153.4	'154.9	'155.4	'154.8	*153.1		
Durable goods materials #..... do.....	157.8	143.0	131.3	133.9	139.5	146.1	147.4	150.0	150.6	152.2	151.8	152.3	'152.4	'153.4	'153.3	*150.5		
Durable consumer parts..... do.....	137.1	107.8	96.8	102.8	108.3	113.1	113.8	114.7	114.3	118.4	119.7	121.1	'123.1	'123.1	'120.8	*117.3		
Equipment parts..... do.....	189.9	187.2	176.3	176.6	179.1	184.2	186.1	189.7	188.9	191.1	192.8	194.0	'193.2	'193.7	'194.1	*192.5		
Nondurable goods materials #..... do.....	175.9	171.5	161.3	171.3	174.3	175.1	179.6	180.2	179.9	177.5	179.3	179.0	'176.9	'176.9	'176.4	*176.6		
Textile, paper, and chemical..... do.....	183.7	177.7	164.8	176.5	180.8	182.4	187.8	187.6	187.3	185.1	186.8	187.3	'183.7	'184.1	'183.8	*184.3		
Energy materials..... do.....	128.9	129.3	129.3	127.6	126.2	128.9	129.6	130.2	131.6	130.9	123.1	123.0	'129.3	'133.5	'131.7	*130.2		
<b>By industry groupings:</b>																		
Mining and utilities..... do.....	144.7	149.5	149.9	149.5	148.9	151.5	152.4	153.3	154.1	154.8	150.5	152.1	'156.3	'159.1	'158.1	*157.7		
Mining..... do.....	125.5	132.7	129.6	130.7	132.1	135.1	138.6	140.4	143.1	143.2	135.2	135.4	'141.7	'146.6	'146.3	*145.9		
Metal mining..... do.....	127.0	109.2	71.2	72.8	80.8	107.2	122.2	125.5	134.1	131.1	123.1	125.0	'123.5	'123.1	'121.9	.....		
Coal..... do.....	135.6	146.7	153.0	149.1	149.7	151.7	153.5	147.5	159.0	151.2	75.9	77.0	'122.9	'170.0	'168.4	*161.0		
Oil and gas extraction #..... do.....	121.7	133.3	133.4	134.7	134.5	136.1	138.4	141.4	142.2	144.1	146.1	146.2	'148.2	'147.9	'148.2	*149.0		
Crude oil..... do.....	94.6	94.9	93.5	94.4	93.5	93.2	95.1	95.4	95.0	95.7	96.3	95.2	'96.2	'96.1	'95.8	.....		
Natural gas..... do.....	109.2	111.1	105.1	109.5	110.8	111.9	114.4	113.3	108.7	111.8	112.7	111.8	'112.8	'112.8	.....	.....		
Stone and earth minerals..... do.....	137.6	132.8	125.3	129.7	129.8	132.7	137.4	138.4	140.0	138.8	133.7	132.2	'132.7	'133.1	'131.7	.....		
Utilities..... do.....	166.0	168.3	172.6	170.6	167.7	169.9	167.9	167.6	166.4	167.8	167.6	170.7	'172.7	'173.1	'171.3	*170.8		
Electric..... do.....	185.8	189.7	196.6	193.7	189.6	192.6	189.5	189.3	187.1	188.9	188.6	192.9	'195.6	'196.2	'193.4	*192.6		
Manufacturing..... do.....	153.6	146.7	141.2	143.9	146.5	148.9	150.4	151.1	151.2	151.6	152.0	152.8	'152.4	'153.1	'152.7	*151.4		
Nondurable manufactures..... do.....	164.0	161.2	157.6	161.0	162.1	163.0	165.0	165.6	166.2	165.3	165.9	166.4	'165.8	'166.9	'166.7	*166.4		
Food..... do.....	147.5	149.6	148.7	149.9	151.1	151.6	151.0	151.9	152.5	152.4	151.9	152.2	'151.3	'151.5	'150.8	.....		
Tobacco products..... do.....	117.8	119.9	118.7	119.7	123.6	123.5	118.8	123.5	125.4	125.7	122.2	122.3	'120.9	'122.2	'122.2	.....		
Textile mill products..... do.....	145.0	138.6	134.8	133.2	134.3	136.4	135.6	138.4	139.3	136.2	138.9	138.8	'138.3	'140.0	'137.6	.....		
Apparel products..... do.....	134.4	127.0	125.5	123.5	121.7	125.7	122.7	123.8	121.6	120.2	121.6	122.6	'121.1	'122.2	'122.2	.....		
Paper and products..... do.....	151.0	151.1	146.8	153.6	153.4	154.3	157.0	156.5	156.0	157.6	157.0	155.9	'153.4	'154.9	'155.4	*157.1		
Printing and publishing..... do.....	136.9	139.6	141.7	140.9	142.5	142.1	143.0	143.9	144.8	142.7	141.6	141.3	'143.1	'144.4	'145.0	*145.4		
Chemicals and products..... do.....	211.8	207.1	198.2	208.2	209.4	211.7	220.5	218.9	219.8	218.5	219.8	220.6	'218.4	'220.5	'221.0	.....		
Petroleum products..... do.....	143.9	132.9	124.4	129.0	128.0	128.6	131.3	133.1	131.5	130.3	130.0	129.8	'129.3	'128.7	'131.4	*131.0		
Rubber and plastics products..... do.....	272.2	255.7	243.3	254.4	258.8	258.9	262.3	264.0	270.2	269.5	275.2	280.3	'285.1	'283.0	'283.0	.....		
Leather and products..... do.....	71.7	70.1	67.9	67.5	70.1	71.0	67.9	68.9	68.3	68.8	68.9	69.8	'68.4	'70.1	'70.2	.....		
Durable manufactures..... do.....	146.4	136.7	129.9	132.1	135.7	139.2	140.3	141.0	140.8	142.1	142.5	143.5	'143.2	'143.6	'142.9	*141.0		
Ordnance, pvt. and govt..... do.....	75.2	78.5	78.1	78.9	79.4	79.7	79.6	78.6	78.4	78.5	79.8	80.9	'80.6	'82.1	'82.8	.....		
Lumber and products..... do.....	136.9	119.3	120.2	121.6	121.4	123.7	123.6	127.4	126.2	125.6	126.3	126.2	'122.5	'122.9	'117.5	.....		
Furniture and fixtures..... do.....	161.5	150.0	140.8	144.5	146.7	147.6	148.6	150.0	154.3	155.6	158.7	158.9	'162.4	'164.9	'161.4	.....		
Clay, glass, and stone products..... do.....	163.9	147.5	137.1	143.8	146.2	148.8	153.0	156.8	156.4	154.6	154.3	151.7	'148.1	'148.9	'147.4	.....		
Primary metals..... do.....	121.3	102.3	86.9	90.6	99.6	113.2	111.5	114.1	114.5	114.9	110.6	111.9	'107.4	'109.2	'107.3	.....		
Iron and steel..... do.....	113.2	92.4	76.0	80.4	92.0	107.6	103.0	108.7	108.4	108.0	103.4	105.6	'98.5	'99.7	'104.6	.....		
Nonferrous metals..... do.....	135.8	119.8	106.3	107.2	113.2	128.2	127.1	124.1	125.9	127.7	122.2	121.6	'123.1	'132.2	'127.1	.....		
Fabricated metal products..... do.....	148.5	134.1	124.8	128.8	131.7	132.3	135.7	135.8	137.6	139.2	139.5	138.4	'139.3	'140.0	'139.2	*137.5		
Nonelectrical machinery..... do.....	163.7	162.8	159.6	159.5	160.9	162.9	166.9	167.3	168.3	169.2	169.7	172.1	'174.1	'176.7	'175.4	.....		
Electrical machinery..... do.....	175.0	172.8	166.8	167.4	169.8	173.0	175.1	177.6	174.9	177.4	178.8	179.9	'180.1	'180.9	'181.8	*179.7		
Transportation equipment..... do.....	135.4	116.9	108.5	113.3	118.3	121.8	120.4	117.4	116.1	119.5	121.3	123.7	'119.8	'115.4	'114.8	.....		
Motor vehicles and parts..... do.....	159.9	119.0	104.1	113.7	123.2	129.2	125.7	120.0	119.9	127.1	130.7	136.4	'137.5	'130.5	'122.8	*122.1		
Instruments..... do.....	174.9	171.1	168.6	168.1	169.6	170.0	171.9	173.9	171.1	170.0	170.0	170.6	'171.3	'172.1	'171.7	*170.3		
<b>BUSINESS SALES</b>																		
Mfg. and trade sales (unadj.), total †..... mil. \$.	3,536,797	3,846,477	3,158,74	3,321,06	3,503,30	3,366,63	3,560,11	3,233,00	3,311,24	3,611,75	3,548,73	3,530,99	3,666,40	'3,412,48	'3,481,03	.....		
Mfg. and trade sales (seas. adj.), total †..... do.....	3,536,797	3,846,477	3,179,06	3,327,58	3,358,73	3,390,49	3,437,52	3,490,18	3,503,34	3,498,98	3,502,23	3,492,25	3,544,42	'3,540,53	'3,508,13	.....		
Manufacturing, total †..... do.....	1,727,291	1,845,936	1,511,88	1,569,15	1,610,38	1,623,84	1,637,19	1,645,88	1,655,08	1,658,04	1,674,91	1,675,27	1,714,94	'1,700,68	'1,686,54	.....		
Durable goods industries..... do.....	909,631	936,030	75,485	79,735	82,518	83,229	83,482	83,329	84,215	85,058	86,327	86,664	88,770	'87,063	'85,827	.....		
Nondurable goods industries..... do.....	817,660	909,906	75,703	77,180	78,521	79,155	80,236	81,259	81,293	80,746	81,164	80,863	82,724	'83,005	'82,827	.....		
Retail trade, total †..... do.....	894,343	956,655	79,829	80,620	81,552	82,764	83,443	85,463	86,810	87,608	85,855	85,501	87,384	'87,350	'88,449	.....		
Durable goods stores..... do.....	304,809	297,926	24,593	25,094	25,293	26,007	25,983	27,075	28,328	28,429	26,356	26,532	27,532	'27,753	'28,441	.....		
Nondurable goods stores..... do.....	589,534	658,729	55,236	55,526	56,259	56,757	57,460	58,388	58,482	59,179	59,499	58,965	59,852	'59,597	'60,008	.....		
Merchant wholesalers, total @..... do.....	915,163	1,043,886	86,889	90,223	93,282	93,901	96,591	98,967	98,016	96,846	97,577	96,217	95,564	'97,085	'93,710	.....		
Durable goods establishments..... do.....	410,079	438,439	35,353	36,937	38,110	38,799	39,403	40,370	41,511	39,907	40,299	40,584	41,045	'41,244	'40,164	.....		
Nondurable goods establishments..... do.....	505,084	605,447	51,536	53,286	55,172	55,102	57,188	58,597	56,505	56,939	57,278	55,633	54,519	'55,841	'53,546	.....		
Mfg. and trade sales in constant (1972) dollars (seas. adj.), total *..... bil. \$.			152.9	156.8	158.6	158.8	159.4	160.5	161.4	160.4	159.8	158.5	160.2	'158.9	'157.2	.....		
Manufacturing *..... do.....			70.8	73.6	74.6	74.4	74.4	73.9	74.3	74.3	74.8	74.2	75.7	'74.5	'73.2	.....		
Retail trade *..... do.....			45.4	45.4	45.4	45.9	46.7	47.1	46.8	46.0	45.7	46.4	'45.9	'46.7	.....			
Merchant wholesalers *..... do.....																		

Table with columns for years 1970-1981 and rows for various business indicators such as Manufacturing and trade ratios, Manufacturers' sales and inventories, and Shipments. Includes detailed sub-categories for durable goods and nondurable goods industries.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980	1980				1981								
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>GENERAL BUSINESS INDICATORS—Continued</b>															
<b>MANUFACTURERS' SALES, INVENTORIES, AND ORDERS—Continued</b>															
Inventories, end of year or month †—Continued															
Book value (seasonally adjusted) ‡—Continued															
By industry group—Continued															
Durable goods industries—Continued															
By stage of fabrication: †															
Materials and supplies..... mil. \$..	53,496	53,808	53,734	53,587	53,338	53,181	53,808	55,293	55,870	55,495	55,857	55,282	55,816	56,867	56,664
Primary metals..... do.....	8,225	8,924	9,041	9,000	8,974	8,868	8,924	9,429	9,522	9,401	9,135	8,695	8,849	9,074	9,097
Machinery, except electrical..... do.....	10,905	10,993	11,250	11,176	11,066	11,050	10,993	11,003	10,942	10,843	11,123	11,069	11,212	11,150	11,163
Electrical machinery..... do.....	7,103	7,229	7,381	7,379	7,391	7,321	7,229	7,491	7,488	7,340	7,577	7,556	7,581	7,626	7,801
Transportation equipment..... do.....	9,042	8,836	8,367	8,274	8,281	8,262	8,836	9,123	9,258	9,594	9,627	9,549	9,762	10,394	9,843
Work in process #..... do.....	70,462	77,935	76,705	76,691	76,588	77,298	77,935	79,743	80,090	80,584	81,000	81,933	81,769	82,431	82,902
Primary metals..... do.....	8,045	7,960	8,165	7,999	7,817	7,979	7,960	8,463	8,648	8,951	8,958	9,157	9,107	9,315	9,562
Machinery, except electrical..... do.....	17,120	17,556	17,944	17,791	17,476	17,578	17,556	17,759	17,884	17,844	17,671	18,000	17,828	18,327	18,472
Electrical machinery..... do.....	11,058	12,452	12,067	12,116	12,247	12,315	12,452	12,582	12,866	12,893	13,136	13,098	13,290	13,465	13,368
Transportation equipment..... do.....	19,277	23,902	22,626	23,156	23,473	23,577	23,902	24,625	24,622	24,600	24,807	25,107	25,022	24,762	24,975
Finished goods #..... do.....	37,434	39,860	40,101	39,885	39,855	39,797	39,860	39,188	39,660	40,149	40,265	40,420	41,091	41,557	42,439
Primary metals..... do.....	5,176	5,092	5,055	5,023	5,109	5,072	5,092	4,879	5,070	5,288	5,309	5,311	5,378	5,537	5,732
Machinery, except electrical..... do.....	9,443	10,640	10,643	10,759	10,693	10,685	10,640	10,555	10,750	10,931	10,911	11,001	11,302	11,559	11,627
Electrical machinery..... do.....	4,588	4,702	4,862	4,855	4,787	4,760	4,702	4,683	4,729	4,824	4,876	4,803	4,818	4,896	5,000
Transportation equipment..... do.....	3,847	4,072	4,139	4,012	4,097	3,947	4,072	3,875	3,930	3,917	3,871	3,771	3,844	3,793	3,856
Nondurable goods industries, total #..... do.....	80,182	86,376	86,200	86,674	86,437	86,767	86,376	87,529	88,876	90,295	90,383	91,625	91,033	91,017	90,635
Food and kindred products..... do.....	21,308	22,325	21,950	22,368	22,460	22,648	22,325	22,133	22,074	22,237	22,055	22,114	21,862	21,836	21,603
Tobacco products..... do.....	3,487	3,507	3,574	3,628	3,669	3,697	3,697	3,507	3,699	3,699	3,689	3,699	3,570	3,765	3,931
Textile mill products..... do.....	6,047	6,386	6,053	6,102	6,178	6,263	6,386	6,439	6,525	6,518	6,545	6,562	6,604	6,608	6,559
Paper and allied products..... do.....	7,079	7,798	7,848	7,818	7,775	7,822	7,798	8,090	8,233	8,286	8,246	8,224	8,332	8,429	8,455
Chemicals and allied products..... do.....	17,001	18,489	18,503	18,478	18,385	18,591	18,489	18,879	19,201	19,488	19,490	20,029	20,218	20,116	20,220
Petroleum and coal products..... do.....	6,594	8,240	8,746	8,805	8,339	8,122	8,240	8,422	9,117	9,885	9,932	10,278	9,996	9,604	9,149
Rubber and plastics products..... do.....	5,568	5,279	5,261	5,232	5,272	5,238	5,279	5,321	5,539	5,538	5,652	5,616	5,634	5,677	5,578
By stage of fabrication:															
Materials and supplies..... do.....	33,362	35,572	34,683	35,114	35,222	35,294	35,572	36,113	36,381	36,412	36,656	36,673	36,311	36,786	36,227
Work in process..... do.....	12,871	14,108	13,892	13,957	13,825	13,832	14,108	14,401	14,682	14,782	14,799	14,979	14,607	14,573	14,696
Finished goods..... do.....	33,949	36,696	34,625	37,603	37,390	37,641	36,696	37,014	37,813	39,103	38,927	39,973	40,115	39,658	39,712
By market category: †															
Home goods and apparel..... mil. \$..	19,814	20,663	20,498	20,395	20,487	20,539	20,663	20,873	21,022	21,201	21,420	21,761	21,410	21,637	21,960
Consumer staples..... do.....	30,685	32,201	31,994	31,988	32,254	32,602	32,201	32,522	32,553	32,880	32,693	32,891	32,658	32,826	32,956
Equip. and defense prod., exc. auto..... do.....	61,876	69,908	69,293	69,288	69,516	69,616	69,908	70,784	71,469	71,400	72,284	72,697	73,240	73,756	74,083
Automotive equipment..... do.....	13,488	11,872	11,621	11,589	11,471	11,287	11,872	11,819	11,717	11,775	11,666	11,592	11,530	11,688	11,352
Construction materials and supplies..... do.....	20,694	21,266	20,970	20,809	20,686	20,989	21,266	21,372	21,532	21,602	21,660	22,055	22,393	22,747	22,747
Other materials and supplies..... do.....	95,015	102,070	102,365	102,767	101,804	102,010	102,070	104,382	106,203	107,666	107,783	108,264	108,478	109,352	109,542
Supplementary series:															
Household durables..... do.....	9,978	9,992	10,080	9,980	9,956	9,941	9,992	10,065	10,139	10,236	10,360	10,323	10,250	10,446	10,615
Capital goods industries..... do.....	69,027	78,245	77,072	77,469	77,707	77,933	78,245	79,571	80,243	80,456	81,266	81,608	82,376	83,283	83,625
Nondefense..... do.....	60,421	67,224	66,735	67,021	67,009	67,118	67,224	68,154	68,616	68,473	69,100	69,335	69,022	70,202	70,929
Defense..... do.....	8,606	11,021	10,337	10,447	10,698	10,815	11,021	11,418	11,628	11,984	12,165	12,273	12,700	12,681	12,696
New orders, net (not seas. adj.), total †..... do.....	1,770,917	1,860,708	1,47,422	1,65,215	1,70,629	1,60,864	1,61,700	1,57,134	1,69,653	1,77,003	1,71,926	1,68,602	1,78,014	1,56,831	1,64,145
Durable goods industries, total..... do.....	952,236	951,169	71,133	84,947	90,114	82,107	83,964	80,159	86,993	93,232	90,242	87,680	93,280	79,035	80,707
Nondurable goods industries, total..... do.....	818,681	909,539	76,289	80,268	80,515	78,757	77,736	76,974	82,659	83,771	81,684	80,922	84,734	77,796	83,438
New orders, net (seas. adj.), total †..... do.....	1,770,917	1,860,708	152,657	159,496	161,924	163,020	166,900	165,423	166,987	167,361	168,584	169,340	170,913	172,355	169,163
By industry group:															
Durable goods industries, total..... do.....	952,236	951,169	76,785	82,162	83,364	83,971	86,577	81,336	85,446	86,729	87,180	88,164	88,303	89,440	86,325
Primary metals..... do.....	139,164	134,057	11,176	12,214	12,908	12,629	11,634	10,617	11,872	11,739	11,831	11,809	11,324	12,466	11,598
Blast furnaces, steel mills..... do.....	67,296	63,213	5,612	6,068	6,666	6,720	5,788	5,317	5,951	6,024	6,337	6,076	6,040	6,436	6,065
Nonferrous and other primary met..... do.....	57,112	58,694	4,678	5,068	5,124	4,783	4,718	4,223	4,943	4,580	4,475	4,612	4,235	4,842	4,508
Fabricated metal products..... do.....	118,122	115,993	8,948	9,375	10,466	10,502	10,912	10,063	10,604	10,556	10,291	10,607	10,979	10,804	9,828
Machinery, except electrical..... do.....	174,481	182,782	14,359	16,316	15,707	16,333	18,030	17,718	15,876	16,740	17,504	17,082	17,303	16,376	17,189
Electrical machinery..... do.....	118,430	130,744	11,050	10,513	11,366	11,693	11,051	11,416	11,290	11,666	11,960	11,721	12,600	12,055	11,718
Transportation equipment..... do.....	222,639	202,676	16,437	18,141	16,780	16,592	18,177	17,825	18,633	19,428	18,698	20,093	19,057	20,653	20,110
Aircraft, missiles, and parts..... do.....	65,198	63,658	4,569	4,989	3,615	3,693	4,465	5,111	5,118	6,324	3,777	5,803	4,083	6,116	5,233
Nondurable goods industries, total..... do.....	818,681	909,539	75,872	77,334	78,560	79,049	80,323	81,216	81,541	80,632	81,404	81,176	82,610	82,915	82,838
Industries with unfilled orders †..... do.....	170,301	184,074	15,213	15,958	15,717	15,691	16,072	16,123	16,936	16,666	17,083	17,052	16,814	17,213	17,024
Industries without unfilled orders ‡..... do.....	648,380	725,465	60,659	61,376	62,843	63,358	64,251	65,093	64,606	63,966	64,321	64,124	65,796	65,702	65,814
By market category: †															
Home goods and apparel..... do.....	125,037	134,892	10,960	11,384	11,755	11,516	11,623	12,009	12,494	12,245	12,328	12,083	12,776	12,828	12,123
Consumer staples..... do.....	307,300	329,506	28,389	28,568	28,361	28,169	29,035	28,908	28,746	28,776	29,075	28,188	29,384	29,255	28,985
Equip. and defense prod., excl. auto..... do.....	272,908	291,959	23,770	25,902	23,535	24,406	27,534	26,746	24,742	26,834	25,606	25,365	25,025	26,944	27,157
Automotive equipment..... do.....	152,456	133,322	11,179	11,854	13,105	12,874	12,828	12,281	12,922	13,089	13,822	14,258	15,083	14,218	13,944
Construction materials and supplies..... do.....	146,659	142,793	11,336	11,985	12,812	12,821	12,857	12,869	13,001	13,154	12,843	12,755	13,166	12,900	11,994
Other materials and supplies..... do.....	766,557	828,236	67,												

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980	1980					1981							
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>GENERAL BUSINESS INDICATORS—Continued</b>															
<b>BUSINESS INCORPORATIONS †</b>															
New incorporations (50 States and Dist. Col.):															
Unadjusted..... number.....	524,565	533,520	41,865	44,923	49,023	39,691	48,940	46,960	42,935	51,278	52,032				
Seasonally adjusted..... do.....			43,266	46,488	47,225	43,834	51,807	45,864	47,662	47,927	49,574				
<b>INDUSTRIAL AND COMMERCIAL FAILURES ‡</b>															
Failures, total..... number.....	7,564	11,742	1,009	926	1,323	860	1,015	1,109	1,133	1,212					
Commercial service..... do.....	930	1,594	126	121	211	130	150	155	153	173					
Construction..... do.....	1,378	2,355	221	190	282	168	190	229	228	228					
Manufacturing and mining..... do.....	1,165	1,599	160	134	147	104	150	150	156	180					
Retail trade..... do.....	3,183	4,910	400	363	532	373	421	468	494	505					
Wholesale trade..... do.....	908	1,284	102	118	151	85	104	107	102	126					
Liabilities (current), total..... thous. \$.	2,667,362	4,635,080	345,408	1,002,944	359,242	239,344	288,298	421,360	789,205	485,335					
Commercial service..... do.....	347,749	413,502	46,133	26,842	50,288	54,564	27,466	124,915	34,309	40,629					
Construction..... do.....	291,323	752,109	60,678	41,318	59,971	29,822	46,720	69,030	54,401	51,853					
Manufacturing and mining..... do.....	970,178	1,885,017	108,231	804,390	106,539	59,565	65,828	98,765	522,110	219,521					
Retail trade..... do.....	636,859	993,539	81,870	56,491	86,849	62,195	124,397	99,301	88,002	87,064					
Wholesale trade..... do.....	421,253	590,913	48,496	73,903	55,595	33,198	23,887	29,349	90,383	86,268					
Failure annual rate (seasonally adjusted) No. per 10,000 concerns.....	'27.8	'42.1	45.4	45.0	56.8	39.2	46.8	48.6	47.8	47.6					

## COMMODITY PRICES

<b>PRICES RECEIVED AND PAID BY FARMERS †</b>																
<i>(U.S. Department of Labor Indexes)</i>																
<b>Not Seasonally Adjusted</b>																
<b>ALL ITEMS, WAGE EARNERS AND CLERICAL WORKERS, REVISED (CPI-W)..... 1967=100.....</b>																
<b>ALL ITEMS, ALL URBAN CONSUMERS (CPI-U)..... 1967=100.....</b>																
<b>Special group indexes:</b>																
All items less shelter..... do.....																
All items less food..... do.....																
All items less medical care..... do.....																
Commodities..... do.....																
Nondurables..... do.....																
Nondurables less food..... do.....																
Durables..... do.....																
Commodities less food..... do.....																
Services..... do.....																
Services less rent..... do.....																
Food #..... do.....																
Food at home..... do.....																
Housing..... do.....																
Shelter #..... do.....																
Rent, residential..... do.....																
Homeownership..... do.....																
Fuel and utilities #..... do.....																
Fuel oil, coal, and bottled gas..... do.....																
Gas (piped) and electricity..... do.....																
Household furnishings and operation..... do.....																
Apparel and upkeep..... do.....																
Transportation..... do.....																
Private..... do.....																
New cars..... do.....																
Used cars..... do.....																
Public..... do.....																
Medical care..... do.....																
<b>Seasonally Adjusted</b>																
All items, percent change from previous month.....																
Commodities..... 1967=100.....																
Commodities less food..... do.....																
Food..... do.....																
Food at home..... do.....																
Apparel and upkeep..... do.....																
Transportation..... do.....																
Private..... do.....																
New cars..... do.....																
Services..... do.....																
	602	615	643	651	651	660	661	659	657	655	653	650	649	646	'628	610
Crops #..... do.....	501	541	568	582	582	607	612	622	621	632	619	619	594	589	'560	525
Commercial vegetables..... do.....	548	562	549	573	552	615	640	695	796	833	662	648	594	658	'607	586
Cotton..... do.....	490	602	676	687	636	655	683	649	603	610	618	610	600	593	'549	530
Feed grains and hay..... do.....	360	417	446	458	465	479	490	491	492	491	492	494	478	463	'430	390
Food grains..... do.....	403	452	455	458	482	499	498	497	492	486	486	471	439	436	'432	427
Fruit..... do.....	534	469	448	472	500	483	428	432	415	458	445	511	470	403	'464	452
Tobacco..... do.....	1,145	1,219	1,204	1,291	1,243	1,226	1,300	1,296	1,296	1,297	1,300	1,304	1,304	1,369	'1,409	1,452
Livestock and products #..... do.....	708	691	721	721	724	715	711	697	693	677	687	680	704	704	'699	699
Dairy products..... do.....	736	798	783	807	838	856	863	863	856	844	832	826	820	820	'820	838
Meat animals..... do.....	937	878	930	914	909	879	864	848	845	822	851	845	890	885	'877	872
Poultry and eggs..... do.....	252	255	274	285	280	290	298	279	275	270	264	254	261	270	265	264
Prices paid:																
All commodities and services..... do.....	725	810	819	828	835	847	851	862	(*)							
Production items..... do.....	720	802	810	822	828	836	838	851	854	858	868	868	871	864	862	863
All commodities and services, interest, taxes, and wage rates (parity index)..... 1910-14=100.....	850	955	965	974	981	989	993	1,016	1,020	1,026	1,033	1,035	1,039	1,037	1,039	1,042
Parity ratio §..... do.....	71	64	67	67	66	67	67	65	65	64	63	63	62	62	'60	59

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS

	1979	1980	1980					1981								
	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>COMMODITY PRICES—Continued</b>																
<b>PRODUCER PRICES §</b>																
<i>(U.S. Department of Labor Indexes)</i>																
<b>Not Seasonally Adjusted</b>																
Spot market prices, basic commodities:																
22 Commodities..... 1967=100..	'277.1	'283.5	288.7	292.8	296.6	298.4	287.7	281.7	273.4	275.1	276.0	269.7	(*)			
9 Foodstuffs..... do.....	'255.6	'264.3	283.7	284.8	290.3	289.4	272.6	267.7	258.5	255.0	253.0	244.0	(*)			
13 Raw industrials..... do.....	'293.0	'297.9	292.1	298.3	300.8	304.7	298.4	291.6	284.2	289.8	293.0	288.9	(*)			
All commodities..... do.....	235.6	268.8	273.8	274.6	277.8	279.1	280.8	284.8	287.6	290.3	293.4	'294.1	294.5	296.0	296.2	295.5
By stage of processing: †																
Crude materials for further processing .....	274.3	304.2	317.0	319.3	322.8	324.6	323.5	328.0	336.5	334.2	336.3	'334.4	334.3	336.2	333.2	327.7
Intermediate materials, supplies, etc .....	243.2	280.1	284.3	285.3	287.7	289.1	291.9	296.1	308.3	302.0	305.8	'306.7	307.1	308.6	309.9	309.6
Finished goods # .....	217.7	246.8	251.4	251.4	255.4	256.2	257.2	260.9	263.3	266.0	268.5	'269.9	269.9	271.3	271.2	271.1
Finished consumer goods .....	217.9	248.8	254.1	254.1	257.0	257.9	258.9	262.5	265.0	268.2	270.6	'271.5	271.5	272.8	272.6	272.6
Capital equipment .....	216.5	239.5	241.9	241.8	249.2	250.2	250.9	254.6	256.7	258.1	260.8	'262.5	264.0	265.7	265.9	265.6
By durability of product:																
Durable goods .....	226.9	251.5	253.1	253.7	258.4	258.6	261.0	262.7	263.8	264.9	267.8	'268.6	268.9	270.7	271.8	271.7
Nondurable goods .....	241.7	282.4	290.3	291.2	293.0	295.2	296.3	302.6	306.8	310.9	314.2	'314.8	315.1	316.3	315.9	314.6
Total manufactures .....	228.8	261.5	265.7	265.8	269.6	270.5	272.0	277.3	279.3	282.3	285.3	'286.2	286.7	288.0	288.4	288.1
Durable manufactures .....	226.1	250.8	252.7	253.1	257.8	257.9	260.4	262.3	264.4	267.2	267.2	'268.2	268.7	270.6	271.6	271.6
Nondurable manufactures .....	231.1	273.0	279.5	279.5	282.1	284.0	284.3	293.5	296.4	301.7	304.9	'305.7	306.2	306.8	306.6	305.9
Farm prod., processed foods and feeds .....	229.8	244.7	255.1	256.5	259.4	260.5	257.0	257.9	255.1	253.5	253.8	'252.9	254.1	256.6	253.9	250.0
Farm products # .....	241.4	249.4	263.8	267.0	263.6	264.9	265.3	264.5	262.4	260.7	263.3	'259.6	260.3	263.1	257.8	251.0
Fruits and vegetables, fresh and dried .....	229.0	238.6	254.0	266.2	240.9	246.6	245.1	258.7	275.1	292.8	286.1	'273.9	258.6	265.0	257.3	251.9
Grains .....	214.8	239.0	256.5	260.6	269.2	270.9	265.2	277.7	267.5	261.8	264.7	'257.7	257.1	257.4	242.7	227.0
Live poultry .....	194.3	202.1	224.5	241.0	222.9	221.0	218.9	213.1	220.8	213.5	195.4	207.2	210.0	215.3	210.3	196.7
Livestock .....	260.3	252.7	275.7	266.8	263.0	254.8	251.4	244.3	244.6	239.3	246.6	'251.8	263.0	266.5	262.0	257.3
Foods and feeds, processed # .....	222.5	241.2	249.4	249.8	256.1	257.2	251.5	253.3	250.2	248.5	247.6	'248.2	249.7	252.1	250.7	248.4
Beverages and beverage materials .....	210.7	233.0	237.1	236.1	239.5	240.6	240.5	243.0	244.8	245.4	246.0	'247.6	245.5	246.3	246.3	245.6
Cereal and bakery products .....	210.3	236.0	235.8	238.3	241.5	245.3	248.7	251.5	252.1	252.2	253.9	'256.3	256.0	257.2	256.6	258.0
Dairy products .....	211.2	230.6	232.6	233.7	238.0	240.2	242.3	244.7	245.0	245.1	245.4	'245.0	245.6	245.5	245.6	246.0
Fruits and vegetables, processed .....	221.9	228.7	230.7	231.3	233.8	234.7	236.6	238.4	243.7	255.2	258.0	'260.1	263.3	266.5	267.6	270.3
Meats, poultry, and fish .....	242.0	243.1	259.9	257.8	256.0	250.9	248.1	248.1	243.6	242.0	239.1	'245.2	248.3	257.1	254.2	253.3
Industrial commodities.....	236.5	274.5	278.2	278.8	282.0	283.4	286.6	291.5	295.7	299.6	303.5	'304.7	304.7	306.0	307.0	307.2
Chemicals and allied products # .....	222.3	260.3	264.4	263.4	264.8	266.7	268.1	274.3	277.6	280.4	286.0	'288.6	290.3	291.4	293.2	293.3
Agric. chemicals and chem. prod .....	214.4	257.1	260.0	260.6	260.6	261.1	263.3	267.6	271.6	275.8	277.8	'279.1	288.9	288.9	293.8	292.3
Chemicals, industrial .....	260.0	324.0	330.0	327.5	330.0	332.7	334.6	344.5	352.1	354.5	362.4	'366.6	369.4	370.4	371.9	372.0
Drugs and pharmaceuticals .....	159.4	174.5	176.1	176.8	178.4	181.1	182.6	184.7	187.3	189.3	191.0	'192.4	193.2	195.4	195.6	197.1
Fats and oils, inedible .....	376.7	298.0	307.6	304.5	302.0	308.2	317.1	310.7	289.7	295.7	312.7	'312.1	303.1	290.9	305.6	285.6
Prepared paint .....	204.4	235.3	238.8	239.3	239.3	241.4	241.4	242.9	246.6	246.6	248.1	'250.4	250.4	251.0	251.0	251.0
Fuels and related prod., and power # .....	408.1	574.0	590.6	593.5	592.9	600.2	615.7	634.6	667.5	696.5	707.2	'709.0	704.9	703.4	704.1	703.2
Coal .....	450.9	467.3	468.7	471.3	470.7	475.4	475.3	477.8	480.8	481.1	486.1	'487.7	491.8	505.7	507.3	510.6
Electric power .....	270.2	321.6	333.6	338.3	337.4	333.8	337.6	341.4	346.2	351.2	355.5	'360.7	366.9	374.9	383.6	382.0
Gas fuels .....	544.1	760.7	772.6	786.2	802.2	825.5	844.3	857.1	881.6	889.9	907.8	'933.9	931.6	946.6	952.4	979.7
Petroleum products, refined .....	444.8	674.7	697.6	696.4	690.4	697.6	717.0	736.9	769.6	825.5	840.9	'835.3	827.7	818.4	813.4	805.7
Furniture and household durables # .....	171.3	187.7	188.9	189.5	190.9	191.5	193.1	194.0	195.2	195.8	196.4	'197.4	197.1	198.9	199.5	200.7
Appliances, household .....	160.9	174.2	176.3	177.2	177.5	178.5	179.5	182.2	183.5	184.2	185.1	'184.2	184.8	187.5	187.7	188.3
Furniture, household .....	186.3	204.8	208.0	208.5	209.8	210.9	212.1	212.9	213.8	214.5	216.5	'217.6	218.9	220.4	221.4	223.3
Home electronic equipment.....	91.3	91.4	91.3	91.6	91.5	91.2	91.0	91.1	91.3	91.4	90.9	'91.0	86.9	87.1	87.5	87.8
Hides, skins, and leather products # .....	252.4	248.9	251.3	247.8	251.2	255.4	256.9	258.2	257.7	261.2	263.5	'263.7	262.8	262.1	261.7	263.0
Footwear .....	218.0	233.1	233.7	235.5	236.2	237.5	236.9	238.4	240.7	240.4	241.1	'241.1	241.0	241.9	242.3	242.0
Hides and skins .....	535.4	370.9	398.4	356.1	381.5	409.1	392.8	377.5	367.4	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Leather .....	356.7	310.6	314.2	298.1	301.9	317.3	332.4	332.6	310.0	322.5	337.8	'337.0	321.0	317.4	312.2	311.7
Lumber and wood products.....	300.4	288.9	296.1	292.2	289.0	293.4	299.4	296.5	294.7	294.4	299.4	'298.4	297.9	295.5	294.3	289.1
Lumber .....	354.3	325.8	333.7	328.0	320.6	324.9	333.0	331.3	326.9	326.2	333.6	'336.3	335.0	330.1	329.3	319.7
Machinery and equipment # .....	213.9	239.8	242.6	244.7	246.8	248.3	249.8	253.3	255.3	257.5	259.6	'260.7	261.9	264.5	266.0	267.8
Agricultural machinery and equip .....	232.1	259.2	259.9	263.9	265.4	271.6	272.9	276.4	278.4	279.8	282.5	'284.4	285.9	287.3	289.3	290.0
Construction machinery and equip .....	256.2	289.4	293.4	295.7	299.1	300.1	301.4	305.9	310.0	312.8	317.0	'318.3	320.0	324.0	324.9	326.6
Electrical machinery and equip .....	178.9	201.7	205.0	206.0	207.0	207.5	208.9	211.9	213.7	216.0	217.4	'217.5	219.0	221.0	222.8	224.1
Metalworking machinery and equip .....	241.3	274.4	278.8	280.2	282.5	283.9	285.7	289.7	291.6	294.9	298.7	'299.9	300.9	303.0	303.6	305.3
Metals and metal products # .....	259.3	286.4	285.1	287.3	291.9	291.1	290.6	294.0	294.0	296.4	298.8	'299.1	298.5	302.5	304.3	305.1
Heating equipment .....	187.1	206.5	208.0	208.8	210.6	212.0	214.0	216.6	217.6	219.5	219.8	'221.7	222.9	225.7	227.2	227.9
Iron and steel .....	283.5	305.2	302.6	304.5	310.5	312.7	316.4	323.0	323.2	328.2	331.0	'330.4	329.9	338.7	339.7	339.7
Nonferrous metals.....	261.7	305.0	298.4	302.2	309.4	302.1	293.4	292.1	287.4	286.5	288.4	'287.7	284.9	283.3	287.7	290.0
Nonmetallic mineral products # .....	248.6	283.0	286.0	286.8	288.6	288.7	291.2	296.6	297.9	300.9	310.8	'312.0	312.8	313.9	314.0	313.1
Clay prod., structural, excl. refrac .....	217.9	231.5	229.7	230.1	233.3	233.5	233.6	239.5	239.8	246.6	246.0	'249.6	249.5	250.3	250.4	254.8
Concrete products .....	244.1	273.9	276.0	277.3	277.5	277.7	277.6	286.2	286.6	286.9	289.9	'290.7	293.0	293.0	292.9	292.9
Gypsum products																

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	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>COMMODITY PRICES—Continued</b>															
<b>PRODUCER PRICES—Continued</b> (U.S. Department of Labor Indexes)—Continued															
Seasonally Adjusted															
By durability of product:															
Total manufactures..... 1967=100.....			266.0	265.7	268.5	270.5	273.3	( <sup>2</sup> )							
Durable manufactures..... do.....			253.0	252.8	255.7	257.4	261.2	( <sup>2</sup> )							
Nondurable manufactures..... do.....			279.5	279.4	282.4	285.3	285.9	( <sup>2</sup> )							
<b>PURCHASING POWER OF THE DOLLAR</b>															
As measured by:															
Producer prices..... 1967=\$1.00.....	0.459	0.405	0.398	0.398	0.392	0.390	0.389	0.383	0.380	0.376	0.372	*0.371	0.371	0.369	0.369
Consumer prices..... do.....	0.460	0.405	0.401	0.397	0.394	0.390	0.387	0.384	0.380	0.377	0.375	0.372	0.369	0.364	

**CONSTRUCTION AND REAL ESTATE**

<b>CONSTRUCTION PUT IN PLACE</b>															
New construction (unadjusted), total..... mil. \$.	230,781	230,273	20,500	21,309	21,477	20,319	19,696	16,882	16,184	18,020	*19,254	*19,978	*21,297	*21,603	21,526
Private, total #..... do.....	181,691	174,897	14,978	15,527	16,132	15,702	15,413	13,190	12,689	14,182	*15,088	*15,565	*16,355	*16,563	16,550
Residential..... do.....	99,030	87,261	7,560	7,938	8,248	8,292	7,480	6,623	6,178	6,924	*7,584	*7,883	*8,001	*8,051	7,924
New housing units..... do.....	78,587	63,139	5,415	5,850	6,165	6,199	5,424	4,920	4,668	5,242	5,524	5,613	*5,810	*5,697	5,456
Nonresidential buildings, except farm and public utilities, total #..... mil. \$.	47,298	52,434	4,522	4,547	4,664	4,570	4,536	4,110	4,042	4,450	4,614	4,716	5,073	*5,333	5,445
Industrial..... do.....	14,950	13,837	1,138	1,165	1,129	1,132	1,228	1,093	1,063	1,252	1,239	1,283	1,370	*1,492	1,634
Commercial..... do.....	24,924	29,945	2,645	2,610	2,729	2,636	2,548	2,324	2,283	2,457	2,609	2,698	2,875	*3,028	3,010
Public utilities:															
Telephone and telegraph..... do.....	6,343	6,733	564	595	617	528	545	456	455	588	557	566	611	590	
Public, total #..... do.....	49,090	55,376	5,522	5,782	5,345	4,617	4,283	3,693	3,496	3,839	*4,166	*4,414	*4,941	*5,039	4,976
Buildings (excluding military) #..... do.....	15,857	18,864	1,804	1,828	1,665	1,612	1,620	1,499	1,361	1,508	1,493	*1,507	*1,553	*1,597	1,638
Housing and redevelopment..... do.....	1,211	1,648	133	144	162	149	152	150	140	147	*159	*158	*155	*145	150
Industrial..... do.....	1,411	1,788	145	201	107	111	174	180	135	178	170	191	187	182	157
Military facilities..... do.....	1,647	1,880	199	175	157	152	149	140	170	135	*168	*181	*182	*166	161
Highways and streets..... do.....	11,996	13,785	1,543	1,666	1,627	1,145	824	664	594	653	880	1,061	1,465	*1,530	1,449
New construction (seasonally adjusted at annual rates), total..... bil. \$.			217.9	224.6	228.9	234.3	245.4	259.0	254.5	250.3	*246.5	*235.9	*234.0	*234.8	231.0
Private, total #..... do.....			163.5	169.1	174.9	180.9	187.9	193.9	193.2	189.6	*189.9	*184.1	*181.8	*183.4	181.9
Residential..... do.....			79.3	84.5	89.8	95.6	98.9	100.7	99.7	96.3	*95.2	*89.7	*86.0	*85.4	83.8
New housing units..... do.....			56.3	60.7	64.2	68.1	70.4	74.2	75.1	73.0	72.9	67.7	*64.3	60.5	57.2
Nonresidential buildings, except farm and public utilities, total #..... bil. \$.			50.1	50.2	50.3	51.4	54.3	58.2	58.4	58.3	58.1	56.8	58.4	*60.5	60.7
Industrial..... do.....			12.8	12.9	12.4	12.9	14.3	15.3	15.1	15.4	15.5	15.5	16.2	*17.2	18.4
Commercial..... do.....			29.0	28.7	29.1	29.6	30.8	33.0	33.4	33.3	33.4	32.4	32.4	*34.0	33.1
Public utilities:															
Telephone and telegraph..... do.....			6.3	6.6	6.2	6.3	6.2	7.1	7.3	7.1	6.9	7.0	6.5	6.8	
Public, total #..... do.....			54.4	55.5	54.0	53.4	57.6	65.2	61.3	60.6	*56.6	*51.8	*52.2	*51.4	49.1
Buildings (excluding military) #..... do.....			19.4	19.4	18.8	19.2	20.4	20.7	19.7	20.4	*18.6	17.9	*17.6	*17.4	17.7
Housing and redevelopment..... do.....			1.6	1.5	1.7	1.8	1.8	2.3	1.9	1.9	2.0	1.9	*1.8	1.5	1.8
Industrial..... do.....			1.6	2.1	1.5	1.5	2.2	2.3	1.9	2.0	2.0	2.2	2.0	2.1	1.8
Military facilities..... do.....			2.2	1.9	2.0	1.8	1.7	1.8	2.2	1.7	*2.1	*2.1	*2.3	*1.9	1.8
Highways and streets..... do.....			12.7	13.6	13.0	12.8	13.1	19.4	17.8	16.2	15.1	12.4	13.3	*13.2	12.1
<b>CONSTRUCTION CONTRACTS</b>															
Construction contracts in 50 States (F.W. Dodge Division, McGraw-Hill):															
Valuation, total..... mil. \$.	168,446	147,164	*15,448	13,077	13,886	13,296	12,513	10,467	10,405	13,904	14,378	13,350	14,919	13,651	12,289
Index (mo. data seas. adj.)..... 1972=100.....	136	162	192	163	167	205	193	192	177	183	172	160	170	153	156
Public ownership..... mil. \$.	46,646	41,351	*3,536	3,559	3,459	3,367	3,238	3,242	3,007	3,649	3,703	3,236	3,407	3,292	3,336
Private ownership..... do.....	121,800	105,813	*11,912	9,518	10,428	9,929	9,275	7,225	7,399	10,255	10,675	10,113	11,512	10,360	8,953
By type of building:															
Nonresidential..... do.....	50,206	52,345	*4,258	4,419	5,025	5,008	4,709	4,122	4,085	5,345	5,272	5,050	5,560	5,572	5,270
Residential..... do.....	74,557	63,206	*6,092	6,069	6,785	5,847	5,570	4,207	4,206	5,929	6,569	5,887	5,904	5,853	4,894
Non-building construction..... do.....	43,683	31,613	*5,098	2,589	2,076	2,441	2,235	2,139	2,114	2,630	2,537	2,413	3,454	2,227	2,126
New construction planning (Engineering News-Record) \$..... do.....	135,005	149,143	8,997	9,821	13,580	17,200	13,071	14,991	12,449	11,212	15,545	14,093	11,684	12,897	11,890
<b>HOUSING STARTS AND PERMITS</b>															
New housing units started:															
Unadjusted:															
Total (private and public)..... thous.	1,760.0	1,312.6	131.7	147.0	153.7	113.5	96.3	85.2	72.4	108.9	124.0	110.6	107.0	*101.1	*86.5
Privately owned..... do.....	1,745.1	1,292.2	129.9	138.3	152.7	112.9	95.9	84.5	71.9	107.8	123.0	109.9	105.8	*99.9	*85.5
One-family structures..... do.....	1,194.1	852.2	92.0	95.0	97.5	71.2	56.6	48.0	48.0	70.5	83.6	73.8	72.5	*69.5	*56.3
Seasonally adjusted at annual rates:															
Total privately owned..... do.....			1,411	1,482	1,519	1,550	1,535	1,660	1,215	1,297	1,332	1,158	1,039	*1,047	*934
One-family structures..... do.....			971	1,032	1,009	1,019	974	993	791	838	897	764	688	*704	*598
New private housing units authorized by building permits (16,000 permit-issuing places):															
Monthly data are seas. adj. at annual rates:															
Total..... thous.	1,552	1,191	1,355	1,518	1,351	1,366	1,249	1,214	1,165	1,153	1,186	1,167	963	913	*865
One-family structures..... do.....	982	710	840	884	820	809	753	715	677	678	689	654	567	528	*494
Manufacturers' shipments of mobile homes															
Unadjusted..... thous.	277.4	221.5	20.0	21.5	23.6	17.8	16.0	15.8	17.3	21.5	24.0	22.9	23.0	21.7	22.3
Seasonally adjusted at annual rates..... do.....			208	239	236	239	261	233	256	255	265	255	246	268	230

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS

	1979	1980	1980					1981						
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.

**CONSTRUCTION AND REAL ESTATE—Continued**

<b>CONSTRUCTION COST INDEXES</b>															
Dept. of Commerce composite ..... 1977=100..	128.7	143.3	144.8	145.0	145.6	146.7	147.8	149.2	149.7	152.1	'151.2	'150.7	'150.3	'150.9	150.8
American Appraisal Co., The:															
Average, 30 cities ..... 1913=100..	2,357	2,495	2,551	2,545	2,547	2,556	2,566	2,578	2,581	2,576	2,600	2,635	2,655	2,678	2,679
Atlanta ..... do.....	2,506	2,660	2,735	2,717	2,711	2,715	2,723	2,773	2,781	2,788	2,807	2,805	2,784	2,894	2,896
New York ..... do.....	2,431	2,553	2,589	2,577	2,575	2,579	2,587	2,621	2,639	2,629	2,644	2,640	2,631	2,653	2,668
San Francisco ..... do.....	2,498	2,671	2,732	2,717	2,730	2,738	2,744	2,820	2,821	2,834	2,855	2,855	2,821	2,915	2,909
St. Louis ..... do.....	2,424	2,343	2,398	2,384	2,395	2,399	2,406	2,396	2,357	2,346	2,361	2,485	2,476	2,467	2,505
Boeckh indexes:															
Average, 20 cities:															
Apartments, hotels, office buildings 1977=100..	'114.7	'125.1		'129.6		'130.5		'131.1		'132.6		'135.4		'139.7	142.1
Commercial and factory buildings ..... do.....	'117.1	'127.7		'132.0		'132.9		'133.9		'135.3		'138.1		'141.9	145.3
Residences ..... do.....	'119.0	'128.9		'127.2		'128.9		'129.7		'131.3		'134.4		'138.3	140.4
Engineering News-Record:															
Building ..... 1967=100..	269.3	287.7	292.1	292.4	292.5	296.0	298.6	298.2	298.4	298.0	305.5	307.3	308.3	312.1	313.5
Construction ..... do.....	279.5	301.4	307.6	309.0	309.7	312.5	314.3	313.9	314.0	315.0	321.4	323.3	326.8	331.6	'336.1
Federal Highway Adm.—Highway construction:															
Composite (avg. for year or qtr.) ..... 1977=100..	142.6	163.0		163.1			161.8			160.0			152.4		
<b>CONSTRUCTION MATERIALS</b>															
Output indexes:															
Iron and steel products ..... 1947-49=100..	165.6														
Lumber and wood products ..... do.....	191.2														
Portland cement ..... do.....	225.2														
<b>REAL ESTATE †</b>															
Mortgage applications for new home construction:															
FHA net applications ..... thous. units..	133.8	141.4	15.6	16.5	12.9	9.6	11.3	7.4	8.3	13.0	11.3	8.8	7.4	6.2	7.2
Seasonally adjusted annual rates ..... do.....			186	185	137	133	176	129	119	148	125	87	80	66	85
Requests for VA appraisals ..... do.....	216.1	202.2	21.0	20.3	19.8	12.9	11.3	12.5	14.9	17.3	18.2	15.5	14.2	13.7	11.9
Seasonally adjusted annual rates ..... do.....			243	242	211	188	169	177	191	190	194	183	154	152	138
Home mortgages insured or guaranteed by:															
Fed. Hous. Adm.: Face amount ..... mil. \$..	18,166.74	16,458.53	1,506.58	1,461.37	1,584.55	1,242.93	1,351.14	955.33	849.36	983.70	1,121.55	983.42	978.02	793.47	622.98
Vet. Adm.: Face amount \$ ..... do.....	16,505.50	13,855.54	944.00	1,623.90	1,133.39	1,135.18	954.90	917.26	745.20	706.41	769.70	583.44	875.83	644.07	696.21
Federal Home Loan Banks, outstanding advances to member institutions, end of period ..... mil. \$..															
	41,838	48,963	42,605	44,161	46,115	47,322	48,963	48,581	48,206	49,175	51,530	53,148	56,095	59,475	62,471
New mortgage loans of all savings and loan associations, estimated total ..... mil. \$..															
	100,546	72,537	8,339	9,500	9,336	6,574	6,942	4,285	3,676	4,923	5,533	5,730	6,047	4,983	3,755
By purpose of loan:															
Home construction ..... do.....	20,583	14,946	1,556	1,803	1,886	1,391	1,454	1,029	888	1,224	1,366	1,247	1,186	'1,003	723
Home purchase ..... do.....	62,740	42,957	5,208	5,708	5,552	3,821	3,748	2,315	1,966	2,538	2,826	3,129	3,432	'2,768	2,139
All other purposes ..... do.....	17,223	14,634	1,575	1,989	1,898	1,362	1,740	941	822	1,161	1,341	1,354	1,429	'1,212	893

**DOMESTIC TRADE**

<b>ADVERTISING</b>															
McCann-Erickson national advertising index, seasonally adjusted:															
Combined index ..... 1967=100..	274		326	314	294										
Network TV ..... do.....	312		370	363	330										
Spot TV ..... do.....	293		349	360	354										
Magazines ..... do.....	235		280	253	227										
Newspapers ..... do.....	246		291	265	259										
Magazine advertising (Publishers Information Bureau):															
Cost, total ..... mil. \$..	2,634.0	2,846.1	175.3	251.0	275.2	311.5	254.3	184.3	225.7	268.0	288.3	297.9	267.1	196.6	210.9
Apparel and accessories ..... do.....	91.9	111.7	7.8	15.9	13.0	11.9	9.7	6.7	6.2	12.1	14.4	11.1	7.4	6.4	12.9
Automotive, incl. accessories ..... do.....	212.6	229.5	8.4	12.0	24.3	27.3	22.1	14.8	24.0	25.7	27.2	31.0	29.0	17.6	17.4
Building materials ..... do.....	46.4	48.3	2.9	5.2	4.6	3.9	2.4	2.3	3.2	3.2	4.8	7.4	5.3	3.6	4.8
Drugs and toiletries ..... do.....	262.1	284.2	23.6	27.8	25.9	27.4	22.6	18.1	24.9	27.4	31.6	31.3	27.4	21.4	22.3
Foods, soft drinks, confectionery ..... do.....	200.5	211.6	13.4	14.4	19.6	29.4	18.4	9.0	17.9	18.4	19.4	17.5	19.5	17.6	15.8
Beer, wine, liquors ..... do.....	234.0	238.9	11.9	16.7	22.0	27.6	36.9	11.5	14.4	17.8	19.6	19.0	25.7	15.0	14.3
Household equip., supplies, furnishings ..... do.....	132.5	138.8	7.9	12.3	14.6	18.4	10.8	8.9	7.8	11.6	14.8	18.4	12.3	9.9	9.5
Industrial materials ..... do.....	69.9	70.8	4.0	7.4	7.2	7.6	4.5	4.3	3.8	5.8	6.0	7.2	5.4	4.3	4.0
Soaps, cleansers, etc ..... do.....	35.0	29.8	2.3	3.3	3.1	'2.9	1.4	1.9	1.9	2.1	3.0	3.4	2.0	1.4	1.9
Smoking materials ..... do.....	278.2	289.7	23.1	25.6	24.9	24.2	23.4	20.7	24.8	30.0	29.8	24.8	28.5	25.5	27.5
All other ..... do.....	1,070.8	1,198.0	69.9	110.5	116.0	131.2	102.2	86.0	96.8	113.9	117.8	126.8	104.5	73.4	80.7
Newspaper advertising expenditures (Media Records Inc.):															
Total ..... mil. \$..	7,641.3	8,192.3	675.0	650.2	738.4	810.0	680.5	671.2	703.8	840.3	816.6	884.5	772.2	707.3	811.7
Automotive ..... do.....	196.0	183.6	13.6	15.2	15.6	16.7	11.3	16.2	19.4	22.5	18.4	21.3	15.7	15.8	21.3
Classified ..... do.....	2,179.3	2,191.8	196.8	180.8	183.8	185.3	136.2	197.7	199.2	235.0	215.6	240.2	217.1	208.8	238.8
Financial ..... do.....	243.8	298.0	16.0	21.9	27.7	24.4	27.9	33.9	24.6	31.2	30.9	26.0	28.0	29.7	35.2
General ..... do.....	982.1	1,122.7	78.1	93.2	105.9	113.7	76.6	100.6	113.3	136.2	126.5	134.9	114.0	94.1	92.8
Retail ..... do.....	4,040.1	4,396.3	370.5	339.2	405.4	469.9	428.5	322.7	347.4	415.4	425.2	462.1	397.4	358.9	423.6
<b>WHOLESALE TRADE †</b>															
Merchant wholesalers sales (unadj.), total ..... mil. \$..	915,163	1,043,886	86,311	90,715	99,023	91,328	97,659	93,845	89,641	101,273	99,081	96,676	98,639	'96,072	92,740
Durable goods establishments ..... do.....	410,079	438,439	36,010	38,112	41,298	36,679	38,598	35,927	37,054	41,991	41,934	40,679	43,152	'41,459	40,954
Nondurable goods establishments ..... do.....	505,084	605,447	50,301	52,603	57,725	54,649	59,061	57,918	52,587	59,282	57,147	55,997	55,487	'54,613	51,786
Merchant wholesalers inventories, book value, end of year or month (unadj.), total ..... mil. \$..	93,778	105,449	100,205	101,310	104,277	105,866	105,449	105,446	107,209	107,907	106,420	105,985	106,915	'105,556	106,452
Durable goods establishments ..... do.....	59,198	66,716	65,894	65,273	65,137	65,857	66,716	66,230	68,251	69,208	69,673	71,113	71,821	'70,729	71,490
Nondurable goods establishments ..... do.....	34,580	38,733	34,311	36,037	39,140	40,009	38,733	39,216	38,958	38,699	36,747	34,872	35,094	'34,827	34,962

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980	1980					1981							
	Annual	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.

### DOMESTIC TRADE—Continued

RETAIL TRADE																	
All retail stores: †																	
Estimated sales (unadj.), total †	mil. \$.	894,343	956,655	81,740	77,579	84,000	83,816	100,755	77,361	74,321	84,652	85,770	87,383	87,784	'88,768	'89,426	'86,244
Durable goods stores #	do.....	304,809	297,926	25,256	24,506	26,698	25,121	28,093	23,239	23,857	28,295	27,688	27,669	29,130	'29,038	'29,432	'28,236
Building materials, hardware, garden supply, and mobile home dealers #	mil. \$.	50,272	48,210	4,289	4,434	4,672	4,152	3,971	3,351	3,359	4,043	4,524	4,798	4,993	'4,769	'4,627	'4,589
Building materials and supply stores	do.....	35,255	33,682	3,071	3,215	3,398	2,936	2,616	2,360	2,360	2,785	3,038	3,221	3,463	'3,361	'3,256	'3,256
Hardware stores	do.....	7,838	7,743	641	642	692	659	825	565	538	655	771	809	809	'784	'763	'763
Automotive dealers #	do.....	177,251	167,017	14,211	13,489	15,027	13,264	13,016	13,351	14,370	17,336	16,279	15,791	16,794	'16,922	'17,348	'16,307
Motor vehicle dealers	do.....	161,110	148,799	12,600	11,965	13,330	11,699	11,365	11,926	13,011	15,745	14,563	14,154	15,042	'15,050	'15,498	'15,498
Auto and home supply stores	do.....	16,141	18,218	1,611	1,524	1,697	1,548	1,651	1,425	1,359	1,591	1,716	1,637	1,752	'1,872	'1,850	'1,850
Furniture, home furn., and equip #	do.....	41,868	43,198	3,712	3,626	3,822	4,048	4,905	3,616	3,351	3,716	3,608	3,662	3,819	'3,779	'3,890	'3,842
Furniture, home furnishings stores	do.....	25,692	26,228	2,244	2,170	2,309	2,421	2,566	2,152	2,020	2,260	2,229	2,300	2,351	'2,281	'2,341	'2,341
Household appliance, radio, TV	do.....	12,428	13,190	1,119	1,083	1,126	1,207	1,634	1,074	976	1,088	1,047	1,043	'1,154	'1,182	'1,213	'1,213
Nondurable goods stores	do.....	589,534	658,729	56,484	53,073	57,302	58,695	72,662	54,122	50,464	56,357	58,082	59,714	58,654	'59,730	'59,994	'58,008
General merch. group stores	do.....	109,740	116,287	9,640	8,923	10,105	11,821	18,365	7,279	7,160	8,972	9,961	10,241	10,011	'9,530	'10,344	'9,825
Department stores	do.....	'88,520	94,185	7,834	7,299	8,198	9,642	14,859	5,873	5,783	7,337	8,093	8,359	8,220	'7,757	'8,470	'8,047
Variety stores	do.....	8,385	8,856	741	635	735	787	1,397	566	557	663	787	738	716	'716	'758	'758
Food stores	do.....	195,826	217,511	19,115	17,712	18,853	18,485	20,212	19,195	17,477	18,837	19,383	20,387	19,792	'21,038	'20,257	'19,876
Grocery stores	do.....	182,365	202,065	17,812	16,474	17,561	17,195	18,506	17,830	16,133	17,410	17,839	18,941	18,338	'19,557	'18,817	'14,422
Gasoline service stations	do.....	73,202	94,470	8,470	7,982	8,244	7,951	8,350	8,047	7,616	8,380	8,492	8,734	8,996	'9,173	'9,003	'8,618
Apparel and accessory stores #	do.....	42,375	44,487	3,913	3,586	3,931	4,179	6,335	3,279	2,911	3,448	3,972	3,735	3,632	'3,598	'4,077	'3,856
Men's and boys' clothing	do.....	7,830	8,025	683	608	702	801	1,283	565	494	552	621	615	626	'565	'636	'636
Women's clothing, spec. stores, furriers	do.....	15,802	16,991	1,468	1,409	1,546	1,582	2,339	1,258	1,141	1,355	1,532	1,470	1,404	'1,439	'1,580	'1,580
Shoe stores	do.....	7,127	8,040	724	693	724	750	942	614	530	665	831	728	690	'660	'763	'763
Eating and drinking places	do.....	79,576	86,612	7,920	7,276	7,518	7,142	7,510	7,065	6,742	7,710	7,897	8,344	8,264	'8,524	'8,522	'7,887
Drug and proprietary stores	do.....	28,107	31,557	2,563	2,507	2,693	2,655	3,775	2,722	2,530	2,701	2,769	2,810	2,758	'2,769	'2,786	'2,722
Liquor stores	do.....	15,294	16,556	1,420	1,277	1,347	1,407	1,926	1,275	1,195	1,247	1,285	1,381	1,367	'1,448	'1,402	'1,402
Estimated sales (seas. adj.), total †	do.....			79,829	80,620	81,552	82,764	83,443	85,463	86,810	87,608	85,855	85,501	87,384	'87,350	'88,449	'88,838
Durable goods stores #	do.....			24,593	25,094	25,293	26,007	25,983	27,075	28,328	28,429	26,356	26,536	27,532	'27,753	'28,441	'28,796
Building materials, hardware, garden supply, and mobile home dealers #	mil. \$.			3,844	4,039	4,084	4,251	4,261	4,596	4,596	4,481	4,427	4,399	4,381	'4,260	'4,144	'4,179
Building materials and supply stores	do.....			2,670	2,820	2,863	2,963	3,246	3,246	3,233	3,126	3,087	3,127	3,040	'2,910	'2,814	'2,814
Hardware stores	do.....			633	639	646	662	689	731	738	731	732	718	740	'735	'766	'766
Automotive dealers	do.....			13,940	14,173	14,258	14,593	14,413	14,965	16,315	16,330	14,572	14,786	15,603	'15,998	'16,722	'16,965
Motor vehicle dealers	do.....			12,389	12,661	12,695	13,042	12,827	13,355	14,603	14,688	12,945	13,167	13,967	'14,212	'14,945	'14,945
Auto and home supply stores	do.....			1,551	1,512	1,563	1,551	1,586	1,610	1,712	1,642	1,627	1,619	1,636	'1,786	'1,777	'1,777
Furniture, home furn., and equip. #	do.....			3,628	3,702	3,682	3,802	3,817	4,016	3,888	3,897	3,822	3,794	3,873	'3,719	'3,859	'3,850
Furniture, home furnishings stores	do.....			2,168	2,233	2,210	2,267	2,241	2,404	2,319	2,313	2,286	2,323	2,337	'2,215	'2,300	'2,300
Household appliance, radio, TV	do.....			1,099	1,097	1,093	1,137	1,151	1,201	1,163	1,185	1,166	1,103	1,170	'1,163	'1,214	'1,214
Nondurable goods stores	do.....			55,236	55,526	56,259	56,757	57,460	58,388	58,482	59,179	59,499	58,965	59,852	'59,597	'60,008	'60,042
General merch. group stores	do.....			9,722	9,649	9,940	10,025	10,093	9,994	10,306	10,306	10,563	10,350	10,674	'10,409	'10,701	'10,506
Department stores	do.....	(*)		7,905	7,840	8,045	8,171	8,146	8,078	8,381	8,443	8,610	8,452	8,754	'8,496	'8,759	'8,552
Variety stores	do.....			740	722	739	732	738	775	770	762	792	748	763	'768	'782	'782
Food stores	do.....			18,405	18,577	18,592	18,808	19,098	19,072	19,112	19,522	19,672	19,506	19,850	'19,939	'20,352	'20,341
Grocery stores	do.....			17,078	17,250	17,267	17,457	17,709	17,601	17,632	18,098	18,185	18,091	18,430	'18,467	'18,874	'18,779
Gasoline service stations	do.....			7,998	7,990	8,090	8,130	8,284	8,497	8,596	8,613	8,595	8,513	8,633	'8,541	'8,526	'8,653
Apparel and accessory stores #	do.....			3,785	3,724	3,771	3,777	3,789	3,945	4,022	3,947	3,931	3,923	4,000	'4,013	'4,003	'3,983
Men's and boys' clothing	do.....			736	699	702	683	666	642	681	660	646	666	674	'662	'694	'694
Women's clothing, spec. stores, furriers	do.....			1,435	1,416	1,431	1,438	1,450	1,549	1,557	1,502	1,547	1,534	1,572	'1,580	'1,583	'1,583
Shoe stores	do.....			677	670	672	687	677	728	755	745	734	739	750	'750	'735	'735
Eating and drinking places	do.....			7,135	7,276	7,371	7,416	7,563	7,885	7,876	8,006	7,842	7,902	7,893	'7,799	'7,733	'7,895
Drug and proprietary stores	do.....			2,623	2,667	2,742	2,760	2,760	2,815	2,768	2,770	2,831	2,830	2,823	'2,837	'2,875	'2,917
Liquor stores	do.....			1,367	1,348	1,369	1,371	1,386	1,390	1,404	1,386	1,401	1,396	1,368	'1,376	'1,384	'1,384
Estimated inventories, end of year or month: †																	
Book value (unadjusted), total	mil. \$.	106,169	108,717	108,482	111,826	117,264	119,039	108,717	108,147	110,635	113,741	114,951	115,877	'117,342	'118,952	'118,952	
Durable goods stores #	do.....	52,691	51,159	49,619	49,678	51,457	52,807	51,159	51,904	52,409	53,018	53,868	55,033	'55,969	'56,238	'56,238	
Building materials and supply stores	do.....	8,609	8,695	8,902	8,927	8,975	8,909	8,695	8,816	9,151	9,590	9,642	9,849	'9,711	'9,487	'9,487	
Automotive dealers	do.....	26,763	24,457	22,159	21,821	22,913	24,031	24,457	24,931	24,783	24,624	25,539	26,470	'27,503	'27,893	'27,893	
Furniture, home furn., and equip	do.....	8,146	8,008	8,380	8,420	8,671	8,525	8,008	7,975	8,146	8,374	8,358	8,431	'8,472	'8,382	'8,382	
Nondurable goods stores #	do.....	53,478	57,558	58,863	62,148	65,807	66,232	57,558	56,243	58,226	60,723	61,083	60,844	'61,373	'62,714	'62,714	
General merch. group stores	do.....	18,628	19,894	21,898	23,439	25,328	25,460	19,894	19,397	20,593	22,054	22,499	22,575	'22,960	'23,515	'23,515	
Department stores	do.....	13,734	14,819	15,933	17,031	18,461	18,824	14,819	14,366	15,190	16,289	16,783	16,893	'16,989	'17,319	'17,319	
Food stores	do.....	11,517	12,471	11,791	12,003	12,673	12,957	12,471	12,167	12,527	12,892						



Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS

	1979	1980	1980						1981					
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.

**DOMESTIC TRADE—Continued**

**RETAIL TRADE—Continued**

Firms with 11 or more stores—Continued  
Estimated sales (unadjusted)—Continued  
Nondurable goods stores—Continued

Food stores	mil. \$.	102,496	113,214	9,898	9,209	9,940	9,764	10,652	10,281	9,207	9,883	10,128	10,694	*10,323	11,022		
Grocery stores	do...	101,270	111,857	9,788	9,105	9,832	9,653	10,486	10,153	9,058	9,743	9,960	10,543	*10,172	10,867		
Apparel and accessory stores #	do...	14,285	15,204	1,404	1,227	1,354	1,468	2,312	979	926	1,206	1,459	1,330	1,272	1,225		
Women's clothing, specialty stores, furriers	mil. \$.	5,876	6,191	554	496	555	595	912	384	384	501	594	552	*523	528		
Family clothing stores	do...	3,455	3,664	347	282	325	359	630	240	216	276	325	311	307	295		
Shoe stores	do...	3,420	3,707	345	325	332	343	460	251	235	311	407	344	*317	292		
Eating places	do...	15,165	17,011	1,567	1,427	1,502	1,447	1,505	1,413	1,336	1,548	1,547	1,645	*1,610	1,667		
Drug stores and proprietary stores	do...	13,720	15,665	1,292	1,233	1,297	1,330	2,055	1,317	1,226	1,344	1,392	1,416	*1,347	1,353		
Estimated sales (sea. adj.), total #	do...			27,344	27,368	27,752	28,074	28,359	28,474	29,091	29,252	29,618	29,418	*30,118	29,812		
Auto and home supply stores	do...			298	296	293	295	298	308	329	304	303	307	*317	316		
Department stores	do...			7,475	7,418	7,620	7,768	7,735	7,696	7,958	8,010	8,150	8,002	*8,290	8,051		
Variety stores	do...			556	550	565	558	557	572	585	575	614	575	585	577		
Grocery stores	do...			9,512	9,604	9,630	9,672	9,883	9,810	9,899	10,128	10,132	10,147	*10,380	10,379		
Apparel and accessory stores	do...			1,278	1,257	1,291	1,297	1,324	1,328	1,387	1,402	1,407	1,394	1,410	1,428		
Women's clothing, spec. stores, furriers	do...			513	513	518	526	528	538	573	574	593	566	*583	580		
Shoe stores	do...			311	307	313	314	317	317	342	342	345	358	*352	358		
Drug stores and proprietary stores	do...			1,328	1,340	1,360	1,361	1,361	1,395	1,390	1,393	1,444	1,427	*1,390	1,411		
All retail stores, accts. receivable, end of yr. or mo.: Total (unadjusted)	mil. \$.	40,387		( <sup>2</sup> )													
Durable goods stores	do...	11,391		( <sup>2</sup> )													
Nondurable goods stores	do...	28,996		( <sup>2</sup> )													
Charge accounts	do...	12,268		( <sup>2</sup> )													
Installment accounts	do...	28,119		( <sup>2</sup> )													
Total (seasonally adjusted)	do...	37,437		( <sup>2</sup> )													
Durable goods stores	do...	11,194		( <sup>2</sup> )													
Nondurable goods stores	do...	26,243		( <sup>2</sup> )													
Charge accounts	do...	11,743		( <sup>2</sup> )													
Installment accounts	do...	25,694		( <sup>2</sup> )													

**LABOR FORCE, EMPLOYMENT, AND EARNINGS**

<b>POPULATION OF THE UNITED STATES</b>																		
Total, incl. armed forces overseas †	mil.	*1225.06	*227.66	227.86	228.09	228.30	228.50	228.67	228.83	228.98	229.12	229.28	229.44	229.62	229.80	230.03	230.26	
<b>LABOR FORCE</b>																		
<b>Not Seasonally Adjusted</b>																		
Labor force, total, persons 16 years of age and over	thous.	104,996	106,821	108,240	106,841	107,536	107,406	106,902	106,796	106,929	107,533	107,807	108,474	109,752	110,547	109,931	108,129	
Armed forces	do...	2,084	2,102	2,114	2,121	2,121	2,119	2,124	2,125	2,128	2,128	2,129	2,127	2,131	2,139	2,160	2,165	
Civilian labor force, total	do...	102,908	104,719	106,126	104,720	105,415	105,287	104,778	104,671	104,808	105,405	105,678	106,347	107,621	108,408	107,771	105,964	
Employed	do...	96,945	97,270	98,115	97,256	97,933	97,801	97,545	96,128	96,383	97,318	98,282	98,803	99,341	100,474	100,013	98,277	
Unemployed	do...	5,963	7,448	8,011	7,464	7,482	7,486	7,233	8,543	8,425	8,087	7,396	7,545	8,279	7,934	7,758	7,687	
<b>Seasonally Adjusted †</b>																		
Civilian labor force, total	do...			104,945	104,980	105,167	105,285	105,067	105,543	105,681	106,177	106,722	107,406	106,176	106,464	106,602	106,236	
Participation rate *	percent.	63.7	63.8	63.8	63.8	63.8	63.8	63.6	63.8	63.8	64.0	64.3	64.6	63.8	63.9	64.0	63.7	
Employed, total	thous.	59.3	58.5	58.2	58.3	58.2	58.2	58.1	57.9	58.4	58.6	59.0	58.4	58.7	58.6	58.1	58.6	
Employment-population ratio *	percent.	3.297	3.310	3.210	3.399	3.319	3.340	3.394	3.403	3.281	3.276	3.463	3.353	3.265	3.258	3.370	3.310	
Agriculture	thous.	93,648	93,960	93,793	93,781	93,887	93,999	93,888	94,294	94,646	95,136	95,513	95,882	95,127	95,704	95,574	94,959	
Nonagriculture	do...																	
Unemployed, total	do...			7,942	7,800	7,961	7,946	7,785	7,847	7,754	7,764	7,746	8,171	7,784	7,502	*7,657	7,966	
Long term, 15 weeks and over	do...	1,202	1,829	2,150	2,295	2,292	2,329	2,378	2,358	2,250	2,192	2,105	2,168	2,315	2,100	2,194	2,212	
Rates (unemployed in each group as percent of civilian labor force in the group):																		
All civilian workers		5.8	7.1	7.6	7.4	7.6	7.5	7.4	7.4	7.3	7.3	7.3	7.6	7.3	7.0	7.2	7.5	
Men, 20 years and over		4.1	5.9	6.5	6.6	6.4	6.4	6.2	6.0	5.9	5.8	6.3	6.3	6.1	5.6	5.9	6.2	
Women, 20 years and over		5.7	6.3	6.5	6.2	6.7	6.7	6.8	6.7	6.5	6.6	6.6	6.8	6.5	6.7	6.5	6.8	
Both sexes, 16-19 years		16.1	17.7	18.8	17.8	18.5	18.6	17.8	19.0	19.3	19.1	19.1	19.5	19.0	18.1	18.8	19.3	
White		5.1	6.3	6.7	6.5	6.6	6.6	6.5	6.7	6.6	6.5	6.5	6.8	6.4	6.2	6.1	6.5	
Black and other		11.3	13.2	13.7	14.1	14.2	14.0	14.0	12.9	13.1	13.7	13.2	13.6	14.2	13.6	15.0	15.1	
Married men, spouse present		2.7	4.2	4.8	4.7	4.6	4.4	4.3	4.2	4.1	4.1	3.8	4.1	4.2	3.9	3.9	4.3	
Married women, spouse present		5.1	5.8	6.0	5.7	6.0	5.9	5.8	6.2	5.8	6.0	5.9	5.9	5.6	5.6	5.3	5.9	
Women who maintain families		8.3	9.1	9.0	9.0	10.2	9.9	10.4	10.5	9.6	9.4	9.8	10.3	10.6	11.5	9.8	10.6	
Occupation:																		
White-collar workers		3.3	3.7	3.7	3.8	3.9	3.9	4.0	3.9	3.7	3.9	4.0	4.1	3.8	4.1	3.9	4.1	
Blue-collar workers		6.9	10.0	11.1	10.8	10.8	10.7	10.5	10.2	10.1	9.8	9.6	10.0	9.8	9.4	*9.3	10.2	
Industry of last job (nonagricultural):																		
Private wage and salary workers		5.7	7.4	8.0	7.8	7.8	7.8	7.7	7.5	7.5	7.3	7.2	7.8	7.4	7.2	7.2	7.6	
Construction		10.2	14.2	17.3	15.9	14.6	14.8	13.8	13.3	13.2	14.7	14.4	16.3	16.6	15.0	16.7	16.3	
Manufacturing		5.5	8.5	9.3	9.2	9.2	8.9	8.8	8.4	8.4	8.0	7.4	7.9	7.6	7.3	7.0	7.8	
Durable goods		5.0	8.9	10.1	10.0	9.5	9.0	9.0	8.3	8.5	7.9	7.3	7.3	7.4	7.3	6.4	7.6	
<b>EMPLOYMENT †</b>																		
Employees on payrolls of nonagricultural estab.	thous.	89,823	90,564	89,969	90,638	91,244	91,599	91,750	89,988	90,138	90,720	91,337	91,848	92,481	*91,600	*91,626	*92,026	
Total, not adjusted for seasonal variation	do...	73,876	74,316	74,539	74,797	74,913	75,126	75,315	73,772	73,680	74,227	74,680	75,434	76,278	*76,213	*76,473	*76,600	
Private sector (excl. government)	do...																	
<b>Seasonally Adjusted †</b>																		
Total employees, nonagricultural payrolls	do...	89,823	90,564	90,219	90,461	90,668	90,844	90,949	91,091	91,258	91,347	91,458	91,564	91,615	*91,880	*91,920	*91,875	
Private sector (excl. government)	do...	73,876	74,316	74,030	74,268	74,419	74,602	74,713	74,868	75,018	75,143	75,288	75,433	75,575	*75,888	*76,007	*76,107	
Nonmanufacturing industries	do...	52,836	54,016	54,040	54,208	54,309	54,414	54,538	54,694	54,841	54,952	54,956	55,019	55,151	*55,353	*55,490	*55,571	
Goods-producing	do...	26,461	25,718	25,322	25,445	25,521	25,629	25,631	25,647	25,657	25,705	25,700	25,705	25,818	*25,939	*25,941	*25,949	
Mining	do...	958	1,020	1,008	1,023	1,032	1,052	1,069	1,083	1,091	1,098	950	957	1,110	*1,132	*1,152	*1,160	
Construction	do...	4,463	4,399	4,324	4,362	4,379	4,389	4,387	4,390	4,389	4,416	4,418	4,334	4,284	*4,272	*4,272	*4,253	

See footnotes at end of tables.

Table header with columns for years 1979, 1980, 1980, and 1981, and months from August to September.

LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

Main data table with columns for 1979, 1980, 1980, and 1981, and months from August to September. It contains rows for Employment, Seasonally Adjusted, Employees on nonag. payrolls, Goods-producing, Manufacturing, Service-producing, Production or nonsupervisory workers on private nonagric. payrolls, Seasonally Adjusted, Production or nonsupervisory workers on private nonagricultural payrolls, Goods-producing, Mining, Construction, Manufacturing, Durable goods, Nondurable goods, Service-producing, Transportation and public utilities, Wholesale and retail trade, Retail trade, Finance, insurance, and real estate, Services, Average hours per week, Seasonally Adjusted, Avg. weekly hours per worker on private nonagric. payrolls, Seasonally adjusted, Mining, Construction, Manufacturing, Not seasonally adjusted, Seasonally adjusted, Overtime hours, Durable goods, Overtime hours, Lumber and wood products, Furniture and fixtures, Stone, clay, and glass products, Primary metal industries.

See footnotes at end of tables.

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980	1980					1981							
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.

LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

AVERAGE HOURS PER WEEK †—Cont.																
Seasonally Adjusted—Continued																
Average weekly hours per worker—Cont.																
Manufacturing—Continued																
Durable goods—Continued																
Fabricated metal products §	40.7	40.4	40.2	40.4	40.4	40.5	40.5	40.5	40.2	40.2	40.9	40.9	40.7	40.5	40.5	*39.5
Machinery, except electrical	41.8	41.0	40.8	40.9	40.8	41.0	40.9	41.1	40.8	40.9	41.3	41.4	41.1	41.1	41.2	*39.8
Electric and electronic equipment @	40.3	39.8	39.6	39.6	39.8	39.9	40.0	40.1	39.6	40.0	40.2	40.4	40.2	40.5	40.3	*39.5
Transportation equipment §	41.2	40.6	40.8	40.7	40.7	41.2	41.0	41.3	40.5	40.9	42.0	41.8	41.4	41.2	41.3	*39.8
Instruments and related products	40.8	40.5	40.3	40.2	40.3	40.4	40.4	40.6	40.5	40.5	40.1	40.4	40.4	40.5	40.5	*39.9
Miscellaneous manufacturing	38.8	38.7	38.6	38.8	38.6	38.6	38.9	38.8	38.6	38.7	38.9	39.2	39.1	39.2	38.9	*38.4
Nondurable goods	39.2	39.0	38.9	38.9	39.0	39.1	39.2	39.5	39.2	39.2	39.3	39.6	39.4	39.3	39.3	*38.8
Overtime hours	3.1	2.8	2.8	2.8	2.8	2.9	2.9	3.0	2.9	2.8	2.9	3.1	3.0	2.9	2.9	*2.8
Food and kindred products	39.8	39.7	39.8	39.7	39.6	39.8	39.7	40.3	39.9	39.7	40.1	40.0	39.8	39.4	39.4	*38.8
Tobacco manufactures	38.0	38.1	36.9	38.2	40.0	40.1	38.1	38.6	38.5	37.2	37.2	38.6	38.5	38.6	40.5	*40.4
Textile mill products	37.3	40.0	39.5	39.8	39.8	39.9	40.1	40.0	40.0	39.9	39.8	40.5	40.2	40.4	40.2	*38.7
Apparel and other textile products	35.2	35.4	35.2	35.2	35.4	35.2	35.5	36.1	35.6	35.7	35.5	36.0	36.1	35.9	36.1	*35.2
Paper and allied products	42.6	42.3	42.0	42.2	42.2	42.4	42.8	42.6	42.4	42.4	42.6	42.8	42.7	42.7	42.6	*42.9
Printing and publishing	37.5	37.1	37.0	36.9	37.1	36.8	37.4	37.5	37.3	37.1	37.3	37.6	37.4	37.3	37.3	*37.2
Chemicals and allied products	41.9	41.5	41.2	41.4	41.5	41.6	41.6	41.6	41.6	41.5	41.5	41.7	41.7	41.8	41.7	*42.3
Petroleum and coal products	43.8	41.8	42.1	42.4	42.8	42.9	43.2	43.8	43.8	43.5	44.1	43.8	43.4	43.1	42.8	*42.9
Rubber and plastics products, nec	40.5	40.1	40.2	40.2	40.5	40.8	40.8	40.9	40.3	40.5	40.7	41.3	41.0	40.5	40.6	*39.6
Leather and leather products	36.5	36.7	36.6	36.4	36.7	36.3	36.6	36.8	37.0	37.1	36.6	37.1	37.4	36.5	37.1	*35.9
Transportation and public utilities ‡	39.9	39.6	39.7	39.7	39.8	39.7	40.0	39.4	39.5	39.4	39.3	39.3	39.8	39.8	39.8	*38.9
Wholesale and retail trade	32.6	32.2	32.1	32.1	32.2	32.2	32.1	32.2	32.2	32.2	32.3	32.1	32.1	32.2	32.1	*32.1
Wholesale trade	38.8	38.5	38.3	38.5	38.5	38.5	38.6	38.8	38.6	38.6	38.6	38.5	38.5	38.7	38.5	*38.5
Retail trade	30.6	30.2	30.1	30.1	30.1	30.2	30.0	30.1	30.2	30.2	30.3	30.1	30.1	30.1	30.1	*30.1
Finance, insurance, and real estate ‡	36.2	36.2	36.3	36.1	36.3	36.3	36.3	36.4	36.4	36.4	36.3	36.1	36.1	36.3	36.4	*36.1
Services	32.7	32.6	32.6	32.6	32.6	32.7	32.7	32.7	32.8	32.8	32.8	32.7	32.5	32.5	32.4	*32.4
AGGREGATE EMPLOYEE-HOURS †																
Seasonally Adjusted																
Employee-hours, wage & salary workers in non-agric. establish, for 1 week in the month, seas adj. at annual rate																
Total private sector	169.53	169.70	168.13	169.07	169.66	170.06	171.12	172.87	171.65	172.14	170.56	171.43	170.92	*171.09	*171.39	*167.51
Mining	2.15	2.31	2.23	2.26	2.30	2.39	2.50	2.57	2.52	2.48	2.17	2.19	2.39	*2.54	*2.60	*2.55
Construction	8.59	8.46	8.16	8.46	8.42	8.50	8.56	9.07	8.36	8.60	8.43	8.26	8.04	8.12	*8.07	*7.72
Manufacturing	43.92	41.96	40.92	41.22	41.52	41.94	42.15	42.54	42.24	42.21	42.19	42.50	42.19	*42.21	*42.31	*42.82
Transportation and public utilities	10.65	10.60	10.49	10.57	10.63	10.58	10.62	10.63	10.62	10.60	10.62	10.56	10.60	10.59	*10.57	*10.47
Wholesale and retail trade	34.35	34.29	34.11	34.35	34.47	34.53	34.39	34.79	34.79	34.75	34.84	34.70	34.65	*34.73	*34.91	*35.04
Finance, insurance, and real estate	9.39	9.75	9.78	9.81	9.87	9.92	9.94	9.99	10.03	10.04	10.04	10.05	10.04	10.08	10.13	*10.08
Services	29.21	30.47	30.61	30.72	30.77	30.96	31.06	31.28	31.46	31.51	31.66	31.60	31.49	*31.59	*31.62	*31.79
Government	31.26	31.86	31.83	31.68	31.68	31.25	31.90	32.01	31.63	31.94	30.71	31.57	31.51	*31.15	*31.18	*28.04
Indexes of employee-hours (aggregate weekly): †																
Private nonagric. payrolls, total 1977=100	108.4	107.3	106.6	107.1	107.4	107.7	107.9	108.2	107.9	108.4	108.9	108.9	108.7	*109.4	*109.4	*108.4
Goods-producing	108.6	102.5	100.2	101.3	101.7	102.0	102.3	102.4	100.9	102.4	102.8	103.1	102.6	*103.5	*103.4	*100.8
Mining	115.3	122.1	120.5	123.1	124.0	126.6	130.1	130.1	128.6	128.2	112.0	113.3	128.0	*136.5	*139.8	*136.6
Construction	119.7	116.1	114.5	117.6	117.7	114.4	115.6	113.9	109.1	116.6	115.8	112.9	109.3	110.9	*110.1	*104.2
Manufacturing	106.2	99.0	96.5	97.2	97.6	98.4	98.5	98.9	98.0	98.4	99.9	100.7	100.2	*100.5	*100.4	*98.5
Durable goods	109.1	99.5	96.0	96.8	97.3	98.6	98.5	99.0	97.8	98.6	100.7	101.1	100.6	*100.9	*100.9	*98.9
Nondurable goods	101.9	98.3	97.4	97.7	98.0	98.0	98.4	98.9	98.3	98.1	98.7	100.1	99.5	99.8	*99.6	*98.3
Service-producing	108.2	110.0	110.1	110.3	110.6	110.9	111.0	111.3	111.7	111.8	112.3	112.0	112.1	*112.6	*112.7	*112.6
Transportation and public utilities	107.1	106.3	105.9	106.0	106.3	105.7	106.6	105.0	105.4	105.1	105.4	104.9	106.2	*107.0	*106.1	*104.8
Wholesale and retail trade	106.6	105.9	105.7	106.0	106.1	106.3	105.9	106.6	106.8	106.9	107.2	106.9	107.0	*107.8	*107.8	*107.8
Wholesale trade	110.3	110.4	109.7	110.5	110.6	110.5	110.9	111.5	111.1	111.1	111.4	111.3	111.3	*112.3	*111.9	*111.9
Retail trade	105.1	104.2	104.2	104.3	104.3	104.7	103.9	104.7	105.2	105.4	105.6	105.2	105.3	*106.0	*106.3	*106.2
Finance, insurance, and real estate	110.6	114.6	115.3	114.9	115.9	116.2	116.5	117.3	117.4	117.5	117.8	117.4	117.6	118.1	*119.0	*118.3
Services	109.9	115.0	115.5	115.8	116.0	116.9	117.3	117.7	118.2	118.4	119.3	119.2	118.7	119.3	*119.1	*119.5
HOURLY AND WEEKLY EARNINGS †																
Average hourly earnings per worker: †																
Not seasonally adjusted:																
Private nonagric. payrolls	6.16	6.66	6.67	6.79	6.85	6.92	6.94	7.03	7.06	7.10	7.13	7.17	7.20	7.24	7.30	*7.37
Mining	8.49	9.17	9.16	9.31	9.36	9.49	9.57	9.77	9.86	9.85	9.70	9.68	9.94	*10.11	*10.15	*10.25
Construction	9.27	9.92	10.04	10.18	10.24	10.33	10.42	10.41	10.44	10.43	10.53	13.60	*10.74	*10.87	*10.97	*10.97
Manufacturing	6.70	7.27	7.30	7.42	7.49	7.60	7.70	7.73	7.75	7.80	7.88	7.92	7.97	8.02	8.02	*8.15
Excluding overtime	6.43	7.02	7.06	7.06	7.23	7.32	7.40	7.46	7.48	7.53	7.62	7.64	7.68	7.74	7.73	*7.87
Durable goods	7.13	7.75	7.77	7.92	8.01	8.11	8.23	8.23	8.26	8.32	8.40	8.45	8.52	8.55	8.57	*8.68
Excluding overtime	6.83	7.48	7.52	7.64	7.73	7.82	7.90	7.95	7.98	8.04	8.12	8.15	8.21	8.26	8.27	*8.40
Lumber and wood products	6.07	6.53	6.72	6.76	6.73	6.76	6.74	6.79	6.81	6.79	6.83	6.92	7.10	*7.16	*7.14	*7.15
Furniture and fixtures	5.06	5.49	5.55	5.59	5.60	5.63	5.70	5.71	5.74	5.76	5.78	5.83	5.89	5.91	*5.98	*5.99
Stone, clay, and glass products	6.85	7.50	7.63	7.69	7.74	7.81	7.83	7.87	7.89	7.94	8.11	8.20	8.31	*8.39	*8.40	*8.50
Primary metal industries	8.98	9.77	9.85	9.96	10.10	10.29	10.36	10.36	10.56	10.52	10.76	10.68	10.76	*10.79	*10.99	*11.20
Fabricated metal products §	6.85	7.45	7.49	7.63	7.69	7.77	7.88	7.89	7.91	8.01	8.05	8.17	8.23	*8.22	*8.27	*8.33
Machinery, except electrical	7.32	8.00	8.02	8.21	8.30	8.38	8.50	8.53	8.56	8.62	8.67	8.75	8.81	8.85	8.85	*9.00
Electric and electronic equipment @	6.32	6.95	7.01	7.12	7.18	7.27	7.38	7.41	7.43	7.47	7.51	7.55	7.60	*7.69	*7.76	*7.83
Transportation equipment §	8.53	9.32	9.33	9.54	9.75	9.87	10.09	9.96	9.93	10.08	10.14	10.25	10.36	*10.35	*10.30	*10.46
Instruments and related products	6.17	6.90	6.86	6.91	6.94	7.01	7.13	7.19	7.20	7.23	7.25	7.31	7.34	*7.44	*7.48	*7.54
Miscellaneous manufacturing	5.03	5.47	5.48	5.53	5.56	5.62	5.73	5.82	5.83	5.85	5.91	5.93	5.93	*5.98	*5.97	*6.05
Nondurable goods	6.01	6.56	6.65	6.71	6.74	6.82	6.89	6.97	6.98	7.01	7.08	7.11	7.14	7.23	7.24	*7.38
Excluding overtime	5.78	6.33	6.41	6.46	6.50	6.57	6.63	6.72	6.74	6.77	6.86	6.86	6.88	*6.98	*6.97	*7.10
Food and kindred products	6.27	6.86	6.90	6.94	6.95	7.09	7.13	7.21	7.24	7.29	7.37	7.43	7.43	*7.47	*7.50	*7.60
Tobacco manufactures	6.67	7.73	7.82	7.53	7.69	7.86	8.10	8.50	8.56	8.61	8.90	9.03	9.33	*9.43	*8.63	*8.53
Textile mill products	4.66	5.08	5.20	5.25	5.27	5.31	5.34	5.35	5.35	5.36	5.36	5.40	5.42	5.51	5.64	*5.66
Apparel and other textile products	4.23	4.57	4.60	4.69	4.73	4.75	4.81	4.89	4.87	4.94	4.96	4.98	5.00	*4.94	*4.98	*5.04
Paper and allied products	7.13	7.84	7.99	8.06	8.09	8.18	8.27	8.27	8.28	8.30	8.37	8.42	8.55	*8.73	*8.68	*8.99
Printing and publishing	6.94	7.53	7.62	7.73	7.74	7.79	7.88	7.9								

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980	1980					1981									
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
<b>LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued</b>																	
<b>HOURLY AND WEEKLY EARNINGS</b> †—Cont.																	
Average hourly earnings per worker—Cont.																	
Seasonally adjusted:																	
Private nonagricultural payrolls .....	dollars..	6.16	6.66	6.72	6.76	6.83	6.90	6.94	6.99	7.04	7.09	7.14	7.18	7.23	*7.26	7.34	*7.34
Mining .....	do....	8.49	9.17	9.16	9.31	9.36	9.49	9.57	9.77	9.86	9.85	9.70	9.68	9.94	*10.11	*10.15	*10.25
Construction .....	do....	9.27	9.92	10.02	10.05	10.15	10.21	10.30	10.39	10.44	10.49	10.52	10.57	10.69	*10.77	*10.85	*10.88
Manufacturing .....	do....	6.70	7.27	7.36	7.41	7.49	7.59	7.63	7.69	7.74	7.80	7.90	7.95	7.99	8.02	*8.08	*8.14
Transportation and public utilities .....	do....	8.16	8.87	8.93	8.94	9.12	9.20	9.26	9.33	9.44	9.48	9.57	9.67	9.74	*9.71	*9.85	*9.89
Wholesale and retail trade .....	do....	5.06	5.48	5.54	5.57	5.61	5.66	5.69	5.72	5.78	5.81	5.84	5.89	5.91	5.93	*5.98	*6.00
Finance, insurance, and real estate .....	do....	5.27	5.78	5.83	5.87	5.91	6.02	6.00	6.10	6.21	6.19	6.20	6.24	6.24	*6.27	*6.37	*6.35
Services .....	do....	5.36	5.85	5.91	5.94	6.00	6.07	6.11	6.15	6.20	6.24	6.27	6.32	6.38	*6.42	*6.51	*6.49
Indexes of avg. hourly earnings, seas. adj.: †																	
Private nonfarm economy:																	
Current dollars, seasonally adjusted .....	1977=100..	116.7	127.3	128.7	129.4	130.6	132.1	132.6	133.8	135.0	135.8	136.7	137.7	138.4	*139.0	*140.6	*141.0
1977 dollars † .....	do....	97.3	93.5	93.9	93.3	93.2	93.2	92.7	92.8	92.7	92.8	93.0	93.1	92.9	*92.2	*92.6	*92.6
Mining .....	do....	122.9	134.1	135.0	136.7	137.5	139.2	139.8	142.0	143.2	144.0	145.7	145.6	147.2	*148.9	*149.3	*150.4
Construction .....	do....	114.1	121.8	122.8	123.1	124.4	125.2	126.2	127.6	128.0	128.6	129.0	129.4	130.4	*131.8	*132.6	*132.4
Manufacturing .....	do....	117.6	129.4	131.3	132.3	133.5	134.6	135.4	136.5	137.5	138.5	139.9	140.7	141.6	*142.5	*143.5	*145.1
Transportation and public utilities .....	do....	116.8	127.2	128.0	128.1	130.9	132.6	132.8	133.7	135.4	136.1	137.3	138.9	139.8	*139.3	*141.2	*141.6
Wholesale and retail trade .....	do....	118.0	127.8	129.3	129.9	130.8	132.3	132.4	133.7	135.0	135.8	136.4	137.4	137.8	*138.4	*139.7	*139.9
Finance, insurance, and real estate .....	do....	116.0	127.0	128.6	129.1	129.9	132.4	131.9	133.2	135.0	136.0	135.4	136.8	137.1	*137.4	*140.4	*139.9
Services .....	do....	115.1	125.5	126.6	127.3	128.5	130.5	131.1	132.0	133.2	134.0	134.8	136.0	136.6	*136.9	*139.5	*139.1
Hourly wages, not seasonally adjusted:																	
Construction wages, 20 cities (ENR): ‡																	
Common labor .....	\$ per hr.	10.78	11.73	12.02	12.17	12.25	12.28	12.29	12.28	12.28	12.36	12.45	12.56	12.77	13.03	13.09	*13.27
Skilled labor .....	do....	14.22	18.42	15.70	15.79	15.91	15.95	16.04	16.07	16.07	16.11	16.13	16.30	16.48	16.85	16.98	*17.31
Farm (U.S.) wage rates, hired workers, by method of pay:																	
All workers, including piece-rate .....	\$ per hr.	3.39	3.66			3.85				4.12			3.92				
All workers, other than piece-rate .....	do....	3.34	3.59			3.73				4.04			3.88				
Workers receiving cash wages only .....	do....	3.58	3.82			3.92				4.36			4.09				
Workers paid per hour, cash wages only .....	do....	3.41	3.67			3.83				4.09			3.91				
Railroad wages (average, class 1) .....	do....	8.93	9.92	10.28	10.31	10.25	10.49	10.39	10.51	10.71	10.49	10.58	10.62	*10.54	10.56		
Avg. weekly earnings per worker, private nonfarm: †																	
Current dollars, seasonally adjusted .....		219.91	235.10	236.54	238.63	241.10	243.57	244.98	247.81	247.81	250.28	252.76	253.45	254.50	*256.28	*258.37	*256.17
1977 dollars, seasonally adjusted † .....		183.41	172.74	172.53	172.05	172.09	171.89	171.19	171.12	170.20	170.96	172.06	171.37	170.92	*170.06	*170.20	
Spendable earnings (worker with 3 dependents):																	
Current dollars, seasonally adjusted .....		178.00	188.82	207.49	209.08	210.95	212.83	213.90	213.96	214.75	216.62	218.48	219.00	219.80	*221.14	*222.71	*221.05
1977 dollars, seasonally adjusted † .....		148.46	138.74	151.34	150.74	150.57	150.20	149.48	148.38	147.49	147.96	148.73	148.07	147.62	146.55	146.71	
Current dollars, not seasonally adjusted:																	
Private nonfarm, total .....	dollars..	219.91	235.10	236.79	239.69	241.81	244.28	247.06	246.75	247.10	249.92	250.98	252.38	254.88	*257.74	*259.88	*257.95
Mining .....	do....	365.07	396.14	395.71	404.99	408.10	413.76	422.04	425.97	422.01	416.66	422.92	423.98	418.47	*439.79	*446.60	*442.80
Construction .....	do....	342.99	367.04	374.49	386.84	388.10	376.83	384.28	379.29	364.35	388.37	384.87	388.56	394.32	*404.90	*406.54	*390.53
Manufacturing .....	do....	269.34	288.62	287.62	295.32	298.10	305.52	314.16	308.43	306.13	311.22	312.84	317.59	320.39	*317.59	*319.20	*320.30
Durable goods .....	do....	290.90	310.78	308.47	318.38	322.80	330.08	341.55	332.49	329.57	336.96	338.52	343.07	345.91	*341.15	*344.51	*343.73
Nondurable goods .....	do....	236.19	255.84	259.35	262.36	263.53	268.71	274.91	273.22	271.52	274.09	275.41	280.13	282.03	*282.69	*285.26	*287.82
Transportation and public utilities .....	do....	325.58	351.25	354.92	358.09	365.76	368.02	372.00	367.60	373.28	371.15	374.92	376.89	383.27	*385.66	*392.43	*388.22
Wholesale and retail trade .....	do....	164.96	176.46	179.52	179.03	179.44	181.04	182.65	183.86	185.13	186.62	188.43	188.48	190.25	*193.85	*193.91	*192.28
Wholesale trade .....	do....	247.93	267.96	268.42	272.20	274.38	276.82	281.25	281.82	282.65	285.67	287.60	289.14	289.89	*294.49	*295.29	*294.91
Retail trade .....	do....	138.62	147.38	151.10	149.49	149.40	150.60	152.20	152.81	153.92	154.96	156.68	158.99	161.92	*162.23	*160.66	
Finance, insurance, and real estate .....	do....	190.77	209.24	211.63	211.91	214.53	218.53	217.80	222.04	226.04	225.32	225.06	225.26	225.26	*227.60	*231.87	*229.24
Services .....	do....	175.27	190.71	192.31	193.32	195.60	198.53	199.51	201.83	204.40	205.05	205.38	205.73	206.99	*209.22	*210.89	*209.95
<b>HELP-WANTED ADVERTISING</b>																	
Seasonally adjusted index .....	1967=100..	158	129	117	122	127	134	130	128	129	125	118	118	121	123	*119	
<b>LABOR TURNOVER</b>																	
Manufacturing establishments:																	
Unadjusted for seasonal variation:																	
Accession rate, total																	
mo. rate per 100 employees..		4.0	3.5	4.5	4.3	3.6	2.7	2.2	3.4	3.0	3.4	3.3	3.5	4.0	3.6	*3.9	
New hires .....	do....	2.9	2.1	2.5	2.6	2.2	1.6	1.2	1.8	1.8	2.0	2.0	2.3	2.8	*2.4	*2.6	
Separation rate, total .....	do....	4.0	4.0	4.8	4.1	3.7	3.0	3.1	3.6	3.1	3.2	3.1	3.1	3.2	3.6	*4.3	
Quit .....	do....	2.0	1.5	2.2	1.9	1.4	1.1	0.9	1.2	1.1	1.2	1.3	1.3	1.4	1.5	*2.1	
Layoff .....	do....	1.1	1.7	1.7	1.4	1.5	1.3	1.6	1.6	1.2	1.2	1.0	1.0	1.1	1.3	*1.4	
Seasonally adjusted:																	
Accession rate, total .....	do....			3.6	3.8	3.8	3.6	3.6	3.5	3.6	3.5	3.2	3.1	3.4	*3.4	*3.1	
New hires .....	do....			1.9	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.0	2.0	2.2	*2.3	*2.0	
Separation rate, total .....	do....			3.9	3.5	3.4	3.3	3.3	3.6	3.8	3.6	3.3	3.4	3.4	3.2	*3.5	
Quit .....	do....			1.3	1.3	1.3	1.4	1.5	1.5	1.5	1.4	1.3	1.3	1.4	1.5	*1.3	
Layoff .....	do....			1.9	1.5	1.4	1.2	1.1	1.3	1.4	1.4	1.2	1.3	1.3	1.0	*1.5	
<b>UNEMPLOYMENT INSURANCE</b>																	
Unemployment insurance programs:																	
Insured unemployment, all programs, average weekly # @ .....																	
thous..		2,592	3,837	3,911	3,961	3,660	3,726	4,085	4,621	4,264	3,948	3,453	3,111	2,949	3,008		
State programs (excl. extended duration prov.):																	
Initial claims .....	thous..	20,160	25,412	1,828	1,702	1,808	1,673	2,544	2,653	1,806	1,684	1,647	1,417	1,741			
Insured unemployment, avg. weekly .....	do....	2,433	3,350	3,408	3,087	2,903	2,983	3,321	3,844	3,669	3,382	2,988	2,691	2,596	2,739		
Percent of covered employment: @@																	
Unadjusted .....		3.0	2.9	3.9	3.6	3.3	3.4	3.8	4.4	4.2	3.9	3.4	3.1	3.0	3.1		
Seasonally adjusted .....				4.4	4.4	4.1	3.8	3.5	3.4	3.2	3.3	3.4	3.4	3.4	3.2		
Beneficiaries, average weekly .....	thous..	2,033	2,844	3,026	2,656	2,488	2,381	2,738	3,234	3,220	3,069	2,698	2,331	2,256			
Benefits paid @ .....	mil. \$.	8,612.9	14,584.9	1,244.4	1,144.9	1,125.4	1,055.1	1,243.0	1,416.5	1,313.5	1,393.6	1,226.8	1,006.3	1,012.8			
Federal employees, insured unemployment, average weekly .....																	
thous..		28	29	25	29	32	35	37	41	40	36	31	27	25	25		
Veterans' program (UCX):																	
Initial claims .....	do....	282	267	23	25	23	17	21	19	17	18	16	15	19			
Insured unemployment, avg. weekly .....	do....	52	55	55													

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980	1980					1981						
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.

LABOR FORCE, EMPLOYMENT, AND EARNINGS—Continued

WORK STOPPAGES																	
Industrial disputes:																	
Number of stoppages:																	
Beginning in month or year .....	4,827	4,000	374	420	347	201	66	253	347	314	371	473	421	391	310		
Workers involved in stoppages:																	
Beginning in month or year .....	1,727	1,400	80	126	90	52	18	50	90	271	101	152	186	127	49		
Days idle during month or year .....	34,754	31,500	3,079	3,407	2,195	1,110	617	614	647	1,419	5,117	5,857	3,891	2,015	1,387		

FINANCE

BANKING																	
Open market paper outstanding, end of period:																	
Bankers' acceptances .....	45,321	54,744	54,486	55,774	56,610	55,226	54,744	54,465	58,084	60,089	62,320	60,551	63,427	63,721			
Commercial and financial co. paper, total .....	110,432	121,597	119,339	119,781	121,324	124,484	121,597	128,187	129,929	130,118	134,696	140,056	145,994	150,265			
Financial companies .....	81,617	86,242	81,231	81,257	83,936	86,268	86,242	88,532	88,527	89,682	92,226	95,716	99,458	103,294			
Dealer placed .....	17,001	18,479	17,485	17,503	17,672	18,605	18,479	18,927	19,498	20,652	22,082	22,675	23,438	23,670			
Directly placed .....	64,616	67,763	63,746	63,754	66,264	67,663	67,763	69,605	69,029	69,030	70,144	73,041	76,020	79,624			
Nonfinancial companies .....	28,815	35,355	38,108	38,524	37,388	38,216	35,355	39,655	41,402	40,436	42,470	44,340	46,536	46,971			
Agricultural loans and discounts outstanding of agencies supervised by the Farm Credit Adm.:																	
Total, end of period .....	58,496	68,648	66,239	66,975	67,966	68,324	68,648	70,105	70,886	72,123	73,382	74,452	75,207	76,412	77,072		
Farm mortgage loans:																	
Federal land banks .....	31,284	38,138	36,470	36,843	37,260	37,612	38,138	38,740	39,375	40,264	41,111	41,913	42,693	43,450	44,064		
Loans to cooperatives .....	8,091	9,506	8,388	8,902	9,988	10,261	9,506	10,324	10,056	9,802	9,648	9,361	8,807	8,897	8,932		
Other loans and discounts .....	19,122	21,005	21,381	21,230	20,718	20,451	21,005	21,042	21,455	22,057	22,624	23,178	23,707	24,065	24,075		
Federal Reserve banks, condition, end of period:																	
Assets, total # .....	162,947	171,495	162,860	167,788	164,067	169,041	171,495	161,467	161,824	167,040	168,067	164,447	171,311	167,377	168,429	181,639	
Reserve bank credit outstanding, total # .....	135,092	137,644	134,462	134,437	135,029	139,576	137,644	129,492	129,152	131,037	132,896	130,939	132,227	134,957	136,699	138,288	
Time loans .....	1,454	1,809	1,515	982	1,567	2,284	1,809	1,304	1,249	656	2,333	1,366	1,010	1,027	1,254	2,486	
U.S. Government securities .....	117,458	121,328	119,848	120,711	121,482	120,812	121,328	117,169	117,621	118,043	119,687	118,311	120,017	123,172	124,522	124,330	
Gold certificate account .....	11,112	11,161	11,172	11,168	11,163	11,162	11,161	11,159	11,156	11,154	11,154	11,154	11,154	11,154	11,154	11,152	
Liabilities, total # .....	162,947	171,495	162,860	167,788	164,067	169,041	171,495	161,467	161,824	167,040	168,067	164,447	171,311	167,377	168,429	181,639	
Deposits, total .....	35,708	31,546	33,141	33,071	33,088	34,809	31,546	30,747	29,777	29,983	31,310	27,213	27,423	29,690	30,398	41,924	
Member-bank reserve balances .....	29,520	27,456	29,338	28,146	30,518	31,528	27,456	26,621	26,734	26,164	26,063	24,304	23,626	26,011	27,045	27,243	
Federal Reserve notes in circulation .....	113,355	124,241	116,925	117,144	118,248	121,191	124,241	118,147	118,854	120,874	121,852	123,251	124,783	124,765	125,134	125,050	
All member banks of Federal Reserve System, averages of daily figures:																	
Reserves held, total .....	143,972	140,097	40,373	41,164	41,815	41,678	40,097	41,514	39,650	39,752	40,153	40,344	40,648	41,057	41,024	40,579	
Required .....	143,578	140,067	40,071	40,908	41,498	40,723	40,067	41,025	39,448	39,372	40,071	40,213	40,098	40,675	40,753	40,179	
Excess .....	394	30	302	256	317	955	30	489	202	380	82	131	550	382	271	400	
Borrowings from Federal Reserve banks .....	1,473	1,617	659	1,311	1,335	2,156	1,617	1,405	1,278	1,004	1,343	2,154	2,038	1,751	1,408	1,473	
Free reserves .....	1,997	1,471	347	1,029	951	1,102	1,471	796	928	427	1,100	1,764	1,197	1,121	917	851	
Large commercial banks reporting to Federal Reserve System, Wed. nearest end of yr. or mo.:																	
Deposits:																	
Demand, adjusted \$ .....	123,332	119,584	109,474	112,963	108,156	111,706	119,584	100,185	95,658	106,246	97,595	97,121	101,467	97,063	95,344	100,820	
Demand, total # .....	220,048	228,967	204,865	209,182	191,810	207,817	228,967	185,566	183,252	206,616	188,663	195,134	209,662	173,405	187,465	209,326	
Individuals, partnerships, and corp. ....	156,462	158,722	143,267	145,772	135,213	143,831	158,722	127,940	123,777	139,810	128,835	130,752	140,425	122,049	128,044	136,206	
State and local governments .....	5,992	5,933	4,907	5,155	4,658	4,804	5,933	4,846	4,714	4,938	4,456	4,262	5,176	4,163	4,532	5,137	
U.S. Government .....	868	1,088	1,019	1,035	787	2,964	1,088	1,676	1,579	1,005	2,881	3,312	1,822	1,784	1,111	2,196	
Domestic commercial banks .....	36,052	41,710	36,589	37,565	34,457	36,804	41,710	34,044	35,230	38,664	32,839	36,735	41,213	27,901	36,984	43,903	
Time, total # .....	269,049	313,750	282,456	286,149	289,376	300,970	313,750	320,947	320,996	321,801	322,992	334,602	337,291	341,228	349,890	349,177	
Individuals, partnerships, and corp. ....																	
Savings .....	75,202	72,313	76,240	76,999	76,042	74,946	72,313	74,382	75,072	79,344	77,897	77,797	78,236	76,373	76,204	75,388	
Other time .....	160,840	205,805	174,761	177,677	181,124	193,269	205,805	210,718	209,948	208,372	211,052	221,968	226,009	232,390	239,748	240,298	
Loans (adjusted), total \$ .....	404,117	433,583	404,474	411,964	412,556	424,173	433,583	425,949	423,216	430,070	430,525	437,332	450,145	442,601	452,410	460,457	
Commercial and industrial .....	160,317	174,751	161,761	166,584	166,168	172,266	174,751	171,414	169,482	172,782	174,525	176,623	182,502	180,479	184,978	188,033	
For purchasing or carrying securities .....	9,904	9,979	6,926	7,646	7,084	8,960	9,979	7,746	8,182	10,151	8,708	10,396	12,100	9,160	8,622	10,201	
To nonbank financial institutions .....	26,610	25,988	23,470	24,278	24,024	24,842	25,988	25,253	24,875	24,598	25,338	25,836	26,774	25,929	27,119	26,277	
Real estate loans .....	100,542	111,665	107,406	108,799	109,464	110,728	111,665	112,866	113,681	114,468	115,337	116,622	117,723	118,697	120,047	121,559	
Other loans .....	138,475	135,983	129,017	128,882	126,159	133,629	135,983	131,059	131,875	134,392	129,376	132,871	137,441	133,067	139,661	145,480	
Investments, total .....	108,868	118,036	116,303	115,318	114,236	116,520	118,036	117,337	118,190	120,108	117,234	121,042	119,513	118,132	117,549	117,272	
U.S. Government securities, total .....	36,406	39,539	40,526	38,937	37,674	39,409	39,539	39,777	40,816	41,754	39,720	42,128	40,599	40,657	38,856	37,785	
Investment account # .....	31,533	35,242	35,076	34,613	33,897	34,422	35,242	33,438	33,726	33,897	34,280	34,444	33,807	33,410	31,987	31,642	
Other securities .....	72,462	78,497	75,777	76,381	76,562	77,111	78,497	77,560	77,374	78,354	77,514	78,914	78,914	77,475	78,693	79,487	
Commercial bank credit, seas. adj.:																	
Total loans and securities ¶ .....	1,134.6	1,237.2	1,180.9	1,193.4	1,206.5	1,224.3	1,237.2	1,253.3	1,262.9	1,262.4	1,267.0	1,279.3	1,285.4	1,291.6	1,302.8	1,314.2	
U.S. Treasury securities ¶ .....	93.8	110.7	105.7	107.7	109.1	110.5	110.7	113.5	115.2	114.8	115.1	117.5	119.3	120.4	119.4	117.6	
Other securities .....	191.8	213.9	206.9	207.5	209.9	212.1	213.9	216.2	217.2	218.3	217.6	218.7	219.0	219.5	221.9	223.9	
Total loans and leases ¶ .....	848.9	912.7	868.4	878.1	887.6	901.7	912.7	923.6	930.4	929.3	934.2	943.1	947.1	951.7	961.5	972.7	
Money and interest rates:																	
Discount rate (N.Y.F.R. Bank), end of year or month .....	12.00	12.87	10.00	10.17	11.00	11.47	12.87	13.00	13.00	13.00	13.00	13.87	14.00	14.00	14.00	14.00	
Federal intermediate credit bank loans .....	*10.09	*12.22	12.03	11.82	11.50	11.53	11.90	12.29	12.93	13.35	13.65	13.95	14.29	14.59	14.83	15.11	
Home mortgage rates (conventional 1st mortgages):																	
New home purchase (U.S. avg.) .....	*10.48	*12.25	11.84	11.95	12.20	12.62	12.86	12.80	13.02								

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979		1980						1981							
	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FINANCE—Continued</b>																
<b>CONSUMER INSTALLMENT CREDIT</b>																
Total extended and liquidated:																
Unadjusted:																
Extended .....	mil. \$.	324,777	305,887	27,391	26,907	28,136	24,918	31,052	23,145	23,672	29,519	29,117	28,321	30,477	29,468	30,075
Liquidated .....	do....	286,396	304,477	25,481	25,744	27,840	24,088	25,669	26,027	25,037	27,940	26,464	26,275	27,485	27,040	26,312
Seasonally adjusted:																
Extended, total # .....	do....			26,176	27,064	27,365	25,991	27,149	27,059	28,706	29,822	28,878	28,149	29,005	28,750	28,899
By major holder:																
Commercial banks .....	do....			11,107	11,671	11,977	11,432	11,484	10,397	11,648	12,676	11,986	12,055	12,483	12,433	12,034
Finance companies .....	do....			5,155	5,355	5,323	4,852	5,185	5,904	6,193	5,911	5,218	4,937	5,251	5,439	6,385
Credit unions .....	do....			3,085	2,752	2,872	2,795	3,035	2,994	3,167	3,153	3,181	3,212	3,137	3,299	2,913
Retailers .....	do....			4,263	4,596	4,291	4,250	4,497	4,673	4,500	4,685	5,002	4,486	5,018	4,826	4,616
By major credit type:																
Automobile .....	do....			7,400	7,518	7,544	7,117	7,234	7,237	8,333	8,700	7,205	7,320	7,442	8,178	8,573
Revolving .....	do....			10,700	11,143	11,124	10,953	11,614	11,483	11,867	12,071	12,352	11,904	12,668	12,190	11,964
Mobile home .....	do....			415	442	513	424	479	383	409	641	551	609	488	451	536
Liquidated, total # .....	do....			25,687	26,009	26,663	25,152	25,530	26,190	26,710	26,714	26,547	26,803	27,075	26,796	26,040
By major holder:																
Commercial banks .....	do....			11,789	11,936	12,313	11,552	11,760	11,754	12,192	12,064	12,331	12,069	11,869	12,001	11,849
Finance companies .....	do....			4,768	4,742	4,869	4,258	4,325	4,791	4,663	4,372	3,965	4,528	4,681	4,491	4,002
Credit unions .....	do....			2,620	2,716	2,809	2,577	2,657	2,706	2,723	2,866	2,909	2,821	2,918	2,767	2,668
Retailers .....	do....			4,103	4,104	4,157	4,198	4,181	4,264	4,397	4,432	4,471	4,489	4,602	4,561	4,629
By major credit type:																
Automobile .....	do....			7,045	7,434	7,343	6,872	6,932	7,300	7,354	7,018	6,777	7,515	7,385	6,970	6,458
Revolving .....	do....			10,419	10,665	10,851	10,688	10,998	10,926	11,426	11,484	11,514	11,554	11,650	11,713	11,473
Mobile home .....	do....			382	399	372	400	413	407	456	553	406	366	399	384	360
Total outstanding, end of year or month # .....	do....	312,024	313,435	305,763	306,926	307,222	308,051	313,435	310,554	309,188	310,766	313,419	315,465	318,459	320,886	324,653
By major holder:																
Commercial banks .....	do....	154,177	145,765	146,548	146,362	145,895	145,147	145,765	143,749	142,030	141,897	142,070	142,143	143,310	144,020	144,769
Finance companies .....	do....	68,318	76,756	74,433	74,823	74,985	75,690	76,756	77,131	78,090	79,490	81,033	81,794	82,723	83,924	86,152
Credit unions .....	do....	46,517	44,041	43,347	43,562	43,518	43,606	44,041	43,601	43,776	44,212	44,390	45,055	45,686	46,096	46,605
Retailers .....	do....	28,119	29,410	24,918	25,301	25,703	26,469	29,410	28,300	27,329	26,965	27,227	27,319	27,412	27,469	27,494
By major credit type:																
Automobile .....	do....	116,362	116,327	116,868	116,781	116,657	116,517	116,327	115,262	115,677	117,517	118,479	118,932	119,685	121,002	123,219
Revolving .....	do....	56,937	59,862	53,771	54,406	54,598	55,304	59,862	58,985	57,566	56,831	57,322	57,524	58,470	58,976	59,745
Mobile home .....	do....	16,838	17,327	17,068	17,113	17,276	17,293	17,327	17,244	17,189	17,273	17,422	17,626	17,724	17,784	17,988
<b>FEDERAL GOVERNMENT FINANCE</b>																
Budget receipts and outlays:																
Receipts (net) .....	mil. \$.	'465,955	'520,050	44,259	53,544	38,923	39,175	48,903	52,214	38,394	44,623	74,464	38,514	70,688	48,142	
Outlays (net) .....	do....	'493,607	'579,011	50,755	47,289	56,304	48,049	56,202	59,099	53,969	54,217	57,198	54,608	55,619	58,486	
Budget surplus or deficit (—) .....	do....	'-27,652	'-58,961	-6,496	6,255	-17,382	-8,874	-7,299	-6,884	-15,575	-9,593	17,266	-16,094	-15,070	-10,343	
Budget financing, total .....	do....	'27,652	'58,961	6,496	-6,255	17,382	8,874	7,299	6,884	15,575	9,593	-17,266	16,094	-15,070	10,343	
Borrowing from the public .....	do....	'33,641	'70,515	11,111	6,260	4,758	9,231	13,668	6,772	13,916	15,138	-3,725	539	572	3,383	
Reduction in cash balances .....	do....	'-5,989	'-11,554	-4,615	-12,515	12,624	-357	-6,369	112	1,659	-5,545	-13,541	15,555	-15,642	6,960	
Gross amount of debt outstanding .....	do....	'833,751	'914,317	900,075	914,317	914,782	920,316	936,686	940,528	956,898	970,901	970,326	974,758	977,350	979,388	
Held by the public .....	do....	'644,589	'715,105	708,844	715,105	719,862	729,094	742,761	749,533	763,449	778,587	774,863	775,402	775,973	779,356	
Budget receipts by source and outlays by agency:																
Receipts (net), total .....	mil. \$.	'465,955	'520,050	44,259	53,544	38,923	39,175	48,903	52,214	38,394	44,623	74,464	38,514	70,688	48,142	
Individual income taxes (net) .....	do....	'217,841	'244,069	19,527	26,936	21,150	20,851	23,725	30,964	15,348	13,693	38,659	10,496	33,729	24,439	
Corporation income taxes (net) .....	do....	'65,677	'64,600	1,367	8,884	1,284	1,003	9,387	2,158	564	8,586	9,371	1,011	15,792	1,715	
Social insurance taxes and contributions (net) .....	mil. \$.	'141,591	'160,747	18,546	12,860	11,283	13,242	11,078	14,363	17,211	15,784	20,201	20,694	14,657	15,206	
Other .....	do....	'40,847	'50,634	4,816	4,864	5,205	4,078	4,714	4,728	5,272	6,560	6,232	6,312	6,510	6,783	
Outlays, total # .....	do....	'493,607	'579,011	50,755	47,289	56,306	48,049	56,202	59,099	53,969	54,217	57,198	54,608	55,619	58,486	
Agriculture Department .....	do....	'20,636	'24,555	1,374	1,340	1,785	1,829	3,415	5,212	2,390	1,802	1,546	1,456	2,117	1,123	
Defense Department, military .....	do....	'115,013	'132,840	11,402	11,345	12,705	11,601	12,281	12,424	12,544	13,263	13,000	13,500	13,464	14,392	
Health and Human Services Department \$ .....	mil. \$.	'170,297	'194,691	17,992	17,153	19,017	16,919	19,133	19,083	18,702	18,783	19,308	18,897	19,074	21,141	
Treasury Department .....	do....	'60,988	'76,642	5,164	5,016	7,286	5,625	10,944	5,222	6,936	6,878	8,376	7,415	12,100	7,522	
National Aeronautics and Space Adm .....	do....	'4,187	'4,850	456	356	479	425	499	381	459	559	483	461	509	417	
Veterans Administration .....	do....	'19,887	'21,135	2,655	744	2,857	717	3,028	1,921	1,953	1,025	2,164	1,668	1,784	2,992	
<b>LIFE INSURANCE</b>																
Institute of Life Insurance:																
Assets, total, all U.S. life insurance cos .....	bil. \$.	432.28	479.21	461.11	466.57	470.72	476.29	479.21	482.01	485.03	490.15	493.18	497.28	500.32	503.99	
Government securities .....	do....	29.72	33.02	31.23	31.35	31.57	31.82	33.02	33.56	34.34	34.66	34.75	35.38	36.30	36.82	
Corporate securities .....	do....	208.75	226.97	220.38	223.59	226.03	228.99	226.97	229.64	230.00	232.11	233.70	235.00	235.85	237.06	
Mortgage loans, total .....	do....	118.42	131.08	127.32	128.06	128.96	129.81	131.08	131.71	132.57	133.23	133.90	134.49	135.32	135.93	
Nonfarm .....	do....	106.24	118.12	114.54	115.24	116.09	116.91	118.12	118.78	119.60	120.26	120.92	121.47	122.29	122.84	
Real estate .....	do....	13.01	15.03	14.42	14.59	14.79	14.92	15.03	15.66	15.87	16.24	16.46	16.74	16.97	17.43	
Policy loans and premium notes .....	do....	34.82	41.41	39.91	40.21	40.50	40.81	41.41	41.99	42.57	43.23	43.77	44.29	44.97	45.59	
Cash .....	do....	2.67	3.21	2.04	2.10	1.52	1.82	3.21	1.82	1.59	1.72	1.70	1.80	1.82	1.62	
Other assets .....	do....	24.89	28.49	25.81	26.67	27.34	28.11	28.49	27.63	28.09	28.95	28.91	29.57	29.09	29.54	
Life Insurance Agency Management Association:																
Insurance written (new paid-for insurance):																
Value, estimated total .....	mil. \$.	492,812	544,572													

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980					1981									
	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
<b>FINANCE—Continued</b>																
<b>MONETARY STATISTICS</b>																
Gold and silver:																
Gold:																
Monetary stock, U.S. (end of period) ..... mil. \$..	11,172	11,160	11,172	11,168	11,163	11,162	11,160	11,159	11,156	11,154	11,154	11,154	11,154	11,154	11,154	
Net release from earmark \$ .....	294	204	9	38	1	18	3	72	1	9	-3	11	4	21		
Exports ..... thous. \$..	4,907,865	3,647,932	225,620	177,515	421,774	312,274	287,932	343,344	383,071	310,606	210,307	282,140	473,202	409,217	136,047	
Imports ..... do....	1,480,203	2,750,120	162,535	540,145	330,988	157,531	131,231	200,324	160,263	90,584	165,227	213,447	200,958	140,388	205,218	
Production:																
South Africa ..... mil. \$..	955.1	916.1	76.8	76.0	77.3	74.7	71.4	73.0	73.0	75.2	74.3	73.5	76.0	75.6	.....	
Canada ..... do....	45.9	60.5	.....	6.0	5.6	5.5	4.7	4.8	4.8	5.9	5.1	.....	.....	.....	.....	
Silver:																
Exports ..... thous. \$..	471,162	1,909,733	65,526	29,012	33,453	40,921	74,637	56,582	45,602	41,195	26,571	11,744	31,922	21,987	22,176	
Imports ..... do....	961,761	1,602,295	85,967	135,031	129,450	138,053	122,312	132,996	127,500	85,900	90,319	89,757	85,399	67,920	80,192	
Price at New York ..... dol. per fine oz..	11.094	20.632	15.897	20.144	20.181	18.648	16.393	14.752	13.024	12.338	11.437	10.848	10.001	8.631	8.925	
Production:																
United States ..... thous. fine oz..	27,397	33,602	1,607	3,277	2,577	3,034	3,607	2,820	2,611	1,524	2,520	2,032	2,649	2,434	1,957	
Currency in circulation (end of period) ..... bil. \$..	125.6	137.2	129.7	129.9	131.1	134.1	137.2	131.1	131.9	133.9	135.0	136.5	138.1	138.3	.....	
Money stock measures and components (averages of daily figures): †																
Measures (not seasonally adjusted): ‡																
M1-A ..... bil. \$..	363.4	379.7	381.1	386.6	391.7	394.1	397.7	378.9	358.7	358.9	369.5	359.4	361.1	363.5	*360.8	359.9
M1-B ..... do....	379.0	402.7	405.4	412.3	418.4	421.9	425.9	423.5	411.5	417.8	436.7	424.4	428.4	432.9	*431.3	432.3
M2 ..... do....	1,473.0	1,603.8	1,630.7	1,643.3	1,657.5	1,666.9	1,675.2	1,683.6	1,685.1	1,713.4	1,745.7	1,737.5	1,751.5	*1,765.0	*1,773.6	1,783.3
M3 ..... do....	*1,708.8	*1,870.3	1,892.6	1,909.6	1,931.4	1,952.0	1,975.6	1,994.9	2,000.9	2,024.8	2,052.5	2,054.0	2,075.6	*2,094.6	*2,111.1	2,126.5
L (M3 plus other liquid assets) ..... do....	*2,061.9	*2,266.5	2,285.5	2,304.8	2,327.0	2,353.6	2,385.0	2,411.5	2,426.8	2,446.1	2,467.4	2,478.0	*2,501.4	.....	.....	
Components (not seasonally adjusted):																
Currency ..... do....	102.3	111.8	113.7	113.7	114.9	116.7	118.4	115.7	115.8	116.8	118.4	119.3	119.9	121.4	*121.5	121.0
Demand deposits ..... do....	257.5	264.1	263.0	268.6	272.8	273.5	275.4	259.2	238.9	237.9	246.8	235.9	237.0	237.4	*234.5	234.3
Other checkable deposits †† ..... do....	15.6	23.1	24.4	25.9	26.8	28.0	28.3	44.8	53.0	59.2	67.5	65.3	67.6	69.7	70.8	72.8
Overnight RP's and Eurodollars * ..... do....	27.2	28.7	31.7	33.0	32.7	32.8	32.4	32.7	31.9	33.3	34.3	38.3	39.7	39.2	*40.1	36.4
Money market mutual funds ..... do....	26.9	69.8	80.7	78.2	77.4	77.0	75.8	80.7	92.4	105.6	117.1	118.1	122.8	134.3	*145.4	156.9
Savings deposits ..... do....	446.1	397.9	408.0	411.4	411.9	405.0	390.2	374.2	365.6	365.7	366.4	359.7	355.4	*352.9	*344.2	337.5
Small time deposits @ ..... do....	597.2	708.6	709.0	712.5	721.2	734.6	755.2	776.9	787.7	794.8	795.2	801.0	805.8	*809.6	*816.4	824.0
Large time deposits @ ..... do....	205.3	234.6	227.4	231.8	237.4	248.0	261.4	270.8	276.3	273.8	268.3	276.3	281.6	*286.0	*293.7	296.4
Measures (seasonally adjusted): ‡																
M1-A ..... do....	.....	.....	382.8	386.4	390.1	391.3	387.7	375.1	367.2	365.8	366.6	364.9	361.9	361.3	*362.2	359.8
M1-B ..... do....	.....	.....	406.9	411.8	416.3	419.1	415.6	419.2	421.2	425.8	433.7	431.5	428.8	430.1	*432.8	431.9
M2 ..... do....	.....	.....	1,633.4	1,644.9	1,654.0	1,668.5	1,669.4	1,680.8	1,695.7	1,718.6	1,738.1	1,743.4	1,749.3	*1,760.1	*1,777.2	1,786.7
M3 ..... do....	.....	.....	1,897.4	1,912.8	1,928.3	1,951.0	1,965.1	1,989.3	2,009.1	2,027.2	2,046.0	2,060.8	2,079.0	*2,094.0	*2,117.7	2,132.1
L (M3 plus other liquid assets) ..... do....	.....	.....	2,291.3	2,309.0	2,326.0	2,355.6	2,378.4	2,408.7	2,433.6	2,445.3	2,457.7	2,480.1	*2,502.7	.....	.....	
Components (seasonally adjusted):																
Currency ..... do....	.....	.....	113.4	113.8	114.9	115.7	116.1	116.6	117.2	117.9	118.9	119.8	119.9	120.8	*121.2	121.2
Demand deposits ..... do....	.....	.....	265.4	268.6	271.2	271.6	267.4	254.4	245.8	243.5	243.1	240.7	237.9	236.4	*236.7	234.3
Savings deposits ..... do....	.....	.....	404.6	407.9	407.8	406.1	393.0	376.9	370.8	368.3	367.0	361.1	354.0	*349.1	*341.2	334.7
Small time deposits @ ..... do....	.....	.....	713.6	718.1	724.0	738.0	756.8	775.7	783.3	789.4	790.0	798.4	807.7	*811.3	*821.6	830.6
Large time deposits @ ..... do....	.....	.....	229.6	233.4	237.7	245.4	256.8	268.0	273.9	271.0	269.5	277.2	287.3	*290.3	*296.7	298.6
<b>PROFITS AND DIVIDENDS (QTRLY.)</b>																
Manufacturing corps. (Fed. Trade Comm.):																
Net profit after taxes, all industries ..... mil. \$..	98,698	92,443	.....	20,982	.....	.....	24,262	.....	.....	23,586	.....	.....	29,005	.....	.....	
Food and kindred products ..... do....	7,340	8,223	.....	2,120	.....	.....	2,539	.....	.....	1,861	.....	.....	2,128	.....	.....	
Textile mill products ..... do....	1,340	986	.....	196	.....	.....	247	.....	.....	255	.....	.....	417	.....	.....	
Paper and allied products ..... do....	3,723	2,781	.....	621	.....	.....	689	.....	.....	758	.....	.....	853	.....	.....	
Chemicals and allied products ..... do....	10,896	11,219	.....	2,774	.....	.....	2,514	.....	.....	3,164	.....	.....	3,042	.....	.....	
Petroleum and coal products..... do....	21,936	25,491	.....	5,807	.....	.....	5,751	.....	.....	5,586	.....	.....	7,673	.....	.....	
Stone, clay, and glass products..... do....	2,373	1,812	.....	602	.....	.....	493	.....	.....	228	.....	.....	543	.....	.....	
Primary nonferrous metal ..... do....	2,691	2,771	.....	402	.....	.....	639	.....	.....	633	.....	.....	659	.....	.....	
Primary iron and steel ..... do....	2,185	2,336	.....	218	.....	.....	775	.....	.....	836	.....	.....	1,055	.....	.....	
Fabricated metal products (except ordnance, machinery, and transport. equip.) ..... mil. \$..	4,431	3,936	.....	870	.....	.....	977	.....	.....	1,035	.....	.....	1,303	.....	.....	
Machinery (except electrical) ..... do....	11,530	11,447	.....	2,637	.....	.....	3,329	.....	.....	2,813	.....	.....	3,234	.....	.....	
Elec. machinery, equip., and supplies ..... do....	7,386	7,137	.....	1,681	.....	.....	1,963	.....	.....	2,129	.....	.....	2,125	.....	.....	
Transportation equipment (except motor vehicles, etc.) ..... mil. \$..	3,189	3,077	.....	742	.....	.....	754	.....	.....	1,010	.....	.....	973	.....	.....	
Motor vehicles and equipment ..... do....	4,382	-3,438	.....	-1,626	.....	.....	-269	.....	.....	-386	.....	.....	921	.....	.....	
All other manufacturing industries ..... do....	15,314	14,665	.....	3,938	.....	.....	3,861	.....	.....	3,664	.....	.....	4,079	.....	.....	
Dividends paid (cash), all industries ..... do....	32,491	36,390	.....	8,920	.....	.....	9,763	.....	.....	9,649	.....	.....	9,961	.....	.....	
<b>SECURITIES ISSUED</b>																
Securities and Exchange Commission:																
Estimated gross proceeds, total ..... mil. \$..	57,671	80,564	5,559	5,341	6,143	4,124	6,763	5,417	4,402	6,577	8,239	5,874	10,973	4,183	.....	
By type of security:																
Bonds and notes, corporate ..... do....	40,850	55,719	4,205	3,217	3,074	2,262	3,647	3,209	2,830	4,159	4,694	3,176	5,699	2,117	.....	
Common stock ..... do....	8,709	18,996	1,123	1,717	2,158	1,516	2,648	1,831	1,174	2,003	2,445	2,435	4,754	1,690	.....	
Preferred stock ..... do....	3,525	3,634	131	406	491	256	241	364	149	298	85	164	188	67	.....	
By type of issuer:																
Corporate, total # ..... mil. \$..	53,084	78,349	5,459	5,340	5,723	4,034	6,536	5,404	4,153	6,460	7,224	5,775	10,641	3,874	.....	
Manufacturing ..... do....	11,563	24,398	1,856	1,069	1,509	550	2,422	2,244	1,344	1,820	1,990	2,172	1,895	812	.....	
Extractive (mining) ..... do....	3,192	4,818	238	533	244	263	830	542	521	619	562	753	1,997	397	.....	
Public utility ..... do....	13,736	15,940	1,444	1,487	1,169	892	1,058	692	853	1,161	1,468	1,499	1,839	691	.....	
Transportation ..... do....	3,297	3,745	378	463	357	200	260	477	126	189	288	96	602	85	.....	
Communication ..... do....	4,694	6,845	626	598	830	260	278	76	303	958	710	57	1,506	840	.....	
Financial and real estate ..... do....	12,867	15,638	712	764	1,138	1,182	1,100	587	585	1,305	1,743	858	2,201	802	.....	
State and municipal issues (Bond Buyer):																
Long-term ..... do....	42,261	47,133	3,918	4,226	4,391	2,943	3,738	2,574	2,890	3,695	5,082	3,358	4,921	3,255	2,777	
Short-term ..... do....	20,897	26,485	2,375	2,379	1,775	2,197	1,363	1,82								

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FINANCE—Continued</b>																
<b>SECURITY MARKETS—Continued</b>																
<b>Bonds</b>																
Prices:																
Standard & Poor's Corporation:																
High grade corporate:																
Composite \$..... dol. per \$100 bond.....	51.1	41.4	42.1	41.1	39.7	37.8	37.2	38.0	36.1	36.5	34.5	32.9	35.1	33.0	31.8	29.9
Domestic municipal (15 bonds)..... do.....	73.4	57.4	56.3	54.3	53.4	50.9	48.1	50.4	48.4	47.9	45.9	45.0	45.8	43.7	39.4	36.8
Sales:																
New York Stock Exchange, exclusive of some stopped sales, face value, total..... mil. \$.	4,087.89	5,190.30	367.58	373.04	414.73	427.57	709.63	353.06	324.18	398.95	430.18	418.49	457.82	444.69	475.07	577.36
Yields:																
Domestic corporate (Moody's)..... percent.....	10.12	12.75	12.33	12.80	13.07	13.63	14.04	13.80	14.22	14.26	14.66	15.15	14.76	15.18	15.60	16.18
By rating:																
Aaa..... do.....	9.63	11.94	11.64	12.02	12.31	12.97	13.21	12.81	13.35	13.33	13.88	14.32	13.75	14.38	14.89	15.49
Aa..... do.....	9.94	12.50	12.09	12.52	12.68	13.34	13.78	13.52	13.89	13.90	14.39	14.88	14.41	14.79	15.42	15.95
A..... do.....	10.20	12.89	12.44	12.97	13.05	13.59	14.03	13.83	14.27	14.47	14.82	15.43	15.08	15.36	15.76	16.36
Baa..... do.....	10.69	13.67	13.15	13.70	14.23	14.64	15.14	15.03	15.37	15.34	15.56	15.95	15.80	16.17	16.34	16.92
By group:																
Industrials..... do.....	9.85	12.35	11.84	12.31	12.60	13.20	13.60	13.37	13.60	13.66	14.00	14.45	14.25	14.48	14.87	15.47
Public utilities..... do.....	10.39	13.15	12.82	13.29	13.53	14.07	14.48	14.22	14.84	14.86	15.32	15.84	15.27	15.87	16.33	16.89
Railroads..... do.....	9.60	11.48	11.36	11.56	11.72	12.02	12.22	12.42	12.61	12.72	12.85	12.90	13.09	13.22	13.50	13.71
Domestic municipal:																
Bond Buyer (20 bonds)..... do.....	6.53	8.73	8.85	9.22	9.45	9.61	9.76	9.91	10.27	10.21	10.94	10.64	10.85	11.44	13.10	.....
Standard & Poor's Corp. (15 bonds)..... do.....	6.39	8.51	8.62	8.95	9.11	9.55	10.09	9.65	10.03	10.12	10.55	10.73	10.56	11.03	12.13	12.86
U.S. Treasury bonds, taxable \$..... do.....	8.74	10.81	10.53	10.94	11.20	11.83	11.89	11.65	12.23	12.15	12.62	12.96	12.39	13.05	13.61	14.14
<b>Stocks</b>																
Prices:																
Dow-Jones averages (65 stocks).....	293.46	328.23	342.77	348.16	356.44	373.14	368.40	371.59	365.26	381.05	390.66	380.45	384.92	368.97	364.22	333.33
Industrial (30 stocks).....	844.40	891.41	947.33	946.67	949.17	971.08	945.96	962.13	945.50	987.18	1,004.86	979.52	996.27	947.94	926.25	853.38
Public utility (15 stocks).....	104.56	110.43	110.38	111.44	112.34	114.43	114.23	113.51	108.86	108.42	107.32	106.84	108.79	107.59	111.49	105.18
Transportation (20 stocks).....	237.83	307.23	317.91	333.91	357.32	393.29	394.05	394.64	392.60	417.42	439.23	423.24	422.72	404.26	396.27	353.12
Standard & Poor's Corporation: \$																
Combined index (500 Stocks)..... 1941-43=10.....	103.01	118.78	123.50	126.51	130.22	135.65	133.48	132.97	128.40	133.19	134.43	131.73	132.28	129.13	129.63	118.27
Industrial, total (400 Stocks) #..... do.....	114.83	134.52	140.18	143.73	148.36	155.08	152.19	151.06	145.70	151.03	152.29	149.06	148.70	145.30	145.95	132.67
Capital goods (111 Stocks)..... do.....	115.27	131.37	136.55	142.10	145.07	153.68	149.78	147.23	143.14	149.76	150.80	146.78	144.84	140.10	141.13	126.60
Consumer goods (189 Stocks)..... do.....	83.82	86.88	93.62	95.41	92.76	92.28	90.30	94.61	94.45	100.84	105.96	104.67	108.55	101.63	110.04	93.67
Utilities (40 Stocks)..... do.....	50.40	50.54	51.18	51.10	51.49	52.08	51.66	52.01	49.81	50.36	50.96	50.37	52.15	52.28	54.06	51.01
Transportation (20 Stocks)..... 1970=10.....	14.53	18.52	18.83	19.85	21.77	24.65	24.55	24.25	23.64	25.02	25.88	24.48	24.12	23.55	22.99	20.03
Railroads (10 Stocks)..... 1941-43=10.....	51.74	75.57	73.90	80.64	90.82	106.28	106.74	102.31	97.69	101.32	103.25	94.77	90.91	92.55	91.12	78.81
Financial (40 Stocks)..... 1970=10.....	12.33	12.50	13.04	13.38	13.04	12.68	12.89	13.57	13.41	14.30	14.44	14.55	15.80	14.67	14.46	13.73
New York City banks (6 Stocks) 1941-43=10.....	44.48	44.00	45.81	45.86	43.27	43.19	46.63	48.70	48.18	49.83	49.65	52.57	58.23	53.94	53.42	50.82
Banks outside N.Y.C. (10 Stocks)..... do.....	104.86	102.90	105.24	107.15	103.65	103.58	109.74	117.50	116.43	119.52	119.30	118.09	127.68	120.62	117.24	111.69
Property-Casualty Insurance (6 Stocks) do.....	119.06	127.06	133.87	140.97	134.80	128.25	126.00	129.13	126.73	136.70	142.81	142.21	155.50	146.16	140.67	132.95
New York Stock Exchange common stock indexes:																
Composite..... 12/31/65=50.....	58.32	68.10	70.87	73.12	75.17	78.15	76.69	76.24	73.52	76.46	77.60	76.28	76.80	74.98	75.24	68.37
Industrial..... do.....	64.75	78.70	82.15	84.92	88.00	92.32	90.37	89.23	85.74	89.39	90.57	88.78	88.63	86.64	86.72	78.07
Transportation..... do.....	47.34	60.61	62.48	65.89	70.76	77.23	75.74	74.43	72.76	77.09	80.63	76.78	76.71	74.42	73.27	63.67
Utility..... do.....	38.20	37.35	38.18	38.77	38.44	38.35	37.84	38.53	37.59	37.82	38.34	38.27	39.23	38.90	40.22	38.17
Finance..... do.....	61.42	64.25	67.22	69.33	68.29	67.21	67.46	70.04	68.48	72.82	74.59	74.65	79.79	74.97	73.76	69.38
Yields (Standard & Poor's Corp.):																
Composite (500 stocks)..... percent.....	5.45	5.26	5.06	4.90	4.80	4.63	4.74	4.80	5.00	4.88	4.86	4.98	5.03	5.18	5.16	.....
Industrials (400 stocks)..... do.....	5.18	4.94	4.75	4.59	4.47	4.31	4.42	4.49	4.68	4.57	4.55	4.67	4.76	4.88	4.86	.....
Utilities (40 stocks)..... do.....	9.19	9.77	9.71	9.67	9.77	9.65	9.79	9.78	10.33	10.23	10.46	10.33	10.03	10.07	9.78	.....
Transportation (20 stocks)..... do.....	4.68	4.04	3.84	3.60	3.32	2.77	2.99	3.08	3.22	3.06	2.98	3.17	3.22	3.34	3.46	.....
Financial (40 stocks)..... do.....	5.47	5.75	5.54	5.38	5.58	5.84	5.71	5.52	5.62	5.38	5.41	5.38	4.95	5.35	5.43	.....
Preferred stocks, 10 high-grade..... do.....	9.11	10.60	10.04	10.14	10.64	11.35	11.94	11.55	11.83	11.81	11.81	12.30	12.23	12.43	12.63	13.01
Sales:																
Total on all registered exchanges (SEC):																
Market value..... mil. \$.	299,973	475,934	43,795	41,216	50,641	43,157	49,347	42,443	33,153	49,120	48,253	41,252	46,694	42,649	.....	.....
Shares sold..... millions..	10,863	15,500	1,433	1,336	1,501	1,280	1,515	1,286	1,039	1,526	1,459	1,464	1,520	1,310	.....	.....
On New York Stock Exchange:																
Market value..... mil. \$.	251,098	397,670	35,606	35,308	42,873	36,015	41,373	35,453	27,987	41,888	41,575	34,253	39,713	36,340	.....	.....
Shares sold (cleared or settled)..... millions..	8,675	12,390	1,122	1,090	1,216	1,016	1,205	1,020	834	1,239	1,204	1,019	1,232	1,064	.....	.....
New York Stock Exchange:																
Exclusive of odd-lot and stopped stock sales (sales effected)..... millions..	8,156	11,352	966	1,058	1,032	989	1,025	956	816	1,175	1,123	906	1,101	954	921	959
Shares listed, N.Y. Stock Exchange, end of period:																
Market value, all listed shares..... bil. \$.	960.61	1,242.80	1,115.48	1,147.60	1,168.11	1,289.71	1,242.80	1,189.19	1,203.16	1,248.95	1,229.56	1,238.19	1,224.74	1,224.89	1,149.19	1,080.56
Number of shares listed..... millions..	30,033	33,709	32,602	32,804	33,041	33,427	33,709	33,993	34,211	34,670	34,967	35,545	36,859	37,404	37,567	37,709

**FOREIGN TRADE OF THE UNITED STATES**

<b>VALUE OF EXPORTS</b>																
Exports (mdse.), incl. reexports, total @ ..... mil. \$.	181,815.6	220,704.9	17,946.1	17,829.0	19,948.9	18,614.0	19,545.1	17,964.0	18,845.4	22,928.5	20,511.9	19,988.7	20,261.5	18,569.0	17,766.4	.....
Excl. Dept. of Defense shipments..... do.....	181,650.8	220,548.7	17,938.4	17,800.9	19,936.9	18,609.9	19,537.5	17,962.2	18,838.0	22,917.7	20,509.3	19,986.1	20,254.7	18,565.2	17,764.2	.....
Seasonally adjusted..... do.....	.....	.....	19,103.4	18,701.0	19,088.5	18,634.3	19,117.7	18,824.8	19,764.1	21,434.2	19,818.0	18,869.4	19,870.1	19,264.3	19,050.4	.....
By geographic regions:																
Africa..... do.....	6,298.8	9,060.4	765.6	798.7	895.9	880.0	746.3	803.5	729.4	1,097.7	998.1	928.6	1,088.4	936.3	974.7	.....
Asia..... do.....	48,771.3	60,168.3	5,273.6	4,956.2	5,467.7	5,078.6	5,538.0	5,010.9	4,897.4	6,450.2	5,466.1	5,104.0	5,293.4	5,280.6	4,837.5	.....
Australia and Oceania..... do.....	4,318.8	4,875.7	431.6	416.8	589.4	393.6	388.9	425.9	413.8	498.6	514.1	555.7	692.7	515.0	559.1	.....
Europe..... do.....	60,025.9	71,371.4	5,303.2	5,107.6	5,965.6	5,589.1	5,949.0	5,686.6	6,069.1	7,141.1	6,068.4	5,795.4	5,338.0	5,214.1	5,019.3	.....
Northern North America..... do.....	33,096.7	35,399.0	2,648.2	3,040.7	3,078.2	3,113.2	3,000.5	2,737.0	3,239.5	3,747.1	3,639.0	3,691.1	3,927.8	2,977.3	3,103.0	.....
Southern North America..... do.....	14,886.5	21,337.7	1,790.7	1,796.1	2,123.6	1,910.5	2,121.5	1,815.1	1,832.7	2,157.5	2,271.1	2,312.6	2,08			



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	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.

## FOREIGN TRADE OF THE UNITED STATES—Continued

VALUE OF EXPORTS—Continued																	
Exports (mdse.), incl. reexports—Continued																	
By leading countries:																	
Africa:																	
Egypt	mil. \$..	1,432.9	1,873.6	132.2	163.9	145.1	152.9	134.8	'152.7	164.7	193.8	198.0	193.3	285.0	184.2	193.8	
Republic of South Africa	do.....	1,413.0	2,463.5	239.7	184.6	241.4	352.5	218.3	'214.4	214.3	271.1	260.4	265.3	250.0	267.9	233.4	
Asia; Australia and Oceania:																	
Australia, including New Guinea		do.....	3,649.5	4,130.7	357.2	354.6	526.4	336.5	332.6	'370.7	355.9	417.0	426.9	424.2	488.6	430.1	477.7
India	do.....	1,167.0	1,689.4	189.0	124.0	145.2	122.1	130.6	'147.7	108.1	139.9	122.9	114.6	126.0	165.2	129.6	
Pakistan	do.....	529.1	642.1	84.8	63.8	54.9	41.0	33.4	'41.9	28.9	39.9	28.9	41.6	38.6	41.3	69.5	
Malaysia	do.....	932.1	1,396.9	110.7	86.4	146.8	117.5	116.1	'115.2	94.6	137.1	197.8	104.3	123.5	133.2	115.5	
Indonesia	do.....	981.5	1,545.1	302.9	168.5	139.9	115.7	88.6	'110.7	86.7	118.0	108.0	104.7	104.1	115.1	99.4	
Philippines	do.....	1,570.1	1,999.1	164.3	132.3	148.5	148.7	243.7	'140.3	124.4	142.1	168.7	143.6	144.4	162.5	160.6	
Japan	do.....	17,581.0	20,790.0	1,751.5	1,682.2	1,800.1	1,793.0	1,828.9	'1,741.8	1,746.0	2,161.1	1,756.1	1,595.2	1,786.8	1,900.0	1,594.2	
Europe:																	
France	do.....	5,587.0	7,485.4	537.0	546.2	678.1	584.0	572.6	'617.5	630.7	847.3	705.8	652.1	550.8	512.8	518.5	
German Democratic Republic (formerly E. Germany)	mil. \$..	356.0	478.6	5.4	25.0	18.6	33.6	68.7	'49.5	50.1	33.9	40.0	25.2	5.2	14.6	9.0	
Federal Republic of Germany (formerly W. Germany)	mil. \$..	8,477.8	10,959.8	807.0	815.2	871.8	896.8	828.3	'839.7	863.6	1,025.9	864.1	940.0	808.5	737.9	763.7	
Italy	do.....	4,361.8	5,511.1	444.3	353.3	378.8	423.9	556.3	'418.2	460.6	574.3	394.5	473.7	424.9	352.0	444.7	
Union of Soviet Socialist Republics	do.....	3,607.3	1,512.8	35.4	49.9	151.2	264.7	272.8	'343.9	258.4	199.1	141.6	43.1	80.3	127.2	101.3	
United Kingdom	do.....	10,634.9	12,693.6	907.0	927.3	1,139.6	935.4	994.6	'961.3	1,121.8	1,240.3	1,156.4	1,111.2	1,088.4	1,146.5	885.4	
North and South America:																	
Canada	do.....	33,095.8	35,395.3	2,648.1	3,040.6	3,078.1	3,113.2	2,997.7	'2,736.7	3,239.5	3,747.0	3,639.0	3,691.0	3,927.7	2,977.0	3,103.0	
Latin American republics, total #	do.....	26,258.9	36,030.4	3,108.7	3,141.4	3,510.6	3,223.9	3,580.5	'3,071.0	3,251.2	3,690.3	3,395.1	3,533.2	3,561.7	3,272.0	2,933.6	
Argentina	do.....	1,889.8	2,625.3	211.5	259.0	259.8	271.7	238.9	'276.7	200.4	299.3	212.2	172.4	156.3	135.0	188.7	
Brazil	do.....	3,441.7	4,343.5	414.6	382.8	359.8	361.4	464.8	'361.0	453.3	348.3	330.8	332.1	347.1	287.3	268.8	
Chile	do.....	885.5	1,353.5	122.3	117.0	141.4	136.3	144.4	'135.8	102.1	158.6	115.3	119.5	135.9	122.8	119.3	
Colombia	do.....	1,409.3	1,735.6	154.7	138.5	158.2	128.9	174.3	'116.1	134.6	150.3	144.3	145.7	166.5	157.7	129.9	
Mexico	do.....	9,847.3	15,144.6	1,271.0	1,262.2	1,542.4	1,407.5	1,581.1	'1,297.4	1,329.9	1,620.0	1,603.9	1,673.4	1,735.8	1,513.0	1,314.4	
Venezuela	do.....	3,933.5	4,572.8	410.2	417.9	463.1	397.6	409.9	'347.7	474.8	487.8	436.8	482.4	438.5	508.7	399.9	
Exports of U.S. merchandise, total \$	do.....	178,590.9	216,592.2	17,630.7	17,527.9	19,520.6	18,247.6	19,217.2	'17,598.0	18,522.0	22,494.1	20,102.3	19,618.1	19,851.9	18,198.6	17,455.8	
Excluding military grant-aid	do.....	178,426.0	216,436.0	17,623.0	17,499.8	19,508.6	18,243.5	19,209.6	'17,596.2	18,514.6	22,483.3	20,099.7	19,615.5	19,845.1	18,194.8	17,453.6	
Agricultural products, total	do.....	34,755.4	41,255.9	3,243.6	3,236.2	3,672.9	3,796.4	4,279.4	'4,067.2	3,825.8	4,666.9	3,751.4	3,566.8	3,191.2	2,841.8	2,926.4	
Nonagricultural products, total	do.....	143,832.6	175,336.3	14,387.0	14,291.7	15,847.7	14,451.2	14,937.8	'13,530.9	14,696.2	17,827.2	16,350.9	16,051.3	16,660.7	15,356.8	14,529.4	
By commodity groups and principal commodities:																	
Food and live animals #	mil. \$..	22,250.9	27,743.7	2,340.0	2,501.0	2,689.4	2,652.9	2,919.4	'2,752.0	2,709.2	3,004.1	2,640.5	2,412.1	2,330.7	2,342.3	2,241.2	
Meats and preparations (incl. poultry)	do.....	1,126.9	1,292.6	96.2	103.4	130.6	118.6	125.2	'119.3	149.4	127.5	150.4	131.2	95.6	110.3		
Grains and cereal preparations	do.....	14,453.8	18,079.0	1,613.1	1,657.7	1,710.0	1,765.1	1,929.0	'1,853.6	1,830.9	1,942.3	1,722.8	1,561.8	1,482.7	1,432.9	1,477.9	
Beverages and tobacco	do.....	2,336.5	2,663.0	179.8	207.4	249.4	262.7	275.3	'221.7	198.3	262.3	219.0	237.5	217.7	194.4	187.3	
Crude materials, inedible, exc. fuels #	do.....	20,756.0	23,592.2	1,865.0	1,535.1	1,776.2	1,761.3	2,001.3	'2,044.0	1,843.5	2,325.9	1,823.9	1,865.0	1,594.4	1,244.5	1,301.0	
Cotton, raw, excl. linters and waste	do.....	2,198.4	2,864.2	155.9	150.4	95.0	181.3	225.2	'299.5	296.4	315.0	208.6	190.0	134.1	108.6	94.7	
Soybeans, exc. canned or prepared	do.....	5,708.0	5,882.9	434.1	313.4	493.6	626.6	635.4	'614.0	465.6	847.8	487.2	567.2	335.0	232.0	318.5	
Metal ores, concentrates, and scrap	do.....	3,324.5	4,517.6	389.6	298.1	325.1	226.3	266.5	'275.8	274.1	234.1	283.2	246.2	258.0	186.3	179.1	
Mineral fuels, lubricants, etc. #	mil. \$..	5,620.5	7,982.3	702.9	709.7	755.3	785.3	740.9	'619.5	705.3	826.2	745.5	637.7	613.8	918.6	919.0	
Coal and related products	do.....	3,496.0	4,771.7	480.9	430.0	502.8	458.8	417.8	'302.6	339.2	499.3	420.8	302.7	336.9	579.2	604.1	
Petroleum and products	do.....	1,918.2	2,833.4	204.6	227.7	238.1	269.4	279.7	'278.1	323.5	296.5	285.8	307.1	220.5	297.7	243.5	
Oils and fats, animal and vegetable	do.....	1,845.0	1,946.3	161.7	160.5	145.3	131.0	151.0	'123.5	124.7	206.8	145.4	151.8	164.5	129.4	168.1	
Chemicals	do.....	17,307.9	20,740.2	1,760.1	1,665.7	1,765.9	1,488.0	1,769.0	'1,681.4	1,684.5	2,044.6	1,763.9	1,859.2	1,819.4	1,826.0	1,644.1	
Manufactured goods #	do.....	16,234.2	22,254.6	1,946.9	1,836.1	1,935.5	1,717.7	1,806.4	'1,705.2	1,664.8	2,024.6	1,940.9	1,893.3	1,802.2	1,660.1	1,559.1	
Textiles	do.....	3,189.4	3,632.0	302.0	307.5	328.2	314.1	321.5	'285.6	288.2	366.2	343.4	329.7	320.3	277.3	299.1	
Iron and steel	do.....	2,342.0	3,122.8	294.4	275.5	288.4	250.1	265.3	'240.5	228.9	243.4	255.0	257.9	263.3	242.3	205.1	
Nonferrous base metals	do.....	1,609.4	2,963.9	341.7	289.9	253.2	219.9	214.1	'234.5	168.2	224.6	220.6	196.3	163.3	154.8	130.6	
Machinery and transport equipment, total	mil. \$..	70,407.3	84,552.9	6,730.9	7,018.7	7,934.7	7,372.8	7,531.1	'6,472.0	7,522.2	9,395.1	8,651.4	8,459.8	8,840.2	7,597.2	7,471.5	
Machinery, total #	do.....	44,744.5	55,789.7	4,761.9	4,602.7	5,130.6	4,723.7	4,791.2	'4,592.2	4,850.6	6,047.1	5,456.1	5,371.4	5,614.7	5,299.0	4,879.9	
Agricultural	do.....	2,635.5	3,103.6	237.1	242.6	251.4	236.3	268.9	'231.6	264.8	362.6	317.5	342.5	354.1	298.8	249.1	
Metalworking	do.....	1,391.4	1,756.3	155.1	158.0	173.6	163.9	168.1	'178.5	175.4	222.5	188.2	218.5	202.1	182.0	156.1	
Construction, excav. and mining	do.....	1,233.8	1,627.7	137.1	146.3	141.9	130.3	122.5	'122.7	135.4	171.6	162.6	179.5	169.4	168.8	134.9	
Electrical	do.....	8,635.0	10,484.5	891.6	829.0	997.3	870.7	869.3	'830.1	895.5	1,103.5	985.4	966.2	1,051.6	960.2	942.5	
Transport equipment, total	do.....	25,750.4	28,838.8	1,972.1	2,426.9	2,812.5	2,650.1	2,742.5	'1,880.5	2,673.3	3,351.8	3,196.1	3,089.1	3,226.4	2,298.9	2,592.1	
Motor vehicles and parts	do.....	15,076.5	14,589.6	975.8	1,186.7	1,445.9	1,312.0	1,202.0	'1,060.4	1,334.5	1,592.5	1,531.5	1,603.8	1,573.4	1,297.3	1,196.4	
Miscellaneous manufactured articles	do.....	12,637.4	16,343.1	1,295.7	1,303.5	1,400.6	1,324.0	1,311.5	'1,253.9	1,311.1	1,630.9	1,489.2	1,383.3	1,492.0	1,402.2	1,365.2	
Commodities not classified	do.....	9,030.3	8,419.5	640.1	562.1	856.4	747.9	703.8	'723.0	750.9	762.7	680.0	715.9	970.1	880.1	597.1	
VALUE OF IMPORTS																	
General imports, total	do.....	206,255.8	240,834.3	18,858.8	19,078.7	20,267.8	19,532.7	21,312.0	'22,577.1	21,124.3	21,362.6	22,775.2	21,454.2	22,522.2	20,349.6	22,617.5	
Seasonally adjusted	do.....			19,235.6	19,465.0	20,060.5	19,422.4	21,173.9	'23,194.3	21,921.7	20,949.3	22,289.2					

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	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FOREIGN TRADE OF THE UNITED STATES—Continued</b>															
<b>VALUE OF IMPORTS—Continued</b>															
<b>General imports—Continued</b>															
<b>By leading countries—Continued</b>															
<b>Asia; Australia and Oceania:</b>															
Australia, including New Guinea..... mil. \$.	2,236.1	2,562.3	200.1	172.1	221.5	280.9	255.1	*306.3	187.8	143.9	194.3	195.3	223.3	161.7	190.3
India..... do....	1,037.7	1,097.6	77.9	103.3	78.8	96.8	72.9	*99.5	121.0	110.8	103.8	97.0	99.1	78.2	115.9
Pakistan..... do....	120.0	127.6	10.4	10.3	9.5	8.9	13.0	*13.9	14.4	15.1	14.7	17.4	14.4	13.8	14.6
Malaysia..... do....	2,145.6	2,577.0	152.8	195.5	234.8	192.6	231.4	*198.6	206.9	164.2	182.7	191.1	164.0	192.6	153.4
Indonesia..... do....	3,620.6	5,192.5	255.7	429.7	415.6	346.8	574.8	*552.6	499.5	602.9	486.2	446.9	399.5	451.0	496.0
Philippines..... do....	1,490.1	1,730.3	135.4	154.1	150.5	130.9	207.9	*197.1	180.5	162.3	142.6	175.9	178.9	162.3	150.5
Japan..... do....	26,248.2	30,701.3	2,541.3	2,642.0	2,568.9	2,591.8	2,713.7	*3,196.1	2,341.2	3,053.1	3,223.0	3,030.5	3,147.6	3,140.7	3,542.9
<b>Europe:</b>															
France..... do....	4,767.8	5,247.0	428.2	345.8	457.8	378.1	494.9	*499.6	455.8	465.3	456.7	501.9	469.9	440.3	529.1
German Democratic Republic (formerly E. Germany)..... mil. \$.	36.4	43.9	3.9	2.8	3.9	2.6	4.2	*4.9	2.9	3.8	4.1	3.8	4.1	2.5	5.1
Federal Republic of Germany (formerly W. Germany)..... mil. \$.	10,955.4	11,681.2	933.1	844.8	861.8	876.3	896.4	*995.8	758.0	970.0	1,011.0	971.9	918.3	950.1	987.8
Italy..... do....	4,917.5	4,313.1	386.5	297.0	284.9	332.6	414.4	*391.7	396.7	395.6	397.6	431.6	411.8	433.5	494.8
Union of Soviet Socialist Republics..... do....	873.6	453.2	22.9	95.3	53.3	28.8	55.9	*182.9	32.4	44.5	19.7	18.4	13.3	39.0	14.1
United Kingdom..... do....	8,027.7	9,755.1	734.3	996.8	907.0	743.1	885.6	*854.6	869.1	1,119.1	1,103.9	989.5	1,189.4	1,131.7	1,505.0
<b>North and South America:</b>															
Canada..... do....	38,046.1	41,455.4	2,825.1	3,339.7	3,929.7	3,747.7	3,804.8	*3,622.0	3,676.4	3,987.7	3,921.6	4,140.9	4,048.8	3,677.2	3,638.7
<b>Latin American republics, total #</b>															
Argentina..... do....	587.1	740.8	58.2	71.0	63.5	105.3	86.2	*119.6	94.2	136.5	56.0	76.5	72.8	70.6	83.5
Brazil..... do....	3,118.2	3,714.6	300.0	293.3	304.1	433.3	333.6	*390.2	382.4	413.6	297.1	337.6	349.2	352.1	356.4
Chile..... do....	439.6	515.0	34.3	50.7	46.9	30.9	56.5	*39.6	50.0	70.6	54.3	34.9	46.3	54.2	49.7
Colombia..... do....	1,209.4	1,240.5	69.1	88.8	86.1	92.2	119.8	*97.2	98.3	69.4	63.3	74.2	69.8	38.7	49.7
Mexico..... do....	8,800.1	12,519.5	1,045.8	915.0	1,106.6	1,031.4	1,069.8	*918.1	1,167.2	1,104.9	1,245.4	1,072.2	1,207.7	987.5	1,122.6
Venezuela..... do....	5,165.9	5,297.1	407.0	420.5	372.3	449.0	696.4	*717.7	612.3	407.0	496.5	324.2	310.3	433.5	514.8
<b>By commodity groups and principal commodities:</b>															
Agricultural products, total..... mil. \$.	16,879.5	17,425.0	1,310.9	1,219.3	1,410.6	1,529.9	1,536.0	*1,613.0	1,714.8	1,506.3	1,417.6	1,552.3	1,306.7	1,184.8	1,394.7
Nonagricultural products, total..... do....	189,376.3	223,409.2	17,548.0	17,859.3	18,857.2	18,002.8	19,776.0	*21,007.0	19,471.8	19,826.6	21,326.7	19,891.4	21,182.9	19,132.4	21,276.8
<b>Food and live animals #</b>															
Cocoa beans..... do....	554.9	395.2	23.3	20.0	19.2	21.0	43.1	*29.4	56.3	37.8	62.0	51.3	43.7	33.6	42.6
Coffee..... do....	3,819.7	3,872.3	302.3	217.1	250.7	273.3	310.8	*332.5	290.1	243.6	205.5	232.0	165.3	143.9	187.2
Meats and preparations..... do....	2,539.3	2,346.3	180.1	152.9	246.8	199.1	226.0	*206.9	189.7	153.6	168.9	148.0	160.4	168.9	176.0
Sugar..... do....	974.3	1,987.5	187.5	172.2	172.4	334.1	169.0	*225.8	177.7	182.3	143.9	197.2	146.1	140.9	117.3
<b>Beverages and tobacco</b>															
Crude materials, inedible, exc. fuels #	10,652.7	10,495.9	812.4	837.2	830.6	856.4	871.2	*885.9	1,029.4	989.3	1,038.3	1,129.7	1,061.4	891.9	873.2
Metal ores..... do....	3,249.1	3,696.1	275.0	279.8	302.4	303.0	293.2	*320.9	311.5	278.0	354.1	352.3	404.7	324.9	342.9
Paper base stocks..... do....	1,546.7	1,773.4	150.4	136.2	134.3	144.2	150.8	*167.9	159.0	163.4	132.4	181.6	156.3	145.8	142.0
Textile fibers..... do....	231.2	242.1	20.9	11.0	16.5	17.5	19.5	*26.7	33.4	34.0	32.4	33.0	22.2	33.2	29.8
Rubber..... do....	897.1	816.1	44.8	75.6	42.7	64.7	59.2	*40.5	111.1	71.4	79.6	66.6	60.7	48.7	50.2
Mineral fuels, lubricants, etc..... do....	59,997.9	79,057.7	6,235.9	5,830.5	6,231.0	5,879.6	7,218.4	*8,014.2	7,943.4	6,475.9	7,835.5	6,078.2	7,255.5	5,692.0	6,880.5
Petroleum and products..... do....	56,035.6	73,770.9	5,867.7	5,460.4	5,846.1	5,446.1	6,766.8	*7,388.5	7,344.7	5,992.5	7,368.9	5,651.8	6,853.8	5,264.9	6,436.2
Oils and fats, animal and vegetable..... do....	739.8	533.4	30.8	33.0	64.6	51.3	69.0	*50.1	60.0	46.6	24.9	40.5	32.0	38.3	32.8
Chemicals..... do....	7,478.6	8,582.7	616.9	641.3	745.9	650.3	718.1	*735.8	767.4	818.1	825.4	794.1	815.9	707.8	929.0
<b>Manufactured goods #</b>															
Iron and steel..... do....	30,064.1	32,190.4	2,486.1	2,412.9	2,629.7	2,641.9	2,854.7	*2,910.5	2,795.1	2,807.7	3,125.0	3,221.0	3,179.9	3,092.3	3,440.2
Newsprint..... do....	7,466.5	7,363.6	629.2	520.0	544.8	617.4	737.1	*658.6	677.5	622.8	933.0	968.4	961.9	922.4	1,247.7
Nonferrous metals..... do....	2,322.1	2,685.2	201.7	216.0	224.9	216.5	232.5	*231.2	233.4	248.6	236.3	253.7	232.9	229.3	209.3
Textiles..... do....	6,320.1	7,622.7	508.2	567.4	688.3	601.7	656.6	*623.6	650.9	576.5	606.6	595.1	612.1	581.0	568.2
Textiles..... do....	2,216.3	2,493.3	191.5	194.7	196.1	204.4	209.4	*258.0	226.2	252.0	249.2	242.6	253.0	254.5	269.2
<b>Machinery and transport equipment</b>															
Machinery, total #..... do....	53,677.3	60,545.7	4,565.7	4,952.2	5,333.3	5,236.2	5,335.7	*5,615.7	4,694.2	5,984.2	5,954.3	5,853.8	5,922.7	5,694.2	5,883.0
Metalworking..... do....	28,043.5	31,903.6	2,578.0	2,621.5	2,754.5	2,733.8	2,874.5	*2,886.4	2,611.4	3,174.3	3,125.4	3,112.3	3,204.1	3,198.0	3,376.9
Electrical..... do....	1,442.4	1,813.7	183.7	136.8	150.3	156.7	155.1	*186.6	144.0	152.5	159.0	187.7	138.0	167.0	177.3
Transport equipment..... do....	6,588.0	8,064.1	647.1	674.6	729.6	668.1	747.7	*702.5	606.2	757.1	711.9	763.4	811.7	757.0	789.3
Automobiles and parts..... do....	25,633.9	28,642.0	1,987.6	2,330.8	2,578.8	2,502.5	2,461.3	*2,729.3	2,082.8	2,810.0	2,828.9	2,741.5	2,718.6	2,496.3	2,506.1
Miscellaneous manufactured articles..... do....	22,074.8	24,133.9	1,663.9	2,000.3	2,210.6	2,191.4	2,014.9	*2,311.7	1,689.4	2,324.6	2,329.9	2,298.7	2,365.3	2,097.6	2,089.7
Miscellaneous manufactured articles..... do....	21,006.3	23,711.0	2,143.2	2,077.3	2,104.2	1,983.4	2,017.2	*2,012.5	1,779.3	2,054.8	1,911.0	2,047.8	2,142.0	2,324.1	2,492.2
Commodities not classified..... do....	4,904.6	7,183.3	533.2	911.1	737.4	548.7	624.4	*628.1	478.6	568.1	574.5	606.3	640.6	527.7	625.0
<b>Indexes</b>															
<b>Exports (U.S. mdse., excl. military grant-aid):</b>															
Unit value..... 1977=100..	121.6	138.1	139.7	140.2	142.7	146.8	147.7	*149.5	149.0	148.4	150.4	151.1	149.7	152.2	151.0
Quantity..... do....	124.5	132.9	128.5	127.0	139.2	126.5	132.4	*119.8	126.4	154.2	136.0	132.1	134.9	121.7	117.6
Value..... do....	151.3	183.6	179.4	178.1	198.6	185.7	195.5	*179.1	188.4	228.8	204.6	199.6	202.0	185.2	177.6
<b>General imports:</b>															
Unit value..... do....	128.7	161.4	164.7	165.1	166.4	167.2	169.7	*173.1	174.3	176.1	175.9	172.5	172.4	170.0	167.8
Quantity..... do....	110.4	102.6	94.1	95.0	100.1	96.1	99.9	*107.3	99.7	99.8	106.5	102.3	107.6	98.5	110.9
Value..... do....	142.1	165.5	155.1	156.9	166.7	160.8	175.4	*185.8	173.8	175.8	187.3	176.5	185.4	167.4	186.0
<b>Shipping Weight and Value</b>															
<b>Waterborne trade:</b>															
<b>Exports (incl. reexports):</b>															
Shipping weight..... thous. sh. tons.	357,793	401,172	36,373	33,668	36,364	33,354	35,590	*30,586	30,016	36,416	32,482	30,656	29,244	.....	.....
Value..... mil. \$.	97,579	118,835	10,225	9,662	10,642	9,723	10,661	*10,145	9,860	12,046	10,524	10,563	9,754	.....	.....
<b>General imports:</b>															
Shipping weight..... thous. sh. tons.	597,495	487,936	38,122	35,812	38,068	35,684	40,858	*42,630	40,302	34,240	41,019	37,102	42,874	.....	.....
Value..... mil. \$.	140,091	164,924	13,328	12,753	13,185	12,784	14,374	*15,920	14,657	14,073	15,909	14,335	15,603	.....	.....

See footnotes at end of tables.

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	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
<b>TRANSPORTATION AND COMMUNICATION</b>																
<b>TRANSPORTATION</b>																
<b>Air Carriers (Scheduled Service)</b>																
Certificated route carriers:																
Passenger-miles (revenue)..... bil.	262.02	254.18	26.39	19.61	20.69	17.86	20.22	19.35	17.00	19.84	20.26	21.82	22.86			
Passenger-load factor..... percent.	63.0	59.0	66.3	55.9	57.7	55.2	57.8	54.8	54.2	56.8	58.4	61.0	60.8			
Ton-miles (revenue), total..... mil.	33,390	32,487	3,236	2,540	2,629	2,379	2,590	2,437	2,214	2,591	2,603	2,776	2,876			
Operating revenues (quarterly) # \$..... mil. \$.	27,227	*33,267		8,926			8,388			8,367						
Passenger revenues..... do.....	22,792	*22,791		7,555			6,997			7,108						
Cargo revenues..... do.....	2,211	*2,427		590			637			577						
Mail revenues..... do.....	464	621		143			172			157						
Operating expenses (quarterly) \$..... do.....	*27,018	*33,462		8,657			8,372			8,536						
Net income after taxes (quarterly) \$..... do.....	331	*-90		203			122			-217						
<b>Domestic operations:</b>																
Passenger-miles (revenue)..... bil.	'208.89	200.09	20.25	14.84	15.80	14.24	16.34	15.75	14.08	16.49	16.42	17.41	'17.82	'16.47	'16.18	'13.02
Cargo ton-miles..... mil.	3,466	3,274	282	273	293	265	248	245	246	286	278	289	292			
Mail ton-miles..... do.....	853	944	75	73	81	76	108	84	78	86	85	81	77			
Operating revenues (quarterly) \$..... mil. \$.	21,652	26,376		6,853			6,740			6,964						
Operating expenses (quarterly) \$..... do.....	21,523	*26,383		6,700			6,625			6,993						
Net income after taxes (quarterly) \$..... do.....	222	*-156		105			263			-65						
<b>International operations:</b>																
Passenger-miles (revenue)..... bil.	*53.13	54.09	6.76	4.77	4.25	3.62	3.88	3.60	2.92	3.36	3.84	4.41	5.04			
Cargo ton-miles..... mil.	2,498	2,458	210	203	216	215	170	145	162	204	184	194	191			
Mail ton-miles..... do.....	372	392	31	29	33	37	43	28	28	31	31	31	29			
Operating revenues (quarterly) \$..... mil. \$.	5,575	*6,891		2,073			1,648			1,403						
Operating expenses (quarterly) \$..... do.....	5,505	*7,079		1,958			1,746			1,543						
Net income after taxes (quarterly) \$..... do.....	109	*-246		94			-140			-152						
<b>Urban Transit Systems</b>																
Passengers carried, total..... mil.	8,130	8,228	656	681	748	663	681	647	644	726	690	676	693	615	625	
<b>Motor Carriers</b>																
Carriers of property, large, class I, qtrly.:																
Number of reporting carriers.....	100	100		100			100			100						
Operating revenues, total..... mil. \$.	15,051	15,538		3,776			4,273			4,989						
Net income, after extraordinary and prior period charges and credits..... mil. \$.	312	284		83			105			77						
Tonnage hauled (revenue), common and contract carrier service..... mil. tons.	215	183		42			49			48						
Freight carried—volume indexes, class I and II intercity truck tonnage (ATA):																
Common and contract carriers of property (qtrly.)..... average same period, 1967=100.	155			139												
Common carriers of general freight, seas. adj..... 1967=100.	180.3	'147.9	141.4	146.6	147.4	150.9	153.0	152.7	151.9	150.8	153.2	152.2	'151.9	'153.3	147.7	
<b>Class I Railroads †</b>																
Financial operations, qtrly. (AAR), excl. Amtrak:																
Operating revenues, total #..... mil. \$.	25,352	28,254		6,995			7,514			7,660						
Freight..... do.....	23,576	26,350		6,521			7,022			7,182						
Passenger, excl. Amtrak..... do.....	382	439		117			118			121						
Operating expenses..... do.....	24,093	26,352		6,623			6,807			6,960						
Net railway operating income..... do.....	858	1,337		222			540			469						
Net income (after taxes)..... do.....	*840	*1,131		156			545			636			348			
Traffic:																
Ton-miles of freight (net), total, qtrly..... bil.	928.7	933.1		226.8			239.4			236.1			229.8			
Revenue ton-miles, qtrly. (AAR)..... do.....	902.1	919.0		222.4			236.0			236.6			222.5		235.4	
Price index for railroad freight..... 1969=100.	243.4	285.5	291.5	298.5	299.0	299.6	300.5	313.8	317.7	321.4	321.0	321.4	324.3	333.2	333.5	333.6
<b>Travel</b>																
Hotels and motor-hotels:																
Restaurant sales index ... same month 1967=100.	170	182	184	181	203	178	186	158	176	198	191	200	214			
Hotels: Average room sale }..... dollars.	45.69	49.48	49.40	52.17	53.05	52.65	52.56	56.71	56.17	58.11	57.28	56.29	54.90			
Rooms occupied ..... % of total.	72	65	48	69	77	67	44	62	68	74	73	73	72			
Motor-hotels: Average room sale }..... dollars.	32.36	35.30	36.92	34.37	35.46	34.80	34.94	35.95	37.61	37.42	38.14	38.00	40.15			
Rooms occupied ..... % of total.	71	66	55	66	70	62	51	56	64	72	71	70	73			
Foreign travel:																
U.S. citizens: Arrivals.....thous.																
Departures..... do.....	9,259	*9,010	1,042	704	726	610	564	681	587	735	692	760	789			
Departures..... do.....	9,681	*9,971	954	796	710	655	758	700	670	735	792	863	988			
Aliens: Arrivals..... do.....	9,886	*11,252	1,313	1,000	883	787	910	871	692	819	975	993	1,036			
Departures..... do.....	7,814	*9,285	1,175	858	773	718	707	752	552	618	755	785	789			
Passports issued..... do.....	3,170	3,020	222	200	179	150	158	233	237	338	335	317	363	323	272	*225
National parks, visits..... do.....	56,922	59,081	10,661	6,195	5,250	2,875	2,167	2,017	2,092	2,622	3,556	5,237	7,892	10,955	11,226	
<b>COMMUNICATION</b>																
<b>Telephone carriers:</b>																
Operating revenues #..... mil. \$.	50,604	56,738	4,831	4,825	5,014	4,848	4,970	5,135	5,048	5,307	5,275	5,303	5,503			
Station revenues..... do.....	21,967	24,333	2,030	2,059	2,113	2,097	2,130	2,201	2,236	2,244	2,272	2,288	2,330			
Tolls, message..... do.....	22,389	22,983	1,987	1,959	2,059	1,905	2,006	2,071	1,931	2,144	2,102	2,076	2,199			
Operating expenses (excluding taxes)..... do.....	33,110	37,983	3,228	3,305	3,270	3,257	3,397	3,346	3,352	3,498	3,577	3,574	3,620			
Net operating income (after taxes)..... do.....	9,084	10,194	860	827	960	891	887	975	913	985	888	923	1,019			
Phones in service, end of period..... mil.	155.1	159.9	158.3	158.8	159.4	159.6	159.9	164.2	164.5	164.7	165.0	164.8				
<b>Telegraph carriers:</b>																
<b>Domestic:</b>																
Operating revenues..... mil. \$.	636.0	697.1	57.1	59.9	61.7	56.1	60.5	57.9	58.5	63.0	64.0	61.9	68.4			
Operating expenses..... do.....	519.2	561.5	47.8	48.8	48.2	46.5	49.0	48.8	48.2	49.3	50.0	48.6	54.9			
Net operating revenues (before taxes)..... do.....	80.2	95.9	6.4	7.7	9.7	6.2	7.8	5.9	7.1	10.3	10.8	7.3	9.3			
<b>Overseas, total:</b>																
Operating revenues..... do.....	491.1	*534.2	42.1	44.7	47.3	42.4	46.2	45.2	45.1	50.0	48.0	46.6	49.5			
Operating expenses..... do.....	326.2	*374.4	30.1	30.1	32.3	31.1	39.6	33.2	32.2	34.0	35.2	36.0	36.3			
Net operating revenues (before taxes)..... do.....	142.7	*137.4	10.1	12.8	12.8	9.2	5.1	9.8	10.8	13.7	10.7	8.5	11.1			

See footnotes at end of tables.

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
<b>CHEMICALS AND ALLIED PRODUCTS</b>																	
<b>CHEMICALS</b>																	
<b>Inorganic Chemicals</b>																	
Production:																	
Aluminum sulfate, commercial (17% Al <sub>2</sub> O <sub>3</sub> ) †																	
thous. sh. tons.....	1,314	1,182	105	97	102	85	103	92	91	94	102	99	'98	114			
Chlorine gas (100% Cl <sub>2</sub> ) †	12,228	11,198	824	903	938	949	1,011	886	904	932	960	947	'937	891			
Hydrochloric acid (100% HCl) †	3,090	2,812	219	240	233	222	250	241	209	217	210	210	'221	222			
Phosphorus, elemental	460	440	33	28	43	39	40	36	34	38	38	39	'36	34			
Sodium hydroxide (100% NaOH) †	12,772	11,324	840	907	972	966	1,031	924	910	952	965	962	'945	890			
Sodium silicate, anhydrous †	770	740	66	66	56	53	55	51	58	69	70	55	'73	62			
Sodium sulfate, anhydrous †	1,115	1,258	106	101	109	100	103	92	115	98	98	99	'95	96			
Sodium tripolyphosphate (100% Na <sub>3</sub> P <sub>3</sub> O <sub>10</sub> ) †																	
do.....	758	719	58	58	61	60	53	55	57	60	61	59	'66	57			
Titanium dioxide (composite and pure) †	741	713	57	53	48	56	59	58	60	63	68	70	'68	61			
Sulfur, native (Frasch) and recovered:																	
Production.....	10,263	10,201	834	802	842	843	888	890	818	869	838	878	'875	915	911		
Stocks (producers') end of period.....	4,172	3,042	3,503	3,405	3,306	3,269	3,042	3,018	2,989	2,918	2,876	2,859	'2,824	2,930	3,043		
<b>Inorganic Fertilizer Materials</b>																	
Production:																	
Ammonia, synthetic anhydrous †																	
thous. sh. tons.....	18,523	19,028	1,634	1,475	1,474	1,550	1,730	1,663	'1,535	1,733	1,698	1,632	'1,582	1,531			
Ammonium nitrate, original solution †	7,543	8,590	624	632	698	750	821	837	736	839	778	741	'651	673			
Ammonium sulfate †	2,363	'1,469	161	168	191	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	217	219	188	'181	194			
Nitric acid (100% HNO <sub>3</sub> ) †	8,465	8,931	647	672	726	780	861	832	764	875	804	760	'695	705			
Nitrogen solutions (100% N) †	2,245	3,031	254	232	208	242	269	257	235	284	279	'263	'235	'249			
Phosphoric acid (100% P <sub>2</sub> O <sub>5</sub> ) †	10,317	'10,856	914	909	901	916	983	869	873	941	961	927	'918	'848			
Sulfuric acid (100% H <sub>2</sub> SO <sub>4</sub> ) †	43,204	44,272	3,571	3,605	3,641	3,826	4,029	3,704	3,480	3,829	3,808	3,656	'3,560	3,416			
Superphosphate and other phosphatic fertilizers (100% P <sub>2</sub> O <sub>5</sub> ):																	
Production.....	7,662	8,086	693	669	666	676	728	'1,673	1,568	1,736	'1,706	1,639	'1,520	1,424			
Stocks, end of period.....	366	372	483	515	431	481	372	'1,113	1,348	1,424	1,383	1,350	'1,426	1,565			
Potash, deliveries (K <sub>2</sub> O) †	'7,640	6,950	657	456	674	663	810	371	556	651	687	441	'514	'806			
Exports, total #	328,043	42,389	3,125	2,580	2,487	1,853	2,486	2,261	1,803	1,864	1,859	2,015	'1,949	2,184	1,659		
Nitrogenous materials	'3,176	5,752	534	319	343	224	337	309	258	226	245	259	'227	333	124		
Phosphate materials	17,919	27,661	1,657	1,560	1,595	1,130	1,408	1,362	1,125	1,225	1,184	1,175	'1,076	1,143	979		
Potash materials	1,576	2,496	156	178	83	133	101	109	75	94	114	97	'110	116	103		
Imports:																	
Ammonium nitrate	277	247	27	12	19	13	17	20	18	31	45	19	'16	14	16		
Ammonium sulfate	245	289	14	12	16	26	18	42	13	46	28	46	'10	16	29		
Potassium chloride	9,275	8,907	638	751	836	901	952	681	681	876	806	598	'651	623	948		
Sodium nitrate	116	158	11	0	13	6	10	0	13	25	35	16	'12	10	0		
<b>Industrial Gases</b>																	
Production:																	
Acetylene †	5,741	5,633	429	483	506	405	504	509	438	451	419	404	'394	390			
Carbon dioxide, liquid, gas, and solid																	
thous. sh. tons.....	3,124	3,544	334	326	298	298	292	304	278	316	334	321	'343	384			
Hydrogen (high and low purity) †	99,271	95,883	6,678	7,857	7,740	8,632	9,119	7,879	8,623	7,805	7,824	7,994	'7,748	7,835			
Nitrogen (high and low purity) †	427,151	473,322	35,649	40,552	43,459	43,483	41,900	40,146	38,322	41,248	40,052	41,797	'40,396	40,586			
Oxygen (high and low purity) †	456,636	414,615	31,637	32,186	35,529	35,966	37,095	35,675	32,983	37,153	36,281	37,964	'35,726	35,033			
<b>Organic Chemicals §</b>																	
Production:																	
Acetylsalicylic acid (aspirin)	131.9	133.7	2.5	2.8	3.2	2.7	2.8	3.0	2.6	3.4	3.2	1.9	'1.6	1.8			
Cresote oil	161.6	152.5	11.3	14.8	12.3	11.7	14.0	10.4	10.2	10.5	10.4	11.0	'10.8	8.7			
Ethyl acetate (85%)	262.4	'233.6	17.0	19.8	20.1	22.2	22.0	21.8	20.8	23.1	27.2	22.2	'20.6	24.2			
Formaldehyde (37% HCHO)	'5,971.1	'5,555.3	416.0	483.2	524.2	498.6	519.0	452.8	506.8	531.9	576.5	537.0	'504.2	461.2			
Glycerin, refined, all grades	297.8	314.8	20.6	26.4	25.3	24.3	22.3	25.9	20.7	25.3	27.1	25.7	'27.0	24.9			
Methanol, synthetic	'1,109.5	'1,077.3	80.5	81.3	69.5	84.1	106.1	109.7	99.7	97.1	114.5	100.5	'108.2	112.5			
Phthalic anhydride	'1,012.9	'818.2	51.0	67.5	73.5	73.7	79.2	68.6	53.0	96.0	84.7	87.1	'81.4	60.6			
<b>ALCOHOL</b>																	
Ethyl alcohol and spirits:																	
Production.....	570.3	'642.7	46.4	57.2	64.3	47.7	53.7	49.2	44.3	49.3	50.9	44.0					
Stocks, end of period.....	53.6	72.0	70.4	67.1	57.5	62.3	72.0	78.3	64.8	73.6	69.8	76.2					
Denatured alcohol:																	
Production.....	260.7	'288.3	21.3	22.6	21.5	16.4	21.9	23.1	18.7	17.4	19.3	18.0					
Consumption (withdrawals).....	260.9	'281.6	23.1	23.2	21.4	16.4	17.9	25.6	18.2	17.7	18.5	17.5					
Stocks, end of period.....	4.1	10.7	19.9	10.2	4.8	7.8	10.7	7.0	8.2	6.6	4.5	4.0					
<b>PLASTICS AND RESIN MATERIALS</b>																	
Production:																	
Phenolic resins	'1,778.6	'1,744.9	109.8	120.9	131.9	126.4	112.5	156.5	173.8	237.0	238.5	225.6	'192.5	151.8			
Polyethylene and copolymers	12,408.4	'11,719.9	805.0	906.8	967.3	972.4	1,021.1	1,070.7	942.2	1,116.6	1,063.3	1,058.4	'1,001.2	1,005.5			
Polypropylene	'3,823.9	'3,699.0	241.6	253.3	259.3	282.2	286.1	350.2	318.6	332.4	335.6	357.4	'347.3	346.6			
Polystyrene and copolymers	'6,326.9	'5,540.1	397.9	454.3	495.8	464.2	498.2	449.6	448.5	583.9	501.0	490.2	'498.9	468.3			
Polyvinyl chloride and copolymers	'6,211.4	'5,485.4	393.3	458.9	515.6	513.0	498.8	444.6	476.5	554.3	551.0	552.5	'552.2	517.4			
<b>MISCELLANEOUS PRODUCTS</b>																	
Explosives (industrial), shipments, quarterly																	
mil. lb.....	2,987.1	'3,000.4		704.0			788.6			741.2			'599.7				
Paints, varnish, and lacquer, shipments:																	
Total shipments.....	'7,024.8	7,635.9	689.3	698.2	706.1	546.4	520.3	555.1	593.2	728.1	774.5	770.8	'851.8	767.6			
Architectural coatings	'3,418.7	3,641.2	341.0	329.5	314.8	222.9	217.4	235.2	259.2	339.5	374.6	385.4	'426.1	391.3			
Product finishes (OEM)	'2,284.0	2,418.5	199.7	221.7	233.5	202.3	193.3	208.8	213.8	249.5	248.3	240.4	'261.2	224.7			
Special purpose coatings	'1,322.0	1,576.2	148.6	147.0	157.9	121.2	109.7	111.1	120.2	139.1	151.6	145.0	'164.5	151.2			

See footnotes at end of tables.

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>ELECTRIC POWER AND GAS</b>																
<b>ELECTRIC POWER</b>																
Production:																
Electric utilities, total.....mil. kw-hr.	2,246,934	2,285,509	215,435	191,483	178,541	178,552	195,589	205,192	179,624	185,435	172,369	177,656	202,694			
By fuels.....do.....	1,966,802	2,009,609	194,959	172,991	160,675	159,335	173,298	182,836	158,490	164,863	151,646	153,574	176,325			
By waterpower.....do.....	280,131	275,899	20,476	18,491	17,866	19,217	22,290	22,355	21,134	20,572	20,723	24,081	26,370			
Sales to ultimate customers, total (Edison Electric Institute) †.....mil. kw-hr.	2,079,221	2,095,333	192,936	188,204	171,198	165,276	174,903	187,047	180,663	172,296	164,971	162,656	174,208			
Commercial and industrial:																
Small light and power \$.....do.....	493,494	509,547	48,872	47,405	42,476	40,363	41,871	43,944	42,615	41,114	39,710	40,392	44,501			
Large light and power \$.....do.....	815,586	791,241	65,597	67,583	66,978	65,657	66,324	65,189	65,632	66,251	66,000	66,040	67,497			
Railways and railroads.....do.....	4,245	4,292	356	349	356	351	381	379	365	367	339	331	335			
Residential or domestic.....do.....	694,266	720,784	72,190	66,866	55,528	53,194	60,270	71,063	65,789	58,402	53,024	49,978	55,789			
Street and highway lighting.....do.....	14,755	14,566	1,163	1,203	1,266	1,307	1,353	1,418	1,345	1,317	1,152	1,206	1,172			
Other public authorities.....do.....	49,481	48,426	4,185	4,249	4,031	3,835	4,147	4,466	4,340	4,242	4,175	4,125	4,332			
Interdepartmental.....do.....	7,394	6,477	573	550	564	568	557	589	578	602	571	584	581			
Revenue from sales to ultimate customers (Edison Electric Institute) ‡.....mil. \$.	77,691.5	91,618.7	9,029.8	8,745.4	7,831.2	7,448.8	7,910.2	8,586.6	8,324.3	8,061.0	7,653.8	7,987.2	8,948.2			
<b>GAS</b>																
Total utility gas, quarterly (American Gas Association):																
Customers, end of period, total.....thous.	46,708	47,424		46,886												
Residential.....do.....	43,027	43,697		42,238												
Commercial.....do.....	3,446	3,493		3,414												
Industrial.....do.....	189	189		189												
Other.....do.....	45	45		44												
Sales to customers, total.....tril. Btu.	15,440	15,331		2,610												
Residential.....do.....	5,083	4,870		401												
Commercial.....do.....	2,486	2,398		271												
Industrial.....do.....	7,555	7,782		1,894												
Other.....do.....	316	280		44												
Revenue from sales to customers, total.....mil. \$.	38,947	47,231		8,289												
Residential.....do.....	14,833	17,188		1,748												
Commercial.....do.....	6,624	7,914		970												
Industrial.....do.....	16,961	21,551		5,482												
Other.....do.....	530	578		90												
<b>FOOD AND KINDRED PRODUCTS; TOBACCO</b>																
<b>ALCOHOLIC BEVERAGES</b>																
Beer:																
Production.....mil. bbl.	184.19	*191.84	17.02	16.29	14.95	13.02	13.32	13.31	14.58	16.72	17.68	18.87	18.63	18.80		
Taxable withdrawals.....do.....	168.12	171.81	15.35	14.51	13.53	12.51	12.38	12.08	12.41	15.01	15.47	17.00	17.29	17.37		
Stocks, end of period.....do.....	13.29	13.96	14.45	15.01	14.18	13.94	13.96	13.98	14.95	15.12	15.26	15.78	15.24	14.98		
Distilled spirits (total):																
Production.....mil. tax gal.	186.68	140.53	7.14	8.97	14.17	12.70	14.96	14.42	14.30	16.68	14.75	12.73				
Consumption, apparent, for beverage purposes ‡.....mil. wine gal.	*447.52	*449.93	34.48	34.68	38.25	42.53	54.40	32.97	30.88	35.68	37.03	34.42	37.72			
Stocks, end of period ‡.....mil. tax gal.	645.67	578.02	633.44	625.89	617.26	626.84	578.02	615.58	625.77	571.04	633.18	623.93				
Imports.....mil. proof gal.	123.65	113.71	7.83	11.35	14.66	11.57	9.55	8.84	8.72	10.04	9.03	10.21	7.67	8.56	8.33	
Whisky:																
Production ‡.....mil. tax gal.	101.26	84.31	4.45	5.10	6.75	6.15	7.58	7.38	8.13	12.42	10.64	8.44				
Stocks, end of period ‡.....do.....	581.16	512.02	572.26	565.61	559.61	556.03	512.02	553.51	553.47	497.91	558.33	558.77				
Imports.....mil. proof gal.	95.40	86.00	5.80	9.04	11.35	9.09	7.06	6.51	5.06	7.64	6.88	7.56	5.30	6.52	5.83	
Wines and distilling materials:																
Effervescent wines:																
Production.....mil. wine gal.	23.48	26.19	2.65	1.92	3.61	2.42	3.11	1.87	2.42	2.85	2.42	2.36	3.05			
Taxable withdrawals.....do.....	22.40	25.22	2.07	1.75	4.07	3.52	2.94	1.27	1.03	1.63	1.73	1.98	2.42			
Stocks, end of period.....do.....	10.03	9.26	9.83	12.25	11.68	10.55	9.26	10.90	11.86	13.20	13.97	14.47	11.92			
Imports.....do.....	4.53	4.83	0.35	0.44	0.50	0.66	0.66	0.85	0.35	0.38	0.55	0.64	0.45	0.55	0.52	
Still wines:																
Production ‡.....do.....	434.01	*504.05	20.23	164.44	201.68	57.56	23.47	7.86	5.04	5.87	5.43	5.62	4.45			
Taxable withdrawals ‡.....do.....	328.48	*347.00	27.26	23.16	38.27	29.14	30.48	30.34	25.14	32.31	29.13	29.03	31.20			
Stocks, end of period ‡.....do.....	558.43	610.29	341.12	485.38	643.49	627.03	610.29	556.62	548.25	526.79	494.01	466.63	428.05			
Imports.....do.....	87.63	97.68	8.06	9.14	8.76	9.23	9.03	8.91	7.52	7.44	7.70	9.34	7.97	8.58	9.51	
Distilling materials produced at wineries.....do.....	254.36	204.38	10.22	37.10	90.62	31.48	10.29	5.51	3.52	2.81	2.94	5.96	5.24			
<b>DAIRY PRODUCTS</b>																
Butter, creamery:																
Production (factory) @.....mil. lb.	984.6	1,145.3	75.3	77.0	91.4	84.7	103.6	121.3	110.1	116.7	116.9	116.2	96.6	84.1	85.0	
Stocks, cold storage, end of period.....do.....	177.8	304.6	306.4	302.9	301.5	302.7	304.6	332.1	372.3	407.4	450.4	473.6	507.5	515.5	515.7	
Price, wholesale, 92 score (N.Y.).....\$ per lb.	1.272	1.448	1.515	1.517	1.526	1.536	1.539	1.534	1.537	1.535						
Cheese:																
Production (factory), total @.....mil. lb.	3,717.2	3,983.1	317.6	317.0	332.1	317.2	354.4	342.8	316.5	365.4	371.2	386.9	385.9	347.1	333.7	
American, whole milk @.....do.....	2,189.9	2,374.6	192.9	179.8	186.6	176.7	204.8	212.2	198.1	224.5	237.5	253.5	243.6	217.9	202.8	
Stocks, cold storage, end of period.....do.....	512.1	578.8	613.8	610.6	590.9	565.4	578.8	601.7	596.3	591.1	631.9	649.8	685.7	714.2	715.7	
American, whole milk.....do.....	406.5	479.6	501.2	498.2	484.4	462.3	479.6	504.7	508.6	501.4	539.4	555.6	585.0	615.7	613.4	
Imports.....do.....	248.3	231.2	17.5	24.9	29.3	30.9	44.4	10.3	11.6	15.3	19.5	13.7	16.8	18.6	16.9	
Price, wholesale, American, single daisies (Chicago).....\$ per lb.	1.414	1.562	1.570	1.615	1.653	1.641	1.641	1.640	1.640	1.669	1.670	1.678	1.679	1.678	1.678	1.678

See footnotes at end of tables.

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	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FOOD AND KINDRED PRODUCTS; TOBACCO—Continued</b>															
<b>DAIRY PRODUCTS—Continued</b>															
Condensed and evaporated milk:															
Production, case goods @ .. mil. lb.	796.1	724.7	57.3	55.9	51.5	50.3	60.7	55.7	54.7	60.4	65.0	65.2	69.2	67.8	68.0
Stocks, manufacturers', case goods, end of month or year .. mil. lb.	76.7	51.8	131.7	119.6	93.4	75.6	51.8	41.7	36.9	39.5	53.0	66.3	77.0	81.6	99.1
Exports .. do.	42.3	43.4	3.1	4.2	4.0	3.6	5.0	2.8	3.4	2.9	2.1	2.8	3.2	2.7	2.4
Fluid milk:															
Production on farms † .. do.	123,411	128,425	10,782	10,364	10,455	10,076	10,491	10,739	10,093	11,426	11,544	12,064	11,628	11,320	11,065
Utilization in mfd. dairy products @ .. do.	66,041	71,689	5,752	5,522	5,731	5,235	5,997	6,212	5,903	6,718	6,863	7,052	6,830	6,456	6,179
Price, wholesale, U.S. average .. \$ per 100 lb.	12.00	13.00	12.80	13.20	13.70	14.00	14.10	14.10	14.00	13.80	13.60	13.50	13.40	13.40	13.40
Dry milk:															
Production:															
Dry whole milk @ .. mil. lb.	85.3	82.7	6.3	6.4	8.0	7.4	6.9	6.8	6.0	6.8	8.0	8.5	6.4	7.0	7.6
Nonfat dry milk (human food) @ .. do.	908.7	1,160.7	104.0	77.3	72.8	69.1	89.6	92.0	95.3	110.0	122.9	135.3	132.6	120.0	114.8
Stocks, manufacturers', end of period:															
Dry whole milk .. do.	4.3	5.3	4.5	3.0	3.4	5.0	5.3	6.6	4.8	3.9	4.0	4.0	3.6	3.3	2.9
Nonfat dry milk (human food) .. do.	92.6	85.0	109.5	76.2	75.3	69.5	85.0	80.6	92.8	96.9	102.0	116.5	116.3	99.1	104.5
Exports, whole and nonfat (human food) .. do.	73.3	176.2	10.6	28.1	26.5	14.7	17.5	16.9	7.2	11.4	14.6	24.2	31.4	26.3	30.9
Price, manufacturers' average selling, nonfat dry milk (human food) .. \$ per lb.	0.800	0.887	0.892	0.897	0.922	0.936	0.939	0.938	0.936	0.937	0.939	0.939	0.939	0.938	0.938
<b>GRAIN AND GRAIN PRODUCTS</b>															
Exports (barley, corn, oats, rye, wheat) .. mil. bu.	3,640.3	3,914.4	363.2	350.5	368.1	366.4	382.9	348.0	341.8	361.9	326.1	289.8	289.9	295.7	301.2
Barley:															
Production (crop estimate) † .. do.	<sup>2</sup> 382.8	<sup>3</sup> 358.5													<sup>1</sup> 476.0
Stocks (domestic), end of period, total † .. do.	365.6	301.9		390.8			301.9			202.1		<sup>1</sup> 136.7			
On farms † .. do.	246.4	184.1		248.0			184.1			112.2		<sup>1</sup> 73.6			
Off farms .. do.	119.2	117.8		142.7			117.8			90.0		<sup>1</sup> 63.0			
Exports, including malt † .. do.	34.5	68.9	9.3	6.7	5.6	6.8	9.1	6.4	11.5	4.8	3.5	0.1	1.5	6.7	12.4
Prices, wholesale (Minneapolis):															
No. 2, malting .. \$ per bu.	2.67	( <sup>e</sup> )													
No. 3, straight .. do.	2.61	( <sup>e</sup> )													
Corn:															
Production (crop estimate, grain only) † .. mil. bu.	<sup>2</sup> 7,938.8	<sup>2</sup> 6,647.5													<sup>1</sup> 7,940.4
Stocks (domestic), end of period, total † .. do.	6,886.2	5,857.4		<sup>1</sup> 6,175.5			5,857.4			3,997.4		<sup>2</sup> 2,774.0			
On farms † .. do.	5,041.7	4,140.1		<sup>2</sup> 920.9			4,140.1			2,651.7		<sup>1</sup> 3,818.3			
Off farms .. do.	1,844.5	1,717.3		<sup>1</sup> 696.6			1,717.3			1,345.6		<sup>2</sup> 955.7			
Exports, including meal and flour .. do.	2,333.5	2,485.3	206.2	202.6	240.9	245.0	238.6	208.3	199.8	222.2	185.3	207.6	157.7	147.2	139.2
Price, wholesale:															
Weighted avg., selected markets, all grades .. \$ per bu.	2.42	( <sup>e</sup> )													
Oats:															
Production (crop estimate) † .. mil. bu.	<sup>2</sup> 526.6	<sup>2</sup> 457.6													<sup>1</sup> 509.5
Stocks (domestic), end of period, total † .. do.	476.8	390.5		484.1			390.5			255.8		<sup>1</sup> 176.5			
On farms † .. do.	400.8	328.9		394.8			328.9			211.4		<sup>1</sup> 148.7			
Off farms .. do.	76.0	61.7		89.3			61.7			44.4		<sup>2</sup> 27.8			
Exports, including oatmeal .. do.	4.8	9.1	1.3	1.0	1.7	0.5	0.9	0.7	1.5	0.8	2.5	1.9	0.6	1.4	0.8
Price, wholesale, No. 2, white (Minneapolis) .. \$ per bu.	1.57	( <sup>e</sup> )													
Rice:															
Production (crop estimate) .. mil. bags #.	<sup>1</sup> 131.9	<sup>1</sup> 145.1													<sup>1</sup> 178.6
California mills:															
Receipts, domestic, rough .. mil. lb.	2,721	3,582	237	195	476	368	342	354	253	333	351	317	218	168	219
Shipments from mills, milled rice .. do.	1,800	2,711	113	258	132	238	339	216	271	268	303	346	186	67	238
Stocks, rough and cleaned (cleaned basis), end of period .. mil. lb.	249	231	162	49	255	301	231	283	224	226	203	120	107	174	114
Southern States mills (Ark., La., Tenn., Tex.):															
Receipts, rough, from producers .. mil. lb.	9,247	10,831	829	2,439	2,170	1,077	1,358	436	830	749	274	142	85	182	1,503
Shipments from mills, milled rice .. do.	6,019	6,795	498	568	687	583	761	590	635	852	660	492	499	389	511
Stocks, domestic, rough and cleaned (cleaned basis), end of period .. mil. lb.	2,503	2,969	912	1,938	2,664	2,813	2,969	2,686	2,604	2,342	1,853	1,456	1,008	772	1,232
Exports .. do.	4,978	6,620	419	577	409	474	730	533	613	809	688	794	497	371	453
Price, wholesale, No. 2, medium grain (Southwest Louisiana) .. \$ per lb.	0.173	0.225	0.205	0.205	0.210	0.245	0.265	0.270	0.270	0.275	0.275	0.280	0.280	0.280	0.265
Rye:															
Production (crop estimate) † .. mil. bu.	<sup>2</sup> 22.4	<sup>2</sup> 16.3													<sup>1</sup> 17.1
Stocks (domestic), end of period † .. do.	17.7	9.3		18.4			9.3			6.8		<sup>1</sup> 4.1			
Price, wholesale, No. 2 (Minneapolis) .. \$ per bu.	2.51	( <sup>e</sup> )													
Wheat:															
Production (crop estimate), total † .. mil. bu.	<sup>2</sup> 2,134	<sup>2</sup> 2,370													<sup>1</sup> 2,750
Spring wheat † .. do.	<sup>2</sup> 533	<sup>2</sup> 478													<sup>1</sup> 691
Winter wheat † .. do.	<sup>2</sup> 1,601	<sup>2</sup> 1,891													<sup>1</sup> 2,059
Distribution, quarterly @@ .. do.	2,051	2,185		<sup>1</sup> 800			569			575			<sup>1</sup> 339		
Stocks (domestic), end of period, total † .. do.	1,716.2	1,903.8		2,471.9			1,903.8			1,329.2		<sup>1</sup> 990.8			
On farms † .. do.	773.9	754.1		975.3			754.1			539.4		<sup>1</sup> 413.8			
Off farms .. do.	942.2	1,149.7		1,496.6			1,149.7			789.8		<sup>1</sup> 577.1			
Exports, total, including flour .. do.	1,265.1	1,344.5	144.6	139.3	118.6	113.4	133.4	132.2	128.8	134.0	134.5	80.0	130.0	140.4	148.7
Wheat only .. do.	1,222.5	1,309.5	139.6	136.0	116.2	112.2	131.9	129.9	124.4	128.8	127.7	76.0	124.5	138.1	145.4
Prices, wholesale:															
No. 1, dark northern spring (Minneapolis) .. \$ per bu.	4.08	( <sup>e</sup> )													
No. 2 hd. and dk. hd. winter (Kans. City) .. do.	4.03	( <sup>e</sup> )													
Weighted avg., selected markets, all grades .. \$ per bu.	3.73	( <sup>e</sup> )													

See footnotes at end of tables.

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FOOD AND KINDRED PRODUCTS; TOBACCO—Continued</b>																
<b>GRAIN AND GRAIN PRODUCTS—Continued</b>																
Wheat flour:																
Production:																
Flour ‡.....thous. sacks (100 lb.)..	284,051	282,655	24,025	24,813	26,285	24,420	25,232	25,860	22,787	24,959	23,967	23,421	23,521	*23,342	23,810	
Millfeed ‡.....thous. sh. tons.	4,945	4,866	424	430	453	392	415	421	399	435	424	420	416	*410	432	
Grindings of wheat ‡.....thous. bu.	636,375	628,599	52,980	54,762	58,392	54,582	56,920	57,513	51,084	55,310	53,402	52,184	52,643	*51,194	53,905	
Stocks held by mills, end of period																
thous. sacks (100 lb.)..	3,975	3,842		3,716			3,842			3,897			3,895			
Exports.....do.....	18,291	15,014	2,137	1,396	1,034	522	609	980	1,896	2,241	2,932	1,724	2,350	987	1,420	
Prices, wholesale:																
Spring, standard patent (Minneapolis)																
\$ per 100 lb.	9.508	*10.566	10.963	10.975	11.113	11.138		11.050	11.113	10.975	11.100	11.075	11.125	10.813	10.750	
Winter, hard, 95% patent (Kans. City).....do.....	9.268	*10.116	10.113	10.475	10.600	10.675		10.663	10.400	10.275	10.525	10.313	10.525	10.275	10.300	
<b>POULTRY AND EGGS</b>																
Poultry:																
Slaughter (commercial production).....mil. lb.	13,820	14,048	1,170	1,215	1,319	1,070	1,150	1,171	1,027	1,203	1,236	1,258	1,320	1,336	1,306	
Stocks, cold storage (frozen), end of period, total																
mil. lb.	387	339	548	556	579	403	339	359	354	373	394	420	506	596	660	
do.....	240	198	384	399	420	258	198	208	208	221	229	256	327	401	470	
Turkeys.....do.....																
Price, in Georgia producing area, live broilers																
\$ per lb.	0.260	0.270	0.320	0.325	0.305	0.285	0.295	0.285	0.290	0.285	0.255	0.260	0.265	0.290	0.280	0.255
Eggs:																
Production on farms.....mil. cases \$.	192.3	193.6	16.0	15.9	16.5	16.1	16.8	16.6	15.0	16.6	15.9	16.2	15.5	15.9	16.0	
Stocks, cold storage, end of period:																
Shell.....thous. cases \$.	38	31	28	39	15	19	31	22	19	32	32	25	41	41	21	
Frozen.....mil. lb.	23	24	31	30	29	25	24	25	24	22	22	23	24	27	27	
Price, wholesale, large (delivered; Chicago)																
\$ per doz.	0.662	0.628	0.659	0.688	0.643	0.757	0.773	0.714	0.672	0.629	0.697	0.622	0.629	0.675	0.687	
<b>LIVESTOCK</b>																
Cattle and calves:																
Slaughter (federally inspected):																
Calves.....thous. animals.	2,499	2,294	182	198	228	185	214	215	190	213	190	158	175	203	197	
Cattle.....do.....	31,504	31,642	2,684	2,739	3,002	2,507	2,725	2,803	2,483	2,726	2,625	2,593	2,769	2,760	2,768	
Prices, wholesale:																
Beef steers (Omaha).....\$ per 100 lb.	67.75	66.96	72.31	69.68	67.18	65.05	64.29	63.08	61.50	61.40	64.92	66.86	68.26	67.86	66.37	65.37
Steers, stocker and feeder (Kansas City).....do.....	77.60	*75.13	71.92	71.53	*75.00	70.23	70.04	68.56	68.41	65.47	66.28	63.10	63.51	61.51	64.15	64.58
Calves, vealers (So. St. Paul).....do.....	91.41	*75.52	79.12	85.00	83.40	76.47	77.17	77.38	78.00	80.88	83.90	84.25	82.38	76.00	77.25	77.50
Hogs:																
Slaughter (federally inspected).....thous. animals.	85,425	91,882	6,745	7,601	8,404	7,362	7,788	7,768	6,873	7,988	7,993	7,004	6,682	6,539	6,580	
Prices:																
Wholesale, average, all weights (Sioux City)																
\$ per 100 lb.	42.13	39.48	48.49	47.42	48.36	46.44	45.07	41.67	42.78	39.88	40.15	41.96	48.78	51.01	51.14	48.89
Hog-corn price ratio (bu. of corn equal in value to 100 lb. live hog).....	18.3	14.4	15.8	15.3	15.8	14.7	13.8	12.8	12.8	11.9	12.0	12.6	15.0	15.7	*17.1	19.5
Sheep and lambs:																
Slaughter (federally inspected).....thous. animals.	4,833	5,363	427	466	510	415	468	488	426	488	512	425	440	439	467	
Price, wholesale, lambs, average (Omaha)																
\$ per 100 lb.	66.58	*59.81	*66.98	*64.88	*61.77	55.67	*53.13	46.50	54.50	55.25	59.25	65.00	66.25	59.00	53.75	50.25
<b>MEATS</b>																
Total meats (excluding lard):																
Production, total.....mil. lb.	37,225	38,590	3,016	3,221	3,577	3,097	3,349	3,416	3,011	3,383	3,296	3,069	3,113	3,038	3,041	
Stocks, cold storage, end of period.....do.....	706	750	514	510	584	679	750	792	783	776	817	795	717	628	535	
Exports (meat and meat preparations).....do.....	1,378	1,663	129	136	165	144	154	143	141	169	248	189	180	128	144	
Imports (meat and meat preparations).....do.....	2,178	2,052	170	133	209	167	191	171	167	131	155	140	153	162	168	
Beef and veal:																
Production, total.....do.....	21,671	21,849	1,804	1,860	2,064	1,733	1,892	1,971	1,751	1,931	1,843	1,791	1,888	1,852	1,858	
Stocks, cold storage, end of period.....do.....	361	338	235	226	250	286	338	371	356	351	349	338	306	280	250	
Exports.....do.....	366	425	40	35	39	27	33	34	38	54	140	34	46	30	39	
Imports.....do.....	1,712	1,531	125	95	163	122	143	128	128	87	110	95	108	116	119	
Price, wholesale, beef, fresh, steer carcasses, choice (600-700 lbs.) (Central U.S.).....\$ per lb.	1.011	1.044	1.120	1.080	1.055	1.014	1.006	0.998	0.961	0.943	0.997	1.033	1.065	1.072	1.039	1.030
Lamb and mutton:																
Production, total.....mil. lb.	284	310	23	26	29	24	28	30	26	29	29	24	24	24	25	
Stocks, cold storage, end of period.....do.....	11	9	9	8	8	10	9	9	8	8	10	10	12	13	14	
Pork (excluding lard):																
Production, total.....mil. lb.	15,270	16,431	1,189	1,335	1,485	1,339	1,428	1,416	1,234	1,423	1,424	1,254	1,201	1,162	1,158	
Stocks, cold storage, end of period.....do.....	281	349	217	222	269	321	349	351	356	361	404	394	347	283	223	
Exports.....do.....	330	314	19	18	28	29	28	27	32	37	31	39	34	19	19	
Imports.....do.....	361	433	39	31	40	37	39	37	33	37	36	37	39	39	42	
Prices, wholesale:																
Hams, smoked #.....Index, 1967=100..	252.6	*254.8	266.9	274.8	286.1	294.2	288.8	249.4	246.9	245.9	252.4	243.0	253.4	278.9	282.2	
Fresh loins, 8-14 lb. average (N.Y.).....\$ per lb.	1.076	1.011	1.116	1.114	1.136	1.100	1.094	1.156	1.146	1.105	1.035	1.124	1.191	1.261	1.212	1.185
<b>MISCELLANEOUS FOOD PRODUCTS</b>																
Cocoa (cacao) beans:																
Imports (incl. shells).....thous. lg. tons.	165.2	148.5	9.6	8.2	9.6	9.4	19.9	13.5	27.8	19.2	30.4	27.1	24.1	19.3	22.0	
Price, wholesale, Accra (New York).....\$ per lb.	*1.604	1.354	1.200	1.220	1.190	1.200	1.080	1.095	1.100	1.120	1.150	1.040	0.890	1.085	1.120	
Coffee (green):																
Inventories (roasters', importers', dealers'), end of period.....thous. bags #.	2,521	2,834		2,956			2,834			2,849			2,590			
Roastings (green weight).....do.....	17,005	17,047		3,859			4,868			4,742			3,962			
Imports, total.....do.....	19,396	18,153	1,386	1,062	1,292	1,486	1,715	1,858	1,738	1,395	1,299	1,356	1,026	922	1,213	
From Brazil.....do.....	1,890	3,505	336	208	346	352	341	473	259	364	138	283	166	213	172	
Price, wholesale, Santos, No. 4 (N.Y.).....\$ per lb.	1.763	2.066	2.060	2.060	2.100	2.100	2.080	2.180	2.180	2.180	2.180	2.190	1.155	1.155	1.270	
Confectionery, manufacturers' sales @.....mil. \$.	4,281	4,649	375	498	505	430	403	*398	*436	*438	*376	*303	*322	307		
Fish:																
Stocks, cold storage, end of period.....mil. lb.	471	393	380	379	391	408	393	388	344	330	295	294	331	356	369	

See footnotes at end of tables.

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FOOD AND KINDRED PRODUCTS; TOBACCO—Cont.</b>																
<b>MISCELLANEOUS FOOD PRODUCTS—Cont.</b>																
Sugar (United States):																
Deliveries and supply (raw basis): §																
Production and receipts:																
Production..... thous. sh. tons.	4,733	*4,713	60	96	592	928	1,127	758	487	232	153	201	138	82	.....	.....
Deliveries, total..... do.....	10,788	*10,838	975	955	899	744	998	754	743	1,004	878	943	1,031	997	.....	.....
For domestic consumption..... do.....	10,714	10,149	900	906	831	704	815	697	675	836	785	815	914	877	.....	.....
Stocks, raw and ref., end of period..... do.....	3,503	2,970	1,866	1,548	1,679	2,345	2,970	3,330	3,472	3,195	2,807	2,755	2,285	*1,928	*1,495	.....
Exports, raw and refined..... sh. tons.	14,924	608,029	87,919	40,495	81,229	20,650	123,950	26,370	55,765	134,737	80,412	83,266	115,336	88,501	122,452	.....
Imports, raw and refined..... thous. sh. tons.	4,810	4,127	349	314	310	510	272	387	289	313	255	398	312	347	313	.....
Prices, wholesale (New York):																
Raw..... \$ per lb.	*0.164	0.306	0.351	0.372	0.427	0.409	0.291	0.303	0.266	0.231	0.200	0.163	0.191	0.198	0.185	.....
Refined (excl. excise tax)..... do.....	0.228	0.405	0.442	0.413	0.560	0.550	0.403	0.432	0.383	0.344	0.315	0.266	0.295	0.285	0.295	.....
Tea, imports..... thous. lb.	174,690	184,786	11,883	11,870	14,271	12,126	15,936	12,891	18,354	14,696	19,220	18,990	17,736	14,586	19,128	.....
<b>FATS, OILS, AND RELATED PRODUCTS</b>																
Baking or frying fats (incl. shortening):																
Production..... mil. lb.	4,206.4	4,177.8	348.1	347.0	379.6	348.9	367.6	331.4	325.2	354.5	347.3	345.9	356.8	*336.0	327.4	.....
Stocks, end of period @..... do.....	131.9	130.7	114.5	125.5	102.8	111.9	130.7	125.2	122.0	118.9	126.8	129.0	117.4	*114.9	132.1	.....
Salad or cooking oils:																
Production..... do.....	5,075.6	5,167.2	481.1	452.8	414.5	394.4	411.2	404.1	409.5	474.5	438.2	459.3	473.9	*480.6	496.0	.....
Stocks, end of period @..... do.....	141.2	122.5	157.9	137.5	131.8	142.7	122.5	137.9	131.6	127.6	129.2	137.9	117.0	*112.5	114.2	.....
Margarine:																
Production..... do.....	2,553.2	2,592.8	186.9	213.2	221.9	218.4	264.6	235.5	214.4	231.6	196.3	182.1	214.3	*184.7	193.1	.....
Stocks, end of period @..... do.....	80.5	74.2	60.7	66.1	80.0	71.4	74.2	62.2	68.3	76.8	66.1	74.2	87.0	*79.8	87.1	.....
Price, wholesale (colored; mfr. to wholesaler or large retailer; delivered)..... \$ per lb.	0.549	0.603	0.637	0.637	0.624	0.624	0.624	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	.....
Animal and fish fats:																
Tallow, edible:																
Production (quantities rendered)..... mil. lb.	904.8	1,042.7	87.9	91.9	99.6	87.8	96.0	97.1	87.4	100.4	91.2	90.5	93.7	*89.8	92.0	.....
Consumption in end products..... do.....	765.7	714.9	51.1	61.7	65.4	57.3	62.9	62.4	64.0	69.9	66.9	63.1	64.5	*67.5	58.5	.....
Stocks, end of period ¶..... do.....	56.6	55.9	52.2	46.0	47.0	50.8	55.9	68.1	53.8	51.1	47.5	39.8	40.6	*37.8	36.4	.....
Tallow and grease (except wool), inedible:																
Production (quantities rendered)..... do.....	5,836.3	6,284.0	472.7	500.3	558.1	491.7	541.8	533.3	480.6	517.5	514.3	479.3	498.7	*502.1	474.3	.....
Consumption in end products..... do.....	3,083.4	2,922.2	229.5	240.3	264.7	230.1	233.5	254.5	241.0	253.1	256.3	261.9	249.1	*255.7	233.5	.....
Stocks, end of period ¶..... do.....	390.4	413.0	402.8	430.5	439.5	412.1	413.0	436.0	436.9	443.6	449.2	437.5	431.9	*419.0	424.0	.....
Vegetable oils and related products:																
Coconut oil:																
Production, refined..... mil. lb.	595.6	644.7	52.4	57.2	71.6	63.0	62.5	65.5	66.0	61.8	53.5	63.7	58.1	*57.0	58.4	.....
Consumption in end products..... do.....	748.4	693.5	51.0	62.5	66.9	63.1	58.3	67.7	65.0	71.1	68.3	64.0	70.4	*58.0	70.5	.....
Stocks, refined, end of period ¶..... do.....	40.1	49.6	47.6	35.0	36.5	36.6	49.6	47.4	50.6	44.7	33.9	39.4	38.0	*40.1	45.4	.....
Imports..... do.....	979.8	889.3	67.7	56.5	126.7	90.9	116.0	110.1	139.2	79.1	39.8	90.5	81.2	107.8	55.9	.....
Corn oil:																
Production: Crude..... do.....	743.5	810.6	69.9	76.2	80.6	68.0	59.0	65.8	63.6	76.2	69.6	74.3	76.1	76.2	76.2	.....
Production: Refined..... do.....	589.4	638.2	51.2	56.3	63.9	64.3	59.7	61.9	65.6	61.2	59.7	64.4	63.2	57.7	59.5	.....
Consumption in end products..... do.....	555.0	595.3	44.7	52.8	52.8	52.3	61.5	56.9	52.1	56.6	43.3	50.3	52.5	48.0	45.6	.....
Stocks, crude and ref., end of period ¶..... do.....	65.2	76.3	62.3	65.8	72.1	79.3	76.3	72.4	80.3	77.0	82.0	71.4	72.6	*68.5	78.1	.....
Cottonseed oil:																
Production: Crude..... do.....	1,260.5	1,447.1	104.9	93.1	116.4	130.5	122.3	131.7	118.9	115.4	100.8	88.7	77.4	69.6	57.7	.....
Production: Refined..... do.....	1,140.8	1,370.2	107.5	94.8	94.1	119.8	125.1	131.3	99.6	102.1	113.0	82.9	79.1	73.7	53.9	.....
Consumption in end products..... do.....	618.2	698.3	65.5	55.6	57.5	51.8	49.5	38.0	44.5	47.1	44.2	50.6	48.0	*39.0	37.3	.....
Stocks, crude and ref., end of period ¶..... do.....	144.3	170.1	139.8	121.9	122.6	152.9	170.1	183.6	200.1	202.4	165.9	160.2	121.7	*113.1	110.5	.....
Exports (crude and refined)..... do.....	633.0	785.4	77.6	89.3	53.7	66.6	47.1	77.0	29.3	66.7	82.1	72.2	85.7	46.9	35.9	.....
Price, wholesale (N.Y.)..... \$ per lb.	0.369	0.261	0.273	0.263	0.248	0.330	0.338	0.334	0.320	0.335	0.354	0.350	0.365	0.380	0.355	.....
Soybean oil:																
Production: Crude..... mil. lb.	11,504.1	12,097.2	913.8	890.1	1,080.2	1,077.6	1,024.3	1,010.6	887.8	991.3	954.2	914.9	830.7	*815.8	826.5	.....
Production: Refined..... do.....	9,110.1	8,982.2	760.7	764.5	784.1	760.5	763.1	741.6	706.3	833.9	741.2	754.9	812.9	*765.4	813.7	.....
Consumption in end products..... do.....	8,656.4	8,585.2	754.5	737.1	719.1	682.6	738.8	698.7	680.8	775.1	722.3	728.7	774.1	*763.1	775.6	.....
Stocks, crude and ref., end of period ¶..... do.....	1,030.1	1,737.8	1,263.0	1,210.1	1,373.9	1,677.3	1,737.8	1,900.1	1,976.3	2,016.7	2,118.5	2,166.3	2,138.6	*2,024.4	1,769.9	.....
Exports (crude and refined)..... do.....	2,370.6	2,314.6	175.7	171.2	112.5	84.7	120.5	116.0	113.8	202.8	76.1	109.6	108.8	93.1	291.7	.....
Price, wholesale (refined; N.Y.)..... \$ per lb.	0.327	0.289	0.318	0.320	0.302	0.309	0.286	0.282	0.265	0.281	0.285	0.265	0.268	0.292	0.266	.....
<b>TOBACCO</b>																
Leaf:																
Production (crop estimate)..... mil. lb.	*1,527	*1,783	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*1,975	.....
Stocks, dealers' and manufacturers', end of period ¶..... mil. lb.	4,974	4,850	.....	4,548	.....	.....	4,850	.....	.....	4,624	.....	.....	.....	.....	.....	.....
Exports, incl. scrap and stems..... thous. lb.	561,756	591,518	28,328	32,323	47,610	64,420	66,563	44,809	32,831	53,728	49,414	44,571	40,142	31,277	27,398	.....
Imports, incl. scrap and stems..... do.....	377,203	365,622	25,073	27,144	32,793	26,059	22,342	33,973	44,274	31,753	24,274	28,796	22,347	22,171	32,153	.....
Manufactured:																
Consumption (withdrawals):																
Cigarettes (small):																
Tax-exempt..... millions.	93,150	94,256	6,809	8,554	9,630	6,833	8,204	9,868	9,248	7,592	6,891	6,341	8,031	6,766	.....	.....
Taxable..... do.....	613,830	620,565	52,145	54,839	62,133	49,248	43,762	53,048	51,474	54,224	53,670	50,678	56,519	51,064	.....	.....
Cigars (large), taxable..... do.....	3,356	3,290	275	335	335	251	238	258	211	291	257	274	*336	242	.....	.....
Exports, cigarettes..... do.....	79,717	81,998	6,290	7,770	8,171	6,116	6,781	6,958	8,289	8,534	6,046	6,621	6,214	6,231	6,468	.....

See footnotes at end of tables.



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**LEATHER AND PRODUCTS**

<b>HIDES AND SKINS</b>																
Exports:																
Value, total #	991,707	693,678	52,134	48,820	53,048	50,461	58,493	57,458	64,390	64,187	56,901	58,209	55,976	60,702	51,763	
Calf and kid skins	2,321	2,495	281	325	138	137	202	242	264	263	227	278	264	184	216	
Cattle hides	23,731	19,568	1,703	1,510	1,608	1,542	1,711	1,536	1,749	1,737	1,565	1,545	1,560	1,775	1,496	
Imports:																
Value, total #	138,800	88,200	6,400	5,100	6,500	5,400	6,800	7,600	8,200	7,300	8,700	8,400	10,100	8,900	11,200	
Sheep and lamb skins	15,529	9,027	666	286	492	330	248	546	1,289	926	1,341	1,484	1,381	1,446	1,694	
Goat and kid skins	2,444	519	0	29	8	6	10	67	34	68	132	59	79	117	45	
Price, producer:																
Calfskins, packer, heavy, 9 1/2-15 lb	1.687	1.098	1.100	1.100	1.100	1.100	1.100									
Hides, native steer heavy	614.4	385.9	448.0	361.4	412.9	455.9	420.6	375.1	344.1	356.1	405.8	363.8	367.4	351.7	373.2	
<b>LEATHER</b>																
Exports:																
Upper and lining leather	187,665	192,597	15,215	15,818	19,051	20,880	13,641	19,633	14,418	19,717	17,678	18,016	18,692	13,921	10,918	
Price, producer:																
Sole, bends, light	329.6	283.8	312.8	284.0	249.5	268.9	283.2	317.1	302.7	308.5	317.1	318.5	298.4			
<b>LEATHER MANUFACTURES</b>																
Footwear:																
Production, total	398,872	396,851	31,642	33,488	37,159	30,382	29,514	31,441	30,660	34,345	33,025	31,926	30,361	26,744		
Shoes, sandals, and play shoes, except athletic	305,564	299,131	23,720	24,984	28,032	22,817	23,139	22,937	22,866	25,673	24,795	24,124	22,251	20,084		
Slippers	72,779	73,337	5,713	6,263	6,857	5,456	4,327	6,179	5,598	6,282	5,676	5,551	5,798	4,749		
Athletic	20,529	24,383	2,209	2,241	2,270	2,109	2,048	2,325	2,196	2,390	2,554	2,251	2,312	1,911		
Other footwear	3,651	3,271	245	297	305	297	278	270	275	259	219	217	224	233		
Exports:																
	7,581	9,781	893	875	952	908	877	710	804	1,180	913	729	976	551	785	
Prices, producer: *																
Men's leather upper, dress and casual								100.0	100.6	102.0	102.6	103.0	102.7	102.7	103.6	103.8
Women's leather upper	192.9	211.7	212.7	213.5	215.7	216.7	215.7	216.3	217.9	214.0	214.5	214.0	214.0	214.0	213.5	103.4
Women's plastic upper							100.0	100.5	101.8	102.8	102.8	103.0	102.9	102.9	103.4	

**LUMBER AND PRODUCTS**

<b>LUMBER—ALL TYPES #</b>															
National Forest Products Association:															
Production, total	37,061	31,885	2,783	2,818	2,903	2,480	2,329	2,523	2,542	2,818	2,780	2,651	2,588	2,483	
Hardwoods	7,317	7,220	570	527	549	550	500	520	579	614	598	592	560	545	
Softwoods	29,744	24,665	2,213	2,291	2,354	1,930	1,829	2,003	1,963	2,204	2,182	2,059	2,028	1,938	
Shipments, total															
	36,514	31,422	2,716	2,708	2,851	2,494	2,350	2,424	2,379	2,752	2,755	2,633	2,765	2,395	
Hardwoods	6,942	6,584	504	494	511	542	492	501	557	592	579	626	560	498	
Softwoods	29,572	24,838	2,212	2,214	2,340	1,952	1,858	1,923	1,822	2,160	2,176	2,007	2,205	1,897	
Stocks (gross), mill, end of period, total															
	5,342	5,805	5,659	5,776	5,832	5,826	5,805	5,883	6,065	6,098	6,123	6,213	6,015	6,103	
Hardwoods	1,171	1,807	1,701	1,741	1,783	1,799	1,807	1,819	1,843	1,872	1,891	1,871	1,839	1,886	
Softwoods	4,171	3,998	3,958	4,035	4,049	4,027	3,998	4,064	4,222	4,226	4,232	4,342	4,176	4,217	
Exports, total sawmill products															
	1,447	1,655	134	118	123	117	127								
Imports, total sawmill products	11,513	9,859	804	863	867	892	799	756	848	966	980	991	934	842	465
<b>SOFTWOODS</b>															
Douglas fir:															
Orders, new	8,388	6,791	550	646	634	541	453	601	486	698	598	538	566	486	466
Orders, unfilled, end of period	529	499	521	555	563	565	499	549	514	594	601	540	505	510	458
Production	8,427	6,815	584	651	607	531	495	576	562	622	601	576	533	521	546
Shipments	8,412	6,821	589	612	626	539	519	551	521	618	591	599	601	481	518
Stocks (gross), mill, end of period	918	912	924	963	944	936	912	937	978	982	992	969	901	941	969
Exports, total sawmill products															
Sawed timber	519	540	42	35	40	40	37	51	49	43	51	47	43	31	51
Boards, planks, scantlings, etc	156	117	13	7	11	5	8	9	9	9	13	8	13	6	14
Prices, wholesale:	363	422	29	28	30	35	29	42	39	35	38	39	30	25	37
Dimension, construction, dried, 2" x 4", R.L.															
\$ per M bd. ft.	277.24	223.42	248.37	232.98	224.31	214.86	217.12								
Southern pine:															
Orders, new	7,950	6,559	558	510	678	509	439	617	463	587	602	508	535	546	
Orders, unfilled, end of period	523	419	470	434	492	473	419	456	447	493	486	474	440	441	
Production	7,938	6,758	614	575	626	519	515	569	492	552	604	546	559	557	
Shipments	7,932	6,663	600	546	620	528	493	580	472	541	609	520	569	543	
Stocks (gross), mill and concentration yards, end of period															
	1,175	1,270	1,222	1,251	1,257	1,248	1,270	1,259	1,279	1,290	1,285	1,311	1,301	1,313	
Exports, total sawmill products															
	209,793	280,243	24,274	19,376	20,072	16,731	20,878	14,763	11,781	26,059	19,198	19,919	21,226	20,898	21,048
Prices, wholesale (indexes):															
Boards, No. 2 and better, 1" x 6", R.L.															
1967=100.	366.2	337.2	331.6	324.3	316.1	316.1	320.0								
Flooring, C and better, F. G., 1" x 4", S.L.															
1967=100.	301.4	324.7	325.8	328.0	330.2	330.2	330.2								

See footnotes at end of tables.

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<b>LUMBER AND PRODUCTS—Continued</b>																
<b>SOFTWOODS—Continued</b>																
Western pine:																
Orders, new.....mil. bd. ft.	9,630	7,730	628	806	735	636	516	688	605	747	637	573	761	627	569	
Orders, unfilled, end of period.....do.	403	326	392	445	444	415	326	418	414	442	426	355	369	377	314	
Production.....do.	9,780	7,613	648	748	732	644	635	659	631	736	681	684	679	616	656	
Shipments.....do.	9,696	7,807	656	753	736	665	605	596	609	719	653	644	747	619	632	
Stocks (gross), mill, end of period.....do.	1,379	1,185	1,185	1,180	1,176	1,155	1,185	1,248	1,270	1,287	1,315	1,355	1,287	1,284	1,308	
Price, wholesale, Ponderosa, boards, No. 3, 1" x 12", R.L. (6' and over).....\$ per M bd. ft.	317.26	287.55	327.35	304.06	293.25	306.22	340.83									
<b>HARDWOOD FLOORING</b>																
Oak:																
Orders, new.....mil. bd. ft.	93.4	( <sup>9</sup> )														
Orders, unfilled, end of period.....do.	7.0	1.9	4.0	2.9	2.0	1.5	1.9	1.5	1.9	2.5	3.7	3.2	3.0	3.6	3.0	
Production.....do.	99.8	( <sup>9</sup> )														
Shipments.....do.	96.7	78.0	7.0	6.4	7.2	6.1	5.8	6.4	6.7	8.0	9.0	7.5	7.3	6.5	7.1	
Stocks (gross), mill, end of period.....do.	5.4	12.4	9.4	9.8	9.4	10.0	12.4	10.9	9.3	9.7	9.3	8.6	9.2	7.6	8.7	
<b>METALS AND MANUFACTURES</b>																
<b>IRON AND STEEL</b>																
Exports:																
Steel mill products.....thous. sh. tons.	2,818	4,101	449	401	366	316	324	256	213	260	291	259	279	218	194	
Scrap.....do.	11,054	11,168	821	822	967	525	763	578	683	442	694	677	628	348	450	
Pig iron.....do.	105	73	4	1	2	3	( <sup>2</sup> )	2	1	2	2	1	2	1	1	
Imports:																
Steel mill products.....do.	17,518	15,495	1,374	1,064	1,142	1,181	1,536	1,281	1,234	1,142	1,761	1,772	1,665	1,663	2,226	
Scrap.....do.	760	558	26	54	40	35	58	38	41	53	52	62	52	37	59	
Pig iron.....do.	476	400	26	12	32	43	72	18	10	5	36	61	59	36	38	
<b>Iron and Steel Scrap</b>																
Production.....thous. sh. tons.	'52,219	'42,207	2,856	3,247	3,691	3,584	3,820	3,774	3,750	4,240	4,078	4,001	3,876	3,694		
Receipts, net.....do.	'47,048	'40,954	2,574	3,066	3,770	3,609	3,961	3,769	3,604	4,261	4,018	4,162	'3,817	3,453		
Consumption.....do.	98,901	'83,710	5,520	6,328	7,402	7,410	7,386	7,486	7,435	8,379	8,137	8,184	'7,657	7,167		
Stocks, end of period.....do.	8,724	8,018	7,653	7,691	7,771	7,607	8,037	7,939	7,856	8,004	8,015	8,175	'8,287	8,239		
Prices, steel scrap, No. 1 heavy melting:																
Composite.....\$ per lg. ton.	98.07	92.17	83.61	92.38	96.65	98.21	101.86	96.34	94.28	98.74	101.44	96.13	88.63	87.07	91.37	89.74
Pittsburgh district.....do.	101.50	96.17	88.50	99.00	104.50	105.50	106.00	103.50	101.00	109.00	112.00	105.50	99.00	99.00	107.50	102.50
<b>Ore</b>																
Iron ore (operations in all U.S. districts):																
Mine production.....thous. lg. tons.	'85,716	'69,613	4,736	4,368	5,024	4,686	5,913	5,964	6,052	6,751	6,280	7,265	7,525	7,112		
Shipments from mines.....do.	'86,218	'69,594	6,052	6,211	6,638	6,587	6,009	2,800	1,545	2,035	3,938	8,906	9,625	9,703		
Imports.....do.	33,776	25,058	2,029	2,062	2,499	2,348	1,809	1,292	1,075	1,165	1,794	2,901	3,879	3,059		
U.S. and foreign ores and ore agglomerates:																
Receipts at iron and steel plants.....do.	115,892	87,188	7,671	8,054	8,498	8,323	7,625	4,162	2,686	3,794	6,233	11,520	11,924	12,350	12,159	
Consumption at iron and steel plants.....do.	115,014	89,397	5,644	5,953	7,203	7,895	8,326	8,667	8,126	9,293	8,793	8,841	8,162	8,022	8,024	
Exports.....do.	4,455	5,073	650	484	552	309	563	33	2	63	625	2,967	634	530		
Stocks, total, end of period.....do.																
At mines.....do.	55,753	56,066	57,545	57,999	57,653	56,621	56,066	54,536	53,154	50,786	49,781	51,411	53,744	56,356		
At furnace yards.....do.	11,368	14,265	19,757	17,914	16,289	14,374	14,265	17,477	21,990	26,736	29,336	27,700	25,601	23,019		
At U.S. docks.....do.	38,969	35,706	32,953	35,009	36,131	36,499	35,706	31,088	25,554	19,972	17,286	19,885	23,480	27,904	31,931	
At U.S. docks.....do.	5,416	6,095	4,835	5,076	5,233	5,748	6,095	5,971	5,610	4,078	3,159	3,826	4,663	5,433	6,238	
Manganese (mn. content), general imports.....do.	850	795	67	60	38	57	69	22	76	55	70	111	78	68		
<b>Pig Iron and Iron Products</b>																
Pig iron:																
Production (including production of ferroalloys).....thous. sh. tons.	'86,975	'68,699	4,360	4,596	5,621	6,132	6,489	6,603	6,108	7,193	6,755	6,938	6,408	6,268	6,259	
Consumption.....do.	87,458	'69,053	4,392	4,671	5,688	6,186	6,507	6,647	6,209	7,316	6,927	'7,108	6,589	6,508	6,518	
Stocks, end of period.....do.	881	925	888	877	863	859	925	891	894	881	846	831	779	817	789	
Price, basic furnace.....\$ per sh. ton.	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	
Castings, gray and ductile iron:																
Orders, unfilled, for sale, end of period.....thous. sh. tons.	974	938	817	851	891	932	938	942	952	968	882	845	'846	843		
Shipments, total.....do.	15,434	11,587	833	940	1,102	946	873	1,034	1,011	1,140	1,170	1,114	'1,079	987		
For sale.....do.	7,981	6,321	'491	534	605	529	491	562	548	634	657	630	'619	575		
Castings, malleable iron:																
Orders, unfilled, for sale, end of period.....thous. sh. tons.	54	41	30	35	39	44	41	46	45	43	42	40	'44	42		
Shipments, total.....do.	715	461	30	34	41	36	37	37	40	43	42	38	40	29		
For sale.....do.	376	217	15	15	18	16	17	17	18	20	20	19	18	12		
<b>Steel, Raw and Semifinished</b>																
Steel (raw):																
Production.....thous. sh. tons.	'136,341	'111,835	7,018	7,767	9,442	10,057	10,180	10,590	10,028	11,744	11,243	11,423	10,451	10,160	10,120	
Rate of capability utilization.....percent.	'87.2	72.8	54.4	62.6	72.2	79.5	77.8	79.9	83.7	88.6	87.7	86.2	81.5	77.6	77.3	
Steel castings:																
Orders, unfilled, for sale, end of period.....thous. sh. tons.	1,039	606	660	621	603	609	606	668	586	558	540	525	'501	488		
Shipments, total.....do.	2,039	1,851	122	145	141	133	148	158	163	173	154	150	'151	128		
For sale, total.....do.	1,848	1,681	112	132	128	121	135	144	147	155	137	132	'132	115		

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METALS AND MANUFACTURES—Continued

Steel Mill Products																
Steel products, net shipments:																
Total (all grades)..... thous. sh. tons.....	100,262	83,853	5,745	6,682	7,458	7,038	7,591	7,616	7,375	8,422	8,108	7,932	8,148	7,115	7,020	
By product:																
Semifinished products..... do.....	5,496	5,342	386	379	496	488	543	441	477	606	531	535	529	400	434	
Structural shapes (heavy), steel piling..... do.....	5,596	5,207	942	447	489	432	426	457	426	548	472	414	408	392	395	
Plates..... do.....	9,035	8,080	587	652	702	627	661	667	720	731	678	667	627	584	586	
Rails and accessories..... do.....	2,026	1,797	112	138	124	125	140	145	158	170	161	140	116	114	89	
Bars and tool steel, total..... do.....	17,601	13,258	889	1,011	1,132	1,036	1,037	1,079	1,146	1,334	1,292	1,258	1,263	1,115	1,106	
Bars: Hot rolled (incl. light shapes)..... do.....	9,958	6,911	433	517	583	571	564	610	659	764	740	722	706	593	528	
Bars: Reinforcing..... do.....	5,303	4,683	350	371	415	340	348	320	342	407	395	385	399	388	342	
Bars: Cold finished..... do.....	2,245	1,585	101	117	126	120	119	144	140	156	150	145	152	128	131	
Pipe and tubing..... do.....	8,242	9,097	689	739	789	767	782	793	776	945	949	925	890	859	881	
Wire and wire products..... do.....	2,449	1,768	124	136	146	129	148	150	153	185	161	150	155	137	130	
Tin mill products..... do.....	6,310	5,709	435	426	432	425	464	474	473	431	431	388	419	413	399	
Sheets and strip (incl. electrical), total..... do.....	43,507	33,595	2,168	2,756	3,149	3,010	3,390	3,410	3,046	3,470	3,434	3,456	3,739	3,102	3,001	
Sheets: Hot rolled..... do.....	15,995	12,116	754	988	1,083	1,111	1,281	1,209	1,077	1,267	1,252	1,233	1,346	1,146	1,124	
Sheets: Cold rolled..... do.....	17,284	13,313	848	1,104	1,282	1,179	1,325	1,368	1,202	1,344	1,354	1,402	1,487	1,209	1,154	
By market (quarterly):																
Service centers and distributors..... do.....	18,263	16,174		3,432			4,693			4,696			4,997	<sup>2</sup> 1,442	<sup>2</sup> 1,326	
Construction, incl. maintenance..... do.....	10,058	8,787		2,006			2,237			2,356			2,442	<sup>2</sup> 750	<sup>2</sup> 697	
Contractors' products..... do.....	4,021	3,362		727			945			958			892	<sup>2</sup> 284	<sup>2</sup> 264	
Automotive..... do.....	18,624	12,156		2,440			3,473			3,591			3,811	<sup>2</sup> 1,089	<sup>2</sup> 1,095	
Rail transportation..... do.....	4,127	3,178		582			702			753			548	<sup>2</sup> 151	<sup>2</sup> 155	
Machinery, industrial equip., tools..... do.....	6,027	4,566		882			1,003			1,261			1,292	<sup>2</sup> 362	<sup>2</sup> 386	
Containers, packaging, ship. materials..... do.....	6,770	5,549		1,192			1,325			1,470			1,399	<sup>2</sup> 453	<sup>2</sup> 423	
Other..... do.....	32,372	30,082		6,518			7,709			8,326			8,806	<sup>2</sup> 2,583	<sup>2</sup> 2,674	
Steel mill shapes and forms, inventories, end of period—total for the specified sectors:																
mil. sh. tons.....	'36.3	'30.4	'32.7	'30.9	'29.4	'29.9	'30.4	30.7	30.8	31.1	30.8	'31.8	31.7			
Producing mills, inventory, end of period:																
Steel in process..... mil. sh. tons.....	11.5	9.6	11.4	10.3	9.6	9.6	9.6	9.5	9.5	9.8	9.9	10.4	'10.3	10.6		
Finished steel..... do.....	7.6	6.9	6.8	6.6	6.7	6.9	6.9	7.0	7.1	7.1	7.3	7.5	7.2	7.2		
Service centers (warehouses), inventory, end of period..... mil. sh. tons.....	7.1	7.3	7.2	7.1	6.6	7.0	7.3	6.9	7.2	7.2	6.9	'7.3	7.5			
Consumers (manufacturers only):																
Inventory, end of period..... do.....	'10.1	6.6	7.3	6.9	6.5	6.4	6.6	6.7	7.0	7.0	6.7	6.6	'6.7	6.0		
Receipts during period..... do.....	'88.1	'69.9	'4.9	'5.7	'6.5	'5.8	'5.9	6.2	6.4	6.7	6.3	6.4	'6.8	6.1		
Consumption during period..... do.....	'88.5	'73.4	'5.3	'6.1	'6.9	'5.9	'5.7	6.1	6.1	6.7	6.6	6.5	'6.7	6.0		
NONFERROUS METALS AND PRODUCTS																
Aluminum:																
Production, primary (dom. and foreign ores)..... thous. sh. tons.....	9,400	9,430	426	419	437	427	439	445	404	448	431	441	420	426		
Recovery from scrap (aluminum content)..... do.....	1,399	1,377	113	124	128	122	118	124	127	146	139	139	148	149		
Imports (general):																
Metal and alloys, crude..... do.....	570.6	'580.5	40.7	43.0	41.4	29.9	78.3	55.8	55.7	75.6	50.2	67.8	55.9	63.9		
Plates, sheets, bars, etc..... do.....	'201.0	'72.7	4.4	3.7	7.2	4.8	5.2	5.8	8.9	7.5	10.7	13.9	11.6	12.5		
Exports:																
Metal and alloys, crude..... do.....	200.6	715.0	97.6	98.9	70.1	55.0	46.1	59.4	23.2	32.9	48.6	29.3	23.5	29.3		
Plates, sheets, bars, etc..... do.....	265.7	315.3	42.5	24.5	34.1	24.2	24.6	30.1	27.1	32.6	26.5	30.6	21.4	18.0		
Price, primary ingot, 99.5% minimum.... \$ per lb.....	0.5940	0.6957	0.6800	0.6933	0.7546	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	
Aluminum products:																
Shipments:																
Ingot and mill prod. (net ship.)..... mil. lb.....	14,517	14,057	1,172	1,184	1,232	1,021	1,203	1,090	1,072	1,294	1,199	1,189	'1,248	1,049		
Mill products, total..... do.....	11,230	10,485	819	858	913	796	868	883	859	963	952	929	'957	856		
Sheet and plate..... do.....	6,296	5,862	464	481	494	435	492	511	486	562	550	541	'564	493		
Castings..... do.....	2,080	1,538	108	119	135	124	122	141	131	154	148	139	'146	120		
Inventories, total (ingot, mill products, and scrap), end of period..... mil. lb.....	5,125	5,076	5,037	4,966	4,966	5,082	5,076	5,221	5,323	5,408	5,495	5,600	'5,632	5,949		
Copper:																
Production:																
Mine, recoverable copper..... thous. met. tons.....	1,443.6	1,175.3	34.1	48.3	76.0	102.0	116.8	119.4	114.0	121.4	124.6	127.9	'125.2	122.0	134.9	
Refinery, primary..... do.....	1,515.4	'1,210.9	22.7	25.8	64.2	90.2	121.1	126.0	125.0	139.6	140.1	131.7	133.1	120.8	116.9	
From domestic ores..... do.....	1,411.5	1,121.9	<sup>(9)</sup>	<sup>(9)</sup>	58.7	82.7	109.6	113.5	110.3	131.7	131.0	123.6	125.5	111.5	103.4	
From foreign ores..... do.....	103.9	'89.0	<sup>(9)</sup>	<sup>(9)</sup>	5.5	7.5	11.5	12.5	14.6	7.9	9.2	8.1	7.6	9.2	13.5	
Secondary, recovered as refined..... do.....	575.6	573.0	33.6	33.4	60.8	45.0	36.9	38.9	52.8	45.5	63.1					
Imports (general):																
Refined, unrefined, scrap (copper cont.)..... do.....	341.3	520.3	38.6	42.8	64.2	55.8	44.3	41.7	39.0	29.0	40.2	28.6	51.1	41.6		
Refined..... do.....	217.9	431.8	34.8	39.1	59.2	46.0	36.8	24.7	29.4	21.8	28.1	21.7	34.5	32.2		
Exports:																
Refined and scrap..... do.....	308.8	330.1	39.2	20.8	25.3	25.2	22.9	36.2	32.1	38.7	20.2	33.7	'40.0	18.5		
Refined..... do.....	80.5	17.4	0.9	0.4	0.5	1.0	3.4	2.9	2.5	5.8	1.2	0.9	'3.5	1.3		
Consumption, refined (by mills, etc.)..... thous. sh. tons.....	'2,470	2,083		375			500			527						
Stocks, refined, end of period..... do.....	288	365		392			365			331						
Price, electrolytic (wirebars), dom., delivered..... \$ per lb.....	'0.9333	'1.0242	1.0071	0.9886	0.9947	0.9698	0.8913	0.8857	0.8607	0.8738	0.8803	0.8580	0.8523	0.8441	0.8739	
Copper-base mill and foundry products, shipments (quarterly total):																
Brass mill products..... mil. lb.....	2,981	2,405		532			642			867						
Copper wire mill products (copper cont.)..... do.....	3,048	2,834	674	694		622	622			670						
Brass and bronze foundry products..... do.....	'593	483		108			116			119						
Lead:																
Production:																
Mine, recoverable lead..... thous. met. tons.....	525.6	551.0	41.7	39.3	48.5	39.6	41.2	42.3	40.5	43.0	'26.4	27.5	17.1			
Recovered from scrap (lead cont.)..... do.....	801.4	659.1	52.2	56.0	50.2	58.1	54.9	46.5	43.9	43.8	42.4	44.1	46.7			
Imports (general), ore (lead cont.), metal..... do.....	59.6	52.1	4.2	6.5	4.6	3.7	2.6	3.5	6.0	11.1	3.3	11.5	2.4	9.9		
Consumption, total..... do.....	1,358.3	1,048.2	79.5	95.6	103.0	92.5	92.0	98.9	90.7	95.9	91.2	89.1	91.0			

Unless otherwise stated in footnotes below, data through 1978 and descriptive notes are as shown in the 1979 edition of BUSINESS STATISTICS	1979	1980	1980						1981								
	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
<b>METALS AND MANUFACTURES—Continued</b>																	
<b>NONFERROUS METALS AND PRODUCTS—Continued</b>																	
<b>Lead—Continued</b>																	
Stocks, end of period:																	
Producers', ore, base bullion, and in process (lead content), ABMS.....thous. met. tons..	105.2	135.3	138.3	138.9	142.4	136.9	135.3	126.5	132.0	122.7	110.5	108.3	111.1	117.2	116.0		
Refiners' (primary), refined and antimonial (lead content).....thous. met. tons..	46.1	54.8	49.1	31.5	26.1	41.6	54.8	77.9	81.3	77.4	72.8	57.1	47.3				
Consumers' (lead content) †.....do....	123.2	95.8	84.5	86.8	90.7	94.4	95.8	91.8	87.9	87.1	86.5	89.1	93.2				
Scrap (lead-base, purchased), all smelters (gross weight).....thous. met. tons..	74.1	41.2	35.5	38.2	38.9	39.8	41.2	43.5	37.1	37.1	38.2	38.4	39.1				
Price, common grade, delivered.....\$ per lb..	0.5264	0.4246	0.4096	0.4226	0.4500	0.4381	0.3897	0.3379	0.3042	0.3506	0.3752	0.3641	0.3797	0.4098	0.4389		
<b>Tin:</b>																	
Imports (for consumption):																	
Ore (tin content).....metric tons..	4,529	842	0	0	147	26	0	0	0	0	0	0	0	0	0	0	
Metal, unwrought, unalloyed.....do....	48,354	45,983	2,736	3,095	3,688	3,738	3,805	4,790	3,327	3,985	3,856	4,831	4,359	3,440			
Recovery from scrap, total (tin cont.).....do....	21,493	18,638	1,230	1,220	1,370	1,175	1,265	1,195	1,330	1,220	1,188	1,285	1,345				
As metal.....do....	1,767	1,703	175	155	120	150	145	120	130	135	135	160	135				
Consumption, total.....do....	62,465	56,362	3,900	4,150	4,300	4,050	3,750	4,300	4,400	4,100	4,600	4,400	4,350	3,900			
Primary.....do....	49,496	41,342	3,050	3,350	3,400	3,250	3,000	3,500	3,600	3,300	3,700	3,500	3,200	2,900			
Exports, incl. reexports (metal).....do....	3,418	4,293	498	227	180	151	547	415	233	919	287	343	411	1,019			
Stocks, pig (industrial), end of period.....do....	258	564	6,051	5,180	5,208	5,086	5,504	5,968	5,745	5,229	5,725	5,978	6,227	5,465			
Price, Straits quality (delivered).....\$ per lb..	7.5389	8.4600	8.3922	8.6898	8.4000	7.9779	7.5956	7.4876	7.1349	7.0026	6.8358	6.5806	6.5839	6.8981	7.5339		
<b>Zinc:</b>																	
Mine prod., recoverable zinc.....thous. met. tons..	267.3	313.1	25.2	24.1	28.2	24.0	24.5	24.6	24.8	27.6	25.5	24.8	23.1				
Imports (general):																	
Ores (zinc content).....do....	225.0	113.8	15.6	8.6	2.1	8.5	13.6	19.4	6.0	10.8	3.9	10.2	13.3	8.5			
Metal (slab, blocks).....do....	575.1	329.0	30.1	32.3	38.3	45.1	52.0	36.4	51.7	48.4	52.5	52.3	71.7	55.4			
Consumption (recoverable zinc content):																	
Ores.....do....	79.7	67.6	5.3	4.6	3.8	6.3	6.4	6.4	5.7	4.8	5.7	4.9	5.2				
Scrap, all types.....do....	314.0	296.1	18.3	18.4	19.4	19.3	19.1	19.1	19.2	19.8	19.9	18.9	19.0				
Slab zinc: @																	
Production, total †.....thous. met. tons..	1525.7	325.3	24.2	26.0	28.1	27.1	30.2	30.3	28.5	31.3	30.9	29.2	28.0	30.0	30.4	26.7	
Consumption, fabricators.....do....	100.1	81.7	58.2	66.7	74.6	72.3	70.5	74.5	73.6	77.3	74.3	73.6	79.0				
Exports.....do....	0.3	0.3		(2)	(2)	(2)	(2)	0.0	(2)	(2)	0.1	(2)	(2)				
Stocks, end of period:																	
Producers', at smelter (ABMS).....do....	55.8	18.7	32.1	27.3	21.3	18.7	18.7	16.7	17.0	19.0	16.0	15.6	16.2	18.9	20.8		
Consumers'.....do....	59.1	58.8	56.3	57.9	58.6	57.5	58.8	57.1	57.9	57.4	61.8	66.4	66.3				
Price, Prime Western.....\$ per lb..	0.3730	0.3743	0.3573	0.3663	0.3726	0.3858	0.4059	0.4119	0.4125	0.4130	0.4256	0.4520	0.4612	0.4625	0.4747		
<b>MACHINERY AND EQUIPMENT</b>																	
Heating, combustion, atmosphere equipment, new orders (domestic), net, qtrly #.....mil. \$..	372.6	348.3		39.5			87.7			91.8							
Electric processing heating equipment.....do....	105.5	82.8		19.4			21.1			36.7							
Fuel-fired processing heating equip.....do....	160.4	156.5		20.1			42.4			19.3							
Material handling equipment (industrial):																	
Orders (new), index, seas. adj.....1967=100..	419.4	375.5	3,315.3	4,534.0	3,711.3	3,406.5	3,848.4	383.7	362.0	441.0	365.5	431.9	369.5	446.2			
Industrial trucks (electric), shipments:																	
Hand (motorized).....number..	24,183	20,495	1,396	1,913	1,624	1,512	1,521	1,129	1,443	1,893	1,505	1,559	1,735	1,383	1,596		
Rider-type.....do....	28,654	24,110	1,647	1,947	1,839	1,658	1,712	1,490	1,527	1,693	1,727	1,551	1,722	1,258	1,492		
Industrial trucks and tractors (internal combustion engines), shipments.....number..	55,782	39,448	1,972	2,590	2,878	2,636	2,562	2,687	2,667	2,920	2,817	2,563	2,962	2,366	2,482		
Industrial supplies, machinery and equipment:																	
New orders index, seas. adjusted.....1977=100..	132.1	109.8	100.5	100.2	103.3	109.2	112.0	111.6	113.8	117.8	118.0	115.7	118.2	121.9	119.2		
Industrial suppliers distribution: †																	
Sales index, seas. adjusted.....1977=100..	129.6	134.5	134.1	131.4	135.7	132.7	128.1	138.9	135.6	138.9	145.6	140.2	140.9	149.4	150.6	147.2	
Price index, not seas. adj. (tools, material handling equip., valves, fittings, abrasives, fasteners, metal products, etc.).....1977=100..	117.4	131.2	133.2	133.9	134.6	135.3	136.3	137.8	139.4	140.8	142.6	143.6	144.2	145.8	146.2	146.7	
Fluid power products shipments indexes:																	
Hydraulic products, seas. adj.....1972=100..	147	153	244	246	253	240	255	245	262	260	278	267	294	310	287	290	
Pneumatic products, seas. adj.....do....	120	136	218	225	251	233	259	248	245	253	255	244	245	266	267	237	
Machine tools:																	
Metal cutting type tools:																	
Orders, new (net), total.....mil. \$..	4,495.10	3,884.75	165.05	295.65	286.55	275.00	245.00	206.55	212.80	287.25	228.55	179.00	253.65	136.85	166.80		
Domestic.....do....	3,865.80	3,495.50	148.95	259.45	263.05	253.95	207.25	186.30	179.90	249.05	191.55	162.35	206.05	121.95	143.90		
Shipments, total.....do....	2,930.05	3,680.80	244.65	337.75	352.15	318.65	372.80	308.70	335.30	373.85	358.50	331.95	412.95	295.35	228.35		
Domestic.....do....	2,605.50	3,206.00	223.50	292.80	295.10	271.45	314.50	270.70	279.75	311.80	291.40	274.10	352.45	255.95	228.35		
Order backlog, end of period.....do....	4,545.7	4,749.7	5,029.0	4,986.9	4,921.3	4,877.6	4,749.7	4,647.6	4,525.0	4,438.4	4,308.5	4,155.6	3,996.2	3,837.8	3,742.6		
Metal forming type tools:																	
Orders, new (net), total.....do....	1,047.60	776.95	59.40	79.15	43.45	54.05	54.15	74.45	64.45	57.45	76.45	48.95	55.40	57.95	47.20		
Domestic.....do....	919.90	664.95	51.30	72.45	37.40	44.15	44.05	68.45	56.90	52.90	59.10	42.90	48.85	52.85	43.80		
Shipments, total.....do....	946.50	1,010.95	66.25	73.45	87.65	81.50	90.50	80.25	86.85	103.25	88.90	79.35	95.85	71.75	66.25		
Domestic.....do....	859.80	878.55	53.60	66.10	72.40	69.45	77.95	67.30	72.65	75.20	70.65	67.10	75.45	62.35	56.45		
Order backlog, end of period.....do....	618.8	384.8	487.0	492.7	448.5	421.1	384.8	379.0	356.6	310.8	298.4	268.0	227.5	213.7	194.6		
Tractors used in construction, shipments, qtrly:																	
Tracklaying, total.....units..	19,812	16,460		3,824			3,288			4,398			4,474	4,137			
mil. \$..	1,322.1	1,272.9		293.0			283.0			391.9			425.3	425.1			
Wheel (contractors' off-highway).....units..	4,962	4,781		1,265			947			1,258			1,137				
mil. \$..	419.1	387.5		101.1			73.6			104.0			103.3				
Tractor shovel loaders (integral units only), wheel and tracklaying types.....units..	54,414	45,495		9,340			9,004			9,381			9,675				
mil. \$..	1,758.1	1,696.2		358.2			337.6			439.8			465.0				
Tractors, wheel, farm, nonfarm (ex. garden and construction types), ship., qtrly.....units..	147,385	147,385		27,750			32,306			36,683			39,145	40,755			
mil. \$..	3,424.2	3,113.7		580.5			879.7			938.0			905.8	945.6			
<b>ELECTRICAL EQUIPMENT</b>																	
Batteries (auto-type replacement), ship.....thous..	53,746	50,063	4,564	5,741	6,249	5,361	5,520	4,820	3,548	3,331	3,460	3,488	3,658	4,037	5,278		
Radio sets, production, total market.....thous..	40,029	28,104	2,365	3,792	2,540	2,931	2,149	2,243	1,986	2,030	1,905	2,519	2,739	2,364			
Television sets (incl. combination models), production, total market.....thous..	16,616	18,532	1,359	2,078	1,668	1,684	1,765	1,560	1,518	1,895	1,376	1,390	1,777	1,216	1,494	1,981	
See footnotes at end of tables.																	

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.

**METALS AND MANUFACTURES—Continued**

<b>ELECTRICAL EQUIPMENT—Continued</b>																
Household major appliances (electrical), factory shipments (domestic and export) # .....	33,162	30,259	2,391	2,478	2,877	2,234	2,131	2,566	2,531	2,975	2,982	2,613	3,136	2,683		
Air conditioners (room) .....	3,749	3,197	94	66	90	125	203	226	370	623	603	477	653	283		
Dishwashers .....	3,488	2,738	212	261	297	204	198	242	205	228	240	192	220	190		
Disposers (food waste) .....	3,317	2,960	229	234	343	256	223	280	274	317	309	252	230	237		
Ranges .....	3,000	2,530	191	206	257	208	185	218	198	197	220	193	219	200		
Refrigerators .....	5,701	5,124	464	476	519	371	295	408	364	424	440	428	542	511		
Freezers .....	1,858	1,681	180	146	123	74	89	91	122	142	141	142	206	227		
Washers .....	4,965	4,550	397	401	468	331	302	408	365	408	368	346	402	376		
Dryers (incl. gas) .....	3,551	3,177	257	285	333	284	238	297	244	260	245	221	247	243		
Vacuum cleaners (qtrly) .....	8,674	7,439		1,843			1,724			2,119		1,944				
<b>GAS EQUIPMENT (RESIDENTIAL)</b>																
Furnaces, gravity and forced-air, shipments...thous.	1,863	1,446	123	147	174	144	132	136	123	128	111	105	108	115		
Ranges, total, sales .....	1,799	1,538	119	138	142	121	141	114	118	143	125	123	134	110	123	
Water heaters (storage), automatic, sales @.....do.	2,887	2,818	208	237	271	218	246	260	242	286	287	226	235	204	204	

**PETROLEUM, COAL, AND PRODUCTS**

<b>COAL</b>																
Anthracite:																
Production.....thous. sh. tons.	4,835	6,056	509	478	567	525	470	292	538	565	620	259	565			
Exports .....	1,233	1,795	286	96	248	80	57	65	8	114	167	170	283	332	278	
Price, wholesale * .....	411.0	463.7	469.8	478.2	479.6	491.1	497.9	508.7	542.9	542.8	545.2	553.0	565.1	582.9	595.7	
Bituminous:																
Production † .....	776,299	823,644	67,890	68,344	71,723	68,130	71,647	65,296	70,026	76,928	38,024	36,758	62,210			
Consumption, total .....	677,286	669,061	62,493	57,008	55,459	56,464	62,978	67,347	59,732	60,278						
Electric power utilities .....	526,005	568,322	53,134	47,829	45,019	45,642	51,068	54,276	47,855	48,323	43,604	44,908				
Industrial, total .....	144,150	125,815	9,138	8,884	10,005	10,389	11,318	12,382	11,478	11,650						
Coke plants (oven and beehive) .....	77,009	66,493	4,867	4,785	5,099	5,142	5,335	5,975	5,666	6,058						
Residential and commercial .....	7,131	4,924	221	295	435	433	592	689	399	305						
Stocks, end of period, total .....	178,440	199,077	186,387	189,978	197,291	199,572	199,077	193,090	191,933	200,397						
Electric power utilities .....	156,440	178,269	167,792	170,776	177,564	179,472	178,269	172,151	170,856	179,032	163,859	147,095				
Industrial, total .....	21,660	20,808	18,595	19,202	19,727	20,100	20,808	20,939	21,077	21,365						
Oven-coke plants .....	10,028	9,017	7,829	8,175	8,445	8,563	9,017	9,105	9,200	9,445						
Exports .....	64,783	89,882	8,944	8,266	9,204	8,905	8,169	5,727	6,762	9,593	8,099	5,911	5,872	10,414	11,034	
Price, wholesale .....	451.1	466.5	467.8	470.2	469.6	474.0	473.8	476.0	477.9	478.3	483.4	484.8	488.6	502.3	503.6	
<b>COKE</b>																
Production:																
Beehive and oven (byproduct) .....	52,943	46,132	3,387	3,295	3,470	3,565	3,683			11,382						
Petroleum coke ‡ .....	27,455	27,094	2,318	2,244	2,186	2,203	2,329	2,276								
Stocks, end of period:																
Oven-coke plants, total .....	5,185	8,627	8,676	9,018	9,011	9,040	8,627			7,586						
At furnace plants .....	4,590	7,521	7,612	7,907	7,889	7,833	7,521			6,564						
At merchant plants .....	595	1,106	1,063	1,112	1,123	1,207	1,106			1,022						
Petroleum coke ‡ .....	1,042	846	1,151	1,042	974	1,001	846	1,030								
Exports .....	1,545	2,162	246	207	260	156	67	101	54	132	118	89	206	73	60	
<b>PETROLEUM AND PRODUCTS</b>																
Crude petroleum:																
Oil wells completed .....	19,383	26,984	2,357	2,636	2,409	2,239	3,675	1,789	2,462	3,102	2,905	2,604	3,497	2,790	3,137	
Price, wholesale .....	376.5	556.4	566.8	571.3	579.6	600.6	632.8	704.4	842.7	842.8	842.5	840.0	816.0	799.0	797.0	
Gross input to crude oil distillation .....																
units .....	5,458.7	5,048.4	412.3	407.9	403.0	403.4	432.7	417.6								
Refinery operating ratio .....	85	76	73	74	71	73	75	72	71	68	66	67	69			
All oils, supply, demand, and stocks: ‡																
New supply, total † .....	6,802.0	6,236.5	498.4	490.8	507.8	495.2	529.0	526.4								
Production:																
Crude petroleum .....	3,121.3	3,146.5	261.1	258.6	264.6	255.0	266.9	264.5								
Natural gas plant liquids .....	594.2	589.7	48.2	46.8	47.8	48.4	49.5	50.7								
Imports:																
Crude and unfinished oils .....	2,400.9	1,930.4	147.0	142.3	146.8	141.4	157.1	153.8								
Refined products .....	685.6	569.9	42.1	43.2	48.6	50.4	55.5	57.5								
Change in stocks, all oils (decrease,—) .....	55.7	79.3	23.7	-2.4	-16.8	4.2	13.7	29.3								
Demand, total .....	6,928.9	6,422.5	497.4	513.1	542.8	517.3	588.3	584.2								
Exports:																
Crude petroleum .....	85.7	103.9	2.4	9.6	9.6	8.7	10.6	10.5								
Refined products .....	86.1	94.3	7.5	7.1	8.9	7.8	8.7	6.8								
Domestic product demand, total # .....	6,757.1	6,224.3	487.5	496.4	524.2	500.8	569.0	566.9								
Gasoline .....	2,581.5	2,420.7	207.3	196.5	207.8	188.1	206.2	198.1								
Kerosene .....	68.6	58.2	4.3	3.9	4.5	3.7	7.3	7.0								
Distillate fuel oil .....	1,208.5	1,048.6	66.2	77.7	90.5	87.5	113.0	126.8								
Residual fuel oil .....	1,031.6	912.4	70.9	70.8	68.9	72.9	85.1	89.0								
Jet fuel .....	392.7	391.1	32.3	31.7	32.1	30.9	33.6	32.9								
Lubricants .....	65.5	58.3	4.3	4.9	5.5	4.7	4.8	4.6								
Asphalt .....	172.0	142.6	17.8	17.3	15.8	10.2	7.3	5.4								
Liquefied gases .....	581.0	532.8	35.5	39.6	49.0	46.0	54.2	60.0								
Stocks, end of period, total .....	1,340.9	1,420.2	1,448.9	1,446.5	1,429.7	1,433.9	1,420.2	1,390.9								
Crude petroleum .....	430.3	482.9	478.8	468.8	475.1	475.1	482.9	488.9								
Strategic petroleum reserve .....	91.2	107.8	91.2	92.8	96.6	102.3	112.5									
Unfinished oils, natural gasoline, etc .....	132.0	192.0	148.2	149.7	149.0	143.3	188.8									
Refined products .....	778.6	745.3	821.9	828.0	805.6	815.4	745.3	713.1								

See footnotes at end of tables.

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.

PETROLEUM, COAL, AND PRODUCTS—Continued

PETROLEUM AND PRODUCTS—Continued															
Refined petroleum products: ‡															
Gasoline (incl. aviation):															
Production.....mil. bbl.	2,514.6	2,394.0	201.4	192.4	191.2	194.9	206.9	207.3							
Exports.....do.	0.2	0.5	( <sup>1</sup> )	0.2	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )							
Stocks, end of period.....do.	*239.9	*213.5	262.2	261.0	249.1	259.7	*213.5	227.0							
Prices (excl. aviation):															
Wholesale, regular..... Index, 2/73=100.	367.6	576.7	602.9	599.6	591.5	590.8	596.1	607.5	632.9	683.2	694.7	690.2	685.6	677.3	670.1
Retail, regular grade (Lundberg/Platt's): ¶															
Leaded.....\$ per gal.	*0.878	1.217	1.233	1.221	1.217	1.220	1.233	1.278	1.372	1.384	*1.400	1.398	1.398	1.398	1.398
Unleaded.....do.	0.919	1.261	1.278	1.268	1.265	1.268	1.281	1.326	1.421	1.435	*1.449	1.448	1.449	1.450	1.449
Aviation gasoline:															
Production.....mil. bbl.	13.7	12.8	1.4	0.9	1.1	0.9	1.0	0.9							
Stocks, end of period.....do.	*2.7	*2.3	3.0	2.7	2.6	2.6	*2.3	2.5							
Kerosene:															
Production.....do.	66.8	*50.3	3.3	3.6	3.8	3.9	5.2	5.7							
Stocks, end of period.....do.	15.8	*11.4	13.3	12.9	12.4	12.7	*11.4	10.5	10.6	11.1	12.0	13.5	13.3		
Price, wholesale (light distillate) Index, 1967=100.....	539.6	863.4	903.1	903.2	896.3	896.8	911.4	932.1	972.0	1,041.0	1,080.9	1,083.1	1,077.6	1,066.4	1,051.4
Distillate fuel oil:															
Production.....mil. bbl.	1,150.8	974.9	76.3	80.6	80.3	81.0	89.7	92.6							
Imports.....do.	70.5	50.8	2.4	3.0	3.6	4.0	5.2	8.5							
Exports.....do.	1.1	1.2	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )							
Stocks, end of period.....do.	228.7	*205.4	226.3	232.3	225.7	223.3	*205.4	180.0	171.9	163.9	164.6	172.2	181.6		
Price, wholesale (middle distillate) Index, 1967=100.....	573.9	850.6	875.6	873.7	868.4	873.4	891.1	935.4	1,000.3	1,082.8	1,105.4	1,091.5	1,091.7	1,080.0	1,072.9
Residual fuel oil:															
Production.....mil. bbl.	615.6	577.1	44.8	44.9	46.9	47.3	51.5	50.0							
Imports.....do.	420.1	336.6	27.1	27.2	27.0	30.7	31.8	31.5							
Exports.....do.	3.2	12.2	0.1	0.6	2.2	2.6	1.9	2.0							
Stocks, end of period.....do.	95.6	*91.5	86.9	87.9	91.0	93.8	*91.5	82.3	78.2	75.1	73.3	78.6	70.1		
Price, wholesale..... Index, 1967=100.....	684.5	961.2	953.7	956.2	943.8	1,017.3	1,166.9	1,207.9	1,248.0	1,323.7	1,334.6	1,316.3	1,255.8	1,234.6	1,246.4
Jet fuel:															
Production.....mil. bbl.	369.2	365.6	29.7	31.2	30.3	29.7	29.8	29.6							
Stocks, end of period.....do.	38.5	*42.4	40.3	42.2	43.2	43.9	*42.4	39.5	38.2	38.7	40.9	44.7	44.9		
Lubricants:															
Production.....do.	71.0	65.1	5.0	5.4	5.3	5.0	5.4	5.0							
Exports.....do.	8.6	8.6	0.6	0.6	0.6	0.5	0.6	0.7							
Stocks, end of period.....do.	12.5	*13.6	13.6	13.7	13.2	13.2	*13.6	13.6							
Asphalt:															
Production.....do.	168.8	141.2	13.9	13.8	12.6	10.9	9.1	9.5							
Stocks, end of period.....do.	18.9	*18.8	22.5	19.1	16.1	17.0	*18.8	22.9							
Liquefied gases (incl. ethane and ethylene):															
Production, total.....do.	568.0	564.5	46.7	44.7	47.5	46.5	48.7	50.5							
At gas processing plants (L.P.G.).....do.	443.9	443.6	36.7	35.2	38.2	36.7	38.0	40.4							
At refineries (L.R.G.).....do.	124.1	120.9	10.0	9.4	9.3	9.7	10.7	10.0							
Stocks (at plants and refineries).....do.	*110.7	*128.0	134.7	137.1	134.5	132.1	*128.0	116.5							

PULP, PAPER, AND PAPER PRODUCTS

PULPWOOD AND WASTE PAPER															
Pulpwood:															
Receipts..... thous. cords (128 cu.ft.)	*76,928	81,007	6,893	6,722	6,878	6,408	6,480	6,832	6,378	6,847	6,528	6,465	6,649	6,799	
Consumption.....do.	*77,594	79,703	6,719	6,601	6,779	6,710	6,234	6,700	6,477	6,889	6,882	6,716	6,790	6,526	
Stocks, end of period.....do.	5,443	6,697	6,310	6,349	6,396	6,123	6,285	6,336	6,210	6,009	5,528	5,123	4,985	5,464	
Waste paper:															
Consumption..... thous. sh. tons.	*13,739	13,185	1,051	1,051	1,153	1,068	1,070	1,109	1,148	1,229	1,195	1,159	*1,204	1,107	
Stocks, end of period.....do.	719	892	727	747	790	763	831	825	922	854	910	866	*925	992	
WOODPULP															
Production:															
Total, all grades #..... thous. sh. tons.	*51,177	52,055	4,334	4,186	4,319	4,224	3,851	4,355	4,128	4,621	4,501	4,584	*4,398	4,076	
Dissolving and special alpha.....do.	1,447	1,417	129	94	124	123	126	116	115	110	108	125	120	102	
Sulfate.....do.	36,339	38,931	3,324	3,216	3,292	3,236	2,867	3,305	3,138	3,556	3,479	3,516	*3,351	3,129	
Sulfite.....do.	1,814	1,911	150	160	164	157	155	167	155	157	148	165	159	132	
Groundwood.....do.	4,619	4,887	397	388	411	366	393	420	396	438	421	425	430	400	
Semichemical.....do.	3,889	3,938	335	328	328	341	311	348	325	360	345	353	338	313	
Stocks, end of period:															
Total, all mills.....do.	930	944	1,034	960	960	1,042	944	1,031	1,107	1,035	1,077	1,088	*1,155	1,230	
Pulp mills.....do.	364	439	493	454	467	542	439	542	568	531	581	607	*614	669	
Paper and board mills.....do.	507	449	479	452	440	446	449	433	475	447	438	430	*488	507	
Nonpaper mills.....do.	59	57	62	54	54	54	57	57	64	61	58	51	*53	54	
Exports, all grades, total.....do.															
Dissolving and special alpha.....do.	*2,935	3,806	385	313	341	247	322	291	279	356	290	363	359	237	300
All other.....do.	764	769	70	60	52	52	52	67	61	83	48	61	70	65	
All other.....do.	*2,170	3,037	315	252	289	195	270	224	218	272	243	302	289	172	236
Imports, all grades, total.....do.															
Dissolving and special alpha.....do.	*4,318	4,051	344	300	298	323	334	380	355	368	295	414	349	329	323
All other.....do.	155	194	21	10	12	24	10	23	9	22	8	26	8	25	10
All other.....do.	*4,163	3,858	323	290	286	299	324	356	346	346	287	388	341	304	313
PAPER AND PAPER PRODUCTS															
Paper and board:															
Production (Bu. of the Census):															
All grades, total, unadjusted..... thous. sh. tons.	66,608	65,834	*5,389	*5,393	*5,821	*5,445	*5,245	5,646	5,331	6,005	5,891	5,757	*5,724		
Paper.....do.	30,012	30,164	*2,425	*2,426	*2,660	*2,455	*2,463	2,617	2,448	2,762	2,679	2,626	*2,622	2,458	
Paperboard.....do.	30,936	31,143	*2,584	*2,571	*2,731	*2,608	*2,420	2,675	2,523	2,848	2,811	2,751	*2,734	2,553	
Wet-machine board.....do.	144	138	10	*12	*12	*12	*12	12	17	16	18	15	*11	12	
Construction paper and board.....do.	5,516	4,390	*370	*383	*418	*369	*350	342	343	379	383	365	*357		

See footnotes at end of tables.

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
<b>PULP, PAPER, AND PAPER PRODUCTS—Continued</b>																	
<b>PAPER AND PAPER PRODUCTS—Cont.</b>																	
Paper and board—Cont.																	
Producer price indexes:																	
Paperboard ..... 1967 = 100..	202.1	235.2	238.4	239.5	239.9	241.7	241.1	250.2	252.8	225.7	255.7	262.3	262.7	261.4	261.2		
Building paper and board .....	182.4	206.1	210.3	210.2	212.7	215.6	219.1	219.7	225.7	227.9	232.5	236.9	236.8	234.6	233.8		
Selected types of paper (APD):																	
Groundwood paper, uncoated:																	
Orders, new..... thous. sh. tons..	1,519	1,501	136	121	139	123	115	129	113	126	103	128	107	121			
Orders, unfilled, end of period .....	149	116	118	112	121	125	116	122	124	132	111	117	106	122			
Shipments..... do.....	1,509	1,506	127	122	130	121	124	129	114	122	127	121	120	106			
Coated paper:																	
Orders, new..... do.....	4,547	4,763	386	390	435	380	395	394	377	427	409	405	406	396			
Orders, unfilled, end of period .....	385	389	411	402	421	398	389	365	352	345	324	320	313	335			
Shipments..... do.....	4,527	4,671	378	389	421	394	405	426	391	438	405	411	411	375			
Uncoated free sheet papers:																	
Orders, new..... do.....	7,826	7,708	598	601	735	616	618	693	603	710	664	698	612	615			
Shipments..... do.....	8,189	8,344	676	664	728	662	671	690	656	744	731	731	691	622			
Unbleached kraft packaging and industrial converting papers:																	
Shipments..... thous. sh. tons..	3,934	3,788	306	311	328	302	293	322	309	345	348	342	317	298			
Tissue paper, production..... do.....	4,506	4,353	349	353	370	367	345	372	352	395	372	385	367	335			
Newsprint:																	
Canada:																	
Production..... thous. metric tons..	8,756	8,625	692	651	735	708	691	751	702	766	772	770	748				
Shipments from mills..... do.....	8,780	8,622	662	642	735	691	735	695	684	769	782	744	776				
Stocks at mills, end of period..... do.....	162	165	183	192	192	208	165	221	238	235	225	251	223				
United States:																	
Production..... do.....	3,685	4,239	374	353	377	358	338	379	356	399	391	402	404	404			
Shipments from mills..... do.....	3,689	4,234	371	350	381	346	357	374	357	395	392	400	394	400			
Stocks at mills, end of period..... do.....	16	21	30	32	28	40	21	26	25	29	29	30	39	43			
Consumption by publishers ¶..... do.....	6,673	6,586	5819	5823	5913	5909	5880	5781	5761	5860	5867	5897	5815	5794			
Stocks at and in transit to publishers, end of period..... thous. metric tons..	628	732	793	782	763	696	732	768	807	827	846	847	902	942			
Imports..... thous. sh. tons..	7,223	7,279	546	584	588	568	596	584	587	620	584	622	568	568	502		
Price, rolls, contract, f.o.b. mill, freight allowed or delivered..... Index, 1967 = 100..	249.4	279.3		283.8	283.8	283.8	298.3	301.9	301.9	301.9	301.9	301.9		301.9	314.8		
Paperboard (American Paper Institute):																	
Orders, new (weekly avg.)§..... thous. sh. tons..	613	(?)															
Orders, unfilled..... do.....	1,393	(?)															
Production, total †..... do.....	31,429	30,952	2,567	2,529	2,683	2,603	2,313	2,709	2,539	2,842	2,747	2,854	2,666	2,502			
Paper products:																	
Shipping containers, corrugated and solid fiber shipments..... mil. sq. ft. surf. area..	250,643	243,228	19,345	21,054	23,229	18,849	19,313	21,161	20,044	21,383	21,583	19,808	20,933	20,486	20,434		
Folding paper boxes, shipments..... thous. sh. tons..	2,716.0	(?)															
..... mil. \$..	2,416.7	(?)															

**RUBBER AND RUBBER PRODUCTS**

<b>RUBBER</b>																
Natural rubber:																
Consumption..... thous. metric tons..	739.00	586.15	43.16	49.38	49.48	50.26	48.69	48.76	52.34	55.21	54.72	52.21	57.60	56.58		
Stocks, end of period..... do.....	132.12	126.67	138.50	132.90	129.52	123.14	126.67	127.96	125.39	122.76	125.31	123.63	119.37	117.96		
Imports, incl. latex and guayule..... thous. lg. tons..	747.68	598.31	31.37	55.92	31.77	50.31	45.06	30.06	86.64	53.38	67.62	66.36	50.47	41.59	43.40	
Price, wholesale, smoked sheets (N.Y.)..... \$ per lb..	0.651	0.730	0.680	0.728	0.790		0.730	0.713	0.690	0.650	0.590	0.580	0.570	0.560	0.540	
Synthetic rubber:																
Production..... thous. metric tons..	2,534.50	2,009.04	123.67	149.76	174.59	178.45	193.69	193.52	169.68	200.05	180.94	175.92	158.18	161.50		
Consumption..... do.....	2,340.62	1,854.00	133.73	165.97	167.86	157.70	155.13	162.34	166.29	195.68	148.00	167.48	153.86	145.67		
Stocks, end of period..... do.....	402.86	341.77	372.33	339.73	325.35	328.87	341.77	364.00	354.11	345.04	363.56	365.24	357.00	368.43		
Exports (Bu. of Census)..... thous. lg. tons..	385.10	422.78	30.46	25.51	33.45	30.72	32.31	31.21	31.65	38.73	31.77	32.00	28.55	26.27	21.97	
<b>TIRES AND TUBES</b>																
Pneumatic casings, automotive:																
Production..... thous.....	206,687	159,263	12,057	13,911	15,790	12,861	13,346	15,463	15,641	16,834	15,466	15,183	15,406	14,277		
Shipments, total..... do.....	213,929	177,063	15,537	17,564	18,034	13,305	12,926	15,622	14,323	18,617	18,835	18,619	19,324	17,380		
Original equipment..... do.....	58,072	40,227	2,521	3,615	4,304	3,376	2,707	3,228	3,206	4,301	4,154	4,292	4,538	3,026		
Replacement equipment..... do.....	150,781	131,271	12,566	13,497	13,133	9,499	9,767	11,916	10,537	13,607	14,160	13,851	14,290	13,901		
Exports..... do.....	5,077	5,565	450	452	597	431	452	478	580	709	521	476	496	453		
Stocks, end of period..... do.....	44,873	33,298	37,057	33,730	32,112	32,363	33,298	40,188	43,258	43,686	42,393	40,615	38,570	37,116		
Exports (Bu. of Census)..... do.....	6,572	9,058	657	885	638	691	946	797	1,081	1,055	1,224	1,072	1,040	830	1,134	
Inner tubes, automotive:																
Exports (Bu. of Census)..... do.....	3,576	4,557	265	464	226	314	317	206	358	335	374	252	250	350	337	

See footnotes at end of tables.

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	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>STONE, CLAY, AND GLASS PRODUCTS</b>																
<b>PORTLAND CEMENT</b>																
Shipments, finished cement.....thous. bbl.	'451,383	'404,569	39,644	40,489	43,303	31,824	28,181	20,665	20,782	30,229	35,165	34,181	38,074	38,872		
<b>CLAY CONSTRUCTION PRODUCTS</b>																
Shipments:																
Brick, unglazed (common and face) mil. standard brick.....thous. sh. tons.	7,708.1	6,335.2	574.0	625.5	681.0	527.9	463.4	385.6	361.4	515.0	528.8	501.1	'484.1	475.5		
Structural tile, except facing.....thous. sh. tons.	59.0	'101.5	8.9	9.4	9.7	10.3	9.7	6.4	11.1	9.7	7.1	8.8	'6.8	7.0		
Sewer pipe and fittings, vitrified.....do.	855.3	721.8	76.7	78.7	96.5	73.5	45.5	36.8	34.3	50.4	45.0	38.9	'35.8	42.8		
Facing tile (hollow), glazed and unglazed mil. brick equivalent.....do.	54.0	45.4	3.0	3.8	4.2	3.2	3.6	2.7	2.4	3.2	3.2	3.0	'3.6	3.2		
Floor and wall tile and accessories, glazed and unglazed.....mi. sq. ft.	312.8	297.6	24.4	26.1	25.9	21.1	23.1	20.6	21.7	27.1	25.6	24.1	'24.5	24.7		
Price index, brick (common), f.o.b. plant or N.Y. dock.....1967=100.	263.1	280.8	280.7	281.6	285.9	286.3	286.3	290.2	289.6	299.3	300.1	302.2	302.2	303.7	303.8	
<b>GLASS AND GLASS PRODUCTS</b>																
Flat glass, mfrs.' shipments.....thous. \$.	858,130	868,459		211,049			247,797			233,439			248,658			
Glass containers:																
Production.....thous. gross.	321,999	327,022	29,162	27,040	29,763	25,427	21,122	25,961	25,456	28,201	27,851	28,200	29,532	27,686		
Shipments, domestic, total.....do.	316,024	323,816	29,437	30,781	27,162	23,459	23,561	23,332	23,160	29,327	27,312	26,799	30,081	29,340		
Narrow-neck containers:																
Food.....do.	24,531	24,808	2,339	2,468	1,845	1,560	1,770	1,742	1,764	2,292	1,862	1,907	2,053	1,995		
Beverage.....do.	57,150	61,032	6,039	6,005	5,088	4,082	4,343	4,265	4,201	5,568	5,826	5,706	6,956	7,101		
Beer.....do.	113,875	122,678	11,388	10,925	9,928	9,058	8,563	7,768	8,040	9,892	10,695	10,625	11,327	11,436		
Liquor and wine.....do.	24,306	24,574	2,031	2,278	2,478	2,035	2,080	2,013	1,879	2,598	2,123	1,836	2,146	1,795		
Wide-mouth containers:																
Food (incl. packer's tumblers, jelly glasses, and fruit jars).....thous. gross.	66,517	61,212	5,233	6,401	5,247	4,621	4,909	5,045	4,874	6,301	4,450	4,614	5,165	4,913		
Narrow-neck and wide-mouth containers:																
Medicinal and toilet.....do.	25,856	26,250	2,108	2,379	2,316	1,906	1,715	2,213	2,157	2,359	2,138	1,889	2,172	1,902		
Chemical, household and industrial.....do.	3,789	3,262	299	325	260	197	181	286	245	317	218	222	262	198		
Stocks, end of period.....do.	45,935	46,676	48,838	45,098	47,351	48,708	46,676	50,069	51,651	49,755	49,836	51,054	50,255	48,737		
<b>GYPSUM AND PRODUCTS</b>																
Production:																
Crude gypsum (exc. byproduct).....thous. sh. tons.	'14,630	'12,376	1,050	1,106	1,248	1,028	1,081	987	892	939	1,003	977	1,008			
Calcined.....do.	'14,543	'11,848	984	1,032	1,064	968	924	1,026	885	1,005	1,080	1,067	976			
Imports, crude gypsum.....do.	7,773	7,365	625	595	493	719	590	721	487	456	593	715	710			
Sales of gypsum products:																
Uncalcined.....do.	5,603	'5,544	428	607	529	493	531	309	306	308	419	441	487			
Calcined:																
Industrial plasters.....do.	379	409	36	34	40	31	31	30	33	36	34	32	36			
Building plasters:																
Regular basecoat.....do.	121	217	19	18	20	14	15	16	17	19	18	16	16			
All other (incl. Keene's cement).....do.	283	161	13	13	15	11	13	13	12	16	17	15	14			
Board products, total.....mil. sq. ft.																
Lath.....do.	125	78	5	6	5	5	5	7	6	6	6	4	5			
Veneer base.....do.	444	339	29	31	31	27	29	31	24	29	34	26	29			
Gypsum sheathing.....do.	218	190	17	18	20	17	16	17	14	18	22	19	17			
Regular gypsum board.....do.	12,556	9,923	840	879	961	784	809	884	734	857	928	740	782			
Type X gypsum board.....do.	3,272	3,266	278	289	310	246	265	293	260	296	322	271	292			
Predecorated wallboard.....do.	249	105	10	10	11	8	8	10	9	9	11	11	11			
5/16 mobile home board.....do.	( <sup>9</sup> )	229	25	24	27	20	16	19	21	24	30	31	28			
<b>TEXTILE PRODUCTS</b>																
<b>FABRIC</b>																
Woven fabric, finishing plants:																
Production (finished fabric).....mil. linear yd.	8,065	8,420	602	641	'825	639	'736	629	684	'891	683	686	'8663	520		
Cotton.....do.	3,107	3,531	248	268	'340	251	'286	244	265	'341	268	267	'335	190		
Manmade and silk fiber.....do.	4,957	4,990	354	373	'485	388	'450	385	420	'550	415	419	'528	330		
Inventories held at end of period.....do.	828	769	795	777	800	867	769	785	801	786	778	777	'730	743		
Cotton.....do.	351	339	353	332	346	356	339	341	343	338	343	341	'315	316		
Manmade and silk fiber.....do.	477	430	442	445	454	451	430	444	458	448	435	436	'415	427		
Backlog of finished orders.....do.	9,408	8,495	694	660	681	696	660	790	827	809	832	839	'761	786		
Cotton.....do.	4,838	4,577	363	343	347	365	342	428	451	441	444	446	'375	388		
Manmade and silk fiber.....do.	4,569	4,219	331	317	334	331	318	362	376	368	388	393	'386	398		
<b>COTTON</b>																
Cotton (excluding linters):																
Production:																
Ginnings ¶.....thous. running bales.	'10,826	'10,826	'582	'1,312	'4,599	'7,840	'9,873							44	427	1,725
Crop estimate.....thous. net weight bales \$.	'14,629	'11,122								11,122						15,476
Consumption.....thous. running bales.	6,140	6,135	478	487	'443	456	'597	458	475	'539	435	441	'531	'384	428	
Stocks in the United States, total, end of period # thous. running bales.	12,933	9,261	13,290	12,443	10,948	10,271	9,261	8,328	7,201	5,938	5,007	4,109	3,217	2,586		
Domestic cotton, total.....do.	12,929	9,260	13,288	12,441	10,946	10,270	9,260	8,326	7,200	5,937	5,006	4,108	3,216	2,585		
On farms and in transit.....do.	3,937	2,502	10,890	10,080	7,024	4,451	2,502	1,534	1,054	606	460	278	81	25		
Public storage and compresses.....do.	8,160	5,927	1,509	1,578	3,180	5,070	5,927	5,846	1,509	4,227	3,469	2,808	2,202	1,684		
Consuming establishments.....do.	832	831	889	783	742	749	831	946	1,037	1,104	1,770	1,022	933	876		

See footnotes at end of tables.



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	Annual	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>TEXTILE PRODUCTS—Continued</b>															
<b>COTTON AND MANUFACTURES—Cont.</b>															
Cotton (excluding linters)—Continued															
Exports.....thous. running bales..	'6,649	7,975	402	393	237	436	541	669	2,352	733	498	458	320	264	
Imports.....thous. net-weight bales \$.	6,127	15,816	0	2	1	5	5	1	6	8	(?)	(?)	(?)		
Price (farm), American upland \$.....cents per lb.	63.1	76.1	80.1	81.4	75.3	77.6	80.9	76.9	71.4	72.3	73.2	72.3	71.1	70.2	'65.0
Price, Strict Low Middling, Grade 41, staple 34 (1-1/16"), average 10 markets.....cents per lb.	*61.6	*71.5	85.6	87.5	85.8	87.0	87.2	85.1	83.3	81.5	81.2	78.5	78.1	75.1	66.5
<b>Spindle activity (cotton system spindles):</b>															
Active spindles, last working day, total.....mil.	16.2	15.9	16.1	15.7	16.1	16.0	15.9	15.9	15.9	15.7	15.8	15.6	15.6	15.3	
Consuming 100 percent cotton.....do.....	6.4	6.0	6.2	6.2	6.1	6.0	6.0	5.9	5.9	5.8	5.9	5.8	5.7	5.7	5.6
Spindle hours operated, all fibers, total.....bil.	102.0	102.4	7.6	7.3	10.0	8.0	8.3	7.3	7.4	9.2	7.3	7.4	*8.9	6.8	
Average per working day.....do.....	0.393	0.388	0.378	0.367	0.398	0.399	0.333	0.397	0.371	0.366	0.365	0.372	0.358	0.338	
Consuming 100 percent cotton.....do.....	41.7	42.0	3.2	3.2	*4.1	3.4	*3.3	3.4	2.7	*3.3	2.7	2.7	*3.2	2.4	2.5
<b>Cotton cloth:</b>															
Cotton broadwoven goods over 12" in width:															
Production (qtrly.).....mil. sq. yd.				996			1,072			993					
Orders, unfilled, end of period, compared with avg. weekly production.....no. weeks' prod.	*18.9	*15.8	13.2	12.8	12.2	11.3	14.0	12.8	13.3	14.7	13.7	13.8	13.4		
Inventories, end of period, compared with avg. weekly production.....no. weeks' prod.	*3.7	*4.2	4.2	3.8	4.3	3.9	5.7	5.2	5.4	4.8	4.8	5.2	5.5		
Ratio of stocks to unfilled orders (at cotton mills), end of period.....do.....	*0.20	*0.29	0.32	0.30	0.35	0.34	0.40	0.40	0.40	0.33	0.35	0.38	0.38		
Exports, raw cotton equiv. thous. net-weight \$.....bales.	627.7	540.2	44.3	48.0	42.0	38.4	40.9	34.8	28.2	35.8	35.7	30.9	30.8	21.7	25.8
Imports, raw cotton equivalent.....do.....	505.5	567.0	41.3	49.4	44.7	43.2	38.7	74.9	68.4	66.9	57.4	56.8	61.3	58.0	62.3
<b>MANMADE FIBERS AND MANUFACTURES</b>															
Fiber production, qtrly:															
Filament yarn (acetate).....mil. lb.	316.6	308.5		77.5			68.9			61.4			75.0		
Staple, incl. tow (rayon).....do.....	549.4	443.3		101.0			102.0			116.3			114.1		
Noncellulosic, except textile glass:															
Yarn and monofilaments.....do.....	4,136.3	3,725.3		816.6			1,001.5			979.2			1,011.1		
Staple, incl. tow.....do.....	4,282.3	4,148.2		959.4			1,143.9			1,083.0			1,116.0		
Textile glass fiber.....do.....	1,014.4	867.3		183.3			217.7			*237.1			260.2		
Fiber stocks, producers', end of period:															
Filament yarn (acetate).....mil. lb.	11.8	18.4		17.7			18.4			15.8			12.1		
Staple, incl. tow (rayon).....do.....	35.6	27.2		34.8			27.2			29.3			23.7		
Noncellulosic fiber, except textile glass:															
Yarn and monofilaments.....do.....	379.8	289.3		312.7			289.3			292.6			291.6		
Staple, incl. tow.....do.....	311.1	287.0		285.4			287.0			318.1			312.9		
Textile glass fiber.....do.....	152.5	104.1		149.7			104.1			*109.0			87.9		
Manmade fiber and silk broadwoven fabrics:															
Production (qtrly.), total #.....mil. sq. yd.				*245.7			2,935.5			2,862.2					
Filament yarn (100%) fabrics #.....do.....				*889.1			1,108.6			1,017.2					
Chiefly rayon and/or acetate fabrics.....do.....				*122.1			131.4			138.3					
Chiefly nylon fabrics.....do.....				*123.9			136.0			125.9					
Spun yarn (100%) fab., exc. blanketing #.....do.....				*1,377.2			1,574.3			1,596.7					
Rayon and/or acetate fabrics, blends.....do.....				*83.6			159.0			174.5					
Polyester blends with cotton.....do.....				*1,013.7			1,112.6			1,107.2					
Filament and spun yarn fabrics.....do.....				*163.7			218.3			214.1					
Manmade fiber gray goods, owned by weaving mills:															
Ratio, stocks to unfilled orders, end of period	*0.22														
Prices, manufacturer to mfr., f.o.b. mill:															
50/50 polyester/carded cotton printcloth, gray, 48", 3.90 yds./lb., 78x54-56.....\$ per yd.	*0.472	0.510	0.494	0.513	0.551	0.593	0.575	0.569	0.564	0.568	0.581	0.576	0.574		
Manmade fiber manufactures:															
Exports, manmade fiber equivalent.....mil. lbs.	596.58	771.54	63.79	63.29	75.94	64.97	64.27	53.16	53.50	67.33	64.83	58.05	58.78	47.59	49.70
Yarn, tops, thread, cloth.....do.....	371.44	418.64	35.77	33.15	43.66	35.64	37.00	28.16	27.84	33.72	35.76	27.53	28.13	24.03	24.24
Cloth, woven.....do.....	228.63	249.77	22.00	20.95	27.14	20.92	21.97	17.44	18.23	21.67	24.59	18.20	18.71	15.84	15.75
Manufactured prods., apparel, furnishings.....do.....	225.13	352.91	28.02	30.14	32.28	29.33	27.26	24.67	25.38	33.16	28.82	30.21	30.30	23.56	25.47
Imports, manmade fiber equivalent.....do.....	524.97	540.64	50.18	52.11	49.19	40.10	35.46	46.72	38.55	43.81	45.53	57.83	58.01	66.66	69.32
Yarn, tops, thread, cloth.....do.....	102.18	97.48	7.55	7.96	7.45	7.27	7.36	10.17	8.04	11.86	10.87	13.11	11.34	12.43	12.05
Cloth, woven.....do.....	64.58	67.28	5.69	5.72	5.57	5.12	5.06	7.00	5.50	8.91	7.73	9.34	8.59	9.25	8.98
Manufactured prods., apparel, furnishings.....do.....	422.79	*443.15	42.64	44.15	41.73	32.83	29.10	36.55	30.50	31.94	34.67	44.72	46.67	54.23	57.27
Apparel, total.....do.....	359.61	378.52	37.62	38.26	36.10	27.71	22.74	31.03	25.64	26.70	29.30	36.66	41.06	48.44	49.85
Knit apparel.....do.....	184.50	187.74	19.38	19.20	18.89	12.08	8.77	12.23	10.09	10.51	12.51	16.95	17.68	21.52	21.90
<b>WOOL AND MANUFACTURES</b>															
Wool consumption, mill (clean basis):															
Apparel class.....mil. lb.	106.5	113.4	8.4	7.7	*10.8	8.8	*10.0	10.2	11.0	*12.9	10.8	10.2	*12.8	8.4	
Carpet class.....do.....	10.5	10.0	0.9	*0.8	*0.9	0.6	*0.6	*0.8	0.8	*0.9	0.7	0.8	*0.9	0.7	
Wool imports, clean yield.....do.....	42.3	56.5	4.8	4.1	3.9	3.6	4.0	6.9	7.7	6.6	7.5	8.6	4.9	*6.5	*5.3
Duty-free (carpet class).....do.....	22.0	26.0	2.0	1.2	1.2	1.5	1.6	2.7	2.5	1.8	1.9	2.4	2.1	*2.8	*2.5
Wool prices, raw, shorn, clean basis, delivered to U.S. mills:															
Domestic—Graded territory, 64's, staple 2-3/4" and up.....cents per lb.	*2.18	*2.45	2.51	2.53	2.53	2.53	2.53	2.53	2.68	2.74	2.78	2.78	2.83	2.83	2.83
Australian, 64's, Type 62, duty-paid.....do.....	*2.77	*3.09	3.06	3.11	3.06	3.20	3.21	3.19	3.12	3.07	3.14	3.16	3.19	3.23	3.16
Wool broadwoven goods, exc. felts:															
Production (qtrly.).....mil. sq. yd.				43.7			40.0			53.7					
<b>FLOOR COVERINGS</b>															
Carpet, rugs, carpeting (woven, tufted, other), shipments, quarterly.....mil. sq. yds.	1,206.0	1,082.2		253.0			276.9			255.1			284.3		
<b>APPAREL</b>															
Women's, misses', juniors' apparel cuttings:															
Coats.....thous. units.	17,394	19,199	2,213	1,962	1,926	1,589	1,163	1,280	1,136	1,143	1,457	1,684	*1,773	1,569	
Dresses.....do.....	169,697	168,383	13,177	11,953	11,993	9,785	9,267	10,580	12,246	14,094	12,734	11,150	*11,285	9,528	
Suits (incl. pant suits, jumpsuits).....do.....	25,275	21,140	1,957	2,357	1,954	1,391	1,229	1,371	1,404	1,411	1,306	1,308	*1,391	1,299	
Skirts.....do.....	63,648	73,608	6,576	6,876	6,972	6,432	5,904	7,824	9,096	9,540	8,628	8,304	*9,348	7,104	
Blouses.....thous. dozen..	24,932	25,781	2,216	2,246	2,349	2,117	1,912	2,225	2,413	2,489	2,275	2,231	*2,203	2,235	

See footnotes at end of tables.

	1979		1980						1981						
	Annual		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.

**TEXTILE PRODUCTS—Continued**

**APPAREL—Continued**

Men's apparel cuttings:																	
Suits .....	15,935	14,471	1,203	1,262	1,467	1,236	1,105	1,211	1,044	1,294	1,320	1,405	*1,432	935			
Coats (separate), dress and sport .....	14,329	17,985	1,428	1,739	1,810	1,506	1,299	1,484	1,637	1,571	1,689	1,536	*1,675	1,256			
Trousers (separate), dress .....	124,688	122,399	11,419	11,403	12,567	10,696	7,917	9,025	9,348	10,685	11,204	11,366	*10,927	7,762			
Slacks (jean cut), casual .....	208,368	211,112	18,249	22,061	18,745	15,982	13,005	15,909	12,977	15,990	13,324	12,231	*12,240	11,449			
Shirts, dress and sport .....	38,895	36,662	2,972	3,060	3,082	2,672	2,147	2,535	2,527	2,634	2,550	*2,514	*2,427	1,973			
Hosiery, shipments .....	290,453	286,379	23,770	22,754	26,371	23,193	21,689	23,721	24,531	24,265	26,119	25,192	26,405	30,233	26,850		

**TRANSPORTATION EQUIPMENT**

**AEROSPACE VEHICLES**

Orders, new (net), qtrly, total @ .....	65,208	70,847		17,301			19,355					19,765			20,287		
U.S. Government .....	28,107	33,222		8,168			10,197					9,820			9,851		
Prime contract .....	59,611	68,162		16,764			18,638					19,244			19,826		
Sales (net), receipts, or billings, qtrly, total .....	46,173	57,605		14,405			16,433					16,110			19,502		
U.S. Government .....	23,229	26,141		6,588			7,201					7,467			7,929		
Backlog of orders, end of period # .....	78,259	95,371		92,224			95,371					94,751			95,535		
U.S. Government .....	36,136	41,513		38,507			41,513					39,516			41,438		
Aircraft (complete) and parts .....	41,286	47,857		48,039			47,857					50,051			49,789		
Engines (aircraft) and parts .....	9,198	11,655		12,190			11,655					11,801			12,592		
Missiles, space vehicle systems, engines, propulsion units, and parts .....	7,387	8,855		7,854			8,855					8,806			8,429		
Other related operations (conversions, modifications), products, services .....	10,725	10,871		9,877			10,871					11,063			11,776		
Aircraft (complete):																	
Shipments # # .....	11,186.1	13,120.4	717.1	1,305.0	1,191.1	1,232.1	1,195.5	744.7	1,067.8	1,355.3	1,501.8	1,330.5	*1,492.4	720.9			
Airframe weight # # .....	77,327	97,327	5,571	10,343	8,613	8,752	8,433	5,007	8,037	9,216	10,204	9,239	*9,312	5,063			
Exports, commercial # # .....	6,149	8,250	522	792	705	726	1,020	337	751	963	1,049	746	916	413	608		
<b>MOTOR VEHICLES (NEW)</b>																	
Passenger cars:																	
Factory sales (from U.S. plants), total .....	*8,419	*6,400	299	529	675	560	490	439	475	620	645	670	712	*513	*408	*454	
Domestic .....	4,678	5,840	280	487	623	517	452	407	432	565	589	608	652	472			
Retail sales, total, not seasonally adj. † .....	10,559	8,979	686	672	848	698	649	648	764	963	751	734	724	706	801	681	
Domestics \$ .....	8,232	6,581	487	486	664	530	472	470	544	719	534	524	518	497	602	519	
Imports \$ .....	2,329	2,398	199	186	183	169	178	178	220	244	218	210	206	209	199	162	
Total, seas. adjusted at annual rate † .....			8.8	8.4	9.2	9.2	8.8	9.6	10.4	10.3	8.0	7.9	7.5	8.2	10.4	8.7	
Domestics % .....			6.6	6.2	6.8	6.7	6.3	7.0	7.5	7.7	5.8	5.7	5.2	5.9	8.2	6.7	
Imports % .....			2.2	2.2	2.4	2.5	2.5	2.9	2.9	2.6	2.3	2.2	2.2	2.3	2.2	2.0	
Retail inventories, end of mo., domestics: †																	
Not seasonally adjusted .....	1,691	1,520	1,337	1,373	1,456	1,513	1,520	1,421	1,335	1,216	1,344	1,472	1,665	1,675	1,486	1,427	
Seasonally adjusted .....	1,667	1,438	1,380	1,393	1,392	1,413	1,438	1,335	1,210	1,090	1,198	1,313	1,472	1,616	*1,568	1,433	
Inventory-retail sales ratio, domestics % † .....	2.6	2.7	2.5	2.7	2.5	2.5	2.7	2.3	1.9	1.7	2.5	2.7	3.4	3.3	2.3	2.6	
Exports (BuCensus), assembled cars .....	779.16	607.80	22.61	41.64	58.39	46.95	40.46	31.02	52.82	60.36	58.52	63.81	57.84	49.85	31.79		
To Canada .....	590.95	509.13	18.78	35.48	51.09	39.78	32.45	23.71	46.31	53.12	52.65	58.32	51.87	45.96	29.00		
Imports (BuCensus), complete units # # .....	3,005.5	3,310.7	230.0	252.8	276.9	271.5	253.0	276.5	209.0	306.6	282.3	254.1	282.4	250.1	259.2		
From Canada, total .....	677.0	594.8	21.8	41.9	66.1	63.3	49.9	35.6	29.5	53.9	55.6	56.0	59.8	41.0	33.8		
Registrations †, total new vehicles .....	10,357	8,761	704	702	747	730	711	636	675	849	752	731	747	690	721		
Imports, incl. domestically sponsored .....	2,351	2,469	215	212	196	187	188	174	200	226	228	224	223	207	206		
Trucks and buses:																	
Factory sales (from U.S. plants), total .....	3,037	*1,667	84	134	186	155	149	140	135	167	162	159	180	*127	*89	*127	
Domestic .....	2,741	1,464	73	120	168	140	132	126	118	146	142	139	161	111			
Retail sales, seasonally adjusted: †																	
Light-duty, up to 14,000 lbs. GVW .....	2,861.0	1,963.5	156.5	147.9	143.1	151.7	145.7	153.0	156.5	149.0	150.8	157.3	152.1	141.9	164.1		
Medium-duty, 14,001-26,000 lbs. GVW .....	151.6	92.3	8.1	9.0	7.1	6.3	6.6	8.6	6.4	6.2	8.7	6.3	5.2	6.3	6.1		
Heavy-duty, 26,001 lbs. and over GVW .....	223.2	175.7	16.9	15.3	14.3	12.9	13.6	13.5	12.4	13.8	14.5	11.6	11.5	12.0	12.8		
Retail inventories, end of period, seasonally adjusted † .....	803.4	574.0	522.7	524.1	554.2	570.5	590.5	575.2	548.5	547.7	541.5	546.4	559.0	576.5	523.9		
Exports (BuCensus), assembled units .....	259.44	*190.32	13.33	13.21	14.94	14.08	14.08	12.96	19.65	20.01	16.21	17.81	17.44	12.38	11.19		
Imports (BuCensus), including separate chassis and bodies .....	974.13	1,133.28	90.89	89.86	110.44	77.93	62.17	88.30	46.10	70.72	63.66	72.87	68.24	64.05	67.49		
Registrations, † new vehicles, excluding buses not produced on truck chassis .....	3,472	2,477	196	190	185	190	191	162	163	176	186	198	201	190	194		
Truck trailers and chassis, complete (excludes detachables), shipments .....	209,522	125,278	8,493	9,429	10,268	9,116	9,996	9,186	8,311	9,490	9,980	10,076	*11,313	8,795			
Vans .....	138,484	75,172	5,209	5,832	6,139	5,656	6,230	5,936	4,696	5,211	5,751	5,810	6,710	4,790			
Trailer bodies (detachable), sold separately .....	9,154	11,849	638	1,244	1,227	1,161	1,175	614	835	545	1,009	1,072	*696	459			
Trailer chassis (detachable), sold separately .....	14,700	14,202	1,070	1,053	1,443	1,179	1,083	1,074	1,332	2,662	885	1,105	*1,077	848			
<b>RAILROAD EQUIPMENT</b>																	
Freight cars (new), for domestic use; all railroads and private car lines (excludes rebuilt cars and cars for export):																	
Shipments .....	'90,021	'85,920	6,994	6,947	7,368	4,945	5,530	5,336	4,709	5,162	4,245	4,143	3,781	2,983	3,184		
Equipment manufacturers .....	'83,931	'80,357	6,158	6,596	6,956	4,574	5,151	5,064	4,401	4,718	3,792	3,779	3,442	2,864	2,971		
New orders .....	'119,091	'45,390	'2,569	4,406	2,047	3,930	4,722	2,147	2,069	1,559	1,762	1,791	1,155	1,315	798		
Equipment manufacturers .....	'113,060	'40,140	2,531	4,406	1,847	3,230	4,722	2,147	2,069	1,559	1,737	1,791	927	1,315	798		
Unfilled orders, end of period .....	119,001	51,640	*67,769	66,007	59,378	57,655	51,640	48,451	45,121	41,539	38,972	35,588	32,321	26,267	23,648		
Equipment manufacturers .....	112,749	47,136	62,652	59,806	53,389	51,337	47,136	44,219	41,197	38,059	35,920	32,900	29,744	23,809	21,403		
Freight cars (revenue), class 1 railroads (AAR): †																	
Number owned, end of period .....	1,217	1,168	1,184	1,180	1,177	1,172	1,168	1,166	1,163	1,162	1,146	1,143	1,137	1,130	1,124		
Held for repairs, % of total owned .....	8.0	8.8	8.8	8.9	8.8	8.7	8.8	8.1	8.0	8.0	8.0	8.1	7.7	7.7	7.6		
Capacity (carrying), total, end of mo .....	94.47	92.56	93.27	93.06	93.61	93.06	92.56	92.47	92.35	92.37	91.07	91.18	90.67	90.32	89.92		
Average per car .....	77.62	79.24	78.75	78.83	79.09	79.38	79.24	79.32</									

## FOOTNOTES FOR PAGES S-1 THROUGH S-36

## General Notes for all Pages:

r Revised.  
p Preliminary.  
e Estimated.  
c Corrected.

## Page S-1

1. Estimates (corrected for systematic biases) for July-Sept. and Oct.-Dec. 1981 based on planned capital expenditures of business. Planned capital expenditures for the year 1981 appear on p. 25 of the Sept. 1981 SURVEY.

† The estimates for plant and equipment expenditures have been revised. An article describing that revision and containing revised estimates for 1947-77 begins on p. 24 of the Oct. 1980 SURVEY.

¶ Data for the individual durable and nondurable goods industries appear in the Mar., June, Sept., and Dec. issues of the SURVEY.

## Page S-2

† Revised series. Estimates of personal income have been revised as part of the 1980 benchmark revision of the national income and product accounts. An article describing that revision appears in the Dec. 1980 SURVEY. Data for 1976-79 are available in a special supplement to the SURVEY. Pre-1976 data will be published in *The National Income and Product Accounts of the United States, 1929-76: Statistical Tables*.

‡ Includes inventory valuation and capital consumption adjustments.

\* New series. Detailed descriptions begin on p. 18 of the Nov. 1979 SURVEY. See note "†" for this page for information on historical data.

§ Monthly estimates equal the centered three-month average of personal saving as a percentage of the centered three-month moving average of disposable personal income.

# Includes data for items not shown separately.

## Page S-3

1. Based on data not seasonally adjusted.

# Includes data not shown separately.

‡ Revised series. For wholesale see note "†" for p. S-9. For manufacturing see note "†" for p. S-4. For retail see note "†" for p. S-10.

† See note "†" for p. S-4.

§ See note "†" for p. S-10.

@ See note "†" for p. S-9.

\* New series. Data back to 1967 are available from the National Income and Wealth Division, Bureau of Economic Analysis.

## Page S-4

1. Based on data not seasonally adjusted.

‡ Revised series. Data for both the manufacturing and retail sectors have been revised. For manufacturing see note "†" for this page. For retail see note "†" for p. S-10.

† Revised series. Data have been revised back to 1972. A detailed description of this revision and historical data appear in the report "Manufacturers' Shipments, Inventories, and Orders" M3-1.10 (1972-1980), available from the Bureau of the Census, Washington, D.C. 20233.

§ See note "†" for p. S-10.

@ See note "†" for p. S-9.

\* New series. Data back to 1967 are available from the National Income and Wealth Division, Bureau of Economic Analysis.

¶ Effective September 1981 SURVEY, data for Manufacturers' Export Sales and Orders of Durable Goods have been discontinued due to both budgetary limitations and a continuing deterioration in the quality of the data.

# Includes data for items not shown separately.

## Page S-5

1. Based on data not seasonally adjusted.

† See note "†" for p. S-4.

# Includes data for items not shown separately.

‡ Includes textile mill products, leather and products, paper and allied products, and printing and publishing industries; unfilled orders for other nondurable goods industries are zero.

¶ For these industries (food and kindred products, tobacco, apparel and other textile products, petroleum and coal, chemicals and allied products, and rubber and plastics products) sales are considered equal to new orders.

## Page S-6

1. Based on unadjusted data.

2. This series has been discontinued.

‡ Compiled by Dun & Bradstreet, Inc.

# Includes data for items not shown separately.

§ Ratio of prices received to prices paid (parity index).

¶ Revisions, back to 1975 for some commodities, are available upon request.

## Page S-7

1. Annual average computed by BEA.

2. Indexes are no longer available.

§ For actual producer prices of individual commodities see respective commodities in the Industry section beginning p. S-22. All data subject to revision four months after original publication.

† Revised series. Stage-of-processing producer price indexes have been revised back to 1976 to reflect updated industry input-output relationships and improved classification of some products.

# Includes data for items not shown separately.

‡ Effective Feb. 1981, data have been revised back to 1976 to reflect new seasonal factors.

## Page S-8

1. Computed from cumulative valuation total.

2. Data shown here are based on 1980 seasonal factors. Effective Jan. 1981, data are no longer seasonally adjusted.

# Includes data for items not shown separately.

§ Data for Oct. 1980, and Jan., Apr., and July 1981 are for five weeks; other months four weeks.

## Page S-9

1. Index as of Oct. 1, 1981: building, 319.1; construction, 341.9.

¶ Home mortgage rates (conventional first mortgages) are under money and interest rates on p. S-15.

§ Data include guaranteed direct loans sold.

† Effective April 1981 SURVEY, wholesale trade data have been revised for Jan. 1973-Jan. 1981. Revised data are available upon request.

## Page S-10

1. Advance estimate.

2. Effective Jan. 1979 data, sales of mail-order houses are included with department store sales.

† Effective April 1981 SURVEY, retail trade data have been revised for the years 1971-1980. Revised data and a summary of the changes are available from the Census Bureau, Washington, D.C. 20233.

# Includes data for items not shown separately.

## Page S-11

1. As of July 1.

2. The accounts receivable series have been discontinued.

# Includes data for items not shown separately.

‡ Revisions for Jan. 1977-Oct. 1979 appear in "Current Population Reports," Series P-25, No. 870, Bureau of the Census.

† Effective July 1981 SURVEY, data have been revised to reflect new benchmarks and new seasonal adjustment factors. See "BLS Establishment Estimates Revised to March 1980 Benchmarks," in the July 1981 issue of *Employment and Earnings*.

¶ Effective with the Feb. 1981 SURVEY, the labor force series reflect new seasonal factors. Data have been revised back to 1976; comparable monthly data for 1976-80 appear in the Feb. 1981 issue of *Employment and Earnings*, U.S. Department of Labor, Bureau of Labor Statistics.

\* New series. The participation rate is the percent of the civilian noninstitutional population in the civilian labor force. The employment-population ratio is employment as a percent of the total noninstitutional population, 16 years and over.

## Page S-12

† See corresponding note on p. S-11.

§ Effective October 1978 SURVEY, includes data formerly shown separately under ordinance and accessories.

@ Formerly shown as Electrical equipment and supplies.

¶ Production and nonsupervisory workers.

‡ This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

## Page S-13

† See note "†" on p. S-11.

§ See note "§" on p. S-12.

@ See note "@" on p. S-12.

‡ See note "‡" on p. S-12.

¶ Production and nonsupervisory workers.

## Page S-14

- † See corresponding note on p. S-11.
- ¶ Production and nonsupervisory workers.
- ‡ Earnings in 1967 dollars reflect changes in purchasing power since 1967 by dividing by Consumer Price Index.
- § Wages as of Oct. 1, 1981: Common, \$13.62; Skilled, \$17.66.
- # Includes data for items not shown separately.
- @ Insured unemployment (all programs) data include claims filed under extended duration provisions of regular State laws; amounts paid under these programs are excluded from state benefits paid data.
- @@ Insured unemployment as a percent of average covered employment in a 12-month period.

## Page S-15

1. Average for Dec.
  2. Average for the year.
  3. Daily average.
  4. Beginning Jan. 1981, data are for top-rated only. Prior data cover a range of top-rated and regional dealer closing rates.
- # Includes data for items not shown separately.
  - § For demand deposits, the term "adjusted" denotes demand deposits other than domestic commercial bank and U.S. Government, less cash items in process of collection; for loans, exclusive of loans to and Federal funds transactions with domestic commercial banks and include valuation reserves (individual loan items are shown gross; i.e. before deduction of valuation reserves).
  - ¶ Adjusted to exclude domestic commercial interbank loans and Federal funds sold to domestic commercial banks.
  - \* New series. Beginning Dec. 1978, data are for all investment account securities; comparable data for earlier periods are not available.
  - ‡ Rates on the commercial paper placed for firms whose bond rating is Aa or the equivalent. Data through Oct. 1979 show a maturity for 120-179 days. Beginning Nov. 1979, maturity is for 180 days.
  - @ Data through Oct. 1979 show a maturity for 150-179 days. Beginning Nov. 1979, maturity is for 180 days.

## Page S-16

1. Data are for fiscal years ending Sept. 30 and include revisions not distributed to the months.
- # Includes data for items not shown separately.
  - § The Department of Health, Education, and Welfare was redesignated as the Department of Health and Human Services by the Department of Education Organization Act.

## Page S-17

1. Total for Jan.-May and Oct.-Dec.
  2. Total for 11 months; production not available for Aug.
  3. The money stock measures M3 and L have been revised back through 1978. The monthly data prior to Aug. 1980, and 1978-1980 annuals will be available later.
- § Or increase in earmarked gold (-).
  - † The Federal Reserve has redefined the monetary aggregates. The redefinition was prompted by the emergence in recent years of new monetary assets—for example, negotiable order of withdrawal (NOW) accounts and money market mutual fund shares—and alterations in the basic character of established monetary assets—for example, the growing similarity of and substitution between the deposits of thrift institutions and those of commercial banks. Monthly data from 1959 to date are available from the Banking Section of the Division of Research and Statistics at the Federal Reserve Board, Washington, D.C. 20551.
  - ‡ Composition of the money stock measures is as follows:
  - M1-A*.—This measure is currency plus demand deposits at commercial banks. It is essentially the same as the old M1 except that it excludes demand deposits held by foreign commercial banks and official institutions.
  - M1-B*.—This equals M1-A plus interest-earning checkable deposits at all depository institutions—namely NOW accounts, automatic transfer from savings (ATS) accounts, and credit union share draft balances—as well as a small amount of demand deposits at thrift institutions that cannot, using present data sources, be separated from interest-earning checkable deposits.
  - M2*.—This measure adds to M1-B overnight repurchase agreements (RP's) issued by commercial banks and certain overnight Eurodollars (those issued by Caribbean branches of member banks) held by U.S. nonbank residents, money market mutual fund shares, and savings and small-denomination time deposits (those issued in denominations of less than \$100,000) at all depository institutions. Depository institutions are commercial banks (including U.S. agencies and branches of foreign banks, Edge Act corporations, and foreign investment companies), mutual savings banks, savings and loan associations, and credit unions.
  - M3*.—This measure equals M2 plus large-denomination time deposits (those issued in denominations of \$100,000 or more) at all depository institutions (including negotiable CD's) plus term RP's issued by commercial banks and savings and loan associations.
  - L*.—This broad measure of liquid assets equals M3 plus other liquid assets consisting of other Eurodollar holdings of U.S. nonbank residents, bankers acceptances, commercial paper, savings bonds, and marketable liquid Treasury obligations.
  - ‡ Includes ATS and NOW balances at all institutions, credit union share draft balances, and demand deposits at mutual savings banks.
  - \* Overnight (and continuing contract) RP's are those issued by commercial banks to the nonbank public, and overnight Eurodollars are those issued by Caribbean branches of member banks to U.S. nonbank customers.
  - @ Small time deposits are those issued in amounts of less than \$100,000. Large time deposits are those issued in amounts of \$100,000 or more and are net of the holdings of domestic banks, thrift institutions, the U.S. Government, money market mutual funds, and foreign banks and official institutions.
  - # Includes data for items not shown separately.

## Page S-18

1. Beginning Jan. 1981 data, U.S. Virgin Islands trade with foreign countries is included.
- § Number of issues represents number currently used; the change in number does not affect the continuity of the series.
  - ‡ For bonds due or callable in 10 years or more.
  - # Includes data for items not shown separately.
  - @ Data may not equal the sum of the geographic regions, or commodity groups and principal commodities, because of revisions to the totals not reflected in the component items.

## Page S-19

1. See note 1 for p. S-18.
- # Includes data not shown separately.
  - § Data may not equal the sum of geographic regions, or commodity groups and principal commodities, because of revisions to the totals not reflected in the components.

## Page S-20

1. See note 1 for p. S-18.
- # Includes data not shown separately.

## Page S-21

1. Domestic trunk operations only (averaging about 90 percent of domestic total).
  2. Annual total; quarterly or monthly revisions are not available.
  3. Before extraordinary and prior period items.
  4. For month shown.
  5. Beginning Jan. 1980 data, another company is included.
- # Includes data for items not shown separately.
  - § Total revenues, expenses, and income for all groups of carriers also reflect nonscheduled service.
  - ‡ Beginning Jan. 1977, defined as those having operating revenues of \$50 million or more.
  - ¶ Average daily rent per room occupied, not scheduled rates.

## Page S-22

1. Reported annual total; monthly revisions are not available.
  2. Data withheld to avoid disclosing operations of individual companies.
  3. Beginning Jan. 1979, data include chemically-treated fertilizer and sodium nitrate containing over 16.3% nitrogen by weight; not strictly comparable with data shown for earlier periods.
  4. Annual total for monthly data where available; not comparable with earlier periods.
  5. See note "¶" for this page.
  6. Data beginning Jan. 1979 are for value of shipments and comprise three new product categories. Comparable data for these new categories are not available prior to Jan. 1979. However, the difference between total value of shipments and total factory sales (formerly shown) is considered statistically insignificant.
  7. Beginning Jan. 1981, data represent gross weight (formerly phosphoric acid content weight) and are not comparable with data shown for earlier periods.
  8. Represents solutions containing ammonia and ammonia nitrate/urea solutions; not comparable with other published data.
- # Includes data for items not shown separately.
  - § Data are reported on the basis of 100 percent content of the specified material unless otherwise indicated.
  - ‡ Revisions, back to 1977 for some commodities, are available upon request.
  - ¶ Data for Jan. 1977-June 1979 exclude potassium magnesium sulfate; not strictly comparable with data shown for other periods.

## Page S-23

1. Includes Hawaii; not distributed to the months.
  2. Reported annual total, including Hawaii; monthly data are preliminary and subject to change.
- § Data are not wholly comparable from year to year because of changes from one classification to another.
  - @ Revisions, back to 1978 for some commodities, are available upon request.
  - ‡ Revisions back to 1977 are available upon request.

## Page S-24

1. See note "@@" for this page.
  2. Crop estimate for the year.
  3. Stocks as of June 1.
  4. Stocks as of June 1 and represents previous year's crop; new crop not reported until June (beginning of new crop year).
  5. Previous year's crop; new crop not reported until Oct. (beginning of new crop year).
  6. Data are no longer available.
  7. Sept. 1 estimate of the 1981 crop.
- § Excludes pearl barley.
  - # Bags of 100 lbs.
  - ¶ Revised crop estimates back to 1975 are available upon request.
  - @ Revisions, back to 1977, for some commodities, are available upon request.
  - ‡ Revisions back to 1975 are available upon request.
  - @@ Data are quarterly except for June (covering Apr. and May) and Sept. (covering June-Sept.).

**Page S-25**

1. Average for 11 months; price not available for Dec.
2. Prices for Jan.-Mar. 1979 are estimated; actual price not available. Annual average for 1979 is based on actual price (Apr.-Dec.).
3. Average for nine months; index not available for Apr.-June.
  - § Cases of 30 dozen.
  - ¶ Bags of 132.276 lbs.
- ‡ Revisions for Jan.-July 1979 (back to 1975 for grindings of wheat) are available upon request.
  - @ Revisions back to 1977 are available upon request.
  - # Effective Apr. 1981 SURVEY, the wholesale price of smoked hams has been discontinued and has been replaced with the comparable price index. Annual indexes prior to 1979 and monthly indexes prior to Feb. 1980 are available upon request.

**Page S-26**

1. Beginning Sept. 1979, estimated prices are derived from a different source and are not comparable with prices shown for earlier periods. Annual average for 1979 represents Sept.-Dec.
2. Crop estimate for the year.
3. Reported annual total; not distributed to the months.
4. Sept. 1 estimate of the 1981 crop.
  - § Monthly data reflect cumulative revisions for prior periods.
  - @ Producers' and warehouse stocks.
  - ¶ Factory and warehouse stocks.
  - ‡ Revisions back to 1975 are available upon request.

**Page S-27**

1. Annual total; monthly revisions are not available.
  - \* New series. Source: Bureau of Labor Statistics.
  - # Totals include data for items not shown separately.

**Page S-28**

1. Annual data; monthly revisions not available.
2. Less than 500 short tons.
3. Effective Jan. 1980, data are no longer available.

**Page S-29**

1. Annual data; monthly revisions are not available.
2. For month shown.
3. Copper refinery production from domestic and foreign ores are not shown to avoid disclosing information for individual firms. The source reports 79,039 metric tons of domestic ores and 14,623 metric tons of foreign ores for the period July-Sept. 1980.

**Page S-30**

1. Annual data; monthly revisions are not available.
2. Less than 50 tons.
3. Data are for five weeks; other months 4 weeks.
4. For month shown.
  - ¶ Includes secondary smelters' lead stocks in refinery shapes and in copper-base scrap.
  - @ All data (except annual production figures) reflect GSA remelted zinc and zinc purchased for direct shipment.
  - ‡ Source for monthly data: American Bureau of Metal Statistics. Source for annual data: Bureau of Mines.
  - # Includes data not shown separately.
  - † Effective July 1980 SURVEY, data are revised and shown on a new base. The sample size has been restored to 100 firms and the base has been changed to 1977=100. The revised series are not comparable to previously published data.
  - \* New series. These indexes are based on shipments of hydraulic and pneumatic products reported by participating members of the National Fluid Power Association. Data back to 1959 are available upon request.

**Page S-31**

1. Reflects revisions not available by months.
2. Effective Jan. 1980, total stocks for bituminous coal and lignite exclude residential and commercial stocks and are not comparable with data shown for earlier periods.
3. Data are available back to Oct. 1977.
4. Beginning Jan. 1979, data reflect coverage of additional processing facilities; not strictly comparable with data shown for earlier periods.
5. Beginning 1981, data are for quarterly intervals.
6. Based on new 1981 stock level. See also "‡" for this page.
  - # Includes data for items not shown separately.
  - @ Beginning July 1977, data are representative of those manufacturers reporting and are not an average of the total industry; they are not directly comparable with earlier data.
  - \* New series. Annual data prior to 1978 and monthly data prior to April 1979 are available upon request.
    - § Includes nonmarketable catalyst coke.
    - ¶ Includes small amounts of "other hydrocarbons and hydrogen refinery input," not shown separately.
    - † Revisions for 1978 are available upon request.

‡ Effective with 1981 petroleum data, the Energy Information Agency has changed some definitions and concepts to reflect recent developments in refining and blending practices. These changes include adding a category for gasohol production to motor gasoline production and accounting more precisely for distillate and residual fuel oil processed further after initial distillation. A description of these changes appears in the May 1981 issue of *Monthly Energy Review*, U.S. Department of Energy, Energy Information Administration.

**Page S-32**

1. Less than 50 thousand barrels.
2. See note 4 for p. S-31.
3. Reported annual totals; revisions not allocated to the months.
4. See note "¶" for this page.
5. Effective April 1981, price represents simple average of Platt's/Lundberg special retail gasoline prices for 48 cities; not strictly comparable with prices shown for earlier periods which represent weighted average price.
  - 6. See note 6 for p. S-31.
  - ¶ Prices are mid-month, include taxes, and represent full service; comparable prices prior to Jan. 1979 are not available.
  - # Includes data for items not shown separately.
  - \* New series. See note "¶" for this page.
  - ‡ Except for price data, see note "‡" for p. S-31.

**Page S-33**

1. Reported annual total; not distributed to the months.
2. Effective Jan. 1980, data are no longer available.
3. Average for 11 months; no price for Aug.
  - ¶ Consumption by 525 daily newspapers reporting to the American Newspaper Publishers Association.
  - § Monthly data are averages of the 4-week periods ending on the Saturday nearest the end of the month; annual data are as of Dec. 31.
  - ‡ Data are monthly or annual totals. Formerly weekly averages were shown.

**Page S-34**

1. Reported annual total; revisions not allocated to the months.
2. Crop for the year.
3. Data cover five weeks; other months, four weeks.
4. Cumulative total for the 1980 crop.
5. Data are not available prior to Jan. 1980.
  - \* New series. Data for finishing mills have replaced data for weaving mills, which are no longer available.
  - # Includes data for items not shown separately.
  - ¶ Cumulative ginnings to the end of month indicated.
  - § Bales of 480 lbs.

**Page S-35**

1. Effective Jan. 1, 1978, includes reexports, formerly excluded.
2. Annual total includes revisions not distributed to the months.
3. Average for crop year; Aug. 1-Jul. 31.
4. For five weeks; other months four weeks.
5. Monthly average.
6. Average for 11 months; no price for Oct.
7. Less than 500 bales.
8. Effective Aug. 1981 SURVEY, data are restated to represent millions of square yards.
  - ¶ Bales of 480 lbs.
  - § Based on 480-lb. bales, preliminary price reflects sales as of the 15th; revised price reflects total quantity purchased and dollars paid for the entire month (revised price includes discounts and premiums).
  - # Includes data not shown separately.

**Page S-36**

1. Annual total includes revisions not distributed to the months.
2. Estimates of production, not factory sales.
3. Effective Jan. 1980, passenger vans previously reported as passenger cars are now included with trucks.
4. Effective Jan. 1979, data are not directly comparable with data shown for earlier periods because of the inclusion of Volkswagens produced in the U.S.
  - 5. Monthly data for 1980 exclude exports for off-highway trucks; not strictly comparable with data shown for other periods.
    - # Total includes backlog for nonrelated products and services and basic research.
    - § Domestic comprise all cars assembled in the U.S. and cars assembled in Canada and imported to the U.S. under the provisions of the Automotive Products Trade Act of 1965. Imports comprise all other cars.
    - ¶ Courtesy of R.L. Polk & Co.; republication prohibited. Because data for some states are not available, month-to-month comparisons are not strictly valid.
    - ‡ Excludes railroad-owned private refrigerator cars and private line cars.
    - † Revisions, back to 1967 for some commodities, are available upon request.
    - @ In the 1979 BUSINESS STATISTICS, 4th Qtr. 1977 should read "13,946" mil. \$.
    - ‡‡ In the 1979 BUSINESS STATISTICS, annual data for 1977 should read "2,604.8" mil. \$.
    - ## Revisions back to 1977 are available upon request.

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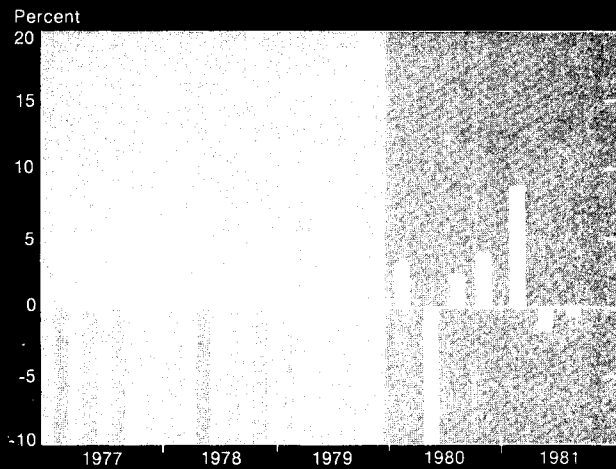
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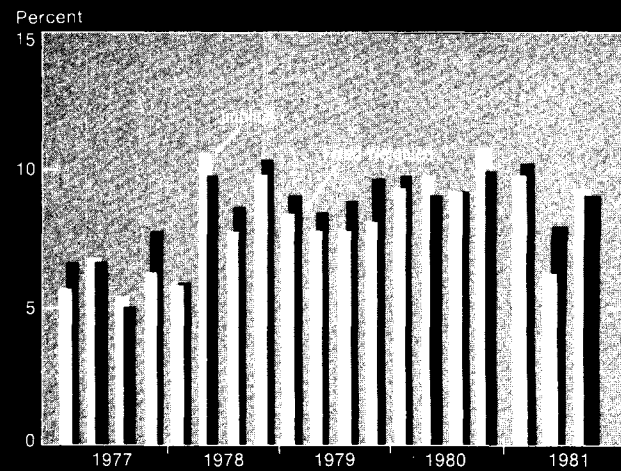
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- GNP fixed-weighted price index increased 9 percent
- Real disposable personal income increased 2 percent

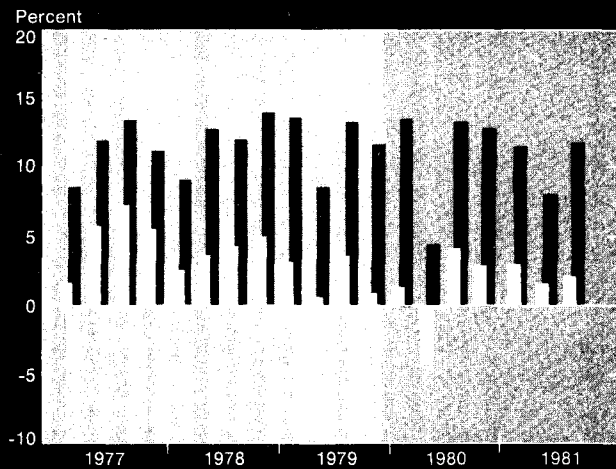
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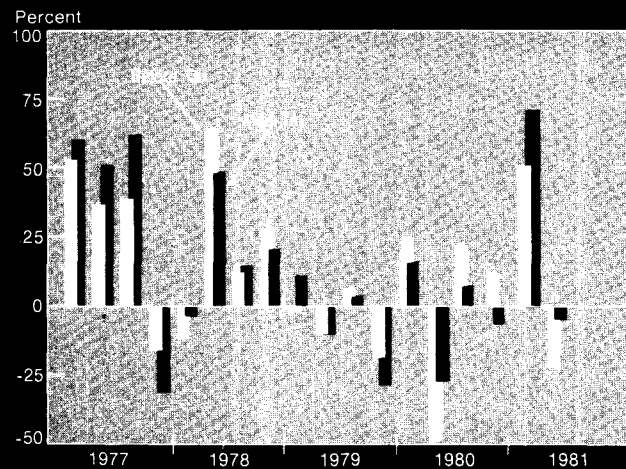
GNP Prices



Disposable Personal Income



Corporate Profits With IVA and CCA<sub>dj</sub>



Percent change from preceding quarter—seasonally adjusted at annual rates.