

# U.S. Trade Shifts in Selected Industries

1993 Annual Report  
Investigation No. 332-345

Publication 2805

September 1994

**U.S. International Trade Commission**

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*This report was prepared principally by the Office of Industries*  
Gail Burns, Project Leader

*With assistance from:*

Carl Seastrum, Dana Abrahamson, and Diane Bennett  
*Minerals, Metals, and Miscellaneous Manufactures Division*

James Kitzmiller, Jack Greenblatt, Richard Brown,  
Ruben Mata, Richard Rhodes, and Janice Wayne  
*Office of Industries*

Andrew Parks  
*Office of Economics*

Barbara Bobbitt  
*Office of Information Resources Management*

*Under the direction of:*

Ralph J. Watkins, Chief  
*Miscellaneous Manufactures Branch*

Larry L. Brookhart, Chief  
*Minerals, Metals, and Miscellaneous Manufactures Division*

**Address all communications to**  
**Secretary to the Commission**  
**United States International Trade Commission**  
**Washington, DC 20436**

# **U.S. International Trade Commission**

Washington, DC 20436

## **U.S. Trade Shifts in Selected Industries**



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# PREFACE

On August 27, 1993, on its own motion and pursuant to section 332(b) of the Tariff Act of 1930(19 U.S.C. 1332(b)), the U.S. International Trade Commission instituted investigation No. 332-345, *Annual Reports on U.S. Trade Shifts in Selected Industries*, for the purpose of preparing annual trade shifts reports for a period of 3 years (covering trade in 1993-95). The current report summarizes and provides brief analyses of the major trade shifts in 1993 occurring in services and commodity industries, and with leading U.S. trading partners. This report also includes summary trade information, basic statistical profiles of commodity groups, and historical trade data (1980-93) for selected U.S. industries.

The information and analysis in this report are for the purpose of this report only. Nothing in this report should be construed to indicate how the Commission would find in an investigation conducted under other statutory authority.



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# CHAPTER 1

## Introduction

The trade analysts of the U.S. International Trade Commission (ITC) routinely monitor trade developments in the services sector and in all agricultural and manufactured commodities. Trade monitoring at the sector- and commodity-specific levels is a facet of the research and analysis undertaken by the Office of Industries in conjunction with its responsibilities to provide advice and technical information on industry and trade issues. Trade monitoring enables the Commission to gain advance information on and address the issues of concern in the exercise of its various roles under U.S. trade statutes. These roles include determining whether U.S. industries are materially injured by unfair imports, conducting studies on the international competitiveness of U.S. industries, and advising the President and the Congress on the likely effects of trade-policy changes and proposals. This report, prepared annually, provides a brief analysis of significant trade shifts at the services and merchandise sector level, on a bilateral basis, and at a detailed commodity level. This year, the report also includes a baseline examination of trade and factors affecting historical trends in key U.S. industries during a 13-year period, 1980-93.

Chapter 2 of the report summarizes the services and the U.S. industrial/agricultural trade shifts that occurred in 1993. Highlights of trade shifts that occurred in 1993 relative to 1992 are also presented in this chapter. For the first time, based on limited data, these highlights include information showing the trade balance for the U.S. service sector as a whole and by selected service industry accounts, the composition of cross-border services trade, recent data on affiliates' sales, and the U.S. surplus on service accounts with select trading partners. This additional analysis reflects continuing efforts by the U.S. Department of Commerce to expand and refine its base of statistical information about the service sector. As new trade information becomes available on the U.S. service sector, the

Commission plans to expand, as appropriate, the U.S. services trade performance section of this report. The more comprehensive coverage of the merchandise sectors include data showing import, export, and trade balance shifts by major commodity sectors and shifts in trade with major U.S. trading partners. In addition, a tabular summary details the most significant shifts that occurred within each of the major industrial and agricultural sectors. Last, significant bilateral shifts in merchandise trade are discussed.

Chapter 3 provides a long-range assessment of common factors affecting trends in selected industry sectors using the Commission's historical trade monitoring database. Industries examined are those for which comparable data exist during 1980-93 and which represent a significant share of total U.S. import or export trade or depict important global trade developments.

Chapters 4 through 11 address specific industrial and agricultural sectors, providing an overview and commodity-specific analyses. Following each sector analysis is a statistical table that summarizes trade for the major commodity groups within the sector.

The report includes two appendixes. Appendix A contains a listing of the specific industrial and agricultural commodity groups that the Commission monitors in this report. Appendix B provides estimated data for 1989-93 on domestic consumption, production, employment, trade, and import penetration for the nearly 300 commodity groups covered in this report. These data, based on primary and secondary sources, including discussions with various government and industry contacts, have been estimated by the Commission's international trade analysts. The estimated data are subject to change either from future secondary sources or from the detailed surveys the Commission often conducts in the course of statutory investigations or other work.



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# CHAPTER 2

## U.S Trade Performance in 1993

The U.S. merchandise trade deficit totaled \$135.6 billion in 1993, an increase of \$35.5 billion over the 1992 deficit (table 1). This deficit was partially offset by the estimated \$59.1 billion surplus in U.S. services trade, resulting in a total trade deficit in 1993 of \$76.4 billion. This compares with a total adjusted trade deficit of \$39.9 billion in 1992. For the first time in recent years, the U.S. services trade surplus declined (down \$1.1 billion) whereas the U.S. merchandise trade deficit continued to increase. Developments affecting trends in services and merchandise trade are highlighted in the following sections of this chapter.

### U.S. Services Trade Performance, 1993

The service sector accounts for 60 percent of gross domestic product (GDP) in the United States and 79 percent of private sector employment. As a whole, U.S. service industries appear to enjoy a competitive advantage in global markets, where they generate consistent trade surpluses (see figure 1). In 1993, the surplus in the services trade account offset 44 percent of the deficit in the U.S. merchandise trade account.

Service industries conduct international transactions either by sending people, information, or money across national borders, or by performing services for foreign entities through affiliates located overseas. In the United States, cross-border transactions accounted for 53.2 percent of service exports. By contrast, cross-border purchases from foreign firms accounted for 45.6 percent of service imports (figure 2).<sup>1</sup>

Although affiliate sales are an important component of total services trade, the remaining discussion is confined to cross-border trade. In 1993, the U.S. service sector recorded a cross-border trade surplus

of \$59.1 billion,<sup>2</sup> marking the first deterioration of the private services<sup>3</sup> trade account in seven years. Exceptionally rapid growth in services imports resulted in a 1.8 percent decline in the services trade surplus, from its high of \$60.2 billion in 1992. During 1993, cross-border imports of private services increased by 8.4 percent, to \$113.4 billion. By comparison, cross-border exports of private services increased by 4.7 percent, to \$172.6 billion.<sup>4</sup>

With respect to the services trade account during 1993, it is instructive to separate the balance in tourism and transportation from the balance in all other services.<sup>5</sup> This demonstrates that the balance in tourism and transportation remained essentially unchanged in 1993 over 1992 (figure 3). During 1989-92, the surplus in the tourism and transportation account increased steadily as the value of the dollar decreased relative to currencies of our largest trading partners (Canada, Japan, Mexico, and the European Union (EU)). Tourism and transportation expenditures by foreigners, which increased by an average annual rate of 12 percent during 1989-92, grew by only 4 percent during 1993. Declining growth in foreign travel expenditures is likely attributable to the depth and duration of recessions in Japan and certain European countries, where most U.S.-bound tourists originate.

Because the balance in transportation and tourism services remained unchanged, the decline in the services trade surplus is attributable principally

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<sup>2</sup> Bureau of Economic Analysis (BEA), "U.S. International Sales and Purchases of Private Services," *Survey of Current Business*, Sept. 1993, p. 120.

<sup>3</sup> This figure excludes public sector transactions (i.e., military goods and miscellaneous services purchased or sold by the U.S. Government), which are recorded in the services account of the U.S. balance of payments. Separation of public sector transactions is preferred because the U.S. Government consistently records deficits in such transactions, which have understated the overall service trade surplus by as much as \$9 billion.

<sup>4</sup> U.S. Dept. of Commerce, *U.S. International Trade in Goods and Services*, Jan. 1994, pp. 12-13.

<sup>5</sup> This balance reflects trade in royalties and license fees, education services, insurance services, financial services, telecommunication services, and business, technical, and professional services. Business, professional, and technical services comprise a wide range of activities, including advertising, information, research and development, consulting, legal, and engineering services, among others.

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Cross-border trade in private services resulted in a surplus of \$53.2 billion in 1991. By comparison, U.S.-owned and foreign-owned overseas affiliates registered a \$14.4 billion sales surplus.

**Table 1****U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major commodity sectors, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
U.S. exports of domestic merchandise:				
Agricultural products .....	51,652	50,824	-827	-1.6
Forest products .....	20,728	20,739	11	0.1
Chemicals and related products .....	48,345	49,833	1,488	3.1
Energy-related products .....	13,680	12,212	-1,468	-10.7
Textiles and apparel .....	10,796	11,686	890	8.2
Footwear .....	603	604	1	0.2
Minerals and metals .....	28,374	32,887	4,512	15.9
Machinery and transportation .....	140,566	142,921	2,355	1.7
Electronic products .....	87,330	94,056	6,726	7.7
Miscellaneous manufactures .....	9,151	9,573	422	4.6
Special provisions .....	13,746	13,960	214	1.6
<b>Total .....</b>	<b>424,971</b>	<b>439,295</b>	<b>14,324</b>	<b>3.4</b>
U.S. imports for consumption:				
Agricultural products .....	31,969	32,534	565	1.8
Forest products .....	18,698	21,394	2,696	14.4
Chemicals and related products .....	35,448	37,596	2,148	6.1
Energy-related products .....	55,391	56,098	707	1.3
Textiles and apparel .....	39,427	42,750	3,323	8.4
Footwear .....	10,141	11,105	964	9.5
Minerals and metals .....	42,364	46,246	3,882	9.2
Machinery and transportation .....	140,441	155,905	15,464	11.0
Electronic products .....	104,948	120,683	15,735	15.0
Miscellaneous manufactures .....	29,252	32,643	3,391	11.6
Special provisions .....	17,012	17,909	897	5.3
<b>Total .....</b>	<b>525,091</b>	<b>574,863</b>	<b>49,772</b>	<b>9.5</b>
U.S. merchandise trade balance:				
Agricultural products .....	19,683	18,290	-1,393	(.2)
Forest products .....	2,030	-655	-2,685	(.2)
Chemicals and related products .....	12,897	12,237	-660	(.2)
Energy-related products .....	-41,711	-43,886	-2,175	(.2)
Textiles and apparel .....	-28,631	-31,064	-2,433	(.2)
Footwear .....	-9,538	-10,501	-963	(.2)
Minerals and metals .....	-13,990	-13,359	631	(.2)
Machinery and transportation .....	125	-12,984	-13,109	(.2)
Electronic products .....	-17,618	-26,627	-9,009	(.2)
Miscellaneous manufactures .....	-20,101	-23,070	-2,969	(.2)
Special provisions .....	-3,266	-3,949	-683	(.2)
<b>Total .....</b>	<b>-100,120</b>	<b>-135,568</b>	<b>-35,448</b>	<b>(2)</b>

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

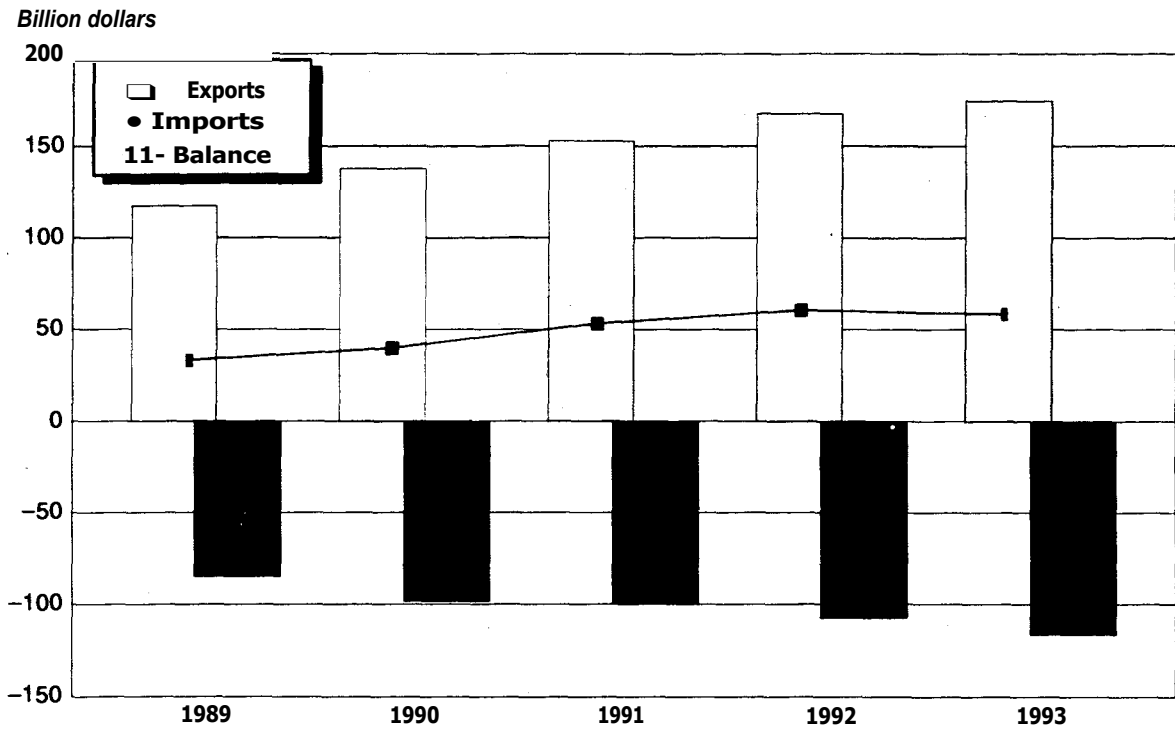
<sup>2</sup> Not applicable.

Note.-Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the U.S. Department of Commerce.

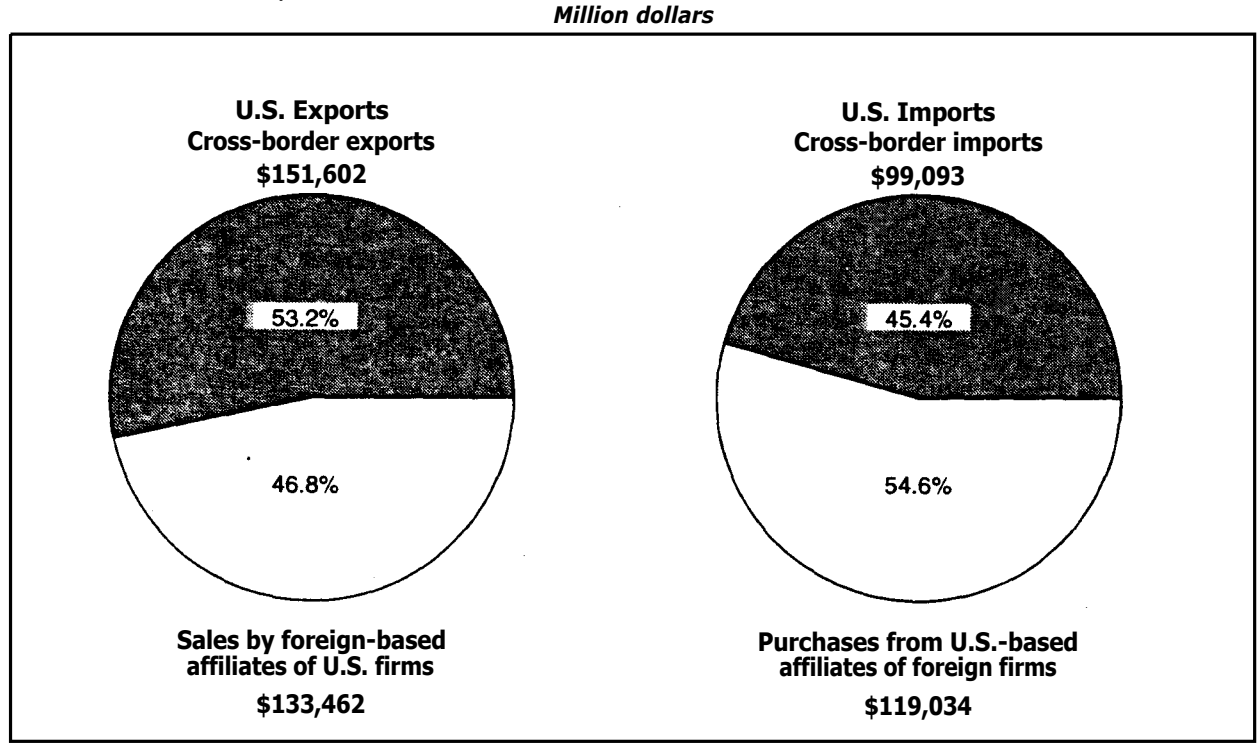


**Figure 1**  
**U.S. international trade in services, 1989-93**



Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*.

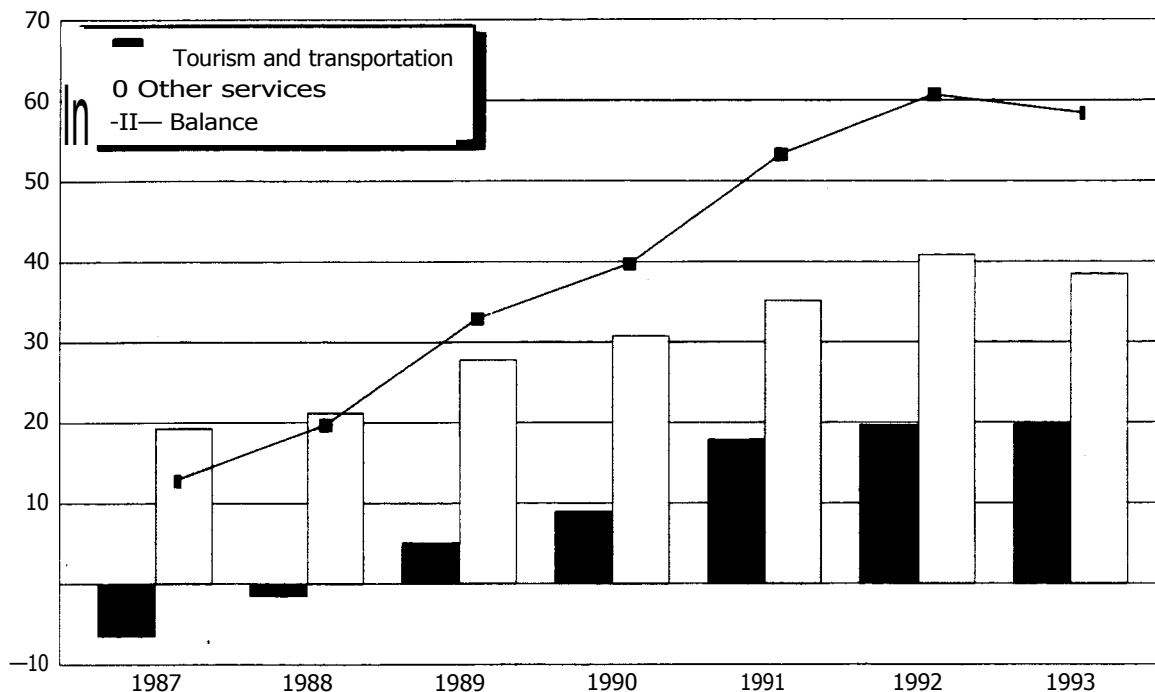
**Figure 2**  
**U.S. trade in services, 1991**



Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*.

**Figure 3**  
**Composition of cross-border services trade surplus, 1987-93**

Billion dollars



Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*.

to the decline of the balance in other private services, which fell by \$1.0 billion. It appears that much of this decline can be ascribed to an anomaly in the insurance account<sup>6</sup> in 1992, which inflated the surplus in cross-border services trade (figure 4). This anomaly appeared in the third quarter of 1992, when U.S. claims on foreign insurers exceeded insurance premiums paid to foreign firms by \$80 million. Claims of such magnitude, occurring in the wake of hurricanes Andrew and Iniki, resulted in a \$377 million surplus in the insurance account during the third quarter. This contrasts sharply with the typical balance in insurance trade, which usually shows a quarterly deficit of \$150 to \$350 million. As a result of this anomaly, the annual insurance account recorded a small deficit of about \$160 million in 1992, compared with a larger \$1.4 billion deficit in 1993.<sup>7</sup>

<sup>6</sup> Net insurance exports are the difference between premiums received from abroad and claims paid to foreign residents. Net insurance imports are the difference between premiums paid by U.S. residents to foreign insurance firms and claims received from these firms. Although net insurance imports generally enter the balance of payments as debits, they effectively become credits when claims received from foreign insurance firms exceed premiums paid to these firms.

<sup>7</sup> Estimated by USITC staff on the basis of trade data for Jan.-Sept., 1993, presented in BEA, *Survey of Current Business*, Dec. 1993, p. 75.

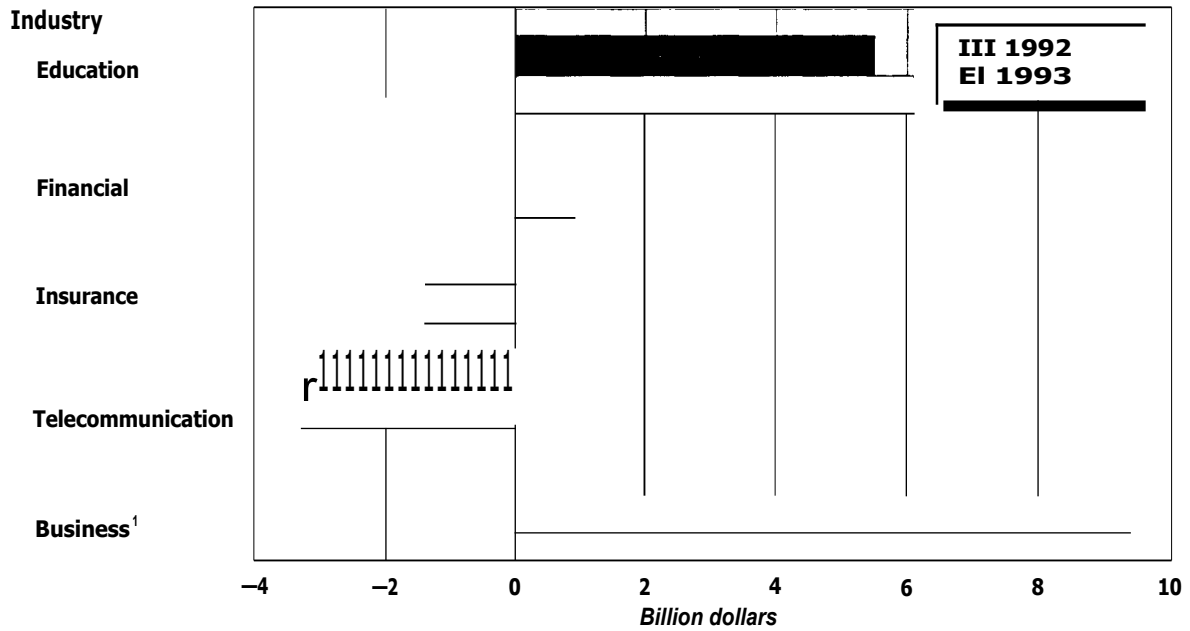
In addition, rallies in foreign stock markets significantly increased imports of investment services. In 1993, net U.S. purchases of foreign stocks totalled \$125.4 billion, compared with the 1992 total of \$48.0 billion.<sup>8</sup> The rush of U.S. funds into foreign stock exchanges was motivated by the relatively higher rates of return available overseas. U.S. investors' increasing payments of commissions and fees to foreign brokers reduced the typical surplus in the investment services account by an estimated 1.0 billion.<sup>9</sup> In sum, deteriorating balances on the insurance account and other financial service accounts more than offset increasing surpluses on the education and business accounts.

With respect to cross-border trade in private services, the largest U.S. trading partners are the EU, Japan, Canada, and Latin America. In 1993, the United States maintained a surplus in the service account with each. However, the size of the surpluses declined with the EU and Canada by 20 percent and 15 percent, respectively (figure 5).

<sup>8</sup> Ibid., p. 78.

<sup>9</sup> Estimated by USITC staff on the basis of trade data for Jan.-Sept., 1993, presented in BEA, *Survey of Current Business*, Dec. 1993, p. 75.

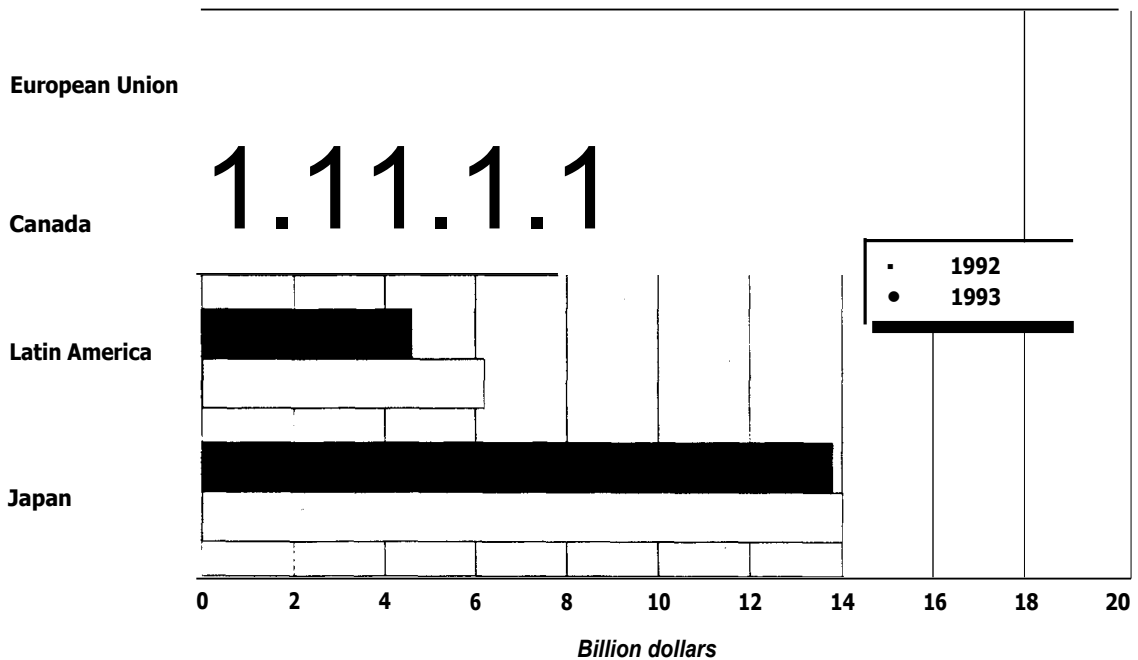
**Figure 4**  
Balances on select service industry accounts, 1992 and 1993



<sup>1</sup> Includes business, professional, and technical services.

Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*.

**Figure 5**  
U.S. surplus on service account with selected partners, 1992 and 1993



Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*.

# U.S. Industrial/ Agricultural Trade Performance, 1993

During 1993, the rise in U.S. imports of such merchandise as cars, trucks, buses, motor-vehicle parts, heavy machinery, computer equipment, semiconductors, wood, apparel, footwear, and medical equipment and the significant decline of U.S. exports of such goods as aircraft parts, mineral oil, wood pulp, tobacco, fertilizers, marine crafts, and aluminum resulted in a significant decline in the overall U.S. trade balance.

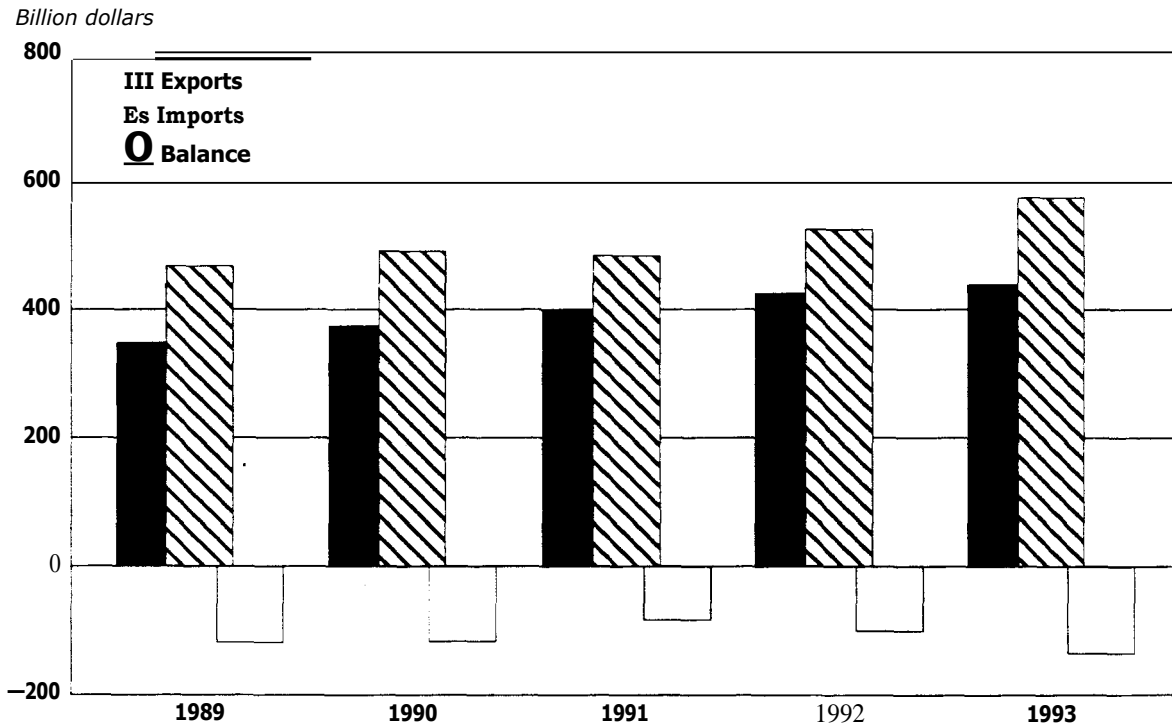
When compared with that in 1992, the 1993 U.S. merchandise trade deficit increased by \$35.4 billion (35 percent) to a level of \$135.6 billion (table 1 and figures 6 and 7).<sup>10</sup> This resulted from a relatively large increase in U.S. imports of \$49.8 billion (10 percent) to \$574.9 billion and from a smaller increase in U.S. exports of \$14.3 billion (3 percent) to \$439.3 billion.

<sup>10</sup> Import values are based on customs value; export values are based on free along side (f.a.s.) value, U.S. port of export.

Import growth was experienced in every major commodity sector. The largest surges were in the electronic products sector, which experienced absolute import growth of \$15.7 billion (15 percent) to reach \$120.7 billion, and the machinery and transportation sector, which grew by \$15.5 billion (11 percent) to \$155.9 billion.

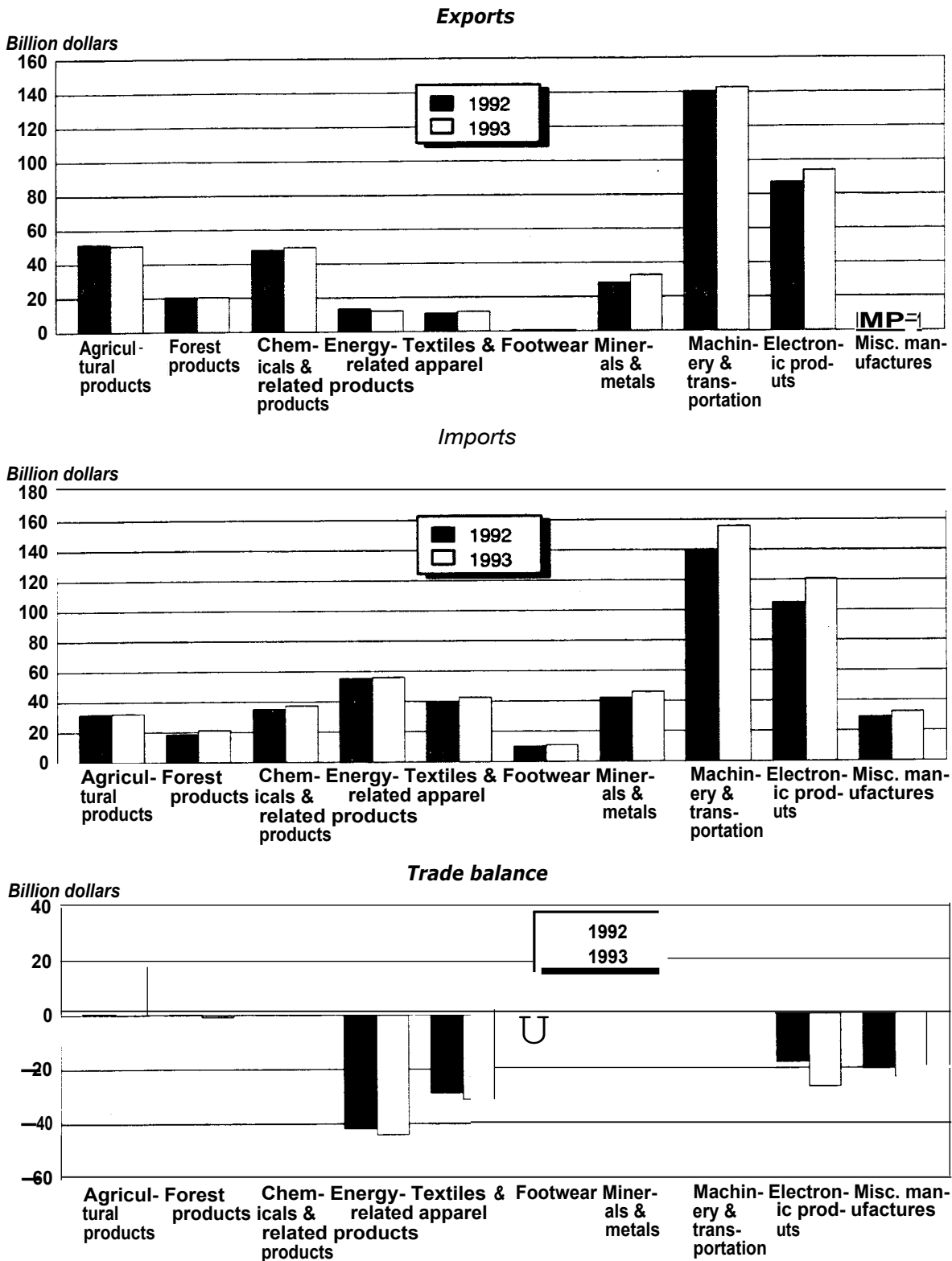
Reflecting these export and import shifts, the most significant absolute change in the merchandise trade balance position on a sector basis occurred in the machinery and transportation sector where increased demand in the United States for cars, trucks, buses, engines, heavy equipment, and machinery parts resulted in a \$13 billion trade deficit in 1993 compared with a \$125 million surplus in 1992. The trade balance in the electronic products sector declined by \$9 billion to a deficit of \$26.6 billion. Computers, semiconductor solid-state devices, office machines, and audio/video consumer electronics products contributed the largest declines for this sector. The only area in which there was some improvement in the merchandise trade balance was the minerals and metals sector. The 1993 trade deficit for this sector was \$13.4 billion, down by \$631 million from 1992, mostly due to increased exports of gold bullion.

**Figure 6**  
U.S. merchandise trade with the world: Exports, imports, and trade balance, 1989-93



Source: Compiled from official statistics of the U.S. Department of Commerce.

**Figure 7**  
**U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major commodity sectors, 1992 and 1993**



Source: Compiled by the staff of the U.S. International Trade Commission (USITC) from official statistics of the U.S. Department of Commerce.

The only two merchandise sectors in which the United States had a trade surplus in 1993 were agriculture and chemicals and related products. The agricultural products sector registered the largest trade surplus among the major trade sectors, although it declined by \$1.4 billion from 1992 to \$18.3 billion. The trade surplus for the chemicals and related products sector fell by \$660 million to \$12.2 billion in 1993. Due to trade fluctuations in lumber and other wood products, the trade surplus of \$2 billion in 1992 for the forest products sector shifted to a trade deficit of \$655 million in 1993.

On a country basis, the U.S. merchandise trade balance with most major trading partners declined except with the United Kingdom, Taiwan, and Singapore. The three most significant developments were the \$10.4 billion expansion in the trade deficit with Japan to \$60 billion, by far the largest bilateral deficit; the \$4.6 billion jump in the deficit with China to \$22.8 billion;<sup>11</sup> and the narrowing of the surplus with Mexico by \$4 billion to \$1.6 billion in 1993. The United States continued to experience trade deficits with all major partners except Mexico and the United Kingdom (table 2 and figure 8).

The significant bilateral shifts in the merchandise trade balance position of the United States with its major trading partners noted in table 2, and discussed in greater detail later in this chapter, should be considered in the context of the GDP of the United States (table 3.) The total U.S. merchandise trade deficit was equivalent to 2.1 percent of U.S. GDP in 1993. The bilateral deficit with Japan equaled 0.9 percent of U.S. GDP.

Figure 9 shows the leading U.S. exports to major markets in 1993, and figure 10 identifies the leading U.S. imports from major sources in 1993.

## Exchange Rate Shifts

The exchange rate between two freely convertible currencies is determined by the supply and demand for each currency, which reflects the supply and demand for goods, services, and assets. "Real exchange rates" are nominal changes adjusted for inflation.

Although caused by changes in supply or demand for currencies, movements in exchange rates themselves affect trade between countries through their effects on prices. Depreciation of the dollar reduces the price foreigners pay for U.S. exports, thereby increasing the quantity demanded for these exports, and increases the price of imports for U.S.

consumers, thereby reducing the quantity demanded for imports. This change in relative price of exports and imports leads to changes in the trade balance.

Since the early 1980s, the United States has had sizable deficits in overall services and merchandise trade. These sustained deficits have been offset by net exports of financial assets. The rest of the world has been willing to purchase U.S. financial assets from the United States, which supported the dollar exchange rate at a higher level than it would have been without these compensatory flows. The depreciation of the dollar since the mid-1980s is probably a result of reduced demand by foreigners for U.S. financial assets. The lower value of the dollar has contributed, in turn, to the reduction in the trade deficit.

The average value of the U.S. dollar showed a small appreciation against world currencies in real terms in 1993 according to the real exchange-rate index prepared by the Federal Reserve Bank of Dallas, shown in table 4. The value of the dollar, adjusted for inflation, increased on average by 3.3 percent with respect to all foreign currencies in 1993. The average real value of the dollar continued the upward swing it registered at the end of 1992 through the first quarter of 1993, declined in the second quarter, then increased again steadily from July through December 1993.

In 1993, the U.S. economy continued its slow recovery. Both business investment and consumer spending increased as the growing U.S. economy benefited from relatively low interest rates and low inflation. The U.S. showed a higher rate of economic growth than other major economies, which resulted in increased demand for imports. Imports grew by 9.5 percent, while exports grew by 3.4 percent. In spite of this, the dollar appreciated in 1993, largely because of a sustained demand - for U.S. financial assets. While interest rates in the United States fell in 1993, the interest rates in some major industrialized countries fell more.

The 1993 trend in the real, trade-weighted value of the dollar was irregular. The U.S. dollar appreciated in real value in 1993 in relation to the currency of Canada by 7.9 percent; the basket of European currencies by 11.9 percent; the basket of Pacific newly industrialized country (NIC)s currencies by 2.36 percent; Taiwan, by 5.26 percent; and Korea, by 1 percent. Much of the increase against the European currencies came in mid-summer when the EU finance ministers widened the allowable currency fluctuation bands within the European Common Market.

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<sup>11</sup> The deficit with China was the second largest bilateral deficit.

**Table 2**  
**All merchandise sectors: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	83,218	91,866	8,648	10.4
Japan .....	45,850	46,045	195	0.4
Mexico .....	39,605	40,265	661	1.7
Germany .....	19,935	17,947	-1,989	-10.0
United Kingdom .....	21,380	24,497	3,118	14.6
Taiwan .....	14,533	15,585	1,052	7.2
China .....	7,339	8,619	1,281	17.5
Korea .....	14,220	14,359	138	1.0
France .....	13,812	12,463	-1,350	-9.8
Singapore .....	8,949	10,655	1,706	19.1
All other .....	156,130	156,994	864	0.6
<b>Total .....</b>	<b>424,971</b>	<b>439,295</b>	<b>14,324</b>	<b>3.4</b>
EU-12 .....	97,345	91,245	-6,100	-6.3
OPEC .....	21,324	20,046	-1,278	-6.0
Latin America .....	73,168	75,307	2,138	2.9
CBERA .....	10,721	11,800	1,079	10.1
Asian Pacific Rim .....	118,971	125,665	6,694	5.6
ASEAN .....	22,618	26,574	3,956	17.5
Eastern Europe .....	1,975	1,999	24	1.2
<b>U.S. imports for consumption:</b>				
Canada .....	98,242	110,482	12,240	12.5
Japan .....	95,520	106,162	10,643	11.1
Mexico .....	33,935	38,668	4,733	13.9
Germany .....	27,585	28,103	518	1.9
United Kingdom .....	19,617	21,303	1,686	8.6
Taiwan .....	24,531	24,981	450	1.8
China .....	25,514	31,425	5,911	23.2
Korea .....	16,523	16,986	463	2.8
France .....	14,725	14,953	228	1.5
Singapore .....	11,234	12,744	1,510	13.4
All other .....	157,666	169,054	11,389	7.2
<b>Total .....</b>	<b>525,091</b>	<b>574,863</b>	<b>49,772</b>	<b>9.5</b>
EU-12 .....	91,826	96,517	4,691	5.1
OPEC .....	32,349	32,756	407	1.3
Latin America .....	66,505	72,661	6,155	9.3
CBERA .....	9,357	9,969	612	6.5
Asian Pacific Rim .....	205,512	227,675	22,163	10.8
ASEAN .....	35,666	42,002	6,336	17.8
Eastern Europe .....	1,684	1,542	-142	-8.4

See footnotes at end of table.

**Table 2-Continued**

All merchandise sectors: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
U.S. merchandise trade balance:				
Canada .....	-15,025	-18,617	-3,592	(2)
Japan .....	-49,670	-60,117	-10,447	(2)
Mexico .....	5,670	1,598	-4,073	(2)
Germany .....	-7,649	-10,156	-2,507	(2)
United Kingdom .....	1,763	3,194	1,431	(2)
Taiwan .....	-9,997	-9,395	602	(2)
China .....	-18,176	-22,806	-4,630	(2)
Korea .....	-2,303	-2,628	-325	(2)
France .....	-913	-2,491	-1,578	(2)
Singapore .....	-2,285	-2,089	196	(2)
All other .....	-1,536	-12,061	-10,525	(2)
<b>Total .....</b>	<b>-100,121</b>	<b>-135,568</b>	<b>-35,447</b>	<b>(2)</b>
EU-12 .....	5,519	-5,272	-10,791	(2)
OPEC .....	-11,025	-12,709	-1,685	(2)
Latin America .....	6,663	2,646	-4,017	(2)
CBERA .....	1,364	1,831	467	(2)
Asian Pacific Rim .....	-86,541	-102,010	-15,469	(2)
ASEAN .....	-13,049	-15,428	-2,379	(2)
Eastern Europe .....	291	457	166	(2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

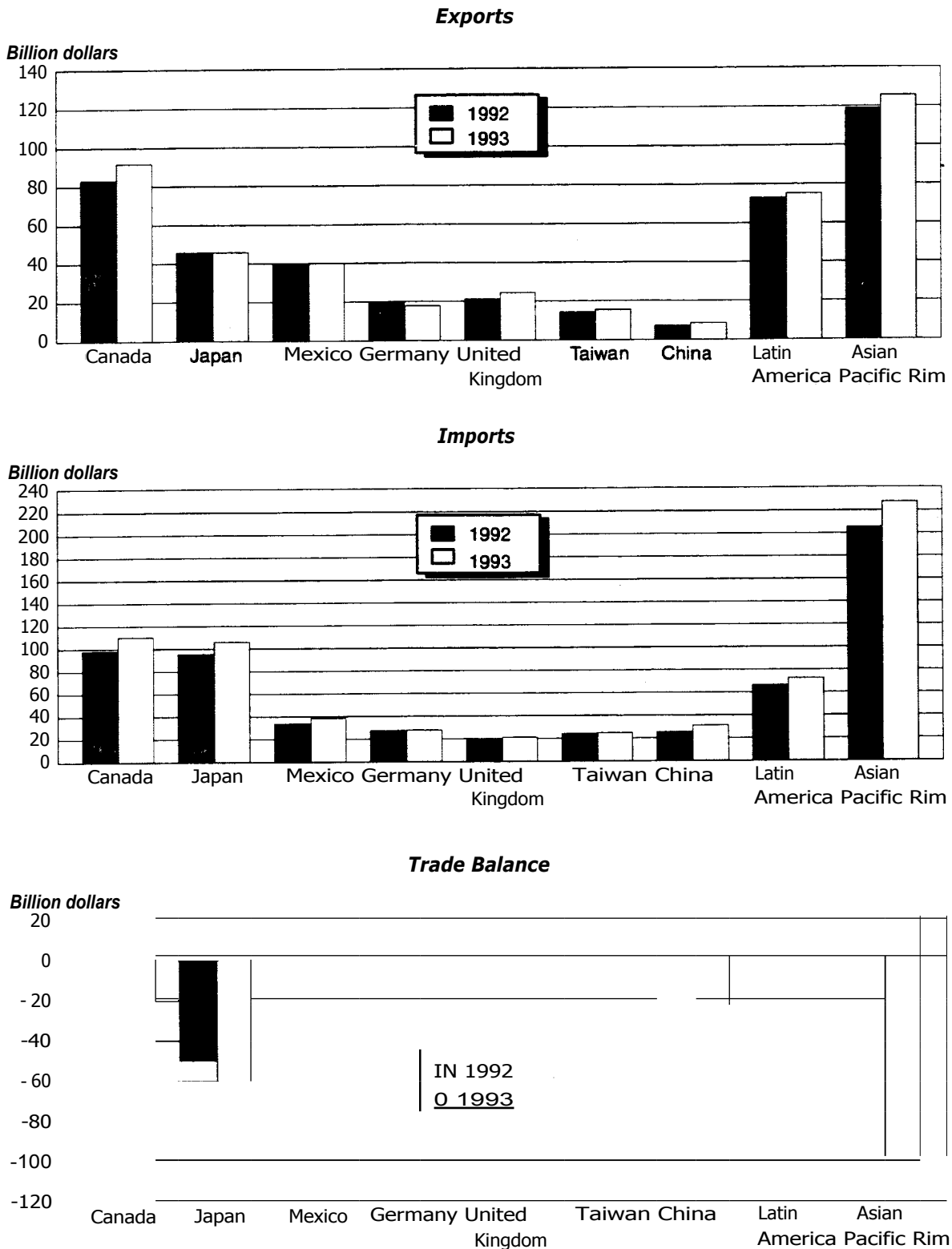
<sup>2</sup> Not meaningful for purposes of comparison.

Note.- Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.



**Figure 8**  
**U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major trading partners, 1992 and 1993**



Source: Compiled by the staff of the U.S. International Trade Commission (USITC) from official statistics of the U.S. Department of Commerce.

**Table 3**  
**U.S. bilateral merchandise trade balances with major partner countries, in dollars and as a ratio to U.S. gross domestic product (GDP), 1993**

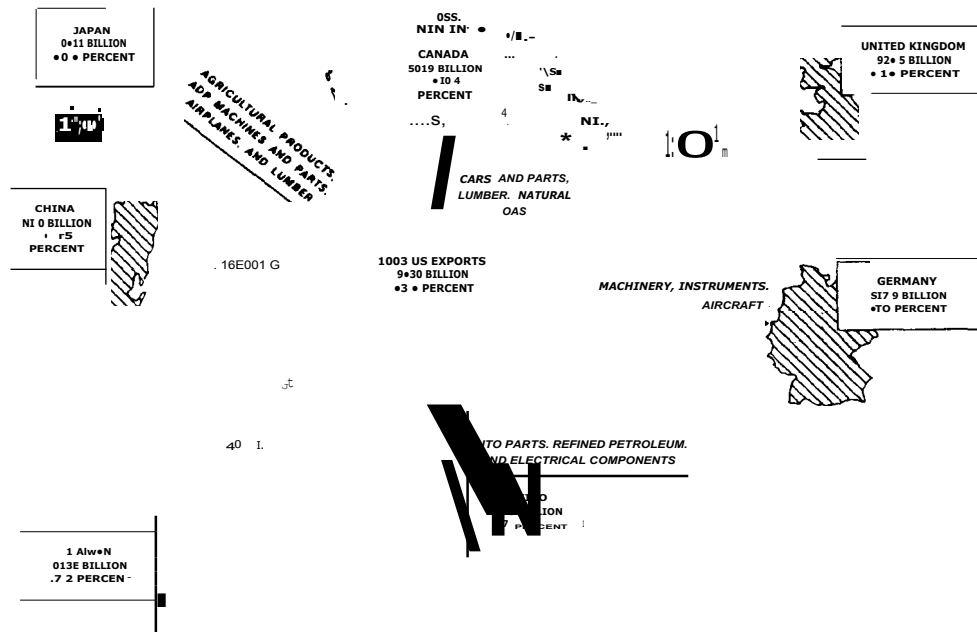
Country	GDP	U.S. exports	U.S. imports	U.S. merchandise trade balance	Ratio of the merchandise trade balance to U.S. GDP
	<i>Billion dollars</i>		<i>Million dollars</i>		<i>Percent</i>
United States .....	6,374	439,295	574,863	-135,568	-2.13
Mexico .....	368	40,265	38,668	1,598	0.03
Canada .....	551	91,866	110,482	-18,617	-0.29
China .....	436	8,619	31,425	-22,806	-0.36
Japan .....	4,168	46,045	106,162	-60,117	-0.94
Malaysia .....	58	5,747	10,482	-4,735	-0.07
Germany .....	1,714	17,947	28,103	-10,156	-0.16
Taiwan .....	216	15,585	24,981	-9,395	-0.15
France .....	1,243	12,463	14,953	-2,491	-0.04
United Kingdom .....	1,053	24,497	21,303	3,194	0.05
Thailand .....	123	3,555	8,539	-4,984	-0.08
Singapore .....	51	10,655	12,744	-2,089	-0.03
Colombia .....	43	3,092	3,010	82	0.00
Argentina .....	244	3,507	1,189	2,318	0.04
Korea .....	319	14,359	16,986	-2,638	-0.04
Indonesia .....	140	2,722	5,342	-2,620	-0.04

<sup>1</sup> GDP data for Mexico, Japan, Taiwan, Thailand, Korea, Indonesia, Singapore, France, and Argentina are from the U.S. House, Committee on Foreign Affairs and Committee on Ways and Means, and U.S. Senate, Committee on Foreign Relations and Committee on Finance, Country Reports on Economic Policy and Trade Practices, prepared by the Department of State in accordance with section 22092 of the Omnibus Trade and Competitiveness Act of 1988 (Washington, DC: GPO, 1993), pp. 55, 67, 94, 99, 105, 168, 311, and 387.

Note.-The GDP data for China, Malaysia, United Kingdom, and Colombia are for 1992 because the 1993 statistics are not available yet.

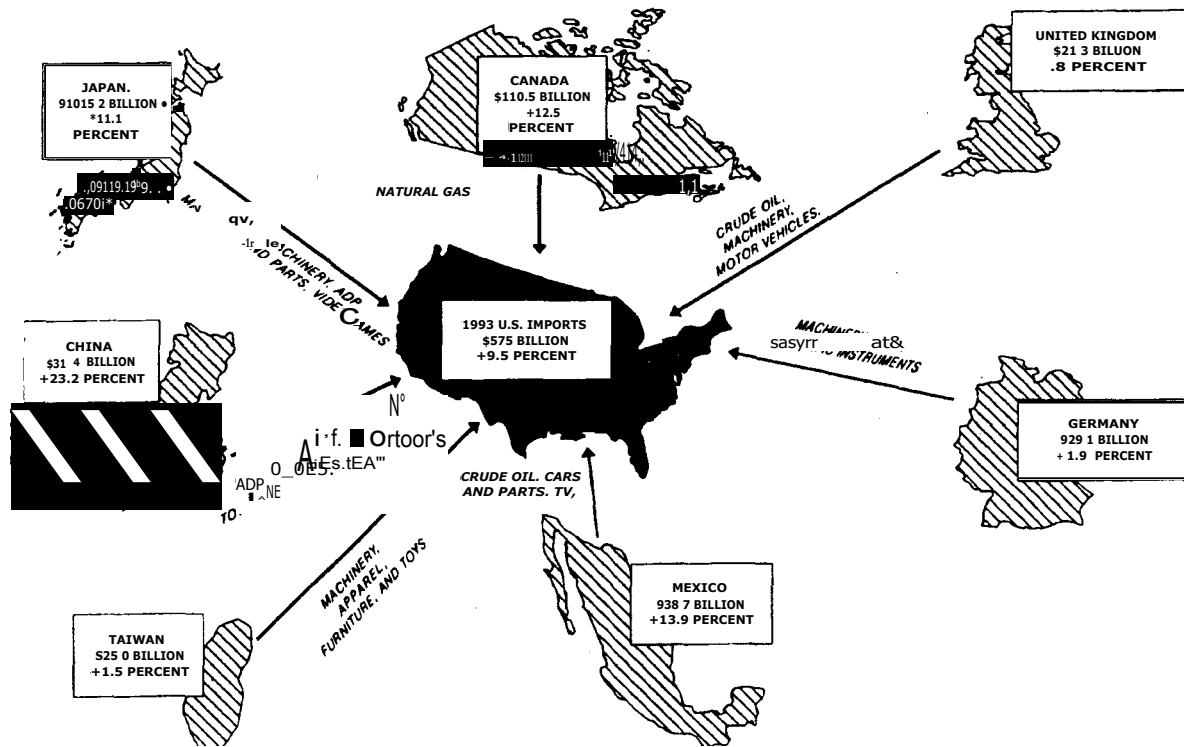
Source: U.S. trade data from official statistics of the U.S. Department of Commerce; GDP data from International Monetary Fund, International Financial Statistics (Washington, DC: IMF Publications Services, 1994), country tables, except as noted.

**Figure 9**  
**Leading U.S. exports, by major markets, and overall percentage change, 1992-93**



Source: Derived for official statistics of the U.S. Department of Commerce.

**Figure 10**  
**Leading U.S imports, by major markets, and overall percentage change, 1992-93**



Source: Derived for official statistics of the U.S. Department of Commerce.

**Table 4**  
**Real Exchange rate, indexes of foreign currencies or of baskets of currencies against the U.S. dollar, annual averages 1990-1993<sup>1</sup>**

Year	Total <sup>2</sup>	Western Hemisphere			Pacific					
		Canada	Mexico	Europe	Japan	NICs	Taiwan	Korea	Singapore	
1990....	75.8	94.1	84.1	105.0	56.3	64.2	88.6	75.9	79.1	93.6
1991 ....	75.5	98.2	81.5	95.8	57.3	60.4	89.8	76.3	77.9	89.9
1992....	75.3	99.6	87.3	87.3	55.3	57.5	88.9	70.4	80.4	85.4
1993....	77.8	98.2	94.2	82.6	61.9	51.3	91.0	74.1	81.2	85.2
Percent change, 1990-91	-0.40	4.14	-3.09	-8.76	1.78	-5.92	1.35	0.53	-1.52	-3.95
Percent change, 1991-92	-0.26	1.43	7.12	-8.87	-3.49	-4.80	-1.00	-7.73	3.21	-5.01
Percent change, 1992-93	3.32	-1.41	7.90	-5.38	11.93	-10.78	2.36	5.26	1.00	-0.23

<sup>1</sup> Index numbers: 1985 (first quarter) = 100.

<sup>2</sup> The Dallas Fed's index of real exchange rates weighted by U.S. bilateral trade with 101 trading partners (RX-101).

Source: Federal Reserve Bank of Dallas.

The dollar depreciated in relation to the basket of Western Hemisphere currencies by 1.4 percent; Mexico, by 5.4 percent; Japan, by 10.8 percent; and Singapore, by 0.2 percent. There was a sharp fall against the Japanese yen in the first part of 1993, when the dollar depreciated from about 125 yen per dollar in January to just over 100 yen in early August. The dollar recovered somewhat in the late months of 1993.

The appreciation does not appear to be clearly linked to U.S. trade deficits but rather appears to be derived to some degree from the demand for U.S. financial assets. The trade balances with the countries against whose currencies the dollar rose, grew worse or stabilized, with the exception of the United Kingdom, with which the U.S. trade balance improved. The major countries against whose currencies the dollar fell did not exhibit the expected link between the exchange rate and the trade balance. The trade deficit with Japan worsened, and the trade surplus with Mexico declined despite a real depreciation of the U.S. dollar against their respective currencies. Poor economic performance by several major trading partners, particularly Europe, Japan, and Mexico, weakened overall demand in those markets. This restrained export growth to Japan and Mexico despite the depreciation of the dollar

## Summaries of Significant Commodity Shifts

Numerous important commodity shifts occurred in the periods under review within each of the major industrial sectors. These shifts are discussed in detail in chapters 4 through 11, and tabular summa-

ries of the most significant of these shifts are presented on the following pages in tables 5 through 10. These six tables provide listings of the most significant export, import, and trade balance shifts in rank order, including an indication of the value and percentage changes between the two periods under consideration.

## Significant Bilateral Shifts

Several of the significant shifts in U.S. bilateral trade in 1993 involved increases in U.S. imports. These increases reflected the more rapid growth in the U.S. economy than in the economies of several leading trading partners. At the same time, the performances of U.S. exports was hampered by remaining trade barriers in certain other trading partners. The tabulation below shows the top 15 bilateral shifts in U.S. international trade in 1993, ranked by the total change in U.S. exports and imports. Ten of the top 15 bilateral shifts had a negative effect on the U.S. trade balance. An analysis of the factors influencing the significant shifts in U.S. bilateral trade is provided for each of the countries in the tabulation.

### Canada

Due to weak Canadian demand and the sustained global advantages of Canada's resource-based industries, the U.S. merchandise trade deficit with Canada in 1993 rose by \$3.6 billion, from \$15 billion to \$18.6 billion. Canadian producers, especially in the forest products and energy sectors, continue to benefit from strong U.S. demand and depreciation

Rank	Partner	Exports	Imports	Total	Change in U.S. balance
<i>Million dollars</i>					
1	Canada .....	8,648	12,239	20,887	-3,591
2	Japan .....	195	10,643	10,838	-10,448
3	China .....	1,281	5,911	7,192	-4,640
4	Mexico .....	661	4,733	5,394	-4,072
5	United Kingdom .....	3,118	1,686	4,804	+1,432
6	Malaysia .....	1,713	2,306	4,019	-593
7	Singapore .....	1,706	1,510	3,216	+196
8	Italy .....	-2,158	962	3,120	-3,120
9	Saudi Arabia .....	-499	-2,479	2,978	+1,950
10	Germany .....	-1,989	518	2,507	-2,507
11	Switzerland .....	2,081	359	2,440	+1,722
12	Russia .....	830	1,263	2,093	-433
13	Kuwait .....	-308	1,528	1,836	-1,836
14	Belgium .....	-994	694	1,668	-1,688
15	India .....	856	782	1,638	+74

Source: Compiled by the U.S. International Trade Commission from official statistic of the U.S. Department of Commerce.

**Table 5**  
**Domestic export growth: Ranking of top 20 commodity groups, 1992 and 1993**

USITC code <sup>2</sup>	Commodity group	U.S. exports		Change 1993 from 1992	
		1992	1993	Amount	Percent
<i>Million dollars</i>					
Rank order based on change in absolute value growth:					
MMO20	Precious metals and related articles .....	4,869	9,895	5,026	103.2
MT039	Certain motor-vehicle parts .....	16,046	18,469	2,423	15.1
ST016	Diodes, transistors, integrated circuits and similar semiconductor solid-state devices .....	11,527	13,813	2,286	19.8
ST002	Telephone and telegraph apparatus .....	4,170	5,199	1,029	24.7
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing .....	17,679	18,555	876	5.0
ST031	Measuring, testing, controlling, and analyzing instruments .....	8,185	9,026	841	10.3
MT002	Internal combustion piston engines, other than for aircraft .....	6,640	7,450	810	12.2
MT023	Semiconductor equipment, robots, and other machinery .....	6,787	7,574	787	11.6
ST007	Radio transmission and reception apparatus, and combinations thereof .....	3,528	4,283	755	21.4
ST006	Records, tapes, compact discs, computer software, and other recorded media .....	2,756	3,281	525	19.0
CH027	Medicinal chemicals, except antibiotics .....	5,248	5,690	442	8.4
MT036	Insulated electrical wire and cable, and conduit; glass and ceramic insulators .....	2,567	2,991	424	16.5
ST024	Medical goods .....	6,940	7,360	420	6.1
ST018	Automatic data processing machines .....	24,985	25,397	412	1.6
AG034	Edible preparations .....	2,156	2,522	366	17.0
AG046	Logs and rough wood products .....	2,809	3,134	325	11.6
MT033	Ignition, starting, lighting, and other electrical equipment .....	1,122	1,432	310	27.6
CH044	Plastic or rubber semifabricated forms .....	2,833	3,139	306	10.8
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits .....	4,924	5,224	300	6.1
MT027	Boilers, turbines, and related machinery .....	857	1,134	277	32.3
Rank order based on change in percentage growth:					
MMO20	Precious metals and related articles .....	4,869	9,895	5,026	103.2
AG062	Ethyl alcohol for nonbeverage purposes .....	38	71	33	86.8
CH059	Sacks and bags of textile materials .....	17	30	13	76.5
CH071	Hosiery .....	135	206	71	52.6
CH073	Neckwear, handkerchiefs, and scarves .....	21	31	10	47.6
CH078	Rubber, plastic, and coated-fabric apparel .....	48	70	22	45.8
MT019	Metal rolling mills and parts thereof .....	182	265	83	45.6
MT022	Non-metalworking machine tools and parts thereof .....	474	665	191	40.3
CH009	Primary aromatics .....	106	145	39	36.8
CH070	Robes, nightwear, and underwear .....	382	512	130	34.0
MT027	Boilers, turbines, and related machinery .....	857	1,134	277	32.3
MM065	Brooms, brushes, and hair grooming articles .....	110	143	33	30.0
CH066	Shirts and blouses .....	664	854	190	28.6
AG035	Cocoa, chocolate, and confectionery .....	438	560	122	27.9
ST014	Television picture tubes and other cathode ray tubes .....	602	769	167	27.7
MT033	Ignition, starting, lighting, and other electrical equipment .....	1,122	1,432	310	27.6
AG051	Tools and tool handles of wood .....	16	20	4	25.0
ST002	Telephone and telegraph apparatus .....	4,170	5,199	1,029	24.7
MT031	Portable electric handtools .....	260	323	63	24.2
CH080	Other wearing apparel .....	368	452	84	22.8

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table 6**  
**Domestic export declines: Ranking of top 20 commodity groups, 1992 and 1993**

USITC code <sup>2</sup>	Commodity group	U.S. exports		Change 1993 from 1992	
		1992	1993	Amount	Percent
<i>Million dollars</i>					
Rank order based on change in absolute value decline:					
MT042	Aircraft, spacecraft, and related equipment .....	35,712	30,673	-5,039	-14.1
CH003	Coal, coke, and related chemicals products .....	4,723	3,587	-1,136	-24.1
AG054	Wood pulp and wastepaper .....	3,862	2,999	-863	-22.3
CH018	Fertilizers .....	2,483	1,877	-606	-24.4
AG030	Cereals .....	11,245	10,728	-517	-4.6
AG064	Cotton, not carded or combed .....	1,999	1,528	-471	-23.6
MT043	Ships, tugs, pleasure boats, and similar vessels .....	1,441	1,002	-439	-30.5
MM037	Unwrought aluminum .....	1,154	771	-383	-33.2
AG007	Frozen fish .....	1,886	1,526	-360	-19.1
AG041	Unmanufactured tobacco .....	1,651	1,306	-345	-20.9
AG043	Cigarettes .....	4,192	3,926	-266	-6.3
MT041	Miscellaneous vehicles and transportation-related equipment .....	2,701	2,441	-260	-9.6
MM019	Natural and synthetic gemstones .....	476	231	-245	-51.5
MM025	Steel mill products, all grades .....	3,046	2,811	-235	-7.7
ST001	Office machines .....	2,003	1,770	-233	-11.6
CH016	Chlor-alkali chemicals .....	803	598	-205	-25.5
ST028	Arms and ammunition .....	2,534	2,372	-162	-6.4
CH006	Natural gas and components .....	759	603	-156	-20.6
ST025	Surveying and navigational instruments .....	1,709	1,556	-153	-9.0
MT012	Construction and mining equipment .....	6,773	6,651	-122	-1.8
Rank order based on change in percentage decline:					
MM005	Lead ores and residues .....	32	14	-18	-56.3
MM019	Natural and synthetic gemstones .....	476	231	-245	-51.5
MM006	Zinc ores and residues .....	250	137	-113	-45.2
MM008	Precious metal ores and concentrates .....	5	3	-2	-40.0
MM051	Silverware and certain other articles of precious metal or metal clad with precious metal .....	138	87	-51	-37.0
CH007	Major primary olefins .....	225	148	-77	-34.2
MM037	Unwrought aluminum .....	1,154	771	-383	-33.2
MM007	Certain ores, concentrates, ash, and residues .....	280	191	-89	-31.8
MT043	Ships, tugs, pleasure boats, and similar vessels .....	1,441	1,002	-439	-30.5
AG063	Wool and other animal hair .....	19	14	-5	-26.3
CH004	Crude petroleum .....	27	20	-7	-25.9
CH016	Chlor-alkali chemicals .....	803	598	-205	-25.5
CH018	Fertilizers .....	2,483	1,877	-606	-24.4
CH003	Coal, coke, and related chemicals products .....	4,723	3,587	-1,136	-24.1
AG064	Cotton, not carded or combed .....	1,999	1,528	-471	-23.6
MM004	Copper ores and concentrates .....	445	342	-103	-23.1
MM040	Zinc and related articles .....	75	58	-17	-22.7
AG054	Wood pulp and wastepaper .....	3,862	2,999	-863	-22.3
AG041	Unmanufactured tobacco .....	1,651	1,306	-345	-20.9
CH006	Natural gas and components .....	759	603	-156	-20.6

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table 7**  
**Domestic import growth: Ranking of top 20 commodity groups, 1992 and 1993**

USITC code <sup>2</sup>	Commodity group	U.S. imports		Change 1993 from 1992	
		1992	1993	Amount	Percent
<i>Million dollars</i>					
Rank order based on change in absolute value growth:					
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing .....	60,376	68,607	8,231	13.6
ST018	Automatic data processing machines .....	31,564	37,906	6,342	20.1
ST016	Diodes, transistors, integrated circuits and similar semiconductor solid-state devices .....	15,449	19,466	4,017	26.0
AG047	Lumber .....	3,481	5,032	1,551	44.6
MT039	Certain motor-vehicle parts .....	13,304	14,646	1,342	10.1
CH082	Footwear and footwear parts .....	10,141	11,105	964	9.5
MM019	Natural and synthetic gemstones .....	4,783	5,739	956	20.0
MT023	Semiconductor equipment, robots, and other machinery .....	5,242	6,131	889	17.0
CH066	Shirts and blouses .....	9,173	10,042	869	9.5
CH006	Natural gas and components .....	3,595	4,421	826	23.0
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits .....	5,445	6,254	809	14.9
MM055	Furniture and selected furnishings .....	5,555	6,298	743	13.4
MM025	Steel mill products, all grades .....	7,932	8,670	738	9.3
MM062	Games and fairground amusements .....	2,729	3,461	732	26.8
MM066	Miscellaneous articles .....	3,718	4,449	731	19.7
MT002	Internal combustion piston engines, other than for aircraft .....	5,618	6,340	722	12.9
MM037	Unwrought aluminum .....	2,120	2,774	654	30.8
MT043	Ships, tugs, pleasure boats, and similar vessels .....	378	1,019	641	169.6
MT012	Construction and mining equipment .....	1,716	2,299	583	34.0
ST009	Television receivers and video monitors and combinations including television receivers .....	3,532	4,100	568	16.1
Rank order based on change in percentage growth:					
MM008	Precious metal ores and concentrates .....	4	20	16	400.0
MT043	Ships, tugs, pleasure boats, and similar vessels .....	378	1,019	641	169.6
MM027	Fabricated structurals .....	45	85	40	88.9
AG043	Cigarettes .....	199	360	161	80.9
MM051	Silverware and certain other articles of precious metal or metal clad with precious metal .....	64	109	45	70.3
MM021	Primary iron products .....	130	213	83	63.8
CH022	Synthetics tanning agents .....	4	6	2	50.0
MT035	Electric and gas welding and soldering equipment .....	345	502	157	45.5
AG047	Lumber .....	3,481	5,032	1,551	44.6
CH036	PVC resins in primary forms .....	82	117	35	42.7
CH035	Polypropylene resins in primary forms .....	83	116	33	39.8
MT019	Metal rolling mills and parts thereof .....	103	144	41	39.8
AG031	Milled grains, malts, and starches .....	70	96	26	37.1
AG004	Sheep and meat of sheep .....	46	62	16	34.8
MT012	Construction and mining equipment .....	1,716	2,299	583	34.0
MT027	Boilers, turbines, and related machinery .....	230	306	76	33.0
CH053	Knit fabrics .....	217	286	69	31.8
MM037	Unwrought aluminum .....	2,120	2,774	654	30.8
CH071	Hosiery .....	178	231	53	29.8
AG018	Fresh, chilled, or frozen vegetables .....	966	1,253	287	29.7

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table 8**  
**Domestic import declines: Ranking of top 20 commodity groups, 1992 and 1993**

USITC code <sup>2</sup>	Commodity group	U.S. imports		Change 1993 from 1992	
		1992	1993	Amount	Percent
<i>Million dollars</i>					
Rank order based on change in absolute value decline:					
MT042	Aircraft, spacecraft, and related equipment .....	7,262	6,255	-1,007	-13.9
MT001	Aircraft engines and gas turbines .....	6,185	5,735	-450	-7.3
CH005	Petroleum products .....	11,288	11,041	-247	-2.2
AG054	Wood pulp and wastepaper .....	2,138	1,899	-239	-11.2
CH067	Sweaters .....	2,149	1,961	-188	-8.7
AG028	Coffee and tea .....	1,871	1,705	-166	-8.9
MM041	Certain base metals and chemical elements .....	1,636	1,472	-164	-10.0
AG036	Fruit and vegetable juices .....	812	653	-159	-19.6
CH002	Nuclear materials .....	1,080	930	-150	-13.9
CH011	Benenoid specialty chemicals .....	2,211	2,063	-148	-6.7
CH013	Selected inorganic chemicals and elements .....	1,363	1,252	-111	-8.1
AG039	Wine and certain other fermented beverages .....	1,094	984	-110	-10.1
AG040	Distilled spirits .....	1,552	1,442	-110	-7.1
AG033	Animal or vegetable fats and oils .....	966	856	-110	-11.4
AG041	Unmanufactured tobacco .....	1,475	1,370	-105	-7.1
ST010	Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus .....	2,236	2,143	-93	-4.2
MM020	Precious metals and related articles .....	4,083	3,994	-89	-2.2
MM040	Zinc and related articles .....	832	746	-86	-10.3
ST025	Surveying and navigational instruments .....	562	477	-85	-15.1
CH032	Miscellaneous chemicals and specialties .....	673	603	-70	-10.4
Rank order based on change in percentage decline:					
MM005	Lead ores and residues .....	2	( <sup>1</sup> )	-2	-100.0
MM006	Zinc ores and residues .....	46	18	-28	-60.9
MM004	Copper ores and concentrates .....	107	42	-65	-60.7
CH016	Chlor-alkali chemicals .....	170	125	-45	-26.5
AG036	Fruit and vegetable juices .....	812	653	-159	-19.6
MM039	Lead and related articles .....	119	97	-22	-18.5
ST025	Surveying and navigational instruments .....	562	477	-85	-15.1
MT042	Aircraft, spacecraft, and related equipment .....	7,262	6,255	-1,007	-13.9
CH002	Nuclear materials .....	1,080	930	-150	-13.9
AG033	Animal or vegetable fats and oils .....	966	856	-110	-11.4
AG022	Citrus fruit .....	134	119	-15	-11.2
AG054	Wood pulp and wastepaper .....	2,138	1,899	-239	-11.2
AG023	Deciduous fruit .....	163	146	-17	-10.4
CH032	Miscellaneous chemicals and specialties .....	673	603	-70	-10.4
MM040	Zinc and related articles .....	832	746	-86	-10.3
AG039	Wine and certain other fermented beverages .....	1,094	984	-110	-10.1
MM041	Certain base metals and chemical elements .....	1,636	1,472	-164	-10.0
AG008	Fish canned, cured, or otherwise prepared, and live fish .....	683	617	-66	-9.7
CH009	Primary aromatics .....	187	169	-18	-9.6
AG028	Coffee and tea .....	1,871	1,705	-166	-8.9

Source: Compiled from official statistics of the U.S. Department of Commerce.



**Table 9**  
**U.S. trade position improvements: Ranking of top 30 commodity groups 1992 and 1993**

USITC code <sup>2</sup>	Commodity group	U.S. balance		Absolute change from
		1992	1993	1992 to 1993
<i>Million dollars</i>				
MMO20	Precious metals and related articles .....	786	5,901	5,115
MT039	Certain motor-vehicle parts .....	2,742	3,823	1,081
ST002	Telephone and telegraph apparatus .....	-1,436	-944	492
CH027	Medicinal chemicals, except antibiotics .....	360	793	433
ST006	Records, tapes, compact discs, computer software, and other recored media .....	2,234	2,665	431
MT001	Aircraft engines and gas turbines .....	2,108	2,531	423
CH011	Benenoid specialty chemicals .....	1,237	1,587	350
ST031	Measuring, testing, controlling, and analyzing instruments .....	4,171	4,473	302
ST007	Radio transmission and reception apparatus, and combinations thereof .....	-2,430	-2,137	293
AG046	Logs and rough wood products .....	2,460	2,747	287
AG034	Edible preparations .....	907	1,174	267
CH005	Petroleum products .....	-4,652	-4,387	265
CH044	Plastic or rubber semifabricated forms .....	899	1,124	225
MT027	Boilers, turbines, and related machinery .....	627	828	201
AG028	Coffee and tea .....	-1,711	-1,518	193
CH067	Sweaters .....	-2,122	-1,929	193
MMO23	Iron and steel waste and scrap .....	952	1,141	189
AG005	Poultry .....	1,029	1,205	176
ST008	Radio navigational aid, radar, and remote control apparatus .....	665	841	176
AG035	Cocoa, chocolate, and confectionery .....	-909	-739	170
AG036	Fruit and vegetable juices .....	-351	-183	168
AG032	Oilseeds .....	4,442	4,603	161
MT022	Non-metalworking machine tools and parts thereof .....	-159	-16	143
AG019	Prepared or preserved vegetables, mushrooms, and olives .....	167	298	131
ST017	Electrical and electronic articles, apparatus, and parts not elsewhere provided for .....	754	884	130
AG033	Animal or vegetable fats and oils .....	473	598	125
CH013	Selected inorganic chemicals and elements .....	-595	-471	124
CH029	Essential oils and other flavoring materials .....	63	177	114
CH030	Perfumes, cosmetics, and toiletries .....	330	442	112
MT033	Ignition, starting, lighting, and other electrical equipment .....	-174	-63	111

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 10  
U.S. trade position declines: Ranking of top 30 commodity groups, 1002 and 1993

USITC code <sup>2</sup>	Commodity group	U.S. balance		Absolute change from
		1992	1993	1992 to 1993
<i>Million dollars</i>				
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing .....	-42,697	-50,052	-7,355
ST018	Automatic data processing machines .....	-6,579	-12,509	-5,930
MT042	Aircraft, spacecraft, and related equipment .....	28,450	24,418	-4,032
ST016	Diodes, transistors, integrated circuits and similar semiconductor solid-state devices .....	-3,922	-5,653	-1,731
AG047	Lumber .....	-1,144	-2,562	-1,418
CH003	Coal, coke, and related chemicals products .....	4,188	2,984	-1,204
MM019	Natural and synthetic gemstones .....	-4,307	-5,508	-1,201
MT043	Ships, tugs, pleasure boats, and similar vessels .....	1,063	-17	-1,080
MM037	Unwrought aluminum .....	-966	-2,003	-1,037
CH006	Natural gas and components .....	-2,836	-3,818	-982
MM025	Steel mill products, all grades .....	-4,886	-5,859	-973
CH082	Footwear and footwear parts .....	-9,538	-10,501	-963
MM066	Miscellaneous articles .....	-2,366	-3,199	-833
CH018	Fertilizers .....	1,012	277	-735
ST001	Office machines .....	-2,575	-3,282	-707
MT012	Construction and mining equipment .....	5,057	4,352	-705
CH066	Shirts and blouses .....	-8,509	-9,188	-679
AG054	Wood pulp and wastepaper .....	1,724	1,100	-624
MM062	Games and fairground amusements .....	-1,845	-2,461	-616
AG030	Cereals .....	10,732	10,142	-590
MT041	Miscellaneous vehicles and transportation-related equipment .....	1,548	976	-572
MM052	Precious jewelry and related articles .....	-2,300	-2,825	-525
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits .....	-521	-1,030	-509
AG058	Printing and writing papers .....	-1,220	-1,723	-503
MM055	Furniture and selected furnishings .....	-2,855	-3,357	-502
AG064	Cotton, not carded or combed .....	1,999	1,528	-471
ST009	Television receivers and video monitors and combinations including television receivers .....	-2,308	-2,760	-452
AG043	Cigarettes .....	3,993	3,566	-427
AG007	Frozen fish .....	584	233	-351
MT018	Textile machinery and parts .....	-843	-1,186	-343

Source: Compiled from official statistics of the U.S. Department of Commerce.

of the Canadian dollar. Lumber prices rose during 1993, both in response to a buoyant U.S. residential construction market and timber supply constraints in the Pacific Northwest. Natural gas prices climbed in the United States in response to the strong demand during an unusually cold winter in 1993, benefitting Canadian producers. In addition, Canadian competitiveness has been boosted by the restructuring of manufacturing operations in many industries, leading to a rise in productivity but a decline in employment. The U.S. deficit with Canada was the third largest U.S. bilateral trade deficit in 1993, after Japan and China.

Canada is the leading trading partner of the United States, accounting for 21 percent (\$92 billion) of all U.S. exports in 1993, and 19 percent (\$111 billion) of total U.S. imports. Such factors as geographical proximity, resource endowment, infrastructure, communication and media linkages, and common culture and language promote trade between the two countries. Trade has also benefited from the growing integration of the North American automobile industry (greatly facilitated by duty-free U.S.-Canadian trade in motor vehicles and parts permitted by the Automotive Products Trade Act of 1965). Canadian exports to the United States accounted for close to 25 percent of Canada's GDP in 1993. However, U.S. exports to Canada accounted for less than 2 percent of the United States' GDP in the same year.

Canada's GDP grew by 3.2 percent in 1993,<sup>12</sup> the fastest growing economy among the Group of Seven (G-7) nations.<sup>13</sup> With the exception of the U.S. economy, where growth trailed just slightly behind the Canadian pace, the rest of the G-7 economies were sluggish. Nevertheless, Scotiabank of Nova Scotia reported that two-thirds of the major industries in Canada were performing at below pre-recession peaks in 1993. The combined output in 1993 of the retail, plastics, textile, and transportation industries posted an 11 percent improvement over the recession-plagued production of 1990 but remained almost 1.5 percentage points below pre-recession levels. Roughly 40 percent of Canada's industrial groups experienced flat or declining output in 1993, despite more than two years of overall economic growth.<sup>14</sup>

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<sup>12</sup> U.S. House, Committee on Foreign Affairs and Committee on Ways and Means, and U.S. Senate, Committee on Foreign Relations and Committee on Finance, *Country Reports on Economic Policy and Trade Practices*, prepared by the Department of State in accordance with section 2202 of the Omnibus Trade and Competitiveness Act of 1988 (Washington, DC: GPO, 1994), p. 145.

<sup>13</sup> Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

<sup>14</sup> Scotiabank: The Bank of Nova Scotia, *Global Economic Outlook*, (Nova Scotia, Canada, Apr. 1994), p. 12.

The restructuring of the Canadian manufacturing sectors was accelerated by the increased level of international competition resulting from the implementation of the U.S.-Canada Free-Trade Agreement (CFTA) on January 1, 1989. Under the CFTA, most nontariff protection afforded to Canadian manufacturers was removed immediately, and all tariffs on trade between the two countries are to be reduced to zero by January 1, 1998. Concurrently, U.S. products became less expensive in the Canadian market as higher interest-rate policies followed by the Bank of Canada to fight inflation drove up the value of the Canadian dollar. In response to increased U.S. competition, Canadian manufacturers improved productivity by automating their manufacturing methods and downsizing. An estimated 400,000 jobs were lost between 1989-92.<sup>15</sup> Many plants closed; some of them were relocated in the United States. Canadian unemployment remained at 11 percent during 1992-93.

Canada's continuing industrial restructuring weakened domestic demand in 1993. Throughout the year, the economy lacked a strong catalyst, such as a significant surge in consumer spending or residential investment. Furthermore, companies remained unwilling to invest in inventory accumulation. Low consumer confidence in the economy contributed to the dampening of domestic demand, which remained below its pre-recession level.<sup>16</sup> Total per capita personal disposal income for Canada fell by almost 1 percent in 1993, to \$18.2 billion (Canadian dollars).<sup>17</sup>

The recovery of the Canadian economy in 1993, and the increase in demand for U.S. imports that would normally result, was hindered by continued high interest rates owing to the Canadian federal government's high level of debt, rising health care costs, tight monetary policies, and the need to attract foreign investment.<sup>18</sup> The recovery of the Canadian economy has also been slowed by the implementation of a goods and services tax (GST) in 1991.<sup>19</sup>

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<sup>15</sup> Anne Swardson, *In Canada, Few Cheers for Free Trade*, *Washington Post*, 14 Nov. 1993, 16(H).

<sup>16</sup> OECD Economic Surveys, Canada 1993, Organization for Economic Co-Operation and Development, (1993): p. 14.

<sup>17</sup> U.S. House, Committee on Foreign Affairs and Committee on Ways and Means, and U.S. Senate, Committee on Foreign Relations and Committee on Finance, *Country Reports on Economic Policy and Trade Practices*, prepared by the Department of State in accordance with section 2202 of the Omnibus Trade and Competitiveness Act of 1988 (Washington, DC: GPO, 1994), pp. 145.

<sup>18</sup> The Canadian federal government's net debt in 1992 exceeded 60 percent of gross domestic product. Net public and private external indebtedness reached 38 percent of GDP in 1992 compared with 26 percent in 1984. The cost of Canada's \$67.6 billion universal health care system is placing additional strains on the Canadian budget. Albert Warson, "Canadian Health System Running a Fever," *Modern Healthcare*, 14 Mar. 1994, p. 78.

<sup>19</sup> The GST is a multistaged 7 percent value-added tax on Canadian consumption.

Reflecting continued integration of the North American motor vehicle industry, U.S. imports of motor vehicles from Canada rose by 18 percent (\$5 billion) in 1993, to \$33 billion. U.S.-made components that were subsequently assembled into complete vehicles by Canadian subsidiaries of U.S. auto producers accounted for about one-quarter of the value of U.S. imports of motor vehicles from Canada in 1993. U.S. imports of other transportation-related products showing significant increases in 1993 were internal combustion piston engines (chiefly for motor vehicles), which rose by 27 percent to 1.2 billion, and jet aircraft engines, which rose by 19 percent to \$813 million.

U.S. exports of motor vehicles to Canada rose by 15 percent (\$2.7 billion) in 1993, to \$21 billion. Meanwhile, U.S. exports of internal combustion and compression piston engines and parts rose by 13 percent (\$642 million) in 1993, to \$5.4 billion. Many of these engines and parts are assembled into complete vehicles and engines for sale in both the U.S. and Canadian markets. Also exhibiting strong export growth to Canada in 1993 were mowers and agricultural machinery, which rose by 33 percent (\$136 million) to \$542 million.

Canada's comparative advantage in the global market is based partly on its wealth of natural resources. U.S. imports of particle board and lumber from Canada rose by 45 percent (\$1.6 billion) in 1993, to \$5.2 billion. By comparison, U.S. exports of these products to Canada in 1993 rose by just 7 percent (\$27 million), to \$403 million. Owing to a weak economy, Canadians have been reluctant to invest in either residential or commercial construction. Other resource-based products contributing significantly to the rise in U.S. imports from Canada in 1993 were natural gas, which expanded by 19 percent (\$636 million) to \$4 billion; and gold, which rose by 31 percent (\$370 million) to \$1.6 billion. Imports of flat-rolled alloy steel, fabricated from domestic sources of coke and iron, rose by 151 percent (\$116 million) to \$194 million. Most of the U.S. imports of Canadian flat-rolled alloy steel are destined for U.S. car manufacturing plants.

## Japan

Japan's large, persistent trade and current account surpluses with the United States and the world increased in dollar terms in 1993, continuing the upward trend begun in 1991. Japan's current account surpluses set record highs during each of the last two years, reaching \$131 billion in 1993 (3.1 percent of GDP).<sup>20</sup> After declining somewhat in the

late 1980s, the current account surplus began to rise in 1991 simultaneously with an appreciation in the value of the yen, which accelerated rapidly in nominal terms in 1993, contributing directly to an increase in the dollar value of U.S. imports from Japan. The slowdown in the rate of growth of the Japanese economy that began in 1991 continued in 1993 whereas the U.S. economy experienced moderate growth in 1993; both factors also contributed to the deterioration in the U.S. merchandise trade deficit with Japan in 1993. Although Japan experienced 0.1-percent real growth in its GDP in 1993,

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trading partners to ask it to make structural adjustments in its economy to allow increased imports. U.S. House, Committee on Foreign Affairs and Committee on Ways and Means, and U.S. Senate, Committee on Foreign Relations and Committee on Finance, **Country Reports on Economic Policy and Trade Practices**, prepared by the Department of State in accordance with section 2202 of the Omnibus Trade and Competitiveness Act of 1988 (Washington, DC: GPO, 1993), pp. 107-108.

However, the real (in 1985 prices) current account surplus decreased by 1.2 trillion yen to 3.1 trillion yen in 1993, as Japanese imports of goods and services expanded more rapidly than exports of goods and services. The real current account surplus had increased by 3.3 trillion yen to 4.3 trillion yen in 1992. Douglas Ostrom, "Japan's Economy Ekes Out Slight Gain in 1993," Japan Economic Institute, No. 13B (Apr. 1, 1994), pp. 2-3. Further, although Japanese merchandise trade data are not available in real terms, the nominal yen merchandise trade surplus with the world decreased by 1,088 hundred million yen in 1993 to 133,761 hundred million yen, compared with a 30,252 hundred million yen increase in 1992. Despite the slight decrease in the nominal yen merchandise trade surplus with the world in 1993, Japan's surplus with the United States continued to increase, rising by 717 hundred million yen to 55,810 hundred million yen, compared with a 3,701 hundred million yen increase in 1992. Economic Section, Embassy of Japan, Washington, DC.

Analysts gave a variety of explanations for the continued expansion of Japan's current account surplus and the U.S. trade deficit with Japan in nominal U.S. dollars. One is the so-called J-curve effect in which U.S. customers pay more in dollars for the same volume (quantity) of Japan's exports to the United States in the short run, and Japanese customers pay less in dollars for the same volume of U.S. products. In a fully free market, customers and suppliers adjust to changed prices and costs, and the U.S. trade deficit with Japan would decrease. However, as one analyst stated, "the demand for many Japanese exports is relatively price inelastic." The Economist Intelligence Unit, **Country Report: Japan, 4th Quarter 1993** (London, United Kingdom, 1993), p. 5. Another source showed that during the period since 1987 the volume of Japanese imports increased substantially more than Japanese exports, but Japan's import and export prices changed little. This source stated that these data appear to support the contention that Japanese exporters squeezed profit margins to hold on to market share and that import prices did not fall fully to reflect the appreciation of the yen. Reduced crude oil prices and decreased imports of certain luxury goods also reduced the dollar value of Japanese imports. The Economist Intelligence Unit, **Country Profile: Japan, 1993-94** (London, United Kingdom, 1993), p. 37-38. Finally, the U.S. Government contended that Japan engaged in practices that impeded imports or resulted in prices not being sufficiently lower on imported products to reflect the full appreciation of the yen. U.S. Senate, Committee on Foreign Relations and Committee on Finance, and U.S. House, Committee on Foreign Affairs and Committee on Ways and Means, **Country Reports on Economic Policy and Trade Practices**, prepared by the Depart-

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<sup>20</sup> United States Trade Representative, **1994 National Trade Estimate Report on Foreign Trade Barriers**, p.141. Japan's surpluses have for many years caused Japan's major

industrial production, plant and equipment spending and net real external demand<sup>21</sup> decreased. Those decreases were offset by growth in government expenditures and household spending.<sup>22</sup> The decreases in the rate of real growth of GDP in Japan can be traced back to monetary tightening begun in late 1989 to contain sharp increases in land and stock market share prices. The success of this policy caused a deflation of those prices in the middle of 1991 that led in turn to slowed residential investment, plant and equipment investment, and personal consumption. In an effort to reverse these conditions, the official discount rate (ODR) was cut seven times, beginning in mid-1991. The last cut lowered the ORD to a record-low of 1.75 percent in September 1993. The government also applied three fiscal stimulus packages in 1992 and 1993; however, weak corporate demand for funds continued in 1993 and banks were reluctant to lend on collateral, usually land, the value of which was falling.<sup>23</sup>

Not only did the total value of the U.S. merchandise trade deficit with Japan increase in 1993, but the rate of growth of the deficit also increased continuing the trend begun in 1991. In that year, the deficit grew by \$1.6 billion to reach \$45.1 billion; it was followed by a greater increase of \$4.6 billion in 1992, to \$49.7 billion, and an even greater increase of \$10.4 billion in 1993, to \$60.1 billion.<sup>24</sup> The trade deficit with Japan in 1993 was by far the largest bilateral deficit that the United States had with any country; China (\$22.8 billion) and Canada (\$18.6 billion) were a distant second and third. However, when measured as a percent of total trade deficit, the trade deficit with Japan accounted for 44 percent of the \$135.6 billion total U.S. merchandise trade deficit in 1993, down from 50 percent of \$100.1 billion in 1992 and from 54 percent of \$82.9 billion in 1991. U.S. imports from Japan increased by \$10.6 billion (11 percent) in 1993, to \$106.2 billion, while exports to Japan increased by

only \$195 million (0.4 percent) to \$46.0 billion.<sup>25</sup> Having increased annually since 1991, U.S. imports from Japan were more than twice as large as U.S. exports to Japan in 1993.

As in 1992, electronic products, transportation equipment, and certain machinery led all commodity groups with the largest increases in U.S. imports from Japan in 1993, reflecting the growth in the U.S. economy. Many of these groups also experienced decreases in U.S. exports to Japan, reflecting the further slowdown in growth of GDP in Japan (table 11).

Certain commodity groups had large decreases in imports from Japan that, to a degree, offset the large increases. Imports of steel mill products decreased by \$477 million (27 percent) to \$1.3 billion in 1993. Imports of tape recorders, tape players, video cassette recorders, turntables, and compact disk players, decreased by \$386 million (13 percent) to \$2.5 billion; and aircraft and parts, by \$106 million<sup>26</sup> (21 percent) to \$398 million.

Among all commodity groups, forest products, transportation equipment, electronic products, and agricultural products posted the highest increases in exports to Japan in 1993 (table 12).<sup>27</sup>

The commodity groups with the largest decreases in exports to Japan in 1993 reflected the downturn in the Japanese economy, particularly the decline in industrial output. Exports of aircraft decreased sharply, by \$962 million (26 percent) to \$2.8 billion; unwrought aluminum, by \$317 million (46 percent) to \$375 million; fish and shellfish, by \$312 million (14 percent) to \$1.9 billion;<sup>28</sup> computers, by \$307 million (9 percent) to \$2.9 billion; and woodpulp and wastepaper, by \$109 million (16 percent) to \$555 million.

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<sup>20</sup>—Continued

ment of State in accordance with section 2202 of the Omnibus Trade and Competitiveness Act of 1988 (Washington, DC: GPO, 1994), pp. 62-66, and USTR, *1994 National Trade Estimate*, see especially pp. 141-146.

<sup>21</sup> As measured by the real current account surplus. Ostrom stated this reduced the growth rate of real GDP by 0.4 percentage point in 1993. Ostrom, "Japan's Economy," p. 2.

<sup>22</sup> Ostrom, "Japan's Economy," p. 2, and Douglas Ostrom, "Not Just Another Recession: Japan's Economic Downturn and Prospects for Recovery," Japan Economic Institute, No. 15A (Apr. 15, 1994), pp. 5-7.

<sup>23</sup> U.S. House, *Country Reports*, 1993, pp. 107-108; U.S. Senate, *Country Reports*, 1994, pp. 62-63.

<sup>24</sup> The value of the increase in the bilateral trade deficit in 1993 was the largest increase with any U.S. trading partner. The United States accounted for nearly 30 percent of all Japanese exports in recent years and was by far its largest market. The Economist Intelligence Unit, *Country Profile*, p. 13.

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<sup>25</sup> The value of the increase in imports was the second largest bilateral increase in 1993, behind the \$12.2 billion increase from Canada. Total U.S. trade with Japan equaled \$152.2 billion in 1993, making it the second largest trading partner behind Canada. It also ranked second behind Canada both as a market for U.S. exports and as a source of imports.

<sup>26</sup> Most of the decrease was parts.

<sup>27</sup> The United States has encouraged Japan in recent years through the United States-Japan Framework for a New Economic Partnership and through other specific industry "Arrangements" and talks to import more U.S. products in many of the industry commodity groups in which the U.S. experienced its greatest increases in exports in 1993, including wood products, motor vehicles and parts, semiconductors, medical devices, telecommunications equipment, and feedgrains. See USTR, *1994 Trade Estimate*, pp. 142, 147-149, 151-152, 156-160, 176-179, 180-183.

<sup>28</sup> The United States and Japan hold annual consultations on fish products to improve access to the Japanese market for U.S. fish exports. Japan had import quotas on almost one-third of the value of total U.S. edible fish exports of \$1.9 billion to Japan in 1993. Such exports decreased in 1993 because of the economic downturn and stagnant markets and prices. See USTR, *1994 Trade Estimate*, pp. 148-149.

**Table 11**  
**Leading increases in U.S. imports from Japan, 1992-93**

Commodity	1992	1993	Percent Change
	<i>Billion dollars</i>		
Passenger motor vehicles .....	25.5	27.8	9
Computers .....	11.2	12.9	16
Diodes and other semiconductor devices .....	4.4	5.8	32
Games .....	2.0	2.6	31
Semiconductor equipment, robots, and certain other industrial machinery .....	1.5	2.0	31
Motor vehicle engines .....	1.8	2.2	22
Certain motor vehicle parts .....	3.5	3.8	10
Office machines .....	2.7	3.0	12
Construction and mining equipment .....	0.6	0.9	43
Electronic circuit apparatus .....	1.3	1.6	18
Certain television equipment .....	2.6	2.9	10
Telephone and telegraph apparatus .....	1.9	2.1	12
Nonpowered handtools .....	0.3	0.5	54

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table 12**  
**Leading increases in U.S. exports to Japan, 1992-93**

Commodity	1992	1993	Percent Change
	<i>Billion dollars</i>		
Logs and rough wood products .....	2.0	2.3	16
Passenger motor vehicles .....	0.8	1.1	33
Diodes and similar solid-state devices .....	0.9	1.1	18
Medical goods .....	1.0	1.1	15
Lumber .....	0.6	0.8	21
Telephone and telegraph apparatus .....	0.4	0.5	30
Beef .....	1.1	1.2	10
Animal feeds .....	0.5	0.6	22
Arms and ammunition .....	0.3	0.4	37
Certain motor-vehicle parts, including engines .....	0.7	0.8	11

Source: Compiled from official statistics of the U.S. Department of Commerce.

## China

The U.S. merchandise trade deficit with China grew by \$4.6 billion to \$22.8 billion in 1993, compared with a \$5.6 billion expansion to \$18.2 billion in 1992, prolonging the widening of the total value of

<sup>29</sup> The United States accounted for about a one-tenth of both total Chinese exports and imports in 1992, making it the third largest market and source, respectively, behind Hong Kong and Japan in both instances. The Economist Intelligence Unit, *Country Profile: China/Mongolia, 1993-94* (London, United Kingdom, 1993), p. 49.

the deficit with China begun in 1984.<sup>29</sup> The U.S. trade deficit with China in 1993 was surpassed only

by the deficit with Japan (\$60.1 billion).<sup>30</sup> Although U.S. exports to China increased in 1993 at a more rapid rate than to any other major U.S. trading partner, by 17 percent (\$1.3 billion) to \$8.6 billion, U.S. imports from China increased even more rapidly, by 23 percent (\$5.9 billion) to \$31.4

<sup>30</sup> The trade deficit with China accounted for 17 percent of the \$135.6 billion total U.S. merchandise trade deficit in 1993, down from 18 percent of \$100.1 billion in 1992.

billion.<sup>31</sup> Furthermore, the value of U.S. imports from China was about three-and-one-half times as large as the value of U.S. exports to China in 1993.

The rapid increase in U.S. exports to China in 1993 resulted primarily from the second consecutive year of very high growth of real GDP in China, 12.8 percent in 1992 and a preliminary estimate of 13.4 percent in 1993.<sup>32</sup> As a consequence of this rapid growth, Chinese data indicate that China had an overall merchandise trade deficit of \$12.2 billion in 1993, its first deficit since 1989. China's exports grew by only 8 percent (\$6.8 billion) to \$91.8 billion, while its imports grew much more rapidly, by 29 percent (\$23.4 billion) to \$104.0 billion, erasing a \$4.4 billion merchandise trade surplus in 1992.<sup>33</sup>

Factors other than rapid economic growth contributed to the Chinese merchandise trade deficit in 1993. Although most foreign-invested enterprises are required to export 80 percent of their output, these firms incurred a large trade deficit because of rapidly increasing investment in plant, equipment, raw materials, and semi-finished products required to begin operations. Such firms accounted for 40 percent of total Chinese imports and 27 percent of exports during January-November 1993. One analyst

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<sup>31</sup> China accounted for the third largest bilateral increase in the value of U.S. imports in 1993 and the sixth largest increase in the value of exports. It ranked fourth as a source of U.S. imports and twelfth as a market for exports in 1993. Total U.S. trade with China amounted to \$40.0 billion in 1993, making it the seventh largest U.S. trading partner.

<sup>32</sup> Real GDP in 1980 prices. Real GDP increased from 1.272 trillion renminbi in 1992 to 1.442 trillion renminbi in 1993. "Statistical Communiqué of the State Statistical Bureau of the People's Republic of China on the 1993 National Economic and Social Development (Feb. 28, 1994)," *China Economic News* (Hong Kong), Supplement No. 3, Mar. 14, 1994, p. 1. See also, U.S. Senate, Committee on Foreign Relations and Committee on Finance, and U.S. House, Committee on Foreign Affairs and Committee on Ways and Means, *Country Reports on Economic Policy and Trade Practices*, prepared by the Department of State in accordance with section 2202 of the Omnibus Trade and Competitiveness Act of 1988 (Washington, DC: GPO, 1994), pp. 42-43. The latter report also states that some estimates based on a purchasing-power-parity comparison basis suggest that China has the third-largest economy in the world. Thus, it concluded, as foreign investment in China reached record levels in 1992-93, "many foreign firms see China as a key growth market." The United States Trade Representative stated that "China is now the fastest growing major economy in the world." United States Trade Representative, *1994 National Trade Estimate Report on Foreign Trade Barriers* (Washington, DC: GPO, 1994), p.43.

<sup>33</sup> "Statistical Communiqué," *China Economic News* (Hong Kong), p. 4. However, the United States Trade Representative stated, Chinese export data "may significantly understate" the value of Chinese exports because such exports are routinely calculated using a value-added method rather than internationally-accepted accounting methods. USTR, *1994 National Trade Estimate*, p. 43. This would mean that China may have a trade surplus.

believes that, when these firms begin full production, exports will increase rapidly.<sup>34</sup>

In addition, the Chinese economy experienced a major transition in 1993. It experienced a sharp increase in inflation caused by the combination of rapid growth of GDP, the freeing of some domestic prices, and the pressure to raise some domestic prices to world prices as China implemented agreements to open its economy.<sup>35</sup> On October 10, 1992, China signed a Memorandum of Understanding on Market Access with the United States that committed China to dismantle 90 percent of its nontariff import restrictions over 5 years and to lower tariffs on a large number of goods.<sup>36</sup> On December 31, 1992, China reduced tariffs by an average of 7.3 percent on 3,371 items.<sup>37</sup> Although a broad array of tariffs and nontariff barriers remain in effect at both the national and provincial levels, the U.S. Trade Representative cited this decision as evidence of China's progress in reducing trade barriers.<sup>38</sup> These policies were consistent with the goal, adopted by the 14th National Party Congress in November 1992, of creating a "socialist market economy" whereby the national economy would be opened to more market forces, in particular to foreign trade and investment, and some state-run enterprises would face more competition based on market costs and prices. These developments contrast with the earlier policies that used import restrictions to maximize national economic self-sufficiency and used import-substitution policies to deny imports when an equivalent product was produced in China. China has specifically agreed to eliminate the use of import substitution.<sup>39</sup>

In addition to rising inflation and inflationary expectations, structural bottlenecks in the energy and transportation sectors and structural problems causing lack of control over fiscal and monetary policy tools threatened continued double-digit economic growth and jeopardized further opening of the Chinese market to imports. In July 1993, the Chinese

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<sup>34</sup> The Economist Intelligence Unit, *Country Report: China/Mongolia, 1st Quarter 1994* (London, United Kingdom, 1994), p. 34.

<sup>35</sup> The cost of living for households increased overall by 14.7 percent in 1993, while that for households in 35 large and medium cities jumped by 19.6 percent. Producers' prices of manufactured products increased by 24.0 percent in 1993. "Statistical Communiqué," *China Economic News* (Hong Kong), pp. 4-5.

USTR, *1994 National Trade Estimate*, pp. 44-45; U.S. Senate, *Country Reports*, 1994, p. 45.

<sup>37</sup> USTR, *1994 National Trade Estimate*, p. 46; U.S. Senate, *Country Reports*, 1994, p. 45.

<sup>38</sup> USTR, *1994 National Trade Estimate*, pp. 44-57; U.S. Senate, *Country Reports*, 1994, pp. 43-47. See also, for example, the Economist Intelligence Unit, *Country Profile*, p. 47, where one analyst states that a series of merchandise trade deficits in the 1980s caused the Chinese authorities to apply a "draconian squeeze" on Chinese imports in 1989 to conserve foreign exchange, leading to positive trade balances during 1990-92.

<sup>39</sup> USTR, *1994 National Trade Estimate*, pp. 48-49; U.S. Senate, *Country Reports*, 1994, pp. 43-45.

Government introduced a "16-point" economic program to restore macroeconomic stability and to cool inflation and speculation in real estate. Following up on this program, further fiscal, financial, and enterprise reforms were announced at the Communist party's Third Plenum in late 1993 to deepen the process of reform, which Chinese authorities believed was the key to gaining effective control of macroeconomic policy.<sup>40</sup>

The bulk of the products exported from China to the United States in 1993 were consumer goods, many of which were made in factories that benefited from foreign investment, often in the form of joint ventures between Asian, U.S., or other producers and Chinese manufacturers. Foreign investors are attracted to China both (a) to take advantage of low labor costs in the production of those goods that require labor-intensive manufacturing, quality control, or packaging operations and hence reduce production costs; and (b) to gain access to what is expected to become the largest consumer market in the world. Because of Chinese Government control over the composition of imports, exports to China tend to be goods that can be used in improving China's infrastructure (such as transportation and communications) or that can assist in enhancing production (such as machinery, components, raw materials, and chemicals).

<sup>40</sup> USTR, *1994 National Trade Estimate*, p. 43; U.S. Senate, *Country Reports*, 1994, pp. 43-44.

**Among major U.S.** merchandise sectors, the miscellaneous manufactures, (electronic products, apparel products, footwear, and chemical products) registered the largest increases in U.S. imports from China in 1993, reflecting the more robust growth rate of the U.S. economy (table 13). The only commodity group that recorded a major decrease in U.S. imports from China in 1993 was shellfish, which dropped by \$127 million (35 percent) to \$236 million."

The machinery and transportation products and electronic products sectors recorded the leading commodity group increases in exports to China in 1993, reflecting the needs of China's rapidly developing economy. Continuing the trend begun in 1992, U.S. exports to China of passenger motor vehicles increased sharply in 1993, by \$474 million (315 percent) to \$624 million. U.S. exports of aircraft did not grow as fast as in 1992, but did increase by \$263 million (13 percent) to \$2.6 billion in 1993. Exports of telephone and telegraph apparatus rose rapidly, by \$234 million (246 percent) to reach \$329 million; and machine tools, by \$139 million (146 percent) to reach \$234 million. In contrast, U.S. exports of fertilizers and cotton both decreased sharply in 1993, as they did in 1992. Fertilizers dropped by \$337 million (53 percent) to

<sup>41</sup> China is losing market share in the United States to rapidly developing shrimp and lobster industries in Central America.

**Table 13**  
**Leading increases in U.S. imports from China, 1992-93**

(Billion dollars)

Commodity	1992	1993	Percent Change <sup>1</sup>
<b>U.S. imports:</b>			
Footwear .....	3.4	4.5	33
<b>Shirts and blouses</b> .....	<b>1.2</b>	<b>1.7</b>	<b>40</b>
<b>Lamps and lighting fittings</b> .....	<b>0.3</b>	<b>0.6</b>	<b>79</b>
<b>Certain rubber &amp; plastics products</b> .....	<b>0.6</b>	<b>0.8</b>	<b>39</b>
<b>Toys and models</b> .....	<b>2.2</b>	<b>2.4</b>	<b>10</b>
<b>Luggage, handbags, &amp; flatgoods</b> .....	<b>1.1</b>	<b>1.3</b>	<b>19</b>
<b>Leather apparel and gloves</b> .....	<b>0.5</b>	<b>0.7</b>	<b>39</b>
<b>Computers</b> .....	<b>0.2</b>	<b>0.4</b>	<b>89</b>
<b>Telephone and telegraph apparatus</b> .....	<b>0.5</b>	<b>0.7</b>	<b>36</b>
<b>Furniture</b> .....	<b>0.3</b>	<b>0.5</b>	<b>45</b>
<b>Radio and television transmission and reception apparatus</b> .....	<b>1.0</b>	<b>1.1</b>	<b>15</b>
<b>Games</b> .....	<b>0.2</b>	<b>0.3</b>	<b>65</b>
<b>Women's and girls dresses, suits, skirts, and coats</b> .....	<b>0.7</b>	<b>0.9</b>	<b>16</b>
<b>Tape recorders, tape players, video cassette recorders, turntables, and CD players</b> .....	<b>0.2</b>	<b>0.3</b>	<b>61</b>
<b>U.S. exports:</b>			
<b>Passenger motor vehicles</b> .....	<b>0.2</b>	<b>0.6</b>	<b>315</b>
<b>Aircraft</b> .....	<b>2.3</b>	<b>2.6</b>	<b>13</b>
<b>Telephone and telegraph apparatus</b> .....	<b>0.1</b>	<b>0.3</b>	<b>246</b>
<b>Machine tools</b> .....	<b>0.1</b>	<b>0.2</b>	<b>146</b>

<sup>1</sup> The percentage increase in import and export in 1993 from 1992 is calculated from unrounded numbers.

Source: Compiled from official statistics of the U.S. Department of Commerce.



\$293 million; and cotton, by \$186 million (nearly 100 percent) to \$179,000. U.S. exports of copper and related articles fell by \$99 million (59 percent) to \$67 million.

## Mexico

Shifts in bilateral merchandise trade between the United States and Mexico in 1993 reflected the differences in real economic growth in the two markets that year. Real economic growth in Mexico slowed from 3.6 percent in 1991 and 2.6 percent in 1992 to an estimated 0.9 percent in 1993. Chiefly because of the sluggish Mexican economy, U.S. exports to Mexico grew by only 1.7 percent in 1993 (a \$661 million increase to \$40.3 billion), compared with growth of 18 percent in 1991 and 23 percent in 1992. Meanwhile, the relatively stronger U.S. economy (2.9 percent real economic growth in 1993) attracted a 14 percent rise in imports from Mexico (by \$4.7 billion to \$38.7 billion). Consequently, the U.S. merchandise trade surplus with Mexico shrank by \$4.1 billion in 1993, to \$1.6 billion.

The sluggish Mexican economy in 1993 was in part affected by the implementation of fiscal and interest-rate policies that helped bring inflation down to an estimated 8.2 percent in 1993—a marked improvement from an inflation rate of 52 percent in December 1988.<sup>42</sup> Furthermore, the accelerated trade liberalization exposed numerous industries to increased foreign competition. Many firms allegedly went out of business in 1992 and 1993 because of this sharpened competition, thus creating a further drag on the Mexican economy and impeding further U.S. export growth.<sup>43</sup> The Mexican Government responded to the economic slowdown with increased spending in the fourth quarter of 1993, especially on public works projects. The Government was able

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<sup>42</sup> For more information about recent changes in economic conditions in Mexico and policy responses by the Salinas administration, see Kornis, Magda, "Mexico Joins NAFTA with a Sluggish Economy," *International Economic Review* (U.S. International Trade Commission: Washington, DC), Apr. 1994, p. 9.

<sup>43</sup> The Salinas administration took a number of actions to narrow its fast growing trade deficit in late 1992. In September, the Government began enforcing quality standards and labeling requirements more strictly for certain imported products. Next, the Government accelerated the peso's daily depreciation in November, putting a stop to the currency's *de facto* appreciation—thus incrementally raising the price of imported goods while making the price of Mexican products more attractive in foreign markets. Finally, in December, the Government reduced the dollar limit on the value of imported goods Mexican residents could bring into the country free of duty from \$300 to \$50. The last move was particularly onerous to retailers on the U.S. side of the border with Mexico who had grown accustomed to booming sales to Mexican vendors who would transport goods not readily available or competitively priced in Mexico across the border free of duty, then resell the goods either in Mexican border towns or farther to the interior of Mexico.

to increase spending because Mexico has had an accumulated budget surplus in recent years.

Mexico has been able to achieve a budget surplus by restraint in spending, reduced charges to finance its dwindling foreign debt, revenue from the privatization of state-owned industries, the return of flight capital, and investment in anticipation of the January 1, 1994, implementation of the North American Free-Trade Agreement (NAFTA). Net capital (including the return of capital that had left Mexico because of the drop in crude oil prices and massive devaluations of the peso against the U.S. dollar in the previous decade and the influx of foreign investment) inflows exceeded Mexico's current account deficit (whose chief component is the overall trade deficit) by \$3.2 billion in 1992 and \$4.1 billion in the first six months of 1993.

Mexico is the United States' third largest trading partner (after Canada and Japan), accounting for 7 percent of U.S. imports in 1993 and 9 percent of U.S. exports. Conversely, the United States accounted for 70 percent of Mexico's imports in 1993 and 83 percent of Mexico's exports. Mexico's maquiladora industry (assembly of foreign components for re-export) accounted for 37 percent of total U.S.-Mexico trade in 1993. These in-bond assembly plants were the destination for 25 percent (\$9.9 billion) of U.S. exports to Mexico and the source of 49 percent (\$19 billion) of U.S. imports from Mexico. Subtracting out maquiladora trade, net exports to Mexico decreased by \$535 million (1.7 percent) in 1993, to \$30.4 billion, while net imports from Mexico rose by \$3.5 billion (14 percent) in 1993, to \$28.8 billion. Both these adjusted and unadjusted data result in a U.S. trade surplus with Mexico of \$1.6 billion in 1993.

Further integration of the North American motor vehicle industry was responsible for the most significant increases in U.S. trade with Mexico in 1993, reflecting the continued importance of the maquiladora industry as a strategy for competitiveness by Chrysler, Ford, and General Motors and their principal parts suppliers. U.S. exports of selected auto parts increased by \$232 million (6 percent) to \$40.3 billion; turning signals, defrosters, and windshield wipers climbed by \$155 million (75 percent) to \$361 million; insulated wire and cable—chiefly for motor vehicles—rose by \$121 million (11 percent) to \$1.2 billion; and speedometers and parts jumped by \$78 million (600 percent) to \$91 million. In return, imports of cars and trucks from Mexico rose by \$848 million (23 percent) to \$4.0 billion; selected auto parts, by \$327 million (19 percent) to \$2.1 billion; speedometers, by \$186 million (740 percent) to \$211 million; and insulated wire and cable (chiefly ignition wiring sets), by \$162 million (9 percent) to \$2.0 billion.

The U.S. electronics industry is also a major customer of the maquiladora industry. "High-tech" products often require labor-intensive assembly operations and quality-control procedures. Consequently, U.S. exports of electronic equipment (including

some auto parts) to Mexico climbed by \$827 million (11 percent) to \$8.1 billion in 1993; U.S. imports from Mexico rose by \$1.4 billion (14 percent) to \$10 billion. Products accounting for the largest increases in exports of electronic equipment to Mexico were: parts for computers and other office machines, by \$221 million (up 49 percent) to \$673 million; electronic tubes (including television picture tubes), by \$128 million (42 percent) to \$436 million; parts for motors and generators, by \$101 million (39 percent) to \$364 million; radio and television transmission apparatus, by \$99 million (50 percent) to \$296 million; articles for connecting, switching, and protecting electrical circuits, by \$97 million (29 percent) to \$436 million; transformers, by \$81 million (18 percent) to \$539 million; and semiconductors and related parts, by \$77 million (22 percent) to \$432 million. Products accounting for the largest increases in imports of electronic equipment from Mexico in 1993 were: television receivers, by \$306 million (25 percent) to \$1.5 billion; and semiconductors and related parts, by \$100 million (56 percent) to \$279 million.

The slowdown in the Mexican economy had its greatest impact on U.S. exports of aircraft. Low levels of business activity led to a 53 percent (\$373 million) drop in U.S. aircraft sales to Mexico to \$329 million. Weak performances in the agricultural and manufacturing sectors in Mexico also caused a decline in exports of natural gas, by \$112 million (34 percent) to \$218 million, and of refined petroleum, by \$91 million (11 percent) to \$718 million. In contrast, reflecting the stronger U.S. economy, U.S. imports of Mexican refined petroleum more than doubled in 1993, increasing by \$255 million to \$479 million.<sup>44</sup>

Trade in the agricultural sector is affected by factors such as growing conditions (which affect availability and therefore prices), quotas, export subsidies, and domestic price supports as well as the strength of demand in foreign markets. Nevertheless, changes in U.S. agricultural trade with Mexico were similar to changes in total U.S.-Mexico merchandise trade: U.S. exports decreased by 3.4 percent (\$130 million), while U.S. imports rose by 15 percent (\$400 million). The U.S. trade surplus in agricultural products fell from \$1.1 billion in 1992 to \$0.6 billion in 1993. At \$6.9 billion, agricultural products accounted for 9 percent of total U.S.-Mexico trade in 1993. The largest export gains to Mexico in this sector were: raw cotton, by \$82 million (up 76 percent) to \$188 million; wheat, by \$74 million (120 percent) to \$136 million; and concen-

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<sup>44</sup> During the same period, U.S. imports of crude oil from Mexico dropped by \$87 million (2 percent). Crude oil accounted for 11 percent of total U.S. imports from Mexico in 1993. Efforts to accelerate the modernization of the infrastructure and equipment in Mexico's petroleum industry have yielded increased productivity and the capacity to make higher value-added products.

trated or sweetened milk and cream, by \$71 million (158 percent) to \$116 million. These gains were more than offset by export losses in: sorghum, by \$187 million (33 percent) to \$386 million; corn, by \$87 million (53 percent) to \$76 million; and live cattle, also by \$87 million (58 percent) to \$63 million. Meanwhile, U.S. imports of fresh or chilled tomatoes from Mexico more than doubled in 1993, rising by \$171 million to \$304 million.

## United Kingdom

A substantial increase in exports and a moderate increase in imports during 1993 combined to lift the U.S. bilateral trade surplus with the United Kingdom to its highest level in recent years, \$3.2 billion. U.S. exports to the United Kingdom also reached a record level of \$24.5 billion in 1993, thereby surpassing the previous record level of \$22.2 billion reached in 1990. Compared with 1992 levels, exports increased 15 percent, while imports advanced by 9 percent.

The U.S. trade position with the United Kingdom continued to improve despite the United Kingdom's slowly recovering economy and the appreciation of the dollar against the pound sterling. Although the United Kingdom was in a recession in the early 1990s, economic conditions improved in 1993 as real GDP grew an estimated 1.8 percent, consumer spending increased approximately 2 percent, and inflation remained low.<sup>45</sup> However, business investment was slow to respond, remaining 20 percent below 1990 levels,<sup>46</sup> and unemployment remained around 10 percent.<sup>46</sup> In addition, the United Kingdom has undertaken a number of reform policies, such as privatization of government-owned businesses and deregulation of industries such as financial services and transportation, that have benefitted the economy. Following withdrawal from the EU Exchange Rate Mechanism (ERM) in September 1992, the pound sterling depreciated against the dollar and relative to the European Currency Unit (ECU) rate.<sup>47</sup> According to one source, U.S. exports improved their position in the United Kingdom despite the unfavorable exchange-rate movement because of the improved competitiveness

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<sup>45</sup> Country Reports on Economic Policy and Trade Practices Report, submitted to the committee on foreign affairs, Committee on Ways and Means of the U.S. House of Representatives and to the Committee on Foreign Relations, Committee on Finance of the U.S. Senate, Feb. 1994, pp. 300-301; and David Smith, "Trends of '93 that Suggest Modest Growth for '94," *Management Today*, Feb. 1994, p. 17.

<sup>46</sup> *Ibid.*, and "The Economy, Invest or Die," *The Economist*, Mar. 5, 1994, p. 64.

<sup>47</sup> In 1992 the pound sterling traded, on average, for \$1.77, and in 1993, the rate averaged \$1.50. International Monetary Fund, "United Kingdom," *International Financial Statistics*, Jan. 1994, pp. 560-561.

of recently restructured U.S. businesses and a stronger export commitment on behalf of U.S. firms.<sup>48</sup>

The United Kingdom remained the largest U.S. export market in Europe during 1993. The elevated U.S. export trade to the United Kingdom in 1993 was largely attributable to increased shipments of gold. Gold exports increased by \$2.9 billion (297 percent), accounting for 16 percent of total exports. Because London is a leading financial center for precious metals, the flow of this commodity is tied to the intricacies of financial markets. The London Gold Price improved from an average of \$333.25 per ounce in 1992 to \$360.35 per ounce in 1993, which probably contributed to the flow of this commodity to the United Kingdom.<sup>49</sup> The increased exports of electronic circuitry by \$122 million and waste and scrap of precious metals by \$113 million were also major contributors to the rise in U.S. exports to the United Kingdom in 1993.

U.S. imports from the United Kingdom fluctuated during 1989-93, reaching the highest level of the period in 1993 at \$21.3 billion. The leading import in 1993 was crude petroleum, which accounted for 9 percent of total imports. Of greater significance was the 38 percent (\$549 million) increase of crude petroleum imports during 1992-93. Crude petroleum imports from the United Kingdom, as obtained from the North Sea, reportedly increased as a result of decreased available supplies from substitute sources (mainly from Africa). Other significant shifts in the import trade with the United Kingdom included a 90-percent increase (from \$408 to \$777 million) of motor vehicle imports during 1992-93; this was attributed not only to the increased U.S. sales of motor vehicles but also to Ford Motor Company's reorganization of its recently acquired Jaguar Division, which has become more competitive in world markets.

## Malaysia

Shifts in the U.S.-Malaysian bilateral merchandise trade balance were largely the result of continued high growth rates in the Malaysian economy (7 to 9 percent over the last 5 years) and low inflation rates in Malaysia. In 1991, the Malaysian Government announced its "National Development Policy" (NDP), which focused on the privatization of key public enterprises in energy, transportation, and communication. Moreover, the manufacturing sector has been the engine of growth in recent years as private sector investment in the infrastructure, both

foreign and domestic, was encouraged. The U.S. bilateral trade deficit with Malaysia rose by \$600 million in 1993 to \$4.7 billion, as rising imports (up \$2.3 billion) outpaced rising exports (up \$1.7 billion).

U.S. imports from Malaysia increased 28 percent from 1992 to 1993 reaching \$10.5 billion, largely reflecting growth in Malaysian exports of microelectronics and consumer electronics. A large share of these imports was intra-company trade from U.S. firms with assembly facilities in Malaysia. U.S. imports from Malaysia of electronic products rose \$1.5 billion (up 32 percent) in 1993 to \$6.1 billion, representing 64 percent of total Malaysian exports to the United States. Within this sector, the major increases in imports were in electronic integrated circuits and microassemblies, up 42 percent (\$723 million) to \$2.5 billion; video recordings and reproduction apparatus, up 40 percent (\$177 million) to \$618 million; reception apparatus for radio telephony, up 21 percent (\$174 million) to \$1.0 billion; T.V. receivers, up 53 percent (\$101 million) to \$290 million; and semiconductor devices, up 37 percent (\$95 million) to \$353 million.

Computer price wars in the United States gave a substantial boost to exports of computer equipment from Malaysia in 1993, which increased by \$502 million (68 percent) to \$1.2 billion. Imports of Malaysian disk drives rose by \$89 million (20 percent) to \$543 million; digital processing units, by \$275 million, from \$10 million to \$285 million; and monitors and keyboards, by \$112 million (51 percent) to \$329 million.

U.S. exports to Malaysia jumped 42 percent, or \$1.7 billion, to \$5.7 billion in 1993. The main sources of the export surge were electronics and aircraft. A large percentage of the U.S. electronic exports to Malaysia were destined for U.S. multinational corporations, where value was added and then re-exported, often back to the United States. U.S. exports of electronics to Malaysia increased \$678 million (39 percent) in 1993 to \$2.4 billion. Among these, exports of electronic integrated circuits and microassemblies climbed \$443 million (34 percent), semiconductor devices rose \$67 million (36 percent), and electric generating sets and rotary converters grew by \$51 million (from \$202,000 to \$51 million).

The sale of U.S. aircraft and parts, one of the most competitive U.S. industries, to Malaysia increased \$677 million (85 percent) to \$1.5 billion; exports of finished aircraft nearly doubled to \$1.4 billion, while exports of aircraft parts fell by \$10 million (13 percent) to \$64 million. Other significant increases in U.S. exports to Malaysia in 1993 included turbojets, turbopropellers, and other gas turbines, up \$78 million (122 percent) to \$142 million; parts for office machinery, up \$31 million (39 percent) to \$110 million; and computer equipment, up \$21 million (41 percent) to \$72 million.

<sup>48</sup> Robert McLaughlin, "U.S. Exports of the United Kingdom Score Major Gains Despite Exchange Rate Turn," *Business America*, Nov. 29, 1993, pp. 22-23.

<sup>49</sup> "United Kingdom," *Inter. Fin. Stat.*, Jan. 1994, pp. 560-561.

## Singapore

As a small nation with virtually no natural resources, postindependence Singapore developed an outward-looking, export-oriented economic policy to encourage trade and investment. Today, Singapore is a major center of light manufacturing, oil refining, and financial services that serves as a major entrepot<sup>50</sup> for the Asia-Pacific region. Singapore is overwhelmingly dependent on foreign trade, and the United States is one of its most important partners, second only to Japan in exporting to Singapore and the largest market for Singapore's exports. The U.S. bilateral merchandise deficit with Singapore decreased \$196 million in 1993 to reach \$2.0 billion. U.S. imports from Singapore increased \$1.5 billion (13 percent) to \$12.7 billion, while U.S. exports to Singapore rose \$1.7 billion (19 percent) to \$10.7 billion.

Singapore's exports to the United States consist largely of components or semi-finished data processing equipment and electronic products manufactured by U.S. multinational corporations for further assembly in the United States.<sup>51</sup> These products accounted for \$8.2 billion, or 65 percent, of the \$12.7 billion of exports from Singapore in 1993. U.S. imports of data processing equipment alone, including personal computers, rose 21 percent (\$919 million) in 1993 to \$5.3 billion. Within this product category, imports of storage units, namely hard disk drive units, totaled \$3.5 billion (28 percent of total exports from Singapore). Imports of parts for office machines climbed 41 percent (\$452 million) to \$1.6 billion, and imports of calculating and accounting machines more than doubled (105 percent), rising from \$38 million to \$79 million. Increases in electronic products from Singapore were led by electronic integrated circuits and microassemblies and parts (up \$144 million or 12 percent), video recording or reproducing apparatus (up \$40 million, or 41 percent); and semiconductor devices (up \$21 million, or 112 percent).

The presence in Singapore of many U.S. multinational corporations has generated a strong demand for U.S. components. Electronics is one of Singapore's most important industries, accounting for more than one-third of all manufacturing. U.S. exports of electric machinery rose 22 percent (\$599 million) in 1993 to \$3.3 billion. Export growth in this sector was led by electronic integrated circuits and microassemblies, up \$461 million (36 percent) in 1993 to \$1.7 billion; electric capacitors, up \$30 million (47 percent) to \$93 million; and printed circuits, up \$35 million (105 percent) to \$69 million.

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<sup>50</sup> A trading center where goods are stored and from which they are distributed, i.e., re-exported.

<sup>51</sup> The policies of the Government of Singapore and the country's developed infrastructure have attracted investment from more than 3,000 multinational corporations from the United States, Japan, and Europe.

Singapore's fast-growing aerospace industry is a world-class aero-component manufacturing and overhaul center for the world market. During the last two decades, Singapore Airlines has expanded rapidly, and it is expected to continue growing to accommodate rising passenger demand in the Asia-Pacific region and beyond.<sup>52</sup> U.S. exports of aircraft to Singapore rose \$228 million (36 percent) in 1993 to \$865 million.

The Government of Singapore visualizes an "intelligent island" by the year 2000, resulting in a booming information technology market supplied largely by the United States. U.S. exports of computers and other data processing machines increased \$153 million (38 percent) in 1993 to \$558 million; specifically, printer exports jumped \$110 million, or 349 percent. Parts for computers, typewriters, and other office machines rose \$72 million (21 percent) to \$426 million.

## Italy

A pronounced increase in the U.S. merchandise trade deficit with Italy in 1993 was due largely to a significant expansion in U.S. imports from Italy of floating or submersible drilling or production platforms combined with a large drop in U.S. exports to Italy, particularly of aircraft and aerospace equipment. The deficit expanded by \$3.1 billion (82 percent) to \$6.9 billion in 1993 following a \$400 million increase in 1992. The rising U.S. trade deficit with Italy largely reflected the strengthening of the U.S. dollar vis-a-vis the Italian lira,<sup>53</sup> weak domestic demand in Italy, and the relatively faster economic growth rate experienced by the U.S. economy in 1993.

Declining GDP in Italy, which began in the autumn of 1992, bottomed out by mid-1993 due to the policy of the Bank of Italy to lower interest rates; growth in export-related production; and a reduction in business inventories of finished goods.<sup>54</sup> During 1993, the Italian economy posted a stable GDP, overcoming the weakness in demand and industrial production that occurred in the first 6 months of 1993. Sluggish economic conditions, however, caused the average unemployment rate in 1993 to rise to 13.4 percent from 11.5 percent in 1992 and average capacity utilization to fall 2 percentage points to 75 percent.<sup>55</sup>

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<sup>52</sup> U.S. Department of Commerce (USDOC), International Trade Administration, *Market Research Reports: Singapore - Country Marketing Plan FY '94*, July 1993.

<sup>53</sup> The dollar strengthened by an average of nearly 25 percent vis-a-vis the lira during 1993.

<sup>54</sup> *OECD Economic Outlook: Italy*, Dec. 1993, p. 71.

<sup>55</sup> *Country Reports on Economic Policy and Trade Practices*, submitted to the Committee on Foreign Relations, Committee on Finance of the U.S. Senate and the Committee on

U.S. imports from Italy increased by \$1.0 billion (8 percent) in 1993, to \$13.1 billion, with significant growth occurring in a broad spectrum of products. The largest import increase (equal to nearly 40 percent of the total rise in imports) occurred in floating or submersible drilling or production platforms, which increased from zero in 1992 to \$396 million in 1993. Other significant import increases included jewelry of precious metal (up \$158 million to \$1.3 billion); semifinished products of iron or nonalloy steel (up from \$10,000 in 1992 to \$132 million in 1993); pharmaceutical products (up \$98 million to \$260 million); parts for office machines, which more than doubled in 1993 (up \$96 million to \$168 million); and integrated circuits and microassemblies, which also more than doubled (up \$48 million to \$82 million). Offsetting these increases in U.S. imports from Italy in 1993, to a small degree, were declines in imports of aircraft parts (down \$127 million to \$237 million) and wine (down \$65 million to \$240 million).

U.S. exports to Italy decreased by \$2.2 billion (27 percent) in 1993 to \$6.1 billion largely because of a decrease in U.S. exports of aircraft and parts from the high levels sustained in 1991 and 1992 (\$590 million and \$831 million, respectively) to just \$265 million in 1993. U.S. exports of chemical wood pulp also dropped by 53 percent (\$148 million) to \$170 million, and coal exports to Italy declined by 28 percent (\$118 million) to \$306 million. The most noteworthy increase in U.S. exports to Italy in 1993 was a \$34 million rise in soybean exports to \$176 million.

## **Saudi Arabia**

The U.S. merchandise trade deficit with Saudi Arabia fell from \$3.3 billion in 1992 to \$1.3 billion in 1993. Soft world oil prices and increased purchases of Kuwaiti crude, (Kuwaiti oil fields damaged by the Iraqi army in 1991 returned to production in 1993) at the expense of Saudi crude, accounted for the \$2-billion improvement in the trade balance.

Possessing the world's largest known reserves of oil (roughly 25 percent of the global total), the Saudi Arabian economy is dominated by its energy sector. Over three-quarters of Saudi Government revenues stem from oil, and most of the nonoil GDP is tied to oil in the form of supplies or services sold to the oil sector. Of the \$7.8 billion in Saudi exports to the United States in 1993, crude oil accounted for \$7.0 billion or 89 percent, while all mineral fuel exports totaled \$7.6 billion or 97 percent. U.S. imports of Saudi crude oil fell \$2.5 billion, or 26 percent, in 1993.

Public and private consumption and investment in Saudi Arabia are dependent on government allocations of oil revenues. Therefore, lower oil prices in 1993 and the subsequent decrease in Saudi revenue led to decreased demands for U.S. goods, resulting in a \$500 million decline in U.S. exports to Saudi Arabia (down 7 percent, from \$7.0 billion in 1992 to \$6.5 billion in 1993). The Saudi budgetary constraints resulted in a net \$179 million (26 percent) decline in U.S. exports of aircraft and aircraft parts; U.S. sales of aircraft declined \$330 million, or 94 percent, while exports of aircraft parts increased \$152 million or 47 percent. Motor vehicle exports, including passenger cars, tanks, trailers, and tractors, fell \$107 million (6 percent); and machinery, like pumps, centrifuges and filtering equipment, and internal combustion engines declined \$104 million (8 percent).

## **Germany**

The German economy continued to experience recessionary conditions in 1993. Relatively high interest rates coupled with increased taxes prompted by reunification dampened demand in the business sector. Consumer demand also slowed as unemployment jumped to nearly 9 percent. In an attempt to reduce the nation's rapidly increasing public debt, the German Government sharply curtailed military and health care expenditures, further weakening consumption. The U.S. economy, meanwhile, continued its slow recovery, with business investment and consumer spending both benefiting from relatively low interest rates and low inflation. The combination of a sluggish German economy and a moderate U.S. recovery contributed to an increase in the U.S. merchandise trade deficit with Germany. The deficit increased by \$2.5 billion (33 percent) in 1993 to \$28 billion, as significantly reduced demand in the German economy resulted in \$2-billion fall in U.S. exports. U.S. imports from Germany increased by \$500 million (2 percent) during the same period.

The rise in German exports was spearheaded by textile and other business equipment, various iron and steel products, and especially automobiles, as German automakers continued to benefit from an improved U.S. market in 1993. During the first 8 months of 1993, U.S. sales of European luxury brands increased by almost 5 percent in the United States, with total U.S. imports of German automobiles growing by \$386 million (7 percent). Benefiting from a shift in U.S. consumer preferences for casual clothes, German producers increased their exports of machinery for manufacturing knit and fleece products. Such machinery is no longer made in the United States. U.S. imports from Germany of machines for preparing textile fibers and yarns increased by \$111 million (45 percent), while imports of machines for extruding and drawing manmade

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Foreign Affairs, Committee on Ways and Means of the U.S. House of Representatives by the Department of State, Feb. 1994, p. 199.

textiles increased by \$24 million (93 percent). German producers of metal and steel products benefited from general improvements in the U.S. economy by increasing sales to the U.S. automobile, appliance, and construction industries. U.S. imports of all iron and steel products from Germany increased by \$143 million (24 percent).

Air travel in Germany was affected by the country's economic slowdown in 1993, as businesses and consumers reduced their discretionary spending. As a result, the principal German airline postponed investments in new aircraft leading to an \$890 million (55 percent) decrease in U.S. exports of aircraft to Germany in 1993. Reduced German Government defense expenditures were responsible for lower U.S. exports of aircraft and related equipment, which decreased by an additional \$111 million (21 percent) to \$428 million. For similar reasons, U.S. exports of bombs, grenades, and cartridges to Germany declined by \$233 million (56 percent). Economic factors also reduced consumer demand for automobiles in Germany, precipitating a \$222 million (21 percent) decline in U.S. exports of passenger cars in 1993.

## Switzerland

In 1993, the Swiss economy was buffeted by a growing budget deficit, rising unemployment, a projected downturn in industrial production, and the widely perceived negative implication of the Swiss vote rejecting membership in the European Economic Area. Improvements in economic performance indicators, however, show that the Swiss economy may have achieved a turnaround in the second half of 1993.<sup>56</sup> Despite a relatively strong Swiss Franc, Switzerland had a record trade surplus in 1993 that was buoyed by the high reputation for the quality of Swiss products, especially industrial machinery, whereas the economic downturn likely contributed to reduced imports.

Switzerland remained a significant trading partner with the United States in 1993. Bilateral trade between the two countries during 1992-93 rose from \$9.5 billion to \$12.0 billion. The United States was the fourth largest foreign supplier to the Swiss market in 1993 following Germany, France, and Italy.

U.S. exports to Switzerland increased by 52 percent in 1993, from \$4.0 billion to \$6.1 billion. Because U.S. exports to Switzerland rose far more rapidly than imports in 1993 (imports increased only slightly in 1993), the U.S. merchandise trade balance

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<sup>56</sup> Economic information on Switzerland was obtained from *Foreign Economic Trends*, Feb. 1994, the United States Embassy in Bern.

<sup>57</sup> *Ibid.*

with Switzerland improved from a \$1.5 billion deficit in 1992 to a \$191 million surplus in 1993. The sharp rise in the value of U.S. exports to Switzerland in 1993 reflected higher U.S. exports of gold to that country rather than a general increase in the level of U.S. merchandise exports. U.S. exports of gold to Switzerland rose from \$530 million in 1992 to \$2.89 billion in 1993, an increase of \$2.3 billion.<sup>58</sup> These exports are believed to consist of central bank exports of gold bullion stocks from New York to Zurich. According to an industry observer, a substantial portion of gold exported from the United States was placed on deposit or exchanged. Reflecting the surge of exports of gold from the United States, the foreign gold balance at the New York Federal Reserve Bank was reported to have declined by almost 600 metric tons in 1993.<sup>59</sup>

U.S. exports to Switzerland of other commodity groupings that rose significantly in 1993 included certain diagnostic and laboratory reagents (an increase of 248 percent to \$99 million), platinum (an increase of 244 percent to \$68 million), and precious metal waste and scrap (an increase of 166 percent to \$56 million). Reflecting economic uncertainty in Switzerland, U.S. exports of aircraft declined precipitously, by 94 percent, from \$339 million in 1992 to \$21 million in 1993. Other product groups that experienced significant reductions in exports to Switzerland were certain articles of pearls or precious and semiprecious stones (a decline of 54 percent to \$44 million) and certain passenger cars (a decline of 42 percent to \$63 million).

U.S. imports from Switzerland rose less than 7 percent to \$5.9 billion during 1992-93. U.S. imports that increased significantly in value in 1993 include certain works of art (an increase of 149 percent to \$489 million), platinum (an increase of 857 percent to \$64 million), and engines for jet aircraft (an increase of 104 percent to \$84 million). U.S. imports from Switzerland that decreased significantly in value in 1993 included certain pharmaceutical medications (a decline of 22 percent to \$320 million) and selected motor vehicle parts (a decline of 94 percent to \$3 million).

## Russian Federation

Russia's gross domestic product declined for the third year in a row in 1993 (down 12 percent from

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<sup>58</sup> These figures are not apparently reflected in Swiss Customs data, as reported by the United States Embassy in Bern, perhaps because Switzerland does not consider shipments of gold bullion by central banks as an import. According to data compiled by Swiss Customs, as reported in *Foreign Economic Trends*, in 1993, Swiss imports of U.S. products declined by 6.6 percent.

<sup>59</sup> Information provided by a staff member at the U.S. Bureau of Mines.

1992, and down 29 percent from 1991).<sup>60</sup> Foreign trade has become a more important component of the Russian economy, in part reflecting the economy's increasing capitalist nature, but also underlining some of the economy's difficulties.<sup>61</sup> Russian exports increased during 1992-93, imports fell, and trade (particularly exports) continued to be redirected toward the convertible currency countries.

Exports and their associated hard currency revenues have become more attractive for a number of reasons. Many intra- and interindustry links, stemming from the Soviet centralized planning and distribution system, were disrupted following the breakup of the Soviet Union in 1990. Reasons for this development included the raising of new customs and financial barriers, the collapse of the ruble zone in 1992 and 1993, and the appearance of new national currencies (issued by former Soviet republics) that complicated exchange arrangements.<sup>62</sup> The breakdown of industrial ties between regions accounted for approximately one-third of reduced industrial output in Russia in 1992.<sup>63</sup> Although stagflation<sup>64</sup>

adversely affected consumer liquidity (termed the "payments crisis") and, therefore, demand, rapid depreciation of the Russian ruble during 1992-93 enhanced the value of export sales made in convertible currency (the ruble fell from Rbl 414.5 per \$1 on Dec. 31, 1992 to Rbl 1247 per \$1 on Dec. 28, 1993, and then in excess of Rbl 1800 per \$1 during April 1994). Government regulations covering export activity were relaxed between 1992 and 1993, Russian export duties and limitations imposed by export quotas were reduced and the Russian Central Bank rescinded regulations that required the sale of a portion (around 40 percent) of hard currency export earnings.<sup>65</sup> In several instances, inventories of raw material inputs that had been built up during the past few years were liquidated wholly or in part through exports thus increasing the importance of foreign markets for the viability of some firms. Russia's domestic political and economic crises also stimulated capital flight, estimated at \$10 to \$20 billion during 1991-93.<sup>66</sup>

Russian trade with countries outside the former Soviet Union increased about 2 percent in value between 1992 and 1993. Increased exports (14 percent to \$45.5 billion) compensated for reduced imports (down 11 percent to \$31.1 billion) and Russia incurred a positive net merchandise trade balance.<sup>67</sup> Trade data prepared for the Committee of the State Duma on Economic Policy indicate that Russian exports to former Soviet republics totaled \$53.5 billion in 1993, (down 22 percent from 1992) and imports from these countries totaled \$43.7 billion in 1993 (down 20 percent from 1992). These countries continued to be Russia's main trading partners, accounting for about 56 percent of Russian foreign trade in 1993.<sup>68</sup> Compared with past years, there has been a restructuring of Russian trade away from the former Soviet republics, although this trade remains important because of industry structural links. Russian trade also declined with former Council for Mutual Economic Assistance (CMEA) bloc members<sup>69</sup> because of these countries' recess-

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<sup>60</sup> Russian State Statistics Committee data quoted in *Interfax Weekly Business Report*, Jan. 7-14, 1994, p. 6.

<sup>61</sup> Foreign trade increased as a percentage of GDP adjusted for inflation. One reflection of the economy's openness is that trade figures for 1993 include exports and imports by private individuals for the first time; so-called private trade accounted for about 20 percent of total foreign trade turnover and constituted a large portion of Russian imports of clothing and consumer electronics. *Interfax Weekly Business Report*, Jan. 7-14, 1994, p. 4.

<sup>62</sup> The national currencies are not freely interchangeable. *Interfax Weekly Business Report*, Jan. 21-28, 1994, p. 7. This process began during July 1992 when Russia announced that external ruble accounts would not be recognized and ceased providing credits and banknotes to the former Soviet republics. These newly independent states issued their own currencies. "CIS Said Lacking Conditions for New Payment Union," Moscow *Segovia*, translated from Russian in *FBIS-SOV-94-082*, Apr. 28, 1994, p. 1. See also, "1992, 1993 Foreign Trade Statistics Reported," Moscow *Delovoy Mir*, translated from Russian in *FBIS-USR-94-057*, June 2, 1994, p. 51.

<sup>63</sup> Production of raw materials increased as a share of total Russian industrial production and exports during 1992-93. Moreover, capital investment in Russia's processing industries declined between 10 and 27 percent between 1992 and 1993, and lags behind capital investment in other industry sectors while capacity closures in processing industries are higher. This indicates that a structural shift may be occurring as well that the demand for such capital investment is low because the domestic industry (to which goods made by processing industries are sold) is in turmoil; there are longer term implications for these industries' competitiveness. *Interfax Weekly Business Report*, Feb. 4-11, 1994, p. 8.

<sup>64</sup> Inflation exceeded 1350 percent in 1992, and was estimated at about 1000 percent in 1993, fueled by rapid expansion of currency in circulation and credits to industrial enterprises, while industrial output fell 18.8 percent in 1992 and 16.4 percent in 1993. Centralized credit issuance, largely to support employment, is reportedly one of the primary reasons for the Russian Government's rising budget deficit (net Central Bank of Russia credits totaled Rbl 16 trillion, approximately equal to the Rbl 17 trillion budget deficit in 1993), and reportedly reached 10 percent of GNP in 1993. *Interfax Weekly Business Report*, Jan. 7-14, 1994, p. 6 and *Interfax Weekly Business Report*, Dec. 17-24, 1993, p. 15.

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<sup>65</sup> B.G. Fedorov, Russian Ministry of Finance, *Russian Finances in 1993*, Moscow, Jan. 1994.

<sup>66</sup> "U.S. Senate Hearings on Organized Crime Described," Moscow *Izvestiya*, translated from Russian in *FBIS-SOV-94-104*, May 31, 1994, p. 6.

<sup>67</sup> Calculated from data published by the Russian State Statistics Committee, published in *Interfax Weekly Business Report*, Jan. 21-28, 1994, p. 7.

<sup>68</sup> "1992, 1993 Foreign Trade Statistics Reported," Moscow *Delovoy Mir*, translated from Russian in *FBIS-USR-94-057*, June 2, 1994, p. 51. Russia's trade turnover with the three Baltic states (Estonia, Latvia, and Lithuania) fell more than 48 percent to \$526 million between 1992 and 1993. *Interfax Weekly Business Report*, Jan. 21-28, 1994, p. 7.

<sup>69</sup> Council for Mutual Economic Assistance, also called COMECON. Its members included Bulgaria, Cuba, the Czech Republic, Hungary, Mongolia, Poland, Romania, Slovakia, and Vietnam. Russia's trade with these countries declined 16 percent (mostly because imports declined 42 percent) between 1992 and 1993.

sions following economic restructuring in the countries of Central and Eastern Europe. Russia's trade with certain developing countries and with most industrially developed countries increased during 1992-93. In general, Russia's exports to industrially developed countries increased about 20 percent, while its imports from those countries declined about 17 percent.<sup>70</sup> Among industrially developed countries, Germany is Russia's leading trading partner; among developing countries, China is Russia's leading trading partner.<sup>71</sup>

Overall, imports declined because state imports of food and consumer goods ceased, import subsidies were reduced or eliminated, the government imposed high import tariffs, and the ruble weakened substantially against the dollar. Falling world prices for the majority of raw materials exports forced Russian exporters to boost volumes in order to maintain revenues; Russian producers and exporters have expressed concerns about losing competitiveness because of rising transportation, energy, raw materials, and labor costs.<sup>72</sup>

The U.S. merchandise trade surplus with Russia narrowed between 1992 and 1993 by \$433 million (27 percent) to \$1.2 billion. Although U.S. exports to Russia increased by \$830 million (40 percent) to \$2.9 billion, this increase was offset by a larger increase in U.S. imports from Russia, by \$1.3 billion (269 percent) to \$1.7 billion.

The rise in U.S. imports from Russia can be attributed mainly to the increased volumes of raw materials discussed earlier. Such imports were recorded across a broad range of products, including minerals, metals (including scrap), petroleum, petrochemicals, and fertilizer. The most significant increases in U.S. imports from Russia in 1993 were of primary aluminum<sup>73</sup> (which increased by \$434 million to \$451 million in 1993); crude petroleum (which increased by \$186 million to \$196 million); platinum (which increased by \$85 million to \$205 million); and gold coins (which increased from negligible levels in 1992 to \$72 million in 1993).

The most significant increases in U.S. exports to Russia were of machinery and equipment (especially spare and replacement parts), which increased by \$325 million to \$631 million; feed grains (corn), up

\$142 million to \$409 million; motor vehicles (including automobiles, trucks, and tractors), up \$141 million to \$206 million; meat, up \$100 million to \$112 million; and chocolate and cocoa preparations, up \$73 million to \$77 million between 1992 and 1993. Increased Russian import tariffs and reduced consumer subsidies led to reduced U.S. exports of cereal grains (especially wheat) and tobacco products to Russia in 1993, with cereal grain exports dropping by \$54 million (to \$680 million) and tobacco products exports falling by \$82 million (to \$115 million).

## Kuwait

Kuwait is largely dependent on its vast oil reserves, which account for almost 90 percent of total Kuwaiti Government revenues.<sup>74</sup> Shifts in bilateral trade between the United States and Kuwait reflect Kuwait's success in rebuilding its economy after the deleterious effects of the Iraqi invasion of 1990-91. By 1993, Kuwait had restored most of its oil infrastructure and was pumping oil at close to its pre-war rate. Therefore, the \$1.0 billion U.S. trade surplus with Kuwait in 1992 shifted to an \$823 million deficit in 1993, due almost entirely to increased oil imports.

U.S. imports of Kuwaiti crude oil rose from \$0.2 billion in 1992 to \$1.7 billion in 1993, accounting for 96 percent of total U.S. imports from Kuwait in 1993 and 7 percent of total U.S. imports of crude oil. Further, Kuwait stepped up its exports of apparel to the United States from \$2.3 million dollars in 1992 to \$43 million in 1993.

After peaking in 1992 at \$1.2 billion, U.S. exports to Kuwait fell \$308 million (24 percent) to \$986 million in 1993, reflecting a downturn in the post-war consumer boom. The rapid renewal of war-damaged goods and infrastructure has created a replacement cycle that is unlikely to engender a return of sales to immediate postwar demand levels for many years. In addition, consumer demand has been affected by profound population shifts in Kuwait resulting from the Iraqi invasion. The Kuwaiti population today is only about two-thirds its prewar level, with the largest fallout in the middle class.

U.S. exports of automobiles declined \$171 million (47 percent) to \$193 million in 1993 as Kuwaiti new car sales fell below prewar levels. Aircraft and aircraft parts exports decreased \$79 million (49 percent) to \$82 million, iron and steel articles fell \$43 million (76 percent) to \$14 million, and machinery used in construction and mining dropped \$29 million (47 percent) to \$33 million.

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<sup>74</sup> Kuwait's proven crude oil reserves amount to approximately 10 percent of total world reserves.

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<sup>70</sup> Calculated from data of the Russian State Statistics Committee in *Interfax Business Weekly Business Report*, Jan. 21-28, 1994 p. 7.

<sup>71</sup> China is reportedly the largest, standing in second place overall in terms of trade turnover during Jan.-Oct. 1993 at \$4.01 billion. Reportedly much of this trade involves cross-border trade in the Russian Far East and barter transactions involving consumer goods.

<sup>72</sup> *Interfax Weekly Business Report*, Jan. 21-28, 1994, p. 9

<sup>73</sup> For additional information on aluminum and the multi-lateral conferences (government-to-government discussions), see USITC. *Aluminum Industry and Trade Summary*, USITC publication 2706, April 1994.



## Belgium

Foreign trade is extremely important to the Belgian economy. Exports account for about half of the nation's output, due to Belgium's reliance on imported raw materials and intermediate goods to produce and export final products. On a per capita basis, Belgium's exports are seven times greater than those of the United States, five times greater than Japan's, and two times greater than Germany's. Belgium's advantages in trade, particularly with other EU nations, stem from its central port location, which allows it to serve as a distribution center for products destined for Europe and other nations, and its well-educated, multilingual workforce. Belgium recorded a slight trade surplus each year during 1991-93. Belgium's trade and its GNP both grew by about 2 percent in 1993. Other members of the EU account for about 75 percent of its total trade. Because Belgium's economy is largely dependent on the economic health of its European partners, its economy and trade reflect trends in the entire region.

Belgium is the 13th largest U.S. export market, receiving about 2 percent of total exports, and the 22nd ranked import source, providing about 3 percent of total imports. The U.S. trade surplus with Belgium dropped by \$1.7 billion in 1993 to \$3.0 billion. This shift reflected both a decline in U.S. exports to, and an increase in imports from, Belgium. Exports declined by 11 percent, to \$8.2 billion, and imports rose by 16 percent, to \$5.2 billion, indicative of the stronger growth of the U.S. economy relative to that of European nations.

Cigarettes are the principal U.S. product exported to Belgium, amounting to \$952 million, or 12 percent, of the 1993 total. These shipments in 1993 were 10 percent lower than in 1992. Only a small share of these cigarettes are consumed in Belgium; most are shipped to other destinations, mainly Eastern Europe, the Commonwealth of Independent States (former members of the Soviet Union), the Middle East, and Asia. Other products contributing to the reduction in exports were automobiles, down 34 percent to \$154 million; coal, down 29 percent to \$226 million; and automatic data processing machines, down 19 percent to \$210 million. On the other hand, U.S. exports to Belgium of parts for machinery and construction equipment were up by 55 percent to \$275 million; parts of motor vehicles were up by 36 percent to \$296 million; and medical and surgical instruments were up by 23 percent to \$223 million. Shipments of the parts for these types of equipment, however, did not reflect the entire increased demand in Belgium and other European markets, but rather were frequently used in conjunction with European-made parts to manufacture or assemble products for the U.S. market.

U.S. imports from Belgium are dominated by cut diamonds, which were 26 percent of the 1993 import total and amounted to \$1.3 billion that year, up 19 percent from 1992. Automobiles, which represented 14 percent of 1993 imports, more than tripled in value from 1992 to \$716 million,<sup>75</sup> and imports of machinery and construction equipment were up by 22 percent to \$100 million.<sup>76</sup>

## India

Economic reforms instituted by the government during the last three years have helped steer India's economy from static to sustained growth. These reforms have included increased privatization of key economic sectors, a reduction in tariffs,<sup>77</sup> removal of import licensing restrictions and foreign exchange controls, improved market access for foreign firms, and tax reforms, including significant reductions in personal and corporate taxes. These measures have spurred domestic industrial activity, improved international trade, and attracted increased foreign investment. India's stability as a democratic country, its large and increasingly open domestic market, its capable infrastructure of local industrial companies, and its enormous pool of skilled workers, scientists, and engineers have also contributed to increased foreign investment.<sup>78</sup> During 1991-93, India's foreign exchange reserves grew from \$1 billion to \$15 billion and foreign investment approved by the government totaled \$4 billion, of which \$1.7 billion came from the United States. The growing industrial activity has created jobs for the rapidly growing middle class, which currently numbers 200 million people.<sup>79</sup>

The United States remained India's largest trading partner in 1993, during which time it supplied 11 percent of India's global imports while absorbing

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<sup>75</sup> Swedish-based Volvo has a major automobile assembly plant in Belgium. Parts for these cars are sourced globally, including from a Volvo subsidiary in Michigan that arranges for the shipment of U.S.- and Canadian-made auto parts to Volvo assembly plants around the world.

<sup>76</sup> U.S.-based Caterpillar is a large producer of these products and uses U.S.-made parts in its Belgian assembly operations. Some of this Belgian output is then shipped to the United States.

<sup>77</sup> The trade-weighted average tariff declined from 87 percent in fiscal year 1991 (Apr. 1990 to Mar. 1991) to 47 percent since Mar. 1993. Despite these reductions, import tariffs in India continue to be among the highest in the world. The Government of India is committed to lowering tariffs to 25 percent within four years.

<sup>78</sup> More engineers graduate in India each year than in China and South Korea combined, *Forbes*, May 23, 1994, "Now We Are Our Masters," pp. 128-138. Motorola is planning to make India what it calls a "brain center" for engineering and design work, and Digital Equipment Corporation's Japanese subsidiary chose Indian software engineers over its Japanese employees to write computer programs that translate English code into Japanese characters.

<sup>79</sup> India's middle class is expected to double to 400 million people in the next 10 years.

21 percent of India's global exports. Two-way trade between the countries increased from \$5.6 billion in 1992 to \$7.2 billion in 1993. Although India's bilateral trade surplus with the United States remained unchanged at \$1.8 billion, its trade deficit with the world declined from \$4 billion in 1992 to about \$2 billion in 1993. Sluggish industrial production dampened India's import growth, which, combined with rapid export expansion, reduced its overall trade deficit in 1993.

U.S. exports benefited from India's market-opening measures and increased by \$856 million (46 percent) in 1993, reversing a downward trend that began in 1990. Aircraft accounted for more than two-thirds (\$577 million) of the increase, advancing to \$581 million in 1993. This rapid growth was due almost entirely to greater demand for new passenger capacity and the need to replace old aircraft. Other product categories experiencing significant gains included high-tech products such as jet aircraft engines and parts (up \$147 million), metal rolling mills and parts (up \$56 million), and electric generating sets (up \$38 million). U.S. exports of wheat, which averaged only \$16 million annually during 1989-92, rose by \$54 million to \$77 million in 1993. According to industry and government sources, these imports were used by India primarily to replenish stocks that were depleted by bad crops and below-market pricing policies of the government. The major products showing significant declines in U.S. exports were fertilizers, down 35 percent to \$171 million, and steel scrap, down 89 percent to \$15 million. The decline in U.S. exports of fertilizers and steel scrap reflects India's purchasing patterns, which often change significantly from year to year. The lower demand for fertilizers by India during 1993 was partly the result of a

1992 fall monsoon that adversely affected India's agricultural production during the latter part of the year and throughout 1993.

U.S. imports from India increased by \$782 million (21 percent) in 1993 to \$4.5 billion. The bulk of the increase is attributed to rapid growth in imports of diamonds, textile products, and leather articles. India is a major diamond-cutting and trading center and a leading exporter of cut diamonds that weigh less than one-half carat. Diamonds, accounting for \$1.2 billion (27 percent) of total U.S. imports from India, represented \$287 million (37 percent) of the increase; textile products, representing nearly \$1 billion (21 percent) of total imports, accounted for \$139 million (18 percent) of the increase; and the increase in other labor-intensive goods, primarily leather apparel and other leather articles, including footwear, accounted for most of the remainder. The increase in U.S. imports of textile and leather products from India is attributed to India's competitive advantages stemming from its low labor costs. Growth in U.S. imports of leather products is also attributable to the Indian Government's program of providing extensive export incentives and developmental support to its leather and leather products industry.<sup>80</sup> India is also a major U.S. supplier of cashew nuts, and in 1993, U.S. imports of cashew nuts from India increased by \$26 million. This increase was fueled primarily by price increases rather than a real increase in volume. Reflecting the gradual recovery in the U.S. economy and increased disposable income, U.S. imports of jewelry of precious metals increased by \$39 million in 1993.

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<sup>80</sup> Leather, October 1993, "India unveils major plan to boost leather industry", p. 6.

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# CHAPTER 3

## Factors Affecting Trends in Selected Industry Sectors

Chapter 3 of this report provides added perspective on trade shifts in various U.S. industries by examining broad-based trends in exports, imports, and trade balance for the period 1980-93. A summary of the common trends among the U.S. industry sectors affecting the U.S. trade balance is presented, followed by graphic illustrations and explanations of particular trends in selected industries.

### Summary of Trends Among Selected Industry Sectors (1980-1993)

Since the early 1980s, the United States has had sizeable deficits in its merchandise trade balance. Factors influencing the level of the deficit include: a generally stronger U.S. economy compared with its trading partners; real exchange rate of the U.S. dollar; globalization of U.S. industries; and increasing competition from emerging industrial countries, as well as other industrial nations. The steady rise in the trade deficit during 1980-87 (from \$22 billion to \$158 billion) was strongly influenced by high U.S. interest rates and the resulting effect of pushing up the value of the U.S. dollar. A change in U.S. interest rates was followed by a significant depreciation of the dollar and a reduction in the trade deficit to \$83 billion in 1991. Weak foreign markets and growing global competition, primarily from China, led to a rise in the deficit during 1991-93 to \$136 billion.

Throughout the 1980s and continuing into the 1990s, foreign demand for U.S. products has been outpaced by U.S. demand for foreign goods, due largely to slower economic growth in other nations. Economic growth in many important foreign markets has been constrained by large debts and falling oil revenues. U.S. recovery after the recessions of the early 1980s and the early 1990s was faster and stronger than in most other nations. As the U.S. economy continued to grow during the 1980s, demand for imports increased, particularly in the areas of motor vehicles, electronics, apparel, and footwear.

Fluctuations in the value of the U.S. dollar also had a strong impact on the growing trade deficit. Before the Plaza Accord<sup>81</sup> in 1985, the U.S. dollar was overvalued on the world market. As the dollar gained in value against the currencies of major U.S. trading partners, U.S. goods grew more expensive in foreign markets, while imports became cheaper in the United States, thus exacerbating the U.S. trade deficit. By the time relief came for exporters and domestic producers when the dollar depreciated in the mid-1980s, U.S. manufacturing capability had declined because low profit levels had discouraged investments in new equipment and technologies. Furthermore, foreign products had earned consumer allegiance, thus making it difficult for U.S. producers to regain lost domestic and foreign market shares. Certain industries, like steel and metal-working machine tools, sought and gained the imposition of voluntary restraint agreements to limit imports—this temporary protection was intended to provide these industries an opportunity to improve their competitiveness.

Efforts by U.S. manufacturers to lower production costs and increase their presence in foreign markets resulted in an increasing shift of U.S. manufacturing facilities offshore, mainly to Mexico, Korea, Hong Kong, Taiwan, and China. In industries like apparel, footwear, and toys, the shift to offshore production and assembly has meant an increased reliance on imports of these products for the United States. Moreover, related-party transactions have increased. In the U.S. semiconductor devices industry, for example, U.S. multinational corporations operating in low-labor cost countries often import U.S. components for products that are assembled or processed and then exported back to the United States.

Finally, U.S. manufacturers are faced with increasing competition from emerging industrial countries as well as from other industrial nations. The dynamic economies in East Asia have enjoyed some

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<sup>81</sup> A significant depreciation of the U.S. dollar was endorsed as official policy by finance ministers of the major industrialized countries at the Plaza Accord in September 1985.

of the highest sustained growth rates in recent years. High rates of both foreign and domestic investment and relatively low labor costs have enabled Korea, Hong Kong, Taiwan, China, Malaysia, and Singapore to emerge as strong competitors of the United States in both international and domestic markets. Additionally, developed nations, especially Japan, have made concerted efforts to gain technological expertise and engineering ingenuity equal to, and in some cases surpassing, that of the United States. Japanese exports of motor vehicles, electronic goods, and video games represent a substantial share of both U.S. and global consumption.

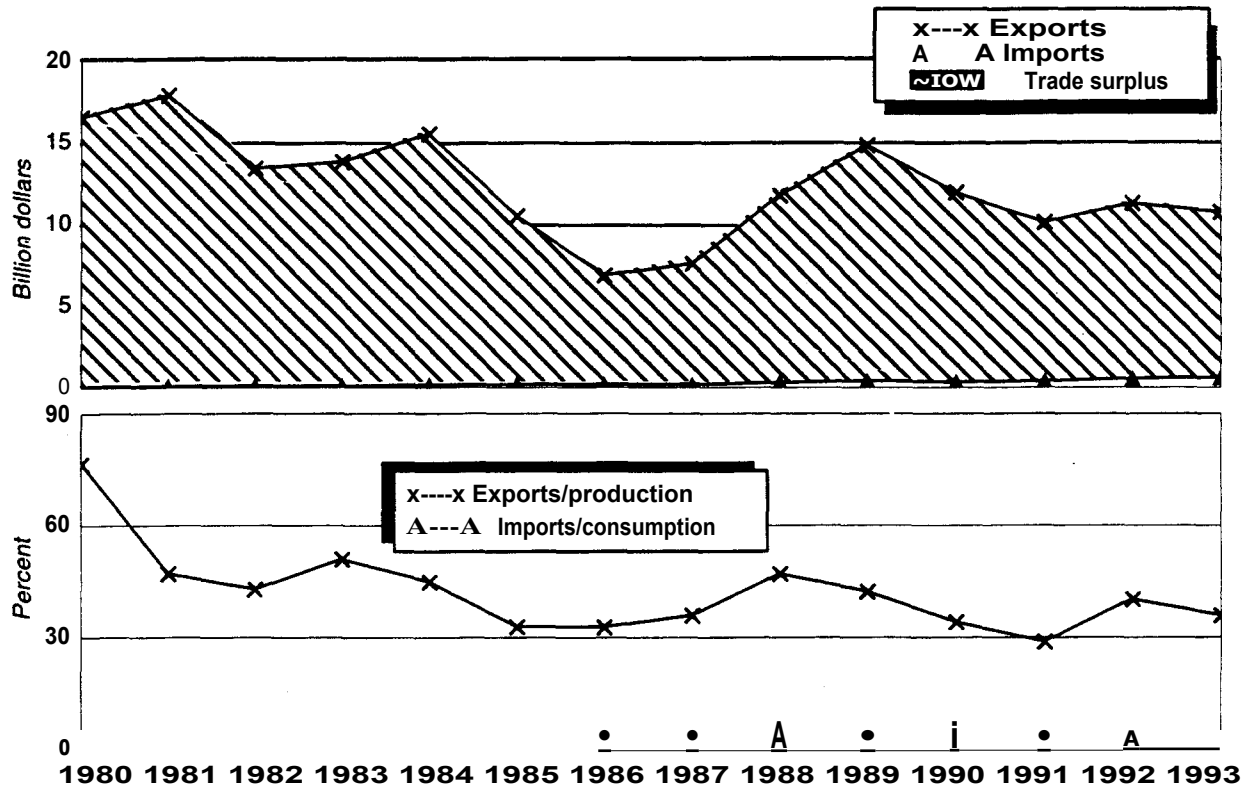
The United States, however, has historically enjoyed trade surpluses in cereal grains, aircraft, chemicals, pharmaceuticals, and services. The United States is the world's largest supplier of cereals, exporting well over one-third of total domestic production. Similarly, the U.S. aircraft industry supplies more than one-half of the global market for new large civil aircraft. The U.S. chemical and pharmaceutical industries enjoy certain competitive advantages over other industrial countries, including

an abundant supply of domestic feedstock used in their production and a strong commitment to research and development (R&D). As a whole, U.S. service industries enjoy a competitive advantage in global markets, where they generate consistent trade surpluses.

## **Historical Performance Indicators and Trade Trends**

Explanatory and pictorial assessments of factors affecting imports-to-consumption and exports-to-production ratios and trade balance trends in selected industry sectors during 1980-93 are provided in the following pages. Industries were selected on the basis of availability of comparable historical data; share of total U.S. imports/exports; or important global developments influencing performance indicators and trade trends.

**Figure 11**  
**Cereals: Imports, exports, trade balance, and trade ratios, 1980-93**

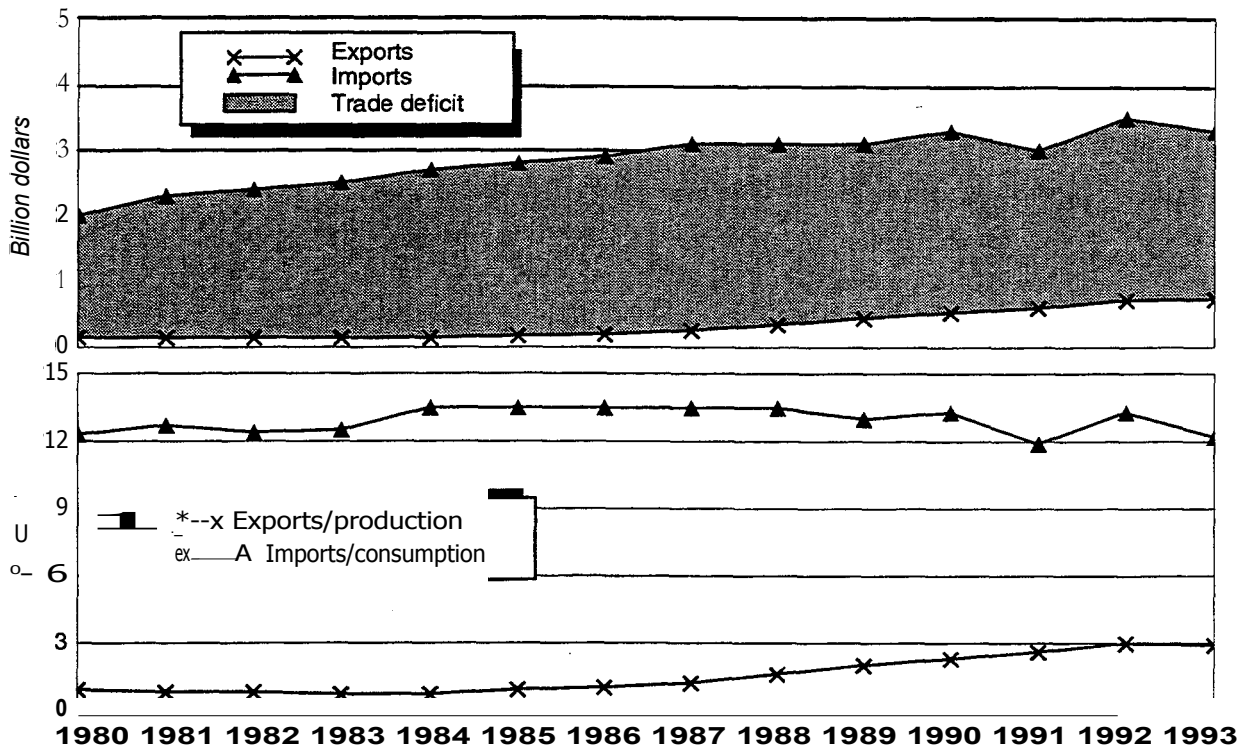


Source: Compiled by USITC staff.

- The U.S. trade balance in cereal grains declined during 1984-86, and the exports-to-production ratio declined during 1983-86, in response to U.S. cereal grain export decreases primarily attributed to two events. There was a drop in U.S. cereal grain exports to the former Soviet Union, with the U.S. market share falling from 27 percent in 1984 to zero percent in 1987. Further, in 1986, world cereal grains stocks rose 60 percent over 1984 levels to 414 million metric tons (MMT) before dropping back to 365 MMT in 1987, as world production rose to a record high of 1,347 MMT in 1986.
- The U.S. cereal grains export trade, and the trade balance, recovered after 1986 partly because of U.S. export promotion programs. These programs include the Export Enhancement Program (EEP), the several export credit programs, such as GSM-102, and food-aid efforts, such as P.L. 480. These programs are credited with maintaining the post-1987 U.S. cereal grains trade surplus within the \$10-14 billion range, levels above the 1985-87 low points.<sup>1</sup>
- The U.S. cereal grain exports-to-production ratio fluctuated within the 29-47 percent range after 1986, reaching its low point in 1991. The 1989-93 period is marked by dips in both the trade balance and the exports-to-production ratio. Reasons include the loss of export markets from the dissolution of the Soviet Union into numerous nations and the ensuing economic difficulties in those regions. The exports-to-production ratio fell during 1988-89 because of a drought which reduced cereal grain production 1986-88, although stocks draw-down attenuated the effect.
- Imports of cereal grains are minuscule in comparison to U.S. exports of cereal grains. The gradual increase in the import-to-consumption ratio for the period of 1981-93 stems mostly from increased imports from Canada, particularly of durum and hard red spring wheats since 1986.

<sup>1</sup> The USSR was eligible for both GSM-102 credits and the EEP; since the breakup of the USSR, only Russia has received GSM-102 credit guarantees with 100 percent U.S. Government backing of the principal.

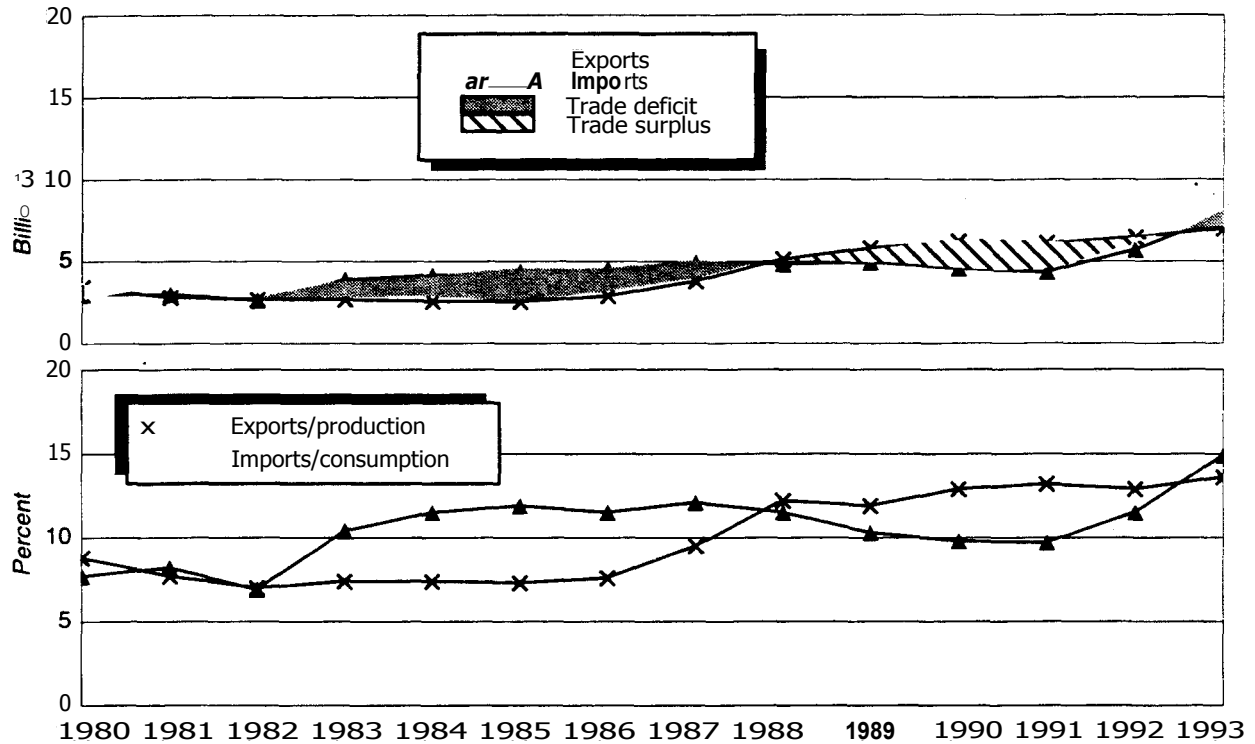
**Figure 12**  
**Alcoholic beverages: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- The growing trade deficit in alcoholic beverages during 1980-87 was driven largely by imports of wine from France and beer from Mexico and the Netherlands. Imports were encouraged by both higher domestic demand for wine and beer and the dollar's strength during the mid-1980s relative to European, Mexican, and Canadian currencies.
- Since 1987, the trade balance has generally improved, with greater exports of distilled spirits and beer to Japan, wine to Canada, and distilled spirits to Germany. This export growth can be attributed mainly to improved market access, better terms of trade, and the increased competitiveness of U.S. producers.
- The notable decline in the trade deficit in 1991 reflects that year's large increase in federal excise taxes on alcoholic beverages. These tax increases had a negative affect on the consumption of both domestic and imported products. In 1992, imports recovered as retailers accumulated large stocks of European wine in response to threatened U.S. sanctions against those products.
- Though the exports-to-production ratio for alcoholic beverages remained very small during the early 1980s, it has grown slowly but steadily since 1984. With U.S. consumption of wine and distilled spirits in decline and the domestic market for beer stagnant, alcoholic beverage producers have set up overseas distribution channels and now market their products abroad.

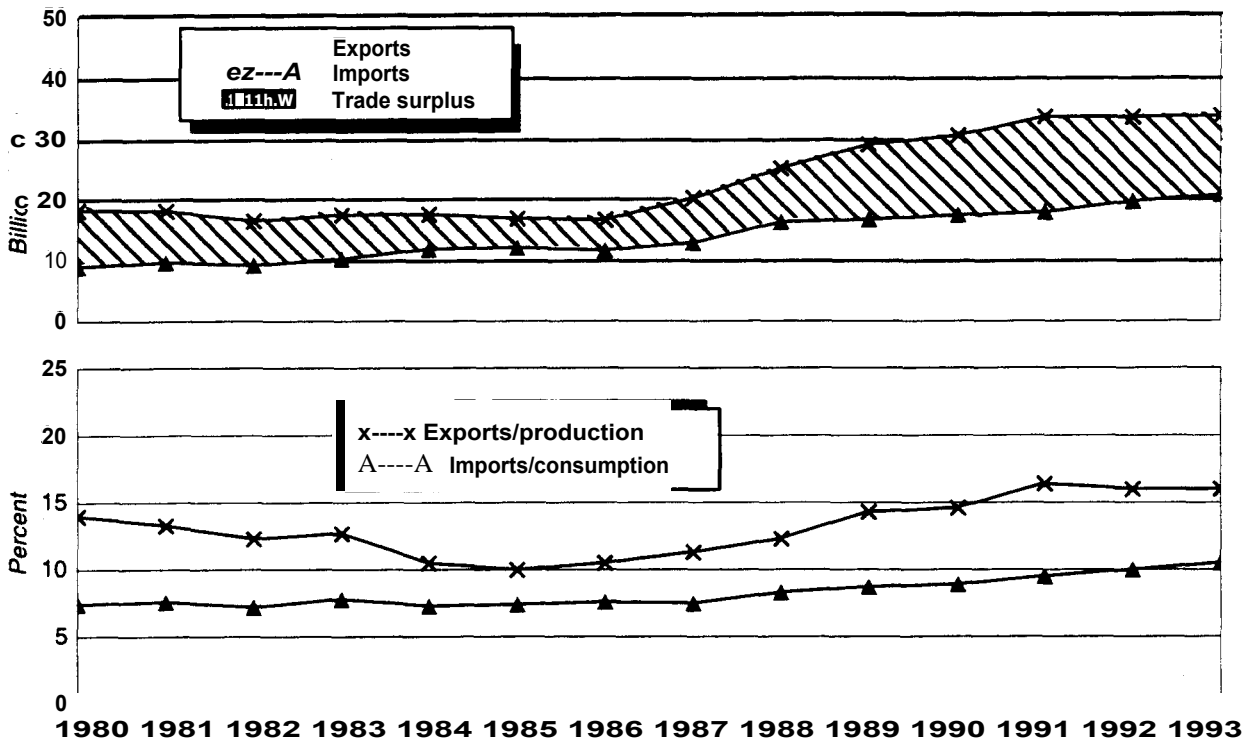
**Figure 13**  
**Lumber and wood products: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- The trade balance in the lumber and wood products sector generally trended downward into a deficit during 1980-85 before gradually improving to reach a peak trade surplus in 1991, a performance which reflected fluctuations in two primary factors—exchange rates and interest rates. In 1993, however, the balance returned to a deficit as environmental concerns, such as habitat destruction for spotted owls, led to domestic supply constraints.
- The share of the U.S. lumber and wood products market held by imports generally rose during 1982-87 before declining annually through 1991 as a result of a slack domestic construction market. Import market share rose sharply during 1992 and 1993 as environmental concerns constrained domestic supply. Dumping and countervailing duties imposed on U.S. imports of Canadian softwood lumber caused some short term price effects during this latter period.
- Exports accounted for a rising share of U.S. lumber and wood products shipments during 1980-93. The rise was particularly sharp during 1987 and 1988. The combination of a relatively weak dollar, rising world prices, and the shift toward exports of higher value-added products contributed to this increasing exports-to-production.

**Figure 14**  
**Chemicals and related products: Imports, exports, trade balance, and trade ratios, 1980-93**



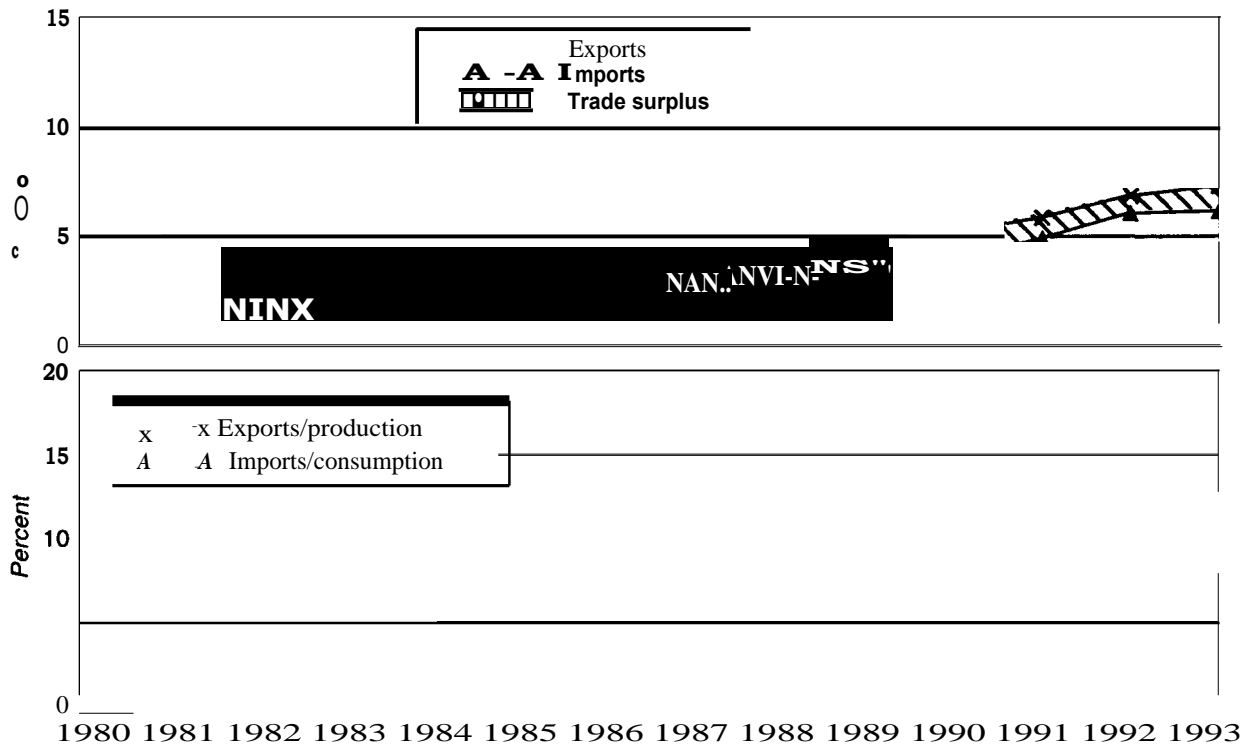
Source: Compiled by USITC staff.

- The United States has historically enjoyed a trade surplus in chemicals.<sup>1</sup> This trade surplus grew during 1986-91, following the decline of the dollar from its 1985 peak. In 1992 and 1993, however, growth in the trade surplus was halted as imports rose more rapidly than exports. Industry observers attribute the reduced trade surplus to the moderate growth of the U.S. economy while U.S. export markets continued to reflect recessionary conditions.
- During 1980-85, the ratio of exports to production declined, partly due to the rising strength of the U.S. dollar. After 1985, when the dollar began to decline in value, the exports-to-production share began to rise, peaking in 1991. During 1991-93, export growth moderated as industrial economies outside the United States experienced little or no growth and the strength of the dollar (based on a trade-weighted index) remained relatively steady.
- The ratio of imports to consumption remained relatively constant during 1980-86, before beginning a steady ascent in 1987. U.S. imports increased due to the surge of chemical production capacity throughout the world and continued growth in U.S. demand. In recent years, this growth was further stimulated by abundant supplies of low-priced crude petroleum, which could often be sold more profitably as downstream chemical products. Additionally, as the U.S. chemical industry has become increasingly multinational, related-party transactions have increased, leading to a growth in trade.

<sup>1</sup> This product grouping conforms to what is generally considered to be the products of the U.S. chemical industry, except pharmaceuticals.



**Figure 15**  
**Pharmaceutical products: Imports, exports, trade balance, and trade ratios, 1980-93**

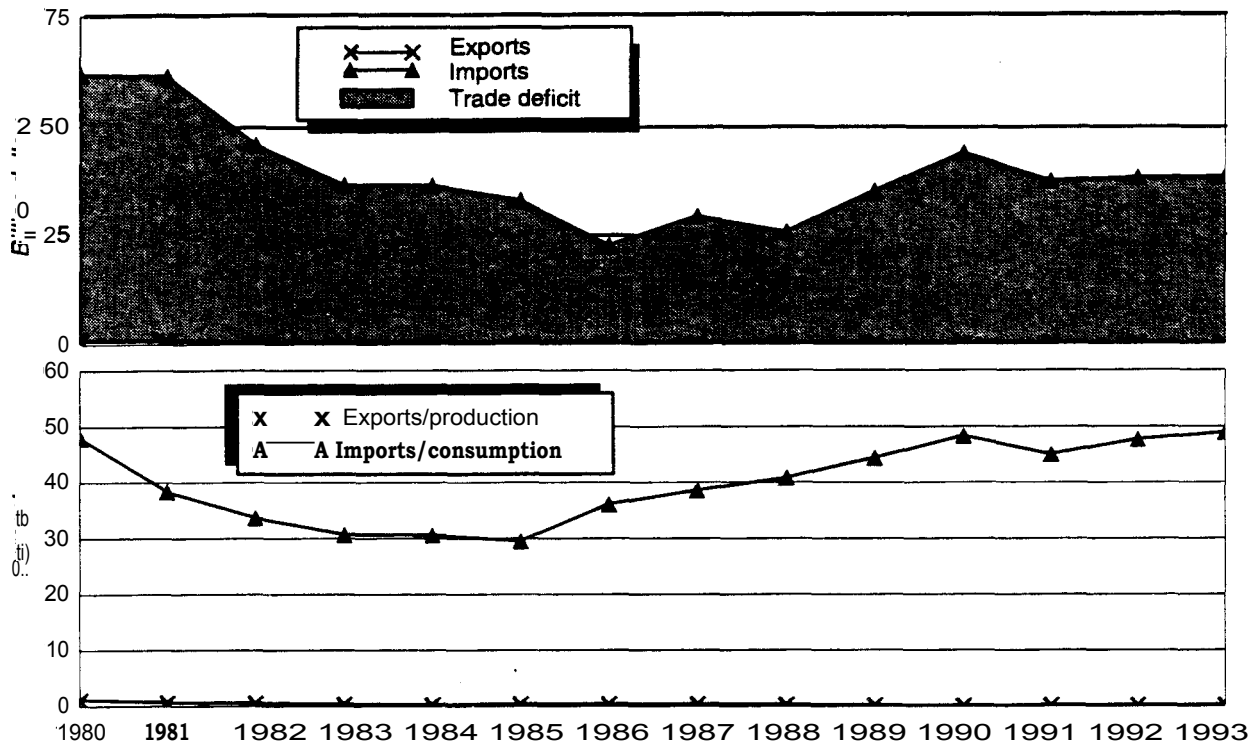


Source: Compiled by USITC staff.

- The U.S. pharmaceutical industry has historically enjoyed a trade surplus. This surplus remained fairly consistent during 1980-85 but has trended downward slightly in recent years. Although factors such as stronger intellectual property rights (IPR) protection<sup>1</sup> and improved access to many foreign markets continue to boost U.S. exports, the value of U.S. pharmaceutical imports has grown relatively rapidly.
- The growth in the imports-to-consumption ratio during 1980-93 is largely attributable to increased related-party trade, driven by offshore production and the proprietary nature of many pharmaceutical products. Offshore production is a result of several factors: ongoing industry consolidation, the number of foreign parent firms operating in the United States, and the increasing tendency of firms to seek marketing approval overseas prior to or during application for such approval in the United States (firms perceive shorter approval times outside the United States). Moreover, multinationals can gain economies of scale by serving global markets from a limited number of production facilities.
- The share of U.S. exports to U.S. production is increasing as a result of a combination of factors, including the passage of the Drug Export Amendments Act in 1986, the proliferation of trade agreements between the United States and other countries or trade blocks, and increased trade in biopharmaceuticals. Export growth has also been aided by a shift in demographics in a number of countries that has resulted in the increased consumption of products used for chronic conditions.

<sup>1</sup> For more information, see the sector writeup.

**Figure 16**  
**Crude petroleum: Imports, exports, trade balance, and trade ratios, 1980-93**



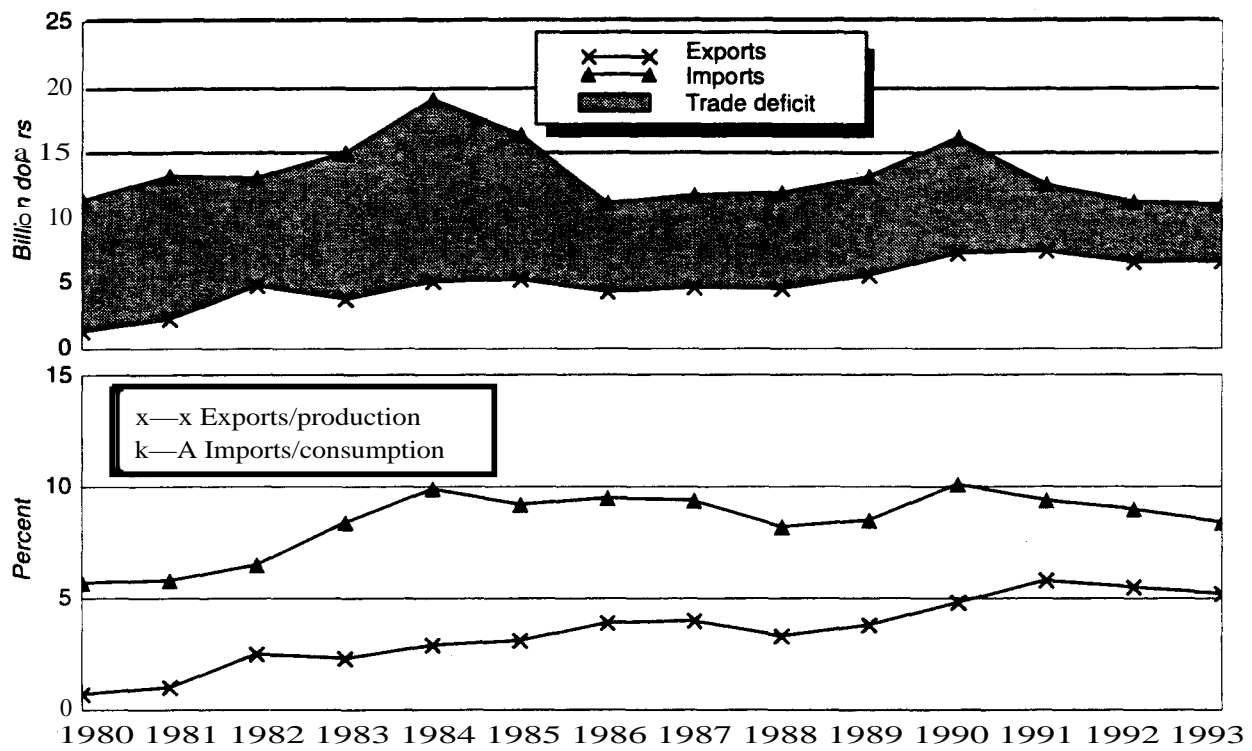
Source: Compiled by USITC staff.

- The U.S. trade deficit (in terms of value) for crude petroleum improved significantly from 1980 to 1993 because of a sharp decline in the world price of crude petroleum. However, in terms of quantity, U.S. imports steadily increased during this period. U.S. exports of crude petroleum are prohibited, except as part of a commercial exchange agreement.<sup>1</sup>
- With many OPEC-member nations producing over their production quotas and other, non-OPEC producing nations operating at full capacity, the U.S. trade deficit narrowed as world prices for crude petroleum fell from about \$32 per barrel in 1980 to \$26 per barrel in 1985. In late 1985, in an effort to encourage OPEC-member nations to operate within their quotas, Saudi Arabia ceased operating as the OPEC swing producer—instead producing at full capacity, which caused world prices to plummet to between \$9 to \$12 per barrel in 1986. World crude prices never rebounded but did stabilize at about \$14 to \$16 per barrel during 1987-93, stimulating U.S. imports.
- The decline in the world price of crude petroleum resulted in the shutdown of many marginally productive U.S. wells. During 1980-93, the quantity of U.S. crude petroleum production decreased by 21 percent, while the value of production fell by 30 percent. As a result of the decrease in U.S. production and the subsequent increase in imports, the ratio of imports to domestic consumption, which had been decreasing in the early 1980s, rose to more than 48 percent (in terms of both quantity and value) by 1993.

<sup>1</sup> See the sector write-up on crude petroleum for details on U.S. export policy.

<sup>2</sup> The term "swing" producer refers to the increasing or decreasing of Saudi Arabia's production to maintain OPEC's production within the quota. When one member would overproduce, Saudi Arabia would produce below its quota by the same amount as the over-production.

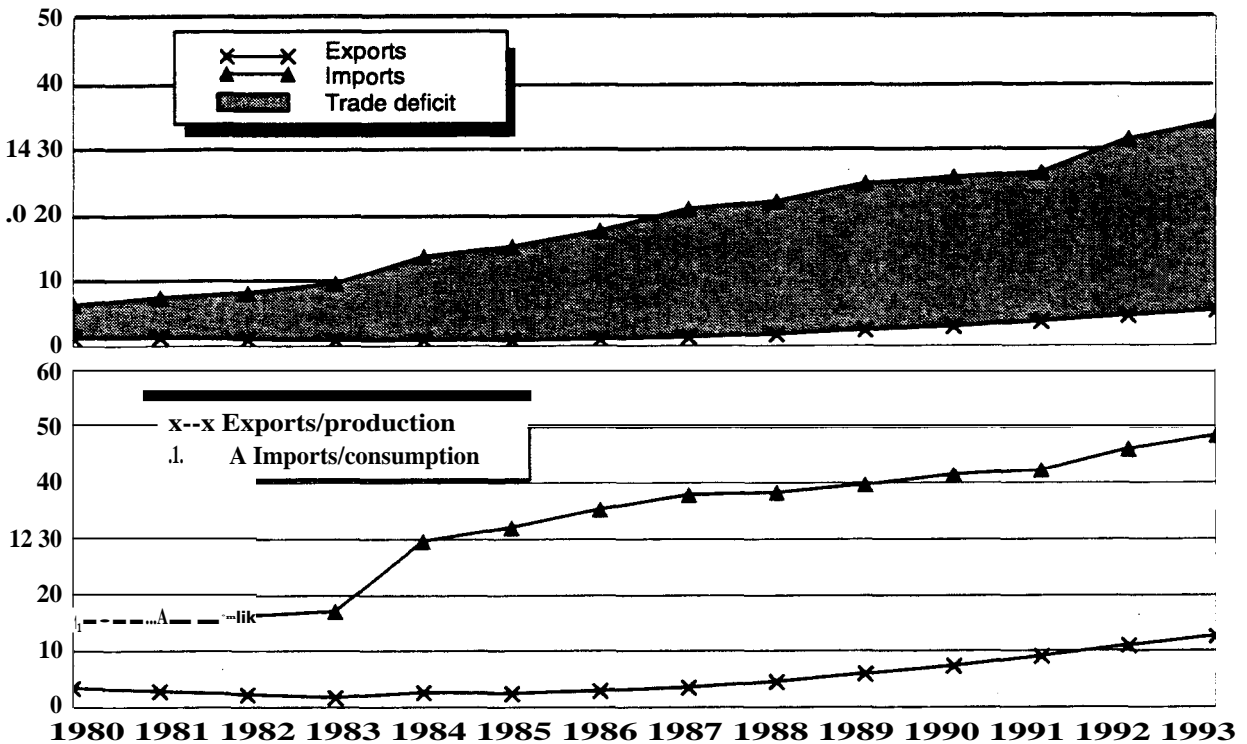
**Figure 17**  
**Petroleum products: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- The U.S. trade deficit in refined petroleum products improved significantly from 1984 to 1993. The U.S. trade deficit peaked at \$13.9 billion in 1984 as refineries in many producing nations were operating at full capacity. In 1990, the trade deficit increased slightly in anticipation of the Gulf War. During 1980-93, U.S. imports remained relatively stable at approximately \$11 billion, with the exception of 1984 and 1990 when imports increased, while exports increased from \$1.3 billion in 1980 to \$6.7 billion in 1993.
- U.S. exports during 1980-93 accounted for only 1 to 5 percent of total domestic production of refined petroleum products. U.S. exports of refined petroleum products reached a high of \$7.5 billion in 1991, which was attributable primarily to increased exports of distillate and residual fuel oils to markets in Western Europe. Prior to the Gulf War, an economic embargo resulted in the closure of a pipeline used to ship these products from Kuwait and Iraq through Turkey to Western Europe. Worldwide shortages of refined products were anticipated but did not occur because Venezuela, Saudi Arabia, and the United States increased their production and exports. U.S. exports of refined petroleum products decreased to \$6.6 billion in 1992 and 1993.
- Following fluctuations in the price of crude petroleum, the value of U.S. shipments of refined petroleum products decreased from \$189.8 billion in 1980 to \$127.5 billion in 1993. The United States is the world's largest consumer of refined petroleum products. Domestic production satisfies about 90 percent of domestic demand for refined petroleum products with imports accounting for the remainder. In terms of value, the ratio of U.S. imports to domestic consumption increased from 5.7 percent in 1980 to 10 percent during 1984-92 and 8.4 percent in 1993; in terms of quantity, imports consistently accounted for approximately 9 to 10 percent of domestic consumption.

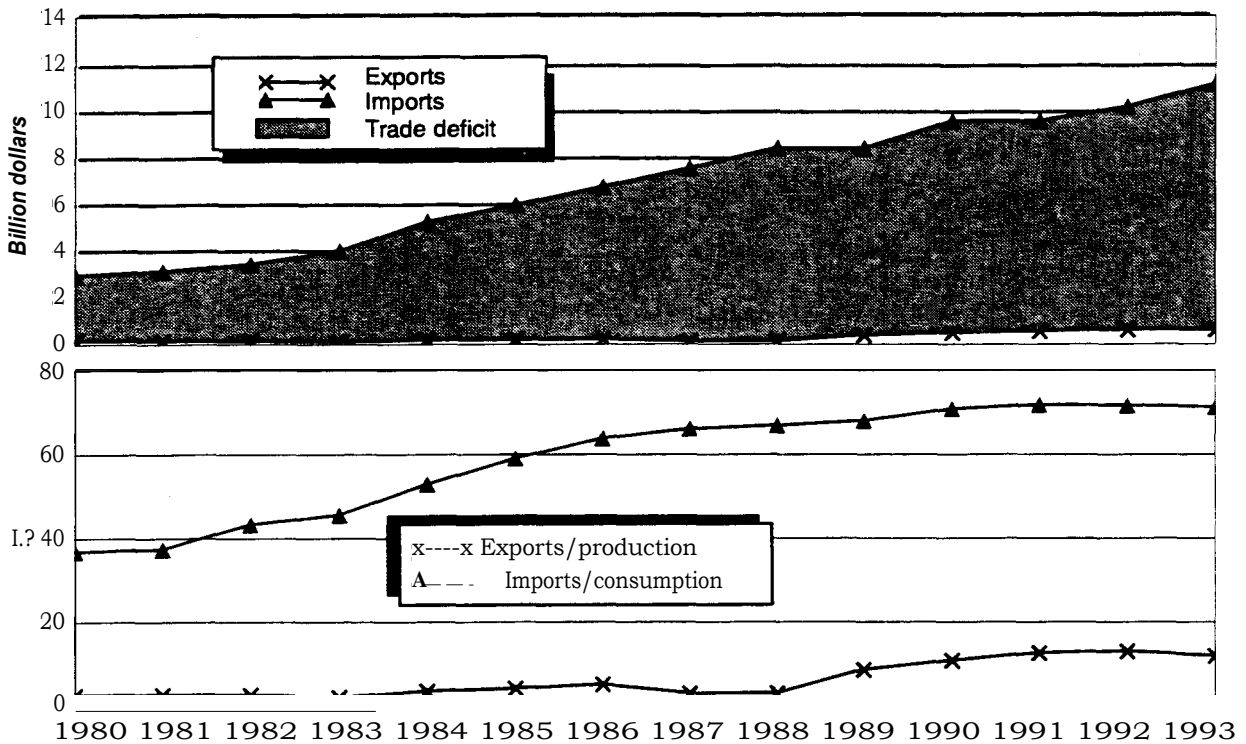
**Figure 18**  
**Apparel: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- The deterioration of the U.S. apparel trade balance since 1980 reflects the substantial growth in imports from low-labor-cost nations. Imports roughly tripled their share of the U.S. apparel market during the period against a backdrop of significant tariff and quota restrictions. The 1980s saw the emergence of a new wave of low-cost exporting nations, led by China, which received most-favored-nation trade status in early 1980, and the ASEAN nations. Developing countries, mostly in Asia, now supply all but a small part of U.S. apparel imports.
- Garment production has become highly globalized, with roughly half the world capacity having moved from developed to developing countries in the last three decades. This pattern of development has been aided in part by many, mostly large U.S. apparel firms and retailers that have turned to foreign sourcing in an effort to reduce operating costs. To compete against cheaper imports from Asia, many U.S. apparel firms have adopted programs with suppliers and retail customers to respond quickly to changing fashions and retailer demands.
- U.S. firms have also greatly expanded production-sharing operations offshore in an effort to remain competitive and preserve market share. Preferential quotas and reduced duties for apparel assembled in Mexico and the Caribbean from U.S.-origin fabric have enabled the region to become the fastest growing source of imports in recent years. The growth in these imports explains much of the increase in U.S. apparel exports. Garment parts for assembly in the region and reexport to the United States now account for roughly half of the apparel exports.

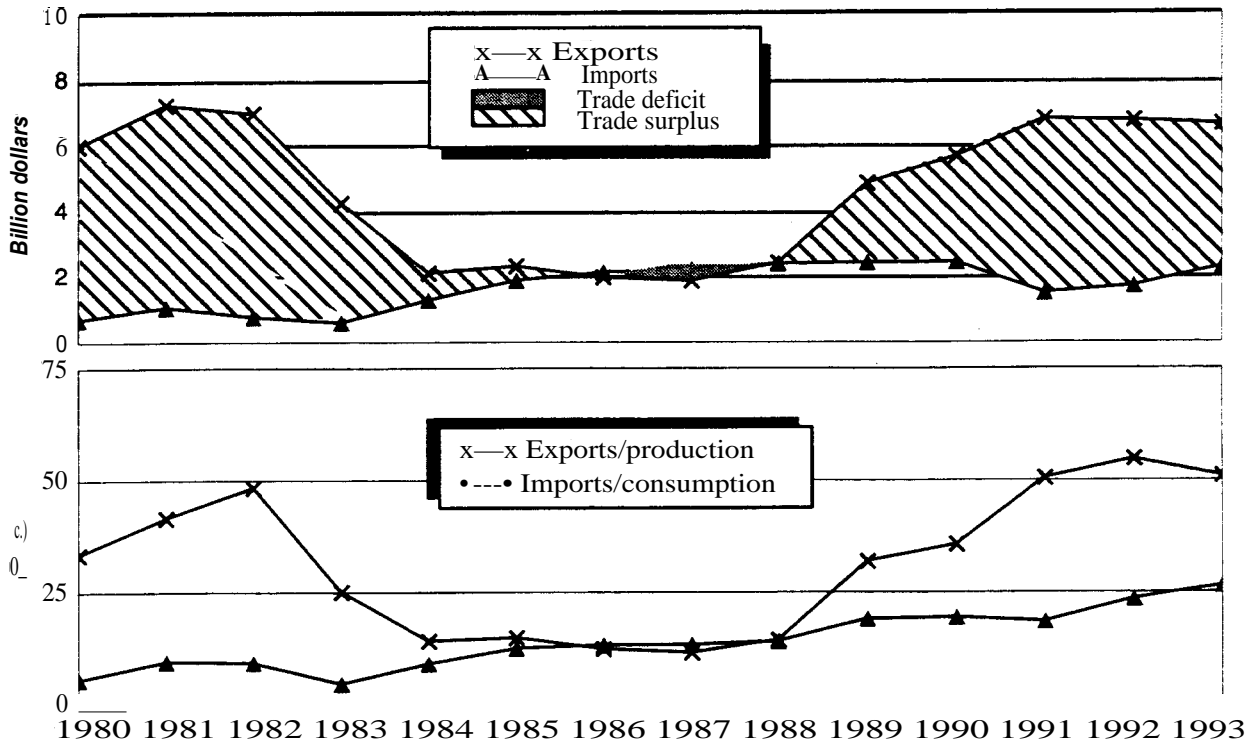
**Figure 19**  
**Footwear: Imports, exports, trade balance, and trade ratios, 1980-1993**



Source: Compiled by USITC staff.

- The growth in imports and the corresponding rise in the U.S. trade deficit for footwear since 1980 reflect the substantial advantage of developing countries in labor costs. Developing countries now supply over 80 percent of the total value of U.S. footwear imports. China alone supplies over 40 percent of the total, having replaced Taiwan and Korea as the major supplier.
- The expiration of the 4-year import-restraint agreements with Taiwan and Korea in 1981 and the appreciation of the U.S. dollar against currencies of major supplying countries in the early to mid-1980s greatly enhanced the competitive position of imports in the U.S. market. As shoe producers in Taiwan and Korea began to face rising operating costs and appreciating currencies in the late 1980s, they began to move production to lower-cost countries, especially China, whose competitive position had been aided with most-favored-nation trading status in 1980. The import growth was also attributable to growing U.S. demand for athletic and jogging shoes, which was met almost exclusively by Asian suppliers. As the average cost of imported shoes declined after the late 1980s, the share of the U.S. market held by imports remained steady in terms of value but increased in terms of quantity.
- The increase in U.S. footwear exports reflects efforts by a few large firms to restructure their operations on a global basis, following unsuccessful efforts to obtain import relief from the U.S. Government. They also automated their manufacturing and marketing functions in an effort to reduce costs and become more competitive in the global market. Many small firms increased exports by concentrating on market niches and competing on nonprice factors, such as brand name, quality, and styling.

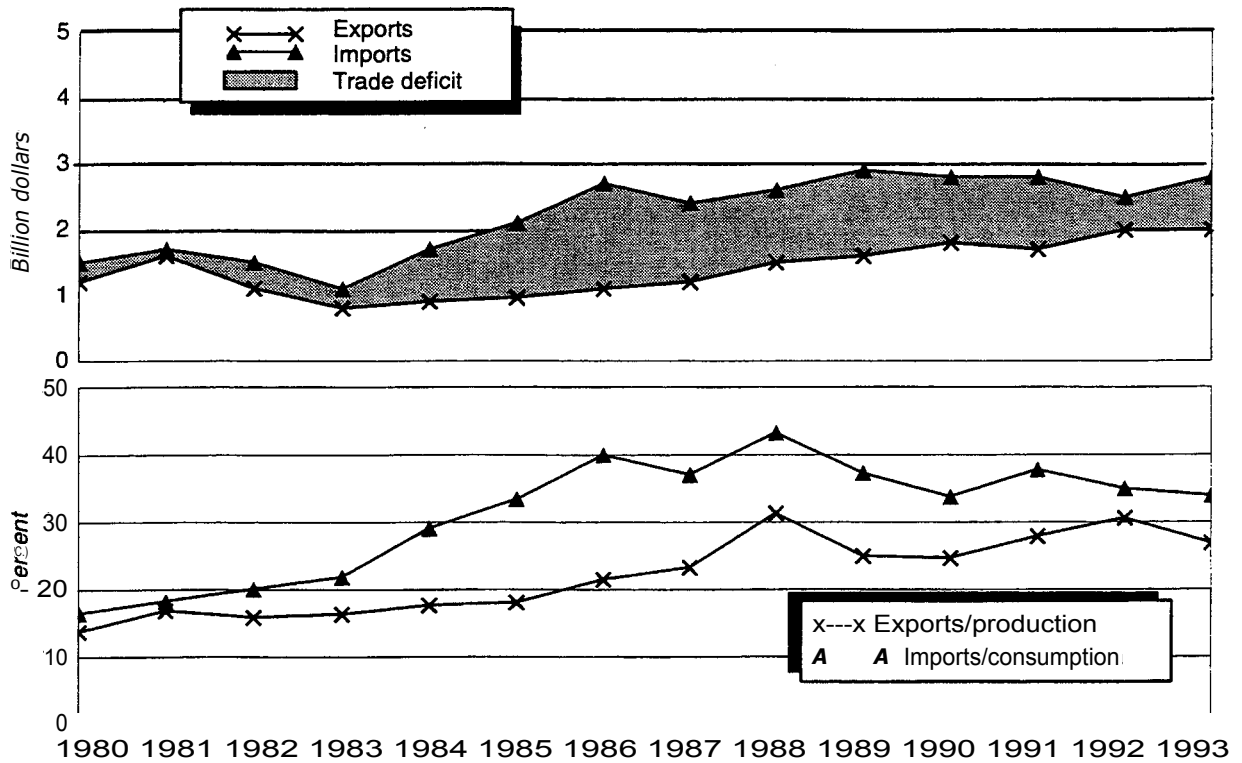
**Figure 20**  
**Construction and mining equipment: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- Fluctuations in the balance of trade in construction and mining equipment have been accounted for by shifts in both import and export levels, with the improvement in the balance of trade in the late 1980s and early 1990s largely due to a strong growth in exports. This growth in U.S. exports was sustained by high levels of construction and mining activity worldwide.
- The import-to-consumption ratio for construction and mining equipment has, with occasional slight dips, trended upward from the early 1980s. This is attributable to the improvements in cost and technology achieved by foreign manufacturers, along with the increased offshore production of U.S. manufacturers for shipment to the United States and other foreign markets.
- The export-to-production ratio for construction and mining equipment has closely followed the trend in the balance of trade for these products. Exports were strong in the early 1980s but sharply declined in the mid 1980s. This decline reflected the general slowdown in worldwide construction; many overseas markets registered double-digit percentage drops in construction activity. The developing world and Middle Eastern markets were especially hard hit by debt rescheduling difficulties and falling oil prices. However, with increased construction activity in important overseas markets and the emergence of major new markets in Asia, Eastern Europe, and the former Soviet Union, exports began a sharp rise in 1989 and tapered off only slightly in 1993.

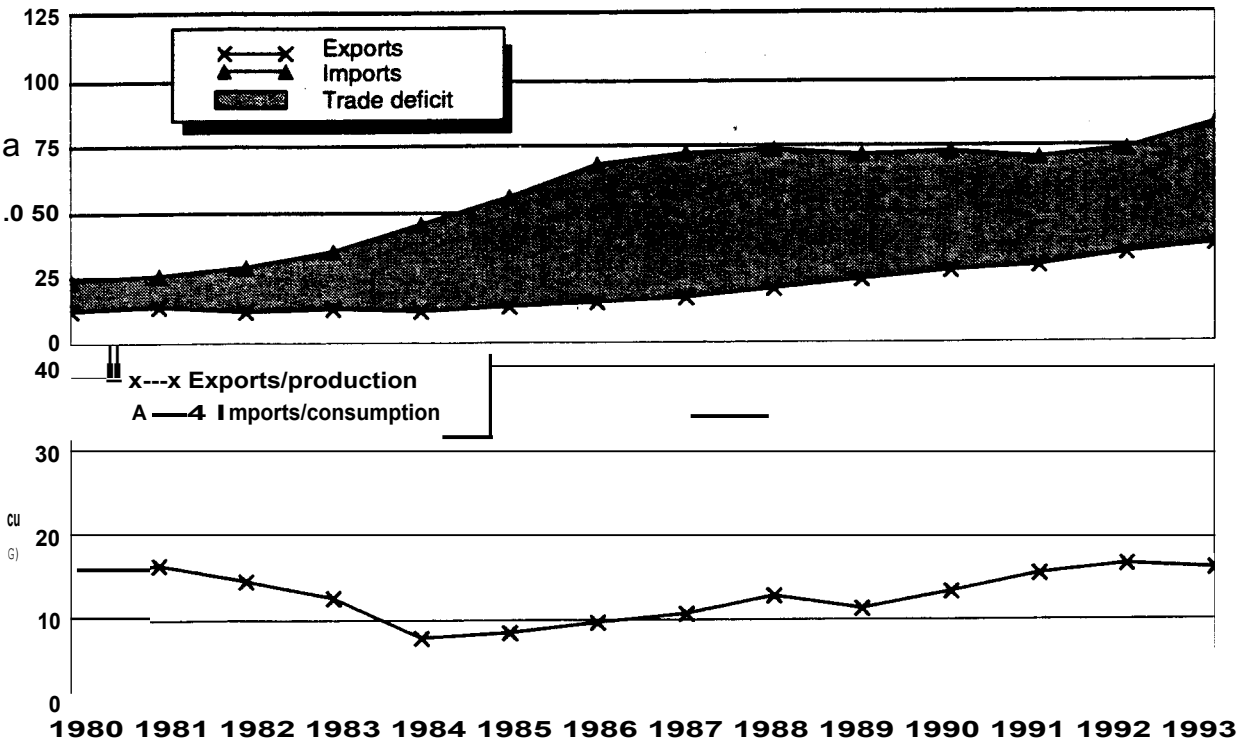
**Figure 21**  
**Metalworking machine tools and accessories: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- U.S. trade trends in metalworking machine tools and accessories (MMTA) are explained in part by the trend in domestic demand. U.S. shipments of MMTA peaked during 1980-81 (shipments of MMTA lag behind the U.S. business cycle by about a year), contracted during 1982-83, and then rose until 1991.
- During 1983-86, both the trade deficit and the ratio of imports to consumption rose sharply, primarily because Japanese, European, and Taiwan producers of MMTA were able to provide U.S. customers with rapid delivery of quality machines and support services at low prices. U.S. producers with full order books were not able to supply the total needs of an expanding U.S. market and lost future customers to import competition.
- During 1987-93, voluntary restraint agreements (VRAs) on certain metalworking machine tools limited imports from Japan and Taiwan. The VRAs covered about one-third of total machine tool imports. Partly due to the VRAs, Japanese machine tool producers shifted some production to U.S. subsidiaries. The pinnacle of the imports-to-consumption ratio for MMTA and the narrowing trend in the trade deficit after 1986 reflect the impact of the VRAs on imports and the shift of production to the United States.
- The ratio of U.S. exports to production rose as U.S. producers became price competitive in foreign markets in part because of favorable foreign exchange rates. Mexico, Korea, and China sought U.S. MMTA during the late 1980s and early 1990s.

**Figure 22**  
**Motor vehicles and parts: Imports, exports, trade balance, and trade ratios, 1980-93**

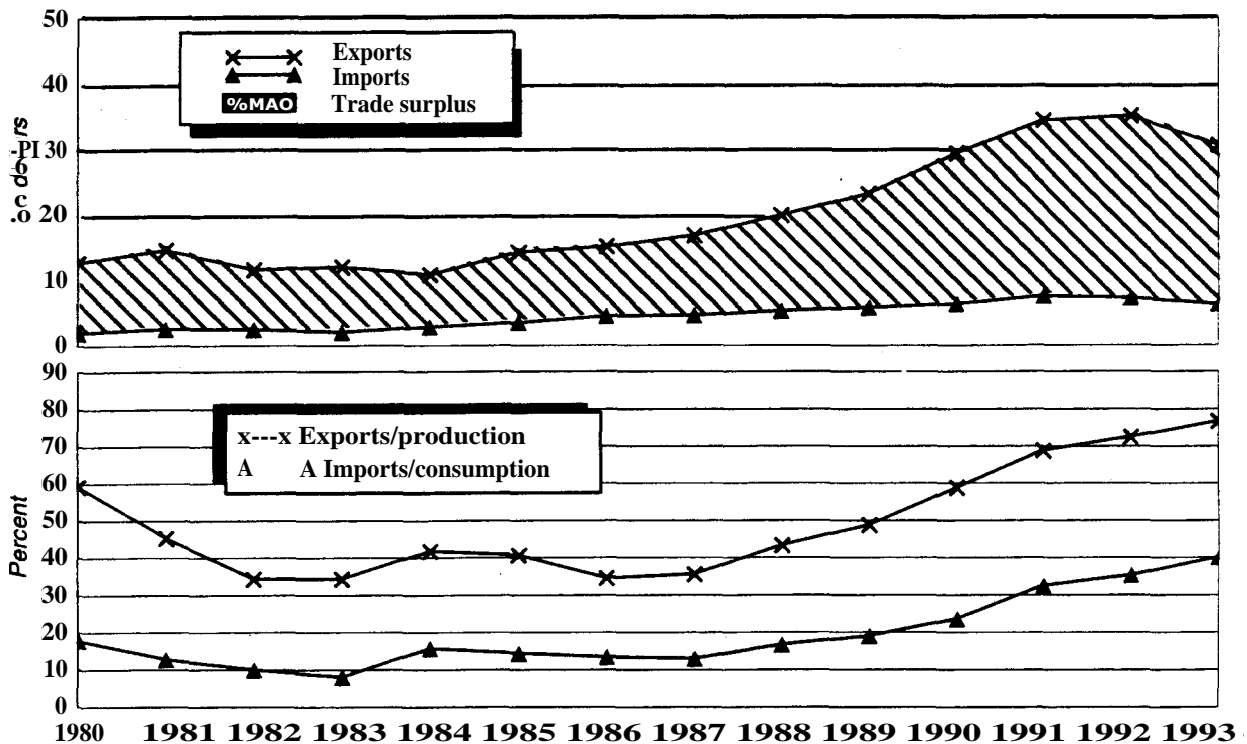


Source: Compiled by USITC staff.

- During 1980-87, the U.S. trade deficit in motor vehicles and parts increased consistently, primarily as the result of a major rise in U.S. imports of motor vehicles and parts from Japan. The trade deficit improved after 1987 as more Japanese motor vehicle and parts firms began to invest in U.S. production, and as U.S. exports grew at a faster pace. U.S. motor vehicle and parts producers have recently placed greater emphasis on gaining global market share both to capitalize on the high growth potential of many foreign markets and to utilize idle U.S. production capacity. The 1993 increase in the U.S. trade deficit was largely due to a rise in U.S. motor vehicle sales, which led to a surge in imports that outpaced the growth in U.S. exports.
- During 1980-88, the rising U.S. imports-to-consumption share reflected the growing trend in U.S. imports of Japanese motor vehicles and parts. The 1980s were a period of restructuring for the U.S. automobile and parts industries, which were forced to respond to the success of Japanese automakers and parts firms after the oil crises of the 1970s. The annual U.S. import-to-consumption ratio has declined and stabilized since the late 1980s, due primarily to increased U.S. production by Japanese-owned assembly plants and the increased competitiveness of U.S. automakers and parts firms in domestic and global markets.
- The ratio of U.S. exports to production declined substantially during 1981-84 due to generally weak or declining sales in many U.S. export markets. In 1983, the weak U.S. motor vehicle market recovered, and U.S. production of autos and parts increased to meet domestic demand, which contributed to the declining export-to-production ratio. Since 1984, the U.S. export share of production has gradually improved, as worldwide sales have grown and as U.S. motor vehicle and parts producers have become more competitive and more focused on global markets.



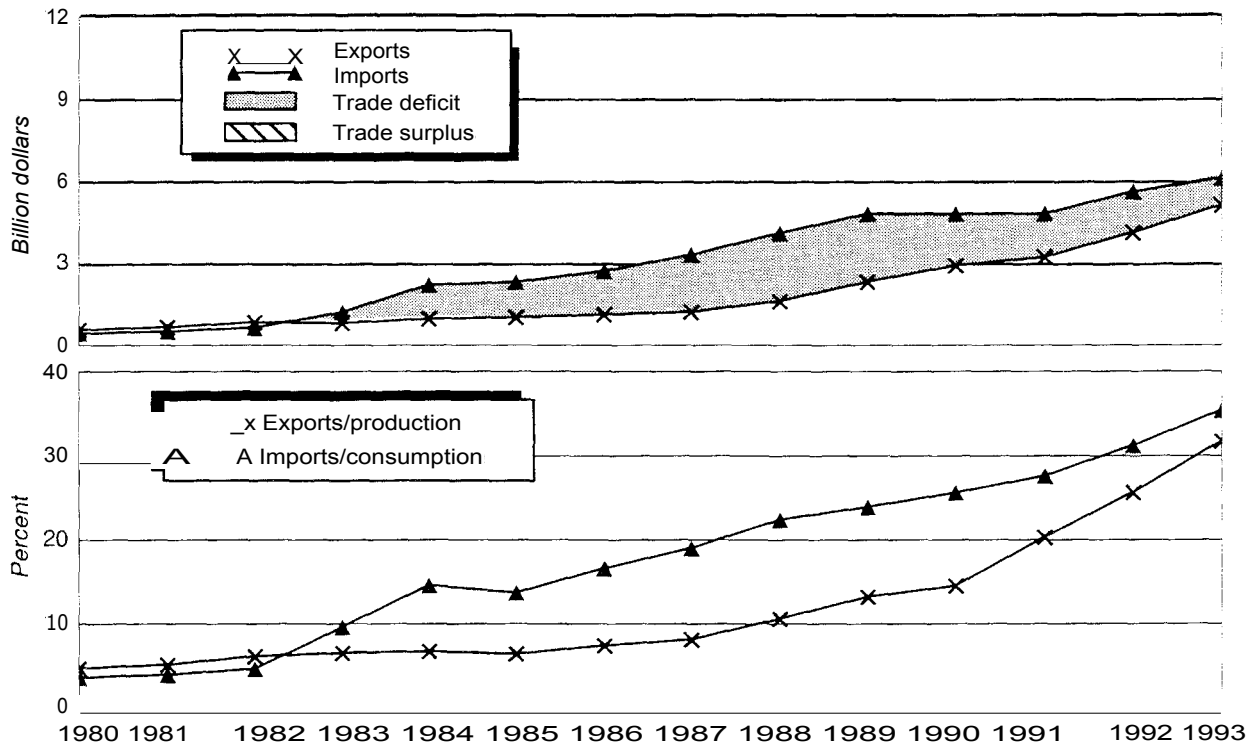
**Figure 23**  
**Aircraft and parts: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- The United States is the major global source of new large civil aircraft (LCA), producing more than half of the Western world's LCA. The U.S. trade surplus in aircraft and parts grew from \$10.8 billion to \$27.9 billion during 1984-92 before slipping to \$24.4 billion in 1993. Civilian exports rose during the period, while military exports declined.
- Global deliveries of LCA are cyclical in nature. Exports and domestic production grew during the period 1977-81, reflecting the increased demand for air transportation services due, in part, to the projected benefits of U.S. airline deregulation. However, between 1981 and 1984, a downturn in world economic conditions reduced demand for air transport, and U.S. exports of LCA sagged. The imports-to-consumption share, which had declined from 1980-83, rose in 1984, based on the small number of LCA shipped by U.S. producers that year (the lowest number for the period 1980-92) and the introduction of a new non-U.S. LCA, British Aerospace's BAe-146. After a three-year decline, this ratio has risen since 1987. While parts have accounted for the majority of this import growth, the popularity of foreign aircraft in the U.S. market was also unprecedented. The commuter aircraft market segment, or those aircraft between 20 and 100 seats, experienced substantial growth during 1987-93; this segment is not addressed by U.S. manufacturers of aircraft. In addition, Airbus Industrie began exporting an alternative to Boeing's popular model 737 during the late 1980s.
- The ratio of exports to production has followed a similar trend, for differing reasons. Foreign airlines reacted slower than their U.S. counterparts to the projected benefits of U.S. deregulation. When the demand for trans-Atlantic and trans-Pacific travel grew in the mid-80s, U.S. manufacturers were the suppliers of choice, partially for reasons of fleet commonality and parts availability.

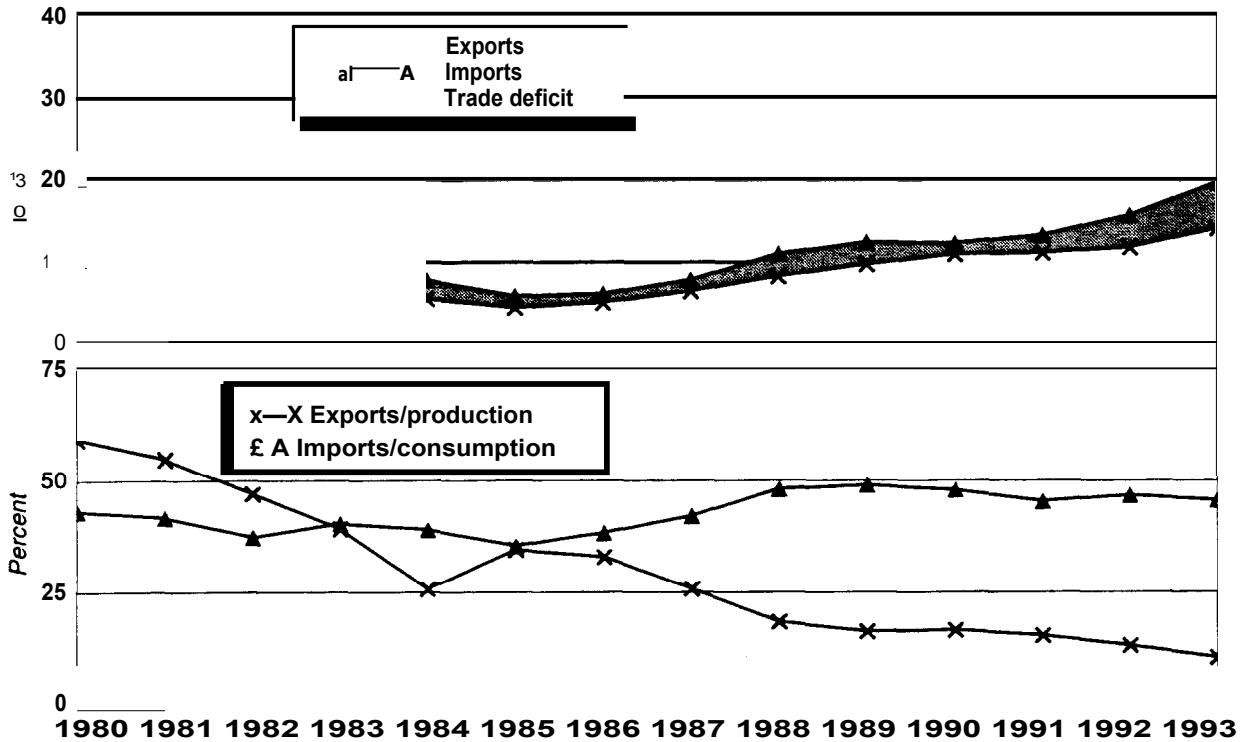
**Figure 24**  
**Telephone equipment: Imports, exports, trade balance, and trade ratios, 1980-1993**



Source: Compiled by USITC staff.

- Differences in the pace and extent of domestic and foreign market liberalization underlie changes in the U.S. trade balance for telephone equipment. The United States maintained one of the most open and liberal markets for many years, allowing imports to grow faster than exports and creating a significant trade deficit in telecommunication equipment. In recent years, however, an increasing number of foreign countries have opened their markets to U.S. exports. Further, many overseas markets are updating network infrastructure with sophisticated equipment, much of which is produced in the United States. As a result of these two trends, U.S. exports have been expanding more rapidly than U.S. imports over the past 5 years, reducing the overall deficit.
- The sharp increase in the share of consumption and production accounted for by imports and exports, respectively, is a reflection of increased competition in, and rapid globalization of, the telecommunication equipment industry. Beginning in the 1980s, competition in the telecommunication service industry increased as American Telephone & Telegraph (AT&T) divested its regional operating companies, Great Britain privatized British Telecom, and Japan initiated privatization of Nippon Telephone and Telegraph (NTT). Many of the newly-established service providers elected to reduce their traditional dependence on domestic equipment suppliers, creating significant new sales opportunities for foreign firms.
- The imports-to-consumption ratio expanded rapidly in the early 1980s as several U.S. manufacturers shifted production of low-end, labor-intensive equipment to countries with lower labor costs. The United States continues to import the majority of its consumer equipment from abroad. The ratio of exports to production also has expanded steadily as demand for sophisticated U.S. network equipment has risen and barriers to trade have fallen.

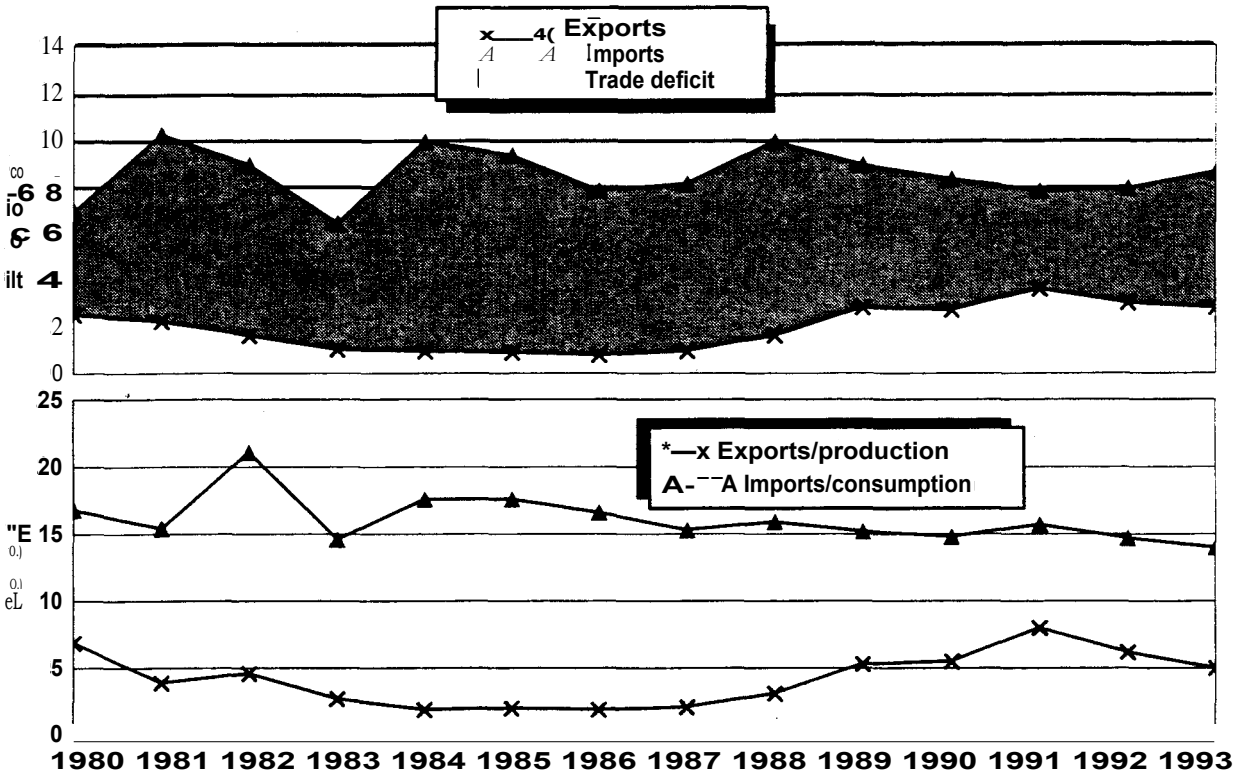
**Figure 25**  
**Semiconductor devices: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- Deteriorating trade balances with Japan and Korea account for most of the rise in the U.S. deficit in semiconductor trade. These two countries are the principal suppliers of commodity semiconductors, primarily dynamic random access memories (DRAMs). Computers and other rapidly expanding digital applications increasingly use DRAMs. Most U.S. semiconductor producers abandoned the production of DRAMs in the mid-1980s.
- Changes in the U.S. imports-to-consumption ratio since 1980 largely reflect changes in the value of commodity semiconductors. Most U.S. semiconductor imports are commodity semiconductors, the prices of which are extremely sensitive to changes in demand. Both in the mid-1980s and the early 1990s, when expenditures on computers and other electronic equipment were at historical lows, prices of commodity semiconductors fell. Overall, U.S. import penetration increased during this period partly because U.S. firms constructed manufacturing and assembly plants abroad to supply the U.S. market.
- Fluctuation in the ratio of U.S. exports to production reflect changes in demand for semiconductors both in the United States and abroad. U.S. exports of semiconductors are affected by U.S. demand for these devices because about half of these exports consist of unfinished semiconductors sent abroad for assembly and testing and then reimported to supply U.S. equipment producers. U.S. exports also are affected by U.S. demand for electronic equipment because a large share of U.S. semiconductor exports is used abroad to construct such equipment.

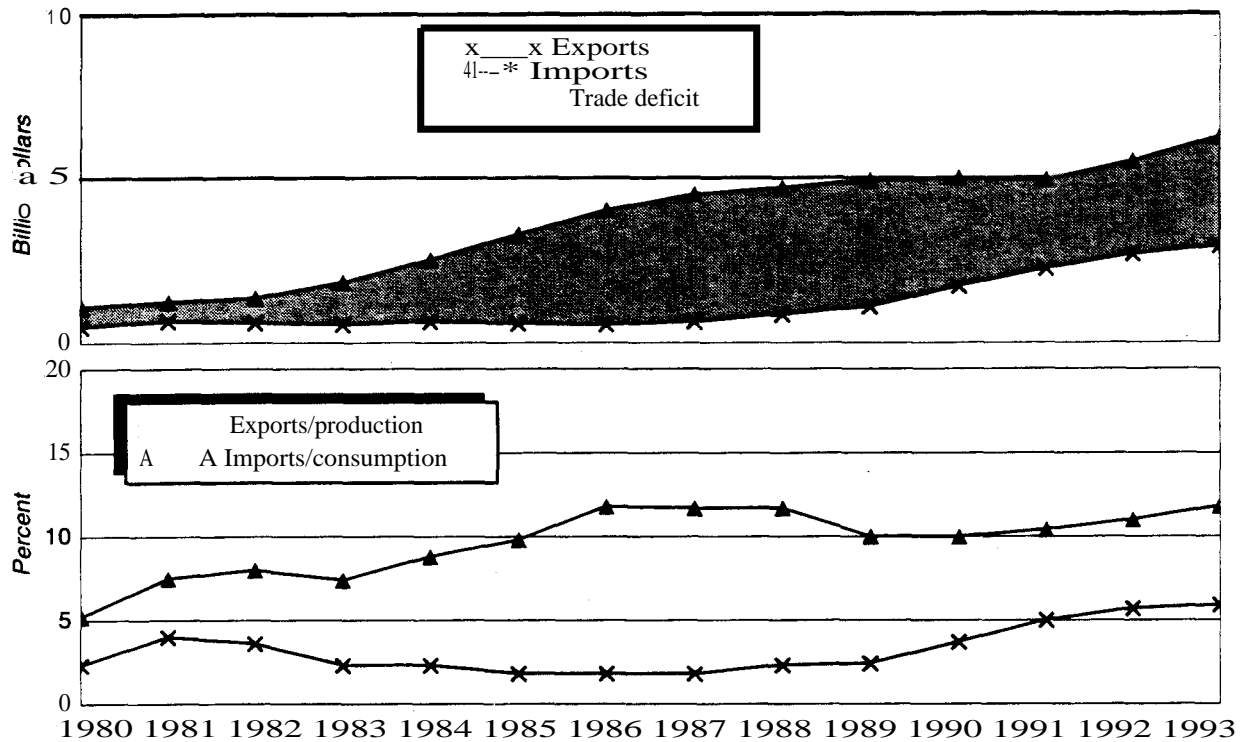
**Figure 26**  
**Iron and steel mill products: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- Variations in the balance of trade of steel mill products have generally been driven by changes in import levels, while the longer term trend of a declining deficit can be attributed largely to greater market access for exports over most of the period. Factors both internal and external to the U.S. market have affected the changes in import and export levels, such as varying relative demand levels and associated prices in the U.S. market and foreign markets, improvements in cost and quality by U.S. producers, and the imposition and expiration of the voluntary restraint agreement program.
- Since the early 1980s, the imports-to-consumption ratio for steel mill products has trended downward for a variety of reasons. Primary among these reasons are the imposition of a program of voluntary export restraints between October 1984 and March 1992, extensive restructuring and modernization of the domestic steel industry throughout the entire period, and significant shifts in the relative exchange rates for the dollar and the currencies of major import sources.
- Many of the same reasons for the decline in the imports-to-consumption ratio underlie an increase in the exports-to-production ratio for steel mill products since 1980. The restructuring and modernization of the domestic industry and exchange rate shifts have made U.S. steel products more competitive in foreign markets.

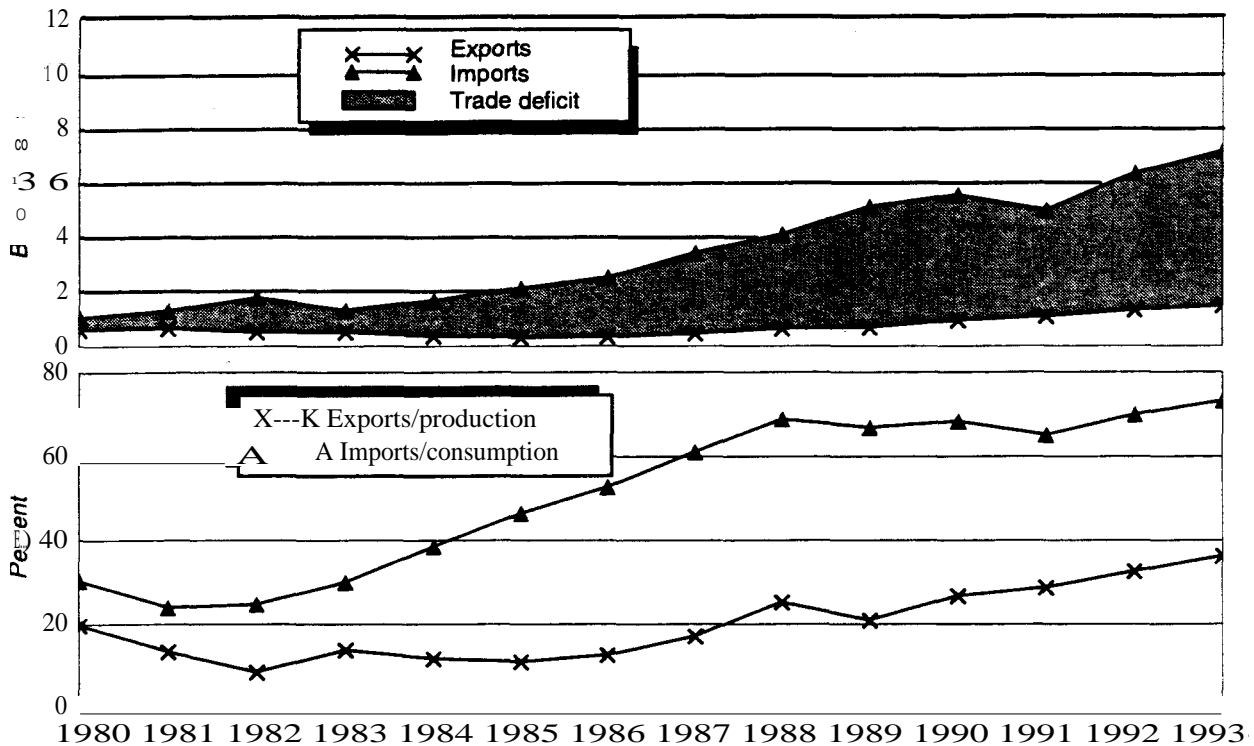
**Figure 27**  
**Furniture: Imports, exports, trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- Improvements in the competitiveness of U.S. furniture manufacturers during 1988-91 reversed a 6-year trend of increasing U.S. trade deficits, as U.S. manufacturers increased investments in manufacturing technology and pursued greater access to the Canadian market under the CFTA. The expanding U.S. trade deficit in earlier years was driven by an increase in U.S. imports from Canada, Taiwan, and Mexico. Aided by a strong U.S. dollar, Canadian household wood furniture became more price-competitive in the U.S. market, whereas Taiwan's lower cost labor during the period strengthened their position in the ready-to-assemble (RTA) furniture market.
- The emergence of China, Malaysia, Thailand, and Indonesia as lower-cost suppliers of RTA furniture in an expanding U.S. consumer market contributed to a recent widening trend in the U.S. trade deficit in 1991-93, despite rapid growth in U.S. exports since 1987. Rising labor costs in Taiwan encouraged producers there to move production facilities to these nearby countries. For the 1980-1993 period, imports have increased as a share of U.S. consumption over the years.
- Car seats account for a significant portion of the U.S. furniture trade with Canada and Mexico. Such trade reflects the integration of the North American motor vehicle industry. The bulk of the imports from both countries are assembled from U.S.-made parts and materials. Most U.S. exports of vehicle seats to both countries are destined for car assembly facilities wholly or jointly owned by the Big Three in Detroit. A significant portion of the assembled vehicles are destined for the U.S. market. Such trade has led to an increase in both U.S. imports and exports.

**Figure 28**  
**Toys and Games: Imports, exports trade balance, and trade ratios, 1980-93**



Source: Compiled by USITC staff.

- A widespread shift to offshore production sites by U.S. toy manufacturers and the Japanese-led resurgence in the video game industry has caused the U.S. market to become increasingly reliant on imports despite steady growth in U.S. exports. The sharply increased U.S. trade deficit over the past decade reflects a consistent upward trend in the imports-to-consumption share as lower-cost foreign competition has encouraged U.S. efforts to reduce production costs through globalization strategies.
- Beginning in the 1970s, many U.S. toy manufacturers sought to benefit from lower-cost labor by shifting production and assembly facilities offshore, primarily to Hong Kong, Taiwan, and, ultimately, China. Imports from Asia received a further boost in 1985 when the video game market was rejuvenated by Nintendo's introduction of an improved home video game system. Later joined in the market by Sega, these two Japanese companies dominate the global industry. The collapse of the video game industry in 1984 led several top U.S. producers (Bally, Mattel, and Coleco) to exit the industry permanently, creating a void that was filled by the Japanese firms.
- The improved exports-to-production ratio over the period reflects a concerted effort by U.S. manufacturers to market and sell products in which they have a significant advantage due to technology, design, skill, or quality reputation, such as pinball and casino games and bowling equipment. Rising exports also reflect increasing shipments of video game components by U.S. electronics firms and game designers to Asia (especially Japan and China) for assembly and global distribution.

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# CHAPTER 4

## Agricultural Products

The agricultural products sector traditionally registers the largest trade surplus among the major trade sectors under analysis. In 1993, this surplus posted at \$18.3 billion, down from \$19.7 billion in 1992. U.S. exports of agricultural products decreased by \$827 million (1.6 percent) to \$50.8 billion in 1993 (table 14). Exports of agricultural products to the EU, declined by \$691 million (8 percent), and exports to Korea, fell by \$300 million (12 percent). U.S. imports of agricultural products increased by \$565 million, or by 1.8 percent, to \$32.5 billion in 1993, with imports from the NAFTA countries increasing by \$1.0 billion.

Significant reductions in surpluses in agricultural commodity groups occurred in food and feed grains (cereals), cotton, cigarettes, frozen fish, cattle and beef, and unmanufactured tobacco. For all of these groups, a decrease in exports was the primary factor contributing to the trade balance decline. Significant increases in surpluses occurred in edible preparations, coffee, poultry, confectionery, fruit and vegetable juices, and oilseeds. Trade position improvement for edible preparations, oilseeds, poultry, and confectionery was attributable primarily to increased exports; improvements for fruit and vegetable juices and coffee were attributable primarily to decreased imports.

Cereals, oilseeds, cigarettes, and animal feeds are the leading U.S. agricultural commodity groups exported, and together account for nearly one-half of the value of all agricultural exports. In 1993, U.S. exports of these products amounted to \$10.7 billion, \$4.8 billion, \$3.9 billion, and \$3.6 billion, respectively. The value of U.S. exports of cereals, cigarettes, and animal feeds declined from 1992 levels. The decline in U.S. exports of cereals was due primarily to plentiful global supplies of food and feed grain combined with diminished consumer purchasing power in less-affluent traditional U.S. export markets. The decline in the value of cigarette exports was the result of many factors, including a decrease in the export unit value, reduced foreign consumption, and more intense foreign competition. Other agricultural commodity groupings that experienced significant decreased exports (i.e., of over \$100 million) between 1992 and 1993, included cotton, frozen fish, unmanufactured tobacco, and cattle and beef. Cotton exports were down, primarily be-

cause of abundant global supplies and aggressive foreign competition. Factors contributing to the decline in frozen fish exports included increased global competition and lower prices. The decline in U.S. unmanufactured tobacco exports resulted from a combination of factors—decreased foreign production of cigarettes and cigars, increased foreign supplies of unmanufactured tobacco, and changes in consumer tastes toward discount cigarettes that had a negative impact on U.S. exports. Agricultural commodity groupings that experienced significant increases in exports in 1993, included edible preparations, oilseeds, poultry, confectionery, and processed vegetables.

The leading U.S. agricultural import groupings were shellfish (\$3.2 billion); cattle and beef (\$3.0 billion); coffee (\$1.7 billion); distilled spirits (\$1.4 billion); unmanufactured tobacco (\$1.4 billion); edible preparations (\$1.3 billion); confectionery (\$1.3 billion); frozen fish (\$1.3 billion); and tropical fruit (\$1.2 billion). These nine agricultural commodity groupings represented one-half of all agricultural imports during 1993. U.S. imports of fresh vegetables, shellfish, cigarettes, beef, and leather each increased by more than \$100 million between 1992 and 1993. U.S. imports of fresh vegetables fluctuate widely from one year to the next; imports in 1992 were at unusually low levels, while import levels in 1993 recovered. U.S. imports of coffee, juices, wine, distilled spirits, fats and oils, and unmanufactured tobacco each fell by over \$100 million in 1993. Most of the decrease in U.S. imports of juices was due to a decline in the average unit value of orange juice imported from Brazil.

### U.S. Bilateral Trade

The major U.S. trading partners in agricultural products during 1993 were the EU, Japan, Canada, and Mexico, which together accounted for \$45.8 billion, or 55 percent of total U.S. foreign trade (table 14). Japan, by far the largest U.S. agricultural export market, accounted for \$12.2 billion, or nearly one-quarter of all U.S. agricultural exports, in 1993. The EU accounted for about one-sixth of all U.S. exports and supplied nearly the

**Table 14**  
**Agricultural products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
Japan .....	12,289	12,189	-100	-0.8
Canada .....	5,235	5,648	413	7.9
Mexico .....	3,855	3,725	-130	-3.4
Netherlands .....	1,954	1,776	-178	-9.1
Taiwan .....	2,061	2,211	149	7.2
Korea .....	2,496	2,197	-300	-12.0
Thailand .....	368	372	4	1.0
United Kingdom .....	1,043	1,045	3	0.2
Germany .....	1,245	1,173	-73	-5.8
Brazil .....	153	218	65	42.1
All other .....	20,952	20,272	-680	-3.2
<b>Total .....</b>	<b>51,652</b>	<b>50,824</b>	<b>-827</b>	<b>-1.6</b>
EU-12 .....	9,055	8,363	-691	-7.6
OPEC .....	2,262	2,687	425	18.8
Latin America .....	7,037	7,304	267	3.8
CBERA .....	1,629	1,878	249	15.3
Asian Pacific Rim .....	20,461	20,111	-350	-1.7
ASEAN .....	1,734	1,781	47	2.7
Eastern Europe .....	311	408	97	31.3
<b>U.S. imports for consumption:</b>				
Japan .....	370	389	19	5.2
Canada .....	5,880	6,514	634	10.8
Mexico .....	2,730	3,130	400	14.7
Netherlands .....	821	885	64	7.8
Taiwan .....	326	325	-2	-0.5
Korea .....	180	179	-1	-0.4
Thailand .....	1,451	1,591	140	9.6
United Kingdom .....	804	833	29	3.6
Germany .....	647	597	-49	-7.6
Brazil .....	1,431	1,514	82	5.8
All other .....	17,330	16,578	-752	-4.3
<b>Total .....</b>	<b>31,969</b>	<b>32,534</b>	<b>565</b>	<b>1.8</b>
EU-12 .....	6,020	5,825	-195	-3.2
OPEC .....	1,512	1,480	-32	-2.1
Latin America .....	9,723	10,266	543	5.6
CBERA .....	2,161	2,235	74	3.4
Asian Pacific Rim .....	5,579	5,187	-392	-7.0
ASEAN .....	2,984	2,858	-125	-4.2
Eastern Europe .....	378	274	-103	-27.3
<b>U.S. merchandise trade balance:</b>				
Japan .....	11,919	11,799	-120	(2)
Canada .....	-645	-866	-221	(2)
Mexico .....	1,125	595	-530	(2)
Netherlands .....	1,134	892	-242	(2)
Taiwan .....	1,735	1,886	151	(2)
Korea .....	2,317	2,018	-299	(2)
Thailand .....	-1,083	-1,219	-136	(2)
United Kingdom .....	239	212	-27	(2)
Germany .....	599	575	-23	(2)
Brazil .....	-1,278	-1,296	-18	(2)
All other .....	3,622	3,695	73	(2)
<b>Total .....</b>	<b>19,683</b>	<b>18,290</b>	<b>-1,392</b>	<b>(2)</b>

See footnotes at end of table.



**Table 14—Continued**  
**Agricultural products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993**<sup>1</sup>

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance—Continued</b>				
EU-12 .....	3,034	2,539	-496	(2)
OPEC .....	750	1,207	457	
Latin America .....	-2,686	-2,961	-276	2)
CBERA .....	-532	-358	174	(2)
Asian Pacific Rim .....	14,882	14,924	42	
ASEAN .....	-1,249	-1,077	172	(2)
Eastern Europe .....	-67	133	200	2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> Not meaningful for purposes of comparison.

**Note.**—Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

**Source:** Compiled from official statistics of the U.S. Department of Commerce.

same proportion of U.S. agricultural imports. Bilateral trade with Canada increased to \$12.2 billion in 1993, or 9 percent, \$1.1 billion more than the 1992 level. Bilateral trade with Mexico increased by 4 percent to \$6.9 billion in 1993, with U.S. exports to Mexico of \$3.7 billion exceeding U.S. imports from Mexico of \$3.2 billion. Figure 29 illustrates U.S. exports to these four major markets, as well as U.S. exports to other major regions. This figure also highlights the major U.S. agricultural exports to these regions. Figure 30 illustrates U.S. imports from the major agricultural import sources and highlights major agricultural imports from these regions in 1993.

## Commodity Analysis

### *Cereals (food and feed grains)*

The traditionally strong U.S. trade surplus in food and feed grains declined by \$590 million in 1993 to \$10 billion. Food and feed grain exports fell by \$0.5 billion, from \$11.2 billion to \$10.7 billion. The decrease in U.S. exports of cereal grains arose from diminished exports to Russia, Mexico, Egypt, and Korea. This decrease resulted from plentiful world supplies and diminished purchasing power in certain traditional markets such as the former Soviet Union, largely because of poor economic performance and foreign exchange shortages. World production of total grains rose from 1,694 million

metric tons (mmt) in 1991/92 to 1,770 mmt in 1992/93.<sup>82</sup>

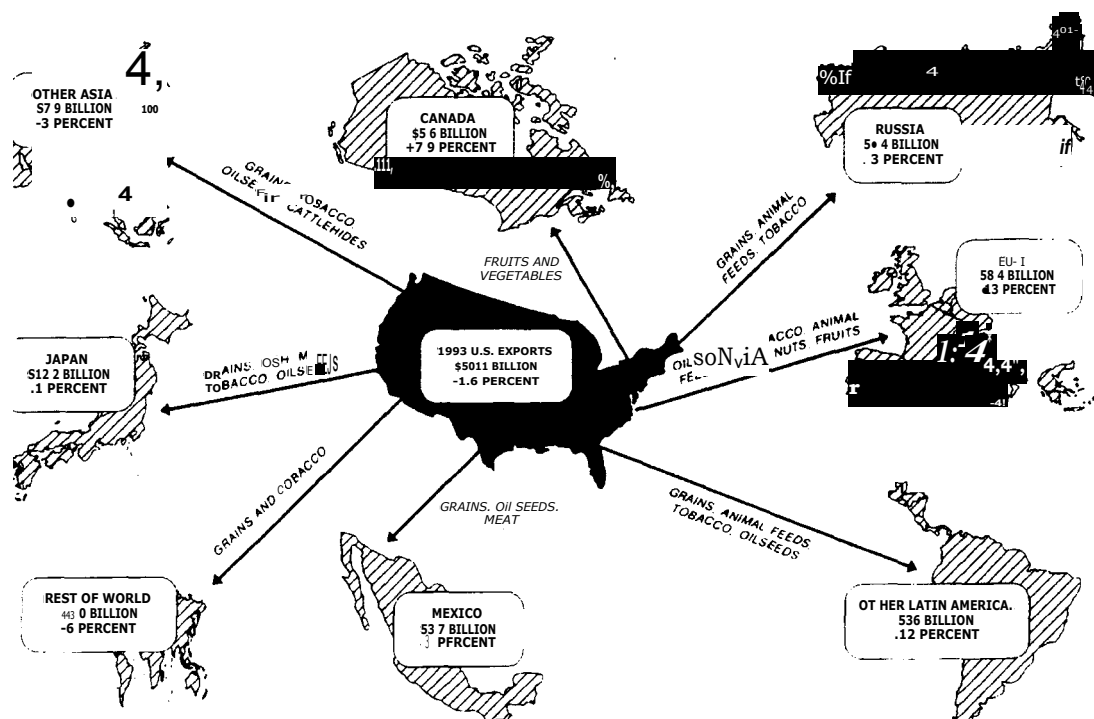
Wheat, corn, and rice accounted for the bulk of cereal grain exports in 1993. Wheat accounted for over 43 percent of such exports; corn, 41 percent; and rice, 7 percent. However, exports of cereal grains to Mexico dropped by \$189 million (36 percent) in 1993 to \$670 million; exports to Korea, fell by \$160 million (34 percent) in 1992 to \$281 million; and shipments to Egypt fell by \$118 million (21 percent) to \$440 million in 1993.

The drop in exports to Mexico was attributed to a \$191 million (33 percent) decline in sorghum exports in 1993, which fell to \$354 million. This decline was offset partly by a 174 percent increase in exports of wheat to Mexico, which jumped \$84 million to \$132 million. The increase in U.S. wheat exports to Mexico is explained in part by that nation's diminished harvest from untimely rains.

A \$150 million (74 percent) drop in corn exports to Korea in 1993 to \$53 million accounted for most of the overall decline in the total cereal exports to that country. Korea, which uses corn as animal feed, switched to importing feed wheat from Australia and Canada instead of corn from the United States.

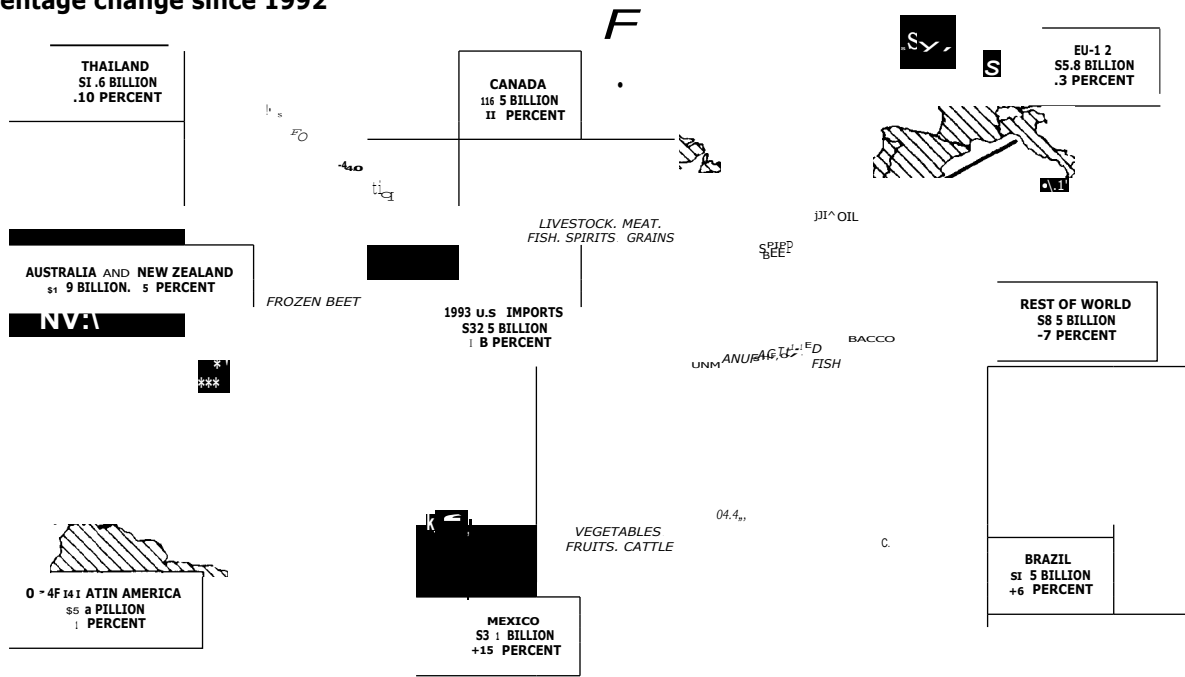
<sup>82</sup> U.S. Department of Agriculture, Foreign Agricultural Service, *World Crop Production* (Jan. 1994, WAP 1-94). Data for 1992/93 are preliminary. The "split" year refers to the marketing year. For wheat, barley, rye, and oats, the marketing year is June 1 through May 31, such that 1992/93 is June 1, 1992 through May 31, 1993. The market years are Sep. 1 through Aug. 31 for corn and sorghum and Aug. 1 through July 31 for rice. For market years, see U.S. Department of Agriculture, Foreign Agricultural Service, "Grain: World Markets and Trade, FG 4-94," Apr. 1994.

**Figure 29**  
**U.S. agricultural sector exports, 1993: Leading U.S. exports, by major markets, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

**Figure 30**  
**U.S. agricultural sector imports, 1993: Leading U.S. imports, by major sources, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

The drop in exports of U.S. cereal grains to Egypt in 1993 was attributed to that nation's 47 percent decline in U.S. wheat purchases, which fell by \$240 million in 1993 to \$210 million. On the other hand, Egypt increased overall flour imports during 1992/93, much of it from the United States. U.S. flour exports to Egypt have benefited from policy reforms that now permit private firms to import flour and to set flour prices. Previously, firms had to sell wheat flour at government-imposed prices.<sup>83</sup> Elsewhere in North Africa, a drought reduced local crop production in 1993 and resulted in increased U.S. cereal grain exports, particularly to Morocco (by \$175 million to \$270 million).

U.S. imports of food and feed grains increased by \$73 million (14 percent) in 1993 to \$586 million in 1993. The increase in imports is largely accounted for by larger imports of Canadian grains, which rose by almost 25 percent in 1993. Excluding Canada, however, U.S. imports of cereals declined by more than 4 percent.

**John Pierre-Benoist**  
(202) 205-3320

## Cotton

Exports of U.S. cotton, not carded or combed (raw cotton), declined for the third year in a row, dropping from slightly less than \$2 billion in 1992 to \$1.5 billion in 1993. U.S. exports of raw cotton for 1993/94<sup>84</sup> were 1.4 mmt, while world exports were 5.6 mint. Over the last 5-crop years, the United States exported an average of 1.5 mmt of raw cotton, compared with a worldwide average of 6.3 mint. Thus, U.S. exports of raw cotton accounted for an averaged of 24 percent of world raw cotton exports over the period.

For the period 1989-93, U.S. imports of cotton declined sharply, from \$3.3 million in 1989 to \$413,000 in 1993, resulting in a 1993 trade surplus in excess of \$1 billion. The decline in U.S. imports of cotton stemmed largely from diminished production in key producing areas, such as Turkey and Pakistan, increased U.S. production, and large stocks. Nevertheless, mainly because of quotas that limit and discourage cotton imports, market penetration of raw cotton imports into the U.S. market is negligible.

Over the last 5-crop years, production of U.S. cotton has averaged 3.4 mmt; production in 1993/94

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<sup>83</sup> U.S. Department of Agriculture, Economic Research Service, *Wheat Situation and Outlook Report* (Sept. 1993, WS-303).

<sup>84</sup> Season runs from Aug. 1 to July 31; 1993/94 data are U.S. Department of Agriculture (USDA) estimates.

was 3.5 mmt. Over the same period, world production averaged 18.5 mint, with the United States accounting for an average of 18 percent of world cotton production during the period.

Major export markets for U.S. cotton, not carded or combed, in 1993, were Korea (\$294.7 million), Japan (\$245.2 million), Mexico (\$188.4 million), and Indonesia (\$141.0 million). According to the U.S. Department of Agriculture (USDA), U.S. exports of raw cotton declined because of abundant world supplies and aggressive pricing by foreign producers. However, exports are expected to increase in 1994 because of lower production estimates for India, Paraguay, Uzbekistan, and Brazil.

**John Pierre-Benoist**  
(202) 205-3320

## Frozen fish

The U.S. trade surplus for frozen fish eroded in 1993 to \$233 million, down 60 percent from the previous year's surplus of \$583 million. Declines were registered in both imports and exports; however, the fall in exports (19 percent) far exceeded that in imports (0.7 percent).

U.S. exports of frozen fish dropped from 603,000 metric tons, valued at \$1.9 billion in 1992, to 583,000 metric tons, valued at \$1.5 billion in 1993. Most of the decline occurred in the primary market of Japan, which accounted for about 80 percent of total U.S. exports in 1993. This drop in value resulted mainly from lower export unit values for salmon,<sup>85</sup> which were caused by ample global supplies and increased competition in the Japanese market. The overall quantity of U.S. frozen fish exports to Japan remained relatively stable during the period, declining by just 0.9 percent. Significant declines were also registered in U.S. exports of frozen groundfish in 1993, as exports dropped by nearly one-third in quantity to about 77,000 metric tons, and by 35 percent in value to \$113 million. The principal factor affecting exports was the depressed state of North Atlantic groundfish stocks, which resulted in lower domestic catches and production of frozen groundfish.

U.S. imports of frozen fish rose in quantity from 429,000 metric tons in 1992 to 461,000 metric tons in 1993, or by 7.6 percent. The value declined slightly (0.7 percent), and totaled about \$1.3 billion each year. The principal suppliers include Canada (16 percent of the total value in 1993), Iceland (13 percent), New Zealand (11 percent), and Taiwan (11 percent). The principal import product is frozen tuna. In 1993, this product accounted for about

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<sup>85</sup> Frozen salmon is a major U.S. export item to Japan in this category.

one-quarter of the quantity and 16 percent of the value of total frozen fish imports. In 1993, U.S. imports of frozen tuna increased 9 percent in quantity to 121,094 metric tons and 14 percent in value to \$204 million. The increase in 1993 imports reflected a recovery from unusually low import levels the previous year. Virtually all of these imports are used by U.S. canned tuna processors as raw material.

U.S. imports of frozen salmon, the second leading import item in this category, increased in quantity by about one-fourth in 1993 to about 8,000 metric tons. The value of this import category remained relatively constant at \$31 million, largely the result of ample global supplies.

U.S. imports of groundfish, another major U.S. frozen fish import item, increased nearly fivefold in quantity in 1993 to 5,418 metric tons, and rose 121 percent in value to \$7.9 million. A substantial rise in imports from Russia contributed to the increase; the relatively low value of such imports (\$1.76 per kilogram) restricted the rise in import value. U.S. and other major world producers of groundfish have expressed concern regarding the recent appearance of low-priced Russian whitefish (including groundfish) in world markets. In 1993, U.S. imports from other suppliers generally rose, particularly from such nontraditional suppliers as India, China, and Mexico. The depressed North Atlantic groundfish stocks prompted the U.S. frozen groundfish market to search for alternative sources of supplies.

**Doug Newman**  
(202) 205-3328

## ***Fresh, chilled, frozen vegetables***

U.S. imports of fresh, chilled, or frozen vegetables rose from \$966.3 million in 1992 to \$1.3 billion in 1993, or by 30 percent. More than 90 percent of this rise was accounted for by more imports of certain fresh or chilled winter vegetables (i.e. cucumbers, peppers, squash, and tomatoes) principally from Mexico. Imports of fresh or chilled tomatoes alone rose 124 percent (by value) in 1993 and accounted for nearly 70 percent of the total increase in winter vegetables. Nearly all of the remaining increase in fresh, chilled, or frozen vegetable imports was accounted for by increases in fresh or chilled potatoes from Canada.

Fresh, chilled, or frozen vegetable imports were at a recent low in 1992, due to unseasonably heavy rains in Mexico during the winter season that, destroyed a large share of production destined for ex-

port. The 1993 import level for fresh, chilled, or frozen vegetables more closely approximates import levels of previous years. Overall import levels of vegetables, especially those fresh or chilled, tend to fluctuate widely from year to year, given the perishability of these items and unfavorable changes in weather during growing and harvesting.

U.S. exports of fresh, chilled, or frozen vegetables rose 2 percent from 1.7 mmt in 1992 to 1.8 mmt in 1993. The bulk of the rise was accounted for by shipments to Japan. The leading foreign markets for domestically-produced fresh, chilled, or frozen vegetables in 1993 included Canada, Japan, and Mexico, the same as in recent years.

**Tim McCarty**  
(202) 205-3324

## ***Edible preparations***

U.S. imports and exports of edible preparations, ranging from infant formula to pasta to chewing gum, have grown significantly over the past 5 years, with average annual value and growth rates of 18 and 22 percent, respectively. In 1993, U.S. exports of edible preparations continued to outstrip U.S. imports, reflecting strong world demand for U.S. processed food products. Exports rose from \$2.2 billion in 1992 to \$2.5 billion in 1993, and imports rose from \$1.2 billion to \$1.3 billion over the same period.

Preparations for the manufacture of beverages and edible preparations not canned or frozen continued to be the largest U.S. edible preparations exports, rising from \$327 million and \$321 million in 1992 to \$362 million and \$444 million, respectively, in 1993. Other U.S. exports of edible preparations that saw a significant increase in the value from 1992 to 1993 included preparations for infant use, chewing gum, mixes and doughs, and products such as breads, cakes, pastries, and puddings. One category of edible preparations exports experiencing a general decline in 1993 was pasta, with the exception of frozen and canned pasta. Exports of pasta declined in 1993, due largely to a tight U.S. durum wheat market with record-high U.S. prices as well as increasing domestic demand and foreign competition.

U.S. exports to Canada experienced the largest absolute growth of edible preparations in 1993, rising from \$734 million to \$808 million. The growth in exports to Canada was led by products such as edible preparations not canned or frozen; breads, cakes, pastries, and puddings; confections ready for consumption; and mixed condiments and seasonings. Other countries significantly increasing edible preparation imports from the United States in 1993 included Mexico, Hong Kong, Japan, Russia, and

Byelarus. These imports included chewing gum, mixes and doughs, and preparations for infant use.

The growth of U.S. imports of edible preparations in 1993 was led by products such as chewing gum, pasta, tea and mate extracts, and dried soups and broths. Imports of edible preparations from Canada and Mexico experienced the largest growth in 1993. Imports from Canada increased 12 percent, from \$467 million to \$523 million; imports from Mexico increased nearly 18 percent, from \$90 million to \$105 million. The increase in U.S. imports of edible preparations from Canada was composed largely of imports of food preparations of flour, starch, and dairy products; pasta; and sweet biscuits, waffles, and wafers. U.S. imports of food preparations from Mexico that increased in 1993 also included sweet biscuits, waffles, and wafers; sauces and preparations; and soups, broths, and preparations thereof.

**Joan Williams**  
**(202) 205-3313**

## ***Unmanufactured tobacco***

After climbing to record levels in 1992, both the quantity and value of U.S. exports of unmanufactured tobacco fell during 1993 by about 20 percent (\$344 million) to 208 million kilograms, valued at \$1.3 billion. Exports of flue-cured and burley tobaccos destined for the EU, Turkey, Japan, South Korea, and Taiwan experienced the greatest declines. Exports of Connecticut Shade tobacco to the Dominican Republic also fell significantly. The overall decline in unmanufactured tobacco exports can be attributed to declining cigarette and cigar production in many export markets, increased world supply and demand for relatively less expensive tobacco, large carryover stocks of tobacco from previous years,<sup>86</sup> and reduced imports of U.S. tobacco by countries such as Turkey in response to the newly enacted U.S. legislation limiting tobacco imports.<sup>87</sup>

U.S. tobacco exports to the EU fell,<sup>88</sup> partly in response to declining European cigarette production,

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<sup>86</sup> The Italian tobacco monopoly had detained large stocks of burley tobacco imported from the United States in previous years.

<sup>87</sup> Omnibus Budget Reconciliation Act of 1993, sec. 1106, Public Law 103-66, 107 Stat. 318, Aug. 10, 1993. "Proposed Rule" of ASCS, USDA in Federal Register, vol. 59, no. 7, Tuesday, Jan. 11, 1994. "Interim Rule" of CCC, USDA in Federal Register, vol. 58, no. 245, Thursday, Dec. 23, 1993 ("Interim Rule" correction: Federal Register, vol. 59, no. 6, Monday, Jan. 10, 1994).

<sup>88</sup> U.S. tobacco exports to Germany fell by 40 percent, or by \$110 million, between 1992 and 1993, while exports to the Netherlands and the United Kingdom each fell by about 25 percent, and exports to Italy and Spain declined by nearly 50 and 70 percent, respectively.

which was caused by trade in contraband cigarettes (especially in Germany and Spain), falling domestic cigarette consumption, and declining cigarette exports. EU cigarette consumption has been negatively affected by antismoking campaigns throughout the EU, together with decreased disposable income in Germany, heavy cigarette tax increases in the United Kingdom, and increased cigarette prices in The Netherlands. European cigarette exports to the former Soviet Union, Eastern Europe, Northern Africa, and the Middle East, which had grown considerably before 1992, declined as hard currency became increasingly scarce in those countries and large multinational cigarette manufacturers invested more heavily there to serve the domestic markets.<sup>89</sup>

U.S. tobacco exports to the EU also fell in response to increased international supply and demand for relatively inexpensive tobacco. While the price of U.S. tobacco rose in 1993, prices of Malawian, Zimbabwean, and Brazilian tobacco fell. Despite its higher price, U.S. tobacco had previously been sought after internationally for its high quality. However, demand for lower-priced tobacco (though somewhat lower in quality) has risen in the EU as European cigarette manufacturers, faced with declining European consumption of premium cigarettes, have increased their purchases of less expensive tobacco to meet stepped-up demand for discount cigarettes both in the EU and abroad.

U.S. tobacco exports to Japan, Korea, and Taiwan also declined<sup>90</sup> based on many of the factors explained above, especially competition from other foreign suppliers, antismoking campaigns, and increased cigarette taxes. However, record Korean tobacco crops during 1992, and large stocks of tobacco purchased by the Taiwan Tobacco and Wine Monopoly Bureau in previous years, also contributed to the decline in U.S. exports to these markets.

U.S. tobacco exports to Turkey declined partly because of reduced Turkish cigarette production resulting from an interruption in Turkish cigarette exports to Russia. However, the most significant reason for reduced U.S. exports to Turkey involved concerns by officials of the Turkish tobacco monopoly (TEKEL) that the new U.S. tobacco legisla-

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<sup>89</sup> As domestic cigarette production in the former Soviet Union and Eastern Europe displaced cigarette imports from the EU, most U.S. tobacco exports were not diverted from the EU to these regions because: (1) often the investment contracts of the international cigarette manufacturers required them to purchase domestically-grown tobacco, (2) the domestic cigarette demand in these regions tended to be more sensitive to price and less sensitive to tobacco type or quality, and (3) tobacco trade measures in these regions were generally more restrictive than in the EU.

<sup>90</sup> U.S. tobacco exports to Japan fell by 10 percent, or by \$38 million, between 1992 and 1993, while exports to Korea and Taiwan declined by 55 and 17 percent, respectively.

tion, which limits the use of imported leaf in cigarettes manufactured in the United States, might have a negative effect on U.S. imports of Turkish oriental tobacco. The United States is Turkey's largest export market for oriental tobacco, and TEKEL currently is faced with large stocks of oriental tobacco. TEKEL lowered its 1993 order of U.S. flue-cured and burley tobacco to about 22 percent less than its 1992 order<sup>91</sup> (despite expanding Turkish production of American-blend cigarettes) in response to its concerns that the level of U.S. imports of oriental tobacco from Turkey might be jeopardized by the U.S. tobacco import law.

The decline in U.S. exports of Connecticut Shade tobacco to the Dominican Republic resulted from lowered cigar production in the United Kingdom. About 85 percent of the Connecticut Shade exported by the United States to the Dominican Republic is processed there in free trade zones, then reexported to the United Kingdom, where it is used to wrap premium cigars. Only a small portion is used for wrapping premium cigars in the Dominican Republic. Cigar production in the United Kingdom has fallen steadily in response to declining consumption resulting from taxation and economic recession.

**Amy Harney**  
**(202) 205-3465**

## Cigarettes

In 1993, the historically huge U.S. trade surplus in cigarettes continued a 3-year decline. While the value of U.S. cigarette imports grew by 81 percent (\$161 million) to \$360 million, exports fell by 6 percent (\$266 million) to \$3.9 billion. Nearly all U.S. cigarette imports originated in Canada, and most of these imports eventually returned to Canada through illegal channels so as to evade the high Canadian cigarette taxes. Declining exports to Hong Kong, Belgium,<sup>92</sup> the former Soviet Union, Turkey, and Japan accounted for most of the total U.S. cigarette export decline.

In order to curb smoking and finance its fiscal deficit, Canada increased its excise tax on cigarettes

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<sup>91</sup> Tobacco Report: Turkey, June 22, 1993, from American Embassy, Ankara, Turkey. It is possible that purchasers in other export markets also shifted from the United States to other tobacco sources in retaliation against the U.S. tobacco import legislation.

<sup>92</sup> Only a small portion of U.S. cigarette exports to Belgium are actually consumed there. Instead, approximately 95 percent of the exports are re-exported through Antwerp to numerous locations in the former Soviet Union, Eastern Europe, the Middle East, Southeast Asia, and China. Although data accounting for the amount of trade transshipped to each of these regions are not available, it is likely that overall U.S. cigarette exports to Belgium have declined due to a combination of the same factors affecting direct U.S. exports to Hong Kong, the former Soviet Union, Turkey, etc.

from \$0.46/pack in 1980 to \$2.93/pack in 1993.<sup>93</sup> This tax generated a significant price differential of about \$20 per carton between Canadian and U.S. cigarettes, which encouraged widespread smuggling across the United States-Canadian border.<sup>94</sup> Much of the smuggling occurred through the Mohawk Indian reserve of Akwesasne, which straddles the border along the St. Lawrence River. Canadian cigarettes were imported into the United States legally by U.S. cigarette wholesalers who resold them to traders on the reservation, who in turn sold them to Canadian dealers/smugglers. As the reservation is considered sovereign territory, federal taxes are not collected within; thus, the cigarettes enter the commerce of Canada without anyone paying excise, sales, or import taxes. Canadian police estimate that about 85 percent of all U.S. cigarette imports from Canada are eventually smuggled back into Canada.

The value of U.S. cigarette exports fell partly because of a reduction in the unit value of cigarette exports from \$0.43 per pack in 1992 to \$0.38 per pack in 1993. U.S. cigarette exports to Japan were affected the most by declining unit value. The unit value of exports to Japan fell from \$0.54 per pack in 1992 to \$0.47 per pack in 1993, causing exports to fall by 2 percent in value and to rise by nearly 14 percent in quantity. Premium brand price reductions and growing exports of discount cigarettes accounted for most of the decline in unit value. Other reasons for the decline in U.S. cigarette exports include reduced cigarette consumption in traditional U.S. export markets, competition from foreign tobacco monopolies and multinational cigarette manufacturers, lost sales due to contraband cigarettes, and the slow movement of U.S. cigarette manufacturing to off-shore facilities.

U.S. cigarette exports to Hong Kong experienced the greatest decline, dropping by 37 percent to \$188 million in 1993. This occurred largely as a result of the intense competition posed by inexpensive, contraband cigarettes which began flowing illegally into Hong Kong after the Hong Kong Government increased its duty on cigarettes by 100 percent in 1991, 10 percent in 1992, and 9.5 percent in 1993, in an effort to raise revenue and curb cigarette consumption. In addition, after the tax increases, a greater percentage of U.S. cigarette exports to Hong Kong were re-exported to China. However, consumption of U.S. cigarettes in China has also declined due to China's growing preference for British-type cigarettes.

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<sup>93</sup> The Canadian government imposed an export tax on Canadian cigarettes and reduced the excise tax in Feb. 1994 in an effort to combat Canada's cigarette smuggling problem.

<sup>94</sup> In 1993, the Canadian government estimated that one in every three packs of cigarettes sold in Canada was contraband.

After surging to nearly \$250 million in 1992, U.S. cigarette exports to the former Soviet Union fell by more than 50 percent to \$118 million in 1993. This decline resulted from the rapid ongoing investment of several large international cigarette companies in many new and newly privatized cigarette manufacturing ventures throughout the former Soviet Union. These more modern, efficient facilities have begun to close the large gap that existed between the supply and demand for cigarettes during and shortly after the collapse of the Soviet Union.

Following a 36-percent decline in 1992, U.S. cigarette exports to Turkey continued declining by 22 percent to \$137 million in 1993. This reduction (which occurred even though cigarette consumption in Turkey was growing) resulted from the rapid expansion in production of American-blend cigarettes in Turkey by both the Turkish tobacco monopoly and large international cigarette manufacturers with operations in Turkey.

**Amy Harney**  
(202) 205-3465

## ***Fruit and vegetable juices***

The trade deficit in fruit and vegetable juices declined by \$168 million in 1993 to \$184 million. The large shift in the balance of trade was caused by a decline in the value of imports of nearly 20 percent (\$159 million), and an increase in the value of exports of nearly 2 percent (\$8.5 million). However, the trade shift was caused mainly by significantly lower average import prices and slightly higher export prices as the quantity of imports increased by more than 12 percent while the quantity of exports remained almost unchanged.

Most of the trade shift can be explained by large decline in the price of orange juice from Brazil and apple juice- from Argentina. Although the quantity of orange juice imports from Brazil surged by 23 percent, the value of bulk orange juice on the world market declined by 28 percent. Also, in 1992, there was a weather-related apple juice shortage in the United States which was filled by imports from Argentina. In 1993, as U.S. production recovered, the quantity of apple juice imports from Argentina declined by 25 percent and average import prices declined by 44 percent. The combination of lower prices and lower import quantities resulted in a decline of 57 percent in apple juice imports from Argentina. The lower prices for apple juice also re-

suited in lower import values from Germany, Chile, and Austria.

**Alfred Dennis**  
(202) 205-3316

## ***Animal feeds***

The animal feeds grouping includes both animal feed ingredients and prepared animal feeds. Animal feed ingredients, especially grain dry milling by-products, are bulky and subject to spoilage, and thus do not tend to be important export categories, except as border trade with Canada and Mexico. However, the byproducts of the wet milling, or starch-producing, industry, of which corn gluten feed and corn gluten meal are the most important, are important export feed ingredients, especially to the EU, where they are subject to low or zero bindings in accordance with General Agreement on Tariffs and Trade (GATT) agreements preceding the Uruguay Round Agreements (URA). Oilcake and other solid residues (ground or pelletized) from the extraction of soybean oil constitutes another important export category that accounted for about one-third of all animal feed exports (\$1.2 billion in 1992 and \$1.1 billion in 1993). Unlike the byproducts of wet milling, oilcake exports tend not to be concentrated in one market; rather, they are exported to numerous markets worldwide, most notably Canada and Russia, which purchased \$159 million and \$146 million, respectively, in 1993.

In 1993, exports of animal feeds declined by 1 percentage point, from \$3,656 million to \$3,616 million. The most important markets for U.S. animal feed exports were Japan, Canada, the EU, and Mexico.

U.S. imports of animal feeds increased by about 21 percent in 1993, climbing from \$450 million to \$543 million. Increases in imports of flours, meals and pellets, of fish or of crustacean<sup>95</sup> from Peru accounted for most of the overall import gain in animal feeds in 1993.<sup>96</sup> The U.S. trade balance for animal feeds was strongly positive, although declining slightly from \$3.2 million in 1992 to \$3.1 million in 1993.

**John Pierre-Benoist**  
(202) 205-3320

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<sup>96</sup> The success of the Peruvian fish harvest is based primarily on the ocean current known as El Niño and the widespread weather conditions it affects.

**Table 15**  
**Agricultural, animal, and vegetable products sector: U.S. trade for selected commodity groups,**  
**1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
AG001	Certain miscellaneous live animals, meat, offals, and animal products:				
	Exports .....	1,509	1,456	-53	-3.5
	Imports .....	905	914	9	1.0
	Trade balance .....	604	542	-62	-10.3
AG002	Cattle and beef:				
	Exports .....	2,120	2,016	-104	-4.9
	Imports .....	2,906	3,045	139	4.8
	Trade balance .....	-786	-1,029	-243	-30.9
AG003	Swine and pork:				
	Exports .....	400	438	38	9.5
	Imports .....	436	501	65	14.9
	Trade balance .....	-36	-63	-27	-75.0
AG004	Sheep and meat of sheep:				
	Exports .....	36	39	3	8.3
	Imports .....	46	62	16	34.8
	Trade balance .....	-10	-23	-13	-130.0
AG005	Poultry:				
	Exports .....	1,051	1,229	178	16.9
	Imports .....	22	24	2	9.1
	Trade balance .....	1,029	1,205	176	17.1
AG006	Fresh or chilled fish:				
	Exports .....	190	196	6	3.2
	Imports .....	601	652	51	8.5
	Trade balance .....	-411	-456	-45	-10.9
AG007	Frozen fish:				
	Exports .....	1,886	1,526	-360	-19.1
	Imports .....	1,302	1,293	-9	-0.7
	Trade balance .....	584	233	-351	-60.1
AG008	Fish canned, cured, or otherwise prepared, and live fish:				
	Exports .....	446	417	-29	-6.5
	Imports .....	683	617	-66	-9.7
	Trade balance .....	-237	-200	37	15.6
AG009	Shellfish:				
	Exports .....	872	860	-12	-1.4
	Imports .....	3,067	3,243	176	5.7
	Trade balance .....	-2,195	-2,383	-188	-8.6
AG010	Dairy produce:				
	Exports .....	593	655	62	10.5
	Imports .....	845	836	-9	-1.1
	Trade balance .....	-252	-181	71	28.2
AG011	Eggs:				
	Exports .....	134	133	-1	-0.7
	Imports .....	27	35	8	29.6
	Trade balance .....	107	98	-9	-8.4
AG012	Sugar and other sweeteners:				
	Exports .....	300	269	-31	-10.3
	Imports .....	857	812	-45	-5.3
	Trade balance .....	-557	-543	14	2.5
AG013	Animal feeds:				
	Exports .....	3,656	3,616	-40	-1.1
	Imports .....	450	543	93	20.7
	Trade balance .....	3,206	3,073	-133	-4.1

See footnotes at end of table.



**Table 15-Continued**  
**Agricultural, animal, and vegetable products sector: U.S. trade for selected commodity groups,**  
**1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
AG014	Live plants:				
	Exports .....	103	94	-9	-8.7
	Imports .....	200	216	16	8.0
	Trade balance .....	-97	=122	-25	-25.8
AG015	Seeds:				
	Exports .....	316	319	3	0.9
	Imports .....	154	156	2	1.3
	Trade balance .....	162	163	1	0.6
AG016	Cut flowers:				
	Exports .....	33	39	6	18.2
	Imports .....	352	382	30	8.5
	Trade balance .....	-319	-343	-24	-7.5
AG017	Miscellaneous vegetable substances:				
	Exports .....	462	436	-26	-5.6
	Imports .....	545	568	23	4.2
	Trade balance .....	-83	-132	-49	-59.0
AG018	Fresh, chilled, or frozen vegetables:				
	Exports .....	972	1,058	86	8.8
	Imports .....	966	1,253	287	29.7
	Trade balance .....	6	-195	-201	-3,350.0
AG019	Prepared or preserved vegetables, mushrooms, and olives:				
	Exports .....	955	1,075	120	12.6
	Imports .....	788	777	-11	-1.4
	Trade balance .....	167	298	131	78.4
AG020	Edible nuts:				
	Exports .....	1,188	1,224	36	3.0
	Imports .....	461	460	-1	-0.2
	Trade balance .....	727	764	37	5.1
AG021	Tropical fruit:				
	Exports .....	64	69	5	7.8
	Imports .....	1,233	1,217	-16	-1.3
	Trade balance .....	-1,169	-1,148	21	1.8
AG022	Citrus fruit:				
	Exports .....	649	647	-2	-0.3
	Imports .....	134	119	-15	-11.2
	Trade balance .....	515	528	13	2.5
AG023	Deciduous fruit:				
	Exports .....	607	596	-11	-1.8
	Imports .....	163	146	-17	-10.4
	Trade balance .....	444	450	6	1.4
AG024	Other fresh fruit:				
	Exports .....	409	437	28	6.8
	Imports .....	486	473	-13	-2.7
	Trade balance .....	-77	-36	41	53.2
AG025	Dried fruit other than tropical:				
	Exports .....	357	360	3	0.8
	Imports .....	34	42	8	23.5
	Trade balance .....	323	318	-5	-1.5
AG026	Frozen fruit:				
	Exports .....	58	58	0	(4)
	Imports .....	57	63	6	10.5
	Trade balance .....	1	-5	-6	-600.0

See footnotes at end of table.

**Table 15-Continued**  
**Agricultural, animal, and vegetable products sector: U.S. trade for selected commodity groups,**  
**1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
AG027	Prepared or preserved fruit:				
	Exports .....	167	166	-1	-0.6
	Imports .....	417	421	4	1.0
	Trade balance .....	-250	-255	-5	-2.0
AG028	Coffee and tea:				
	Exports .....	160	187	27	16.9
	Imports .....	1,871	1,705	-166	-8.9
	Trade balance .....	-1,711	-1,518	193	11.3
AG029	Spices:				
	Exports .....	43	51	8	18.6
	Imports .....	234	223	-11	-4.7
	Trade balance .....	-191	-172	19	9.9
AG030	Cereals:				
	Exports .....	11,245	10,728	-517	-4.6
	Imports .....	513	586	73	14.2
	Trade balance .....	10,732	10,142	-590	-5.5
AG031	Milled grains, malts, and starches:				
	Exports .....	387	445	58	15.0
	Imports .....	70	96	26	37.1
	Trade balance .....	317	349	32	10.1
AG032	Oilseeds:				
	Exports .....	4,564	4,758	194	4.3
	Imports .....	122	155	33	27.0
	Trade balance .....	4,442	4,603	161	3.6
AG033	Animal or vegetable fats and oils:				
	Exports .....	1,439	1,454	15	1.0
	Imports .....	966	856	-110	-11.4
	Trade balance .....	473	598	125	26.4
AG034	Edible preparations:				
	Exports .....	2,156	2,522	366	17.0
	Imports .....	1,249	1,348	99	7.9
	Trade balance .....	907	1,174	267	29.4
AG035	Cocoa, chocolate, and confectionery:				
	Exports .....	438	560	122	27.9
	Imports .....	1,347	1,299	-48	-3.6
	Trade balance .....	-909	-739	170	18.7
AG036	Fruit and vegetable juices:				
	Exports .....	461	470	9	2.0
	Imports .....	812	653	-159	-19.6
	Trade balance .....	-351	-183	168	47.9
AG037	Nonalcoholic beverages, excluding fruit and vegetable juices:				
	Exports .....	191	220	29	15.2
	Imports .....	250	277	27	10.8
	Trade balance .....	-59	-57	2	3.4
AG038	Malt beverages:				
	Exports .....	194	202	8	4.1
	Imports .....	854	929	75	8.8
	Trade balance .....	-660	-727	-67	-10.2
AG039	Wine and certain other fermented beverages:				
	Exports .....	176	177	1	0.6
	Imports .....	1,094	984	-110	-10.1
	Trade balance .....	-918	-807	111	12.1

See footnotes at end of table.

**Table 15—Continued**  
**Agricultural, animal, and vegetable products sector: U.S. trade for selected commodity groups,**  
**1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
AG040	Distilled spirits:				
	Exports .....	343	344	1	0.3
	Imports .....	1,552	1,442	-110	-7.1
	Trade balance .....	-1,209	-1,098	111	9.2
AG041	Unmanufactured tobacco:				
	Exports .....	1,651	1,306	-345	-20.9
	Imports .....	1,475	1,370	-105	-7.1
	Trade balance .....	176	-64	-240	-136.4
AG042	Cigars, and certain other manufactured tobacco:				
	Exports .....	317	327	10	3.2
	Imports .....	85	107	22	25.9
	Trade balance .....	232	220	-12	-5.2
AG043	Cigarettes:				
	Exports .....	4,192	3,926	-266	-6.3
	Imports .....	199	360	161	80.9
	Trade balance .....	3,993	3,566	-427	-10.7
AG044	Hides, skins, and leather:				
	Exports .....	1,974	1,977	3	0.2
	Imports .....	767	868	101	13.2
	Trade balance .....	1,207	1,109	-98	-8.1
AG045	Furskins:				
	Exports .....	134	128	-6	-4.5
	Imports .....	83	83	(3)	(4)
	Trade balance .....	51	45	-6	-11.8
AG062	Ethyl alcohol for nonbeverage purposes:				
	Exports .....	38	71	33	86.8
	Imports .....	114	143	29	25.4
	Trade balance .....	-76	-72	4	5.3
AG063	Wool and other animal hair:				
	Exports .....	19	14	-5	-26.3
	Imports .....	172	175	3	1.7
	Trade balance .....	-153	-161	-8	-5.2
AG064	Cotton, not carded or combed:				
	Exports .....	1,999	1,528	-471	-23.6
	Imports .....	(3)	(3)	(3)	(4)
	Trade balance .....	1,999	1,528	-471	-23.6

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> This coding system is used by the U.S. International Trade Commission to identify major groupings of Harmonized Tariff Schedules (HTS) import and export items for trade-monitoring purposes.

<sup>3</sup> Less than \$500,000.

<sup>4</sup> Less than 0.05 percent.

<sup>5</sup> Cannot be calculated.

Source: Compiled from official statistics of the U.S. Department of Commerce.



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# CHAPTER 5

## Forest Products<sup>97</sup>

The trade surplus of \$2.0 billion in 1992 for forest products shifted to a trade deficit of \$655 million in 1993 (table 16). Over the period, U.S. forest product exports remained virtually unchanged at \$20.7 billion, while U.S. imports of forest products increased from \$18.7 billion to \$21.4 billion in 1993. Figure 31 depicts the major groupings of U.S. exports and U.S. imports for forest products, on a value basis, for 1992 and 1993.

Significant trade position declines occurred in lumber, wood pulp, and printing/writing papers (table 17). U.S. imports of softwood lumber from Canada and printing/writing papers from Canada and Finland increased notably. The value of U.S. exports of wood pulp and waste paper declined significantly, as the unit values of these exports continued to plummet. A significant trade position improvement occurred in the logs and rough wood products area, where the trade surplus increased by \$287 million. An increase in the value of U.S. exports of softwood logs to Japan was the primary contributing factor in the improved surplus.

U.S. exports of printed matter (\$3.8 billion in 1993), industrial papers such as kraft linerboard (\$3.3 billion), logs and rough wood products (\$3.1 billion), pulp and wastepaper (\$3.0 billion), and lumber (\$2.5 billion) account for about three-quarters of all forest product exports. The only significant decline in exports (i.e., over \$50 million) occurred in pulp and waste paper, which declined by \$863 million in 1993.

U.S. imports of lumber, newsprint, printing/writing papers, printed matter, pulp, and structural panels account for about three quarters of all forest product imports. During 1993, only the value of U.S. imports of pulp declined significantly (by \$239 million). The value of newsprint imports remained virtually unchanged. Imports of lumber, printing/writing papers, structural panels, and printed matter increased in 1993: lumber, from \$3.5 billion to \$5.0 billion; printing/writing paper, from \$2.2 billion to \$2.6 billion; printed matter, from \$1.8 billion to \$2.0 billion; and structural panels, from \$1.2 billion to \$1.5 billion.

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<sup>97</sup> Included here are products classified in sections IX and X of the *Harmonized Tariff Schedules of the United States*. This grouping includes wood, wood products, cork, manufacturers of straw, papermaking pulp, waste paper, paper and paperboard, articles made from paper and paperboard, and printed material.

### U.S. Bilateral Trade

U.S. bilateral trade in forest products amounted to \$42.1 billion in 1993. Slightly more than one-third of this trade was accounted for by U.S. imports from Canada, valued at \$14.5 billion in 1993. Canada supplied about two-thirds of all U.S. forest product imports. The leading commodities imported from Canada were lumber, newsprint, pulp, and printing/writing papers. The EU was the second-leading source, supplying 9 percent (\$1.8 billion) of all U.S. forest product imports in 1993.

Almost three-quarters of all U.S. forest product exports went to Canada, Japan, the EU, and Mexico in 1993. U.S. exports to Canada during 1993 amounted to \$4.8 billion. U.S. exports accounted for 92 percent of all forest product trade with Japan, and amounted to \$4.6 billion. U.S. exports of \$3.6 billion accounted for about two-thirds of all forest product trade with the EU in 1993. The fourth-leading market for U.S. forest products in 1993 was Mexico (\$2.1 billion). U.S. exports accounted for about 80 percent of all forest product trade with that country in 1993. Figure 32 illustrates U.S. exports to these four major markets, as well as U.S. exports to other major regions. This figure also highlights the major U.S. forest product exports to these regions.

### Commodity Analysis

#### Lumber

The U.S. trade deficit in lumber widened from \$1.1 billion in 1992 to \$2.4 billion in 1993.<sup>98</sup> The erosion in the trade balance occurred as both imports and exports increased. U.S. lumber imports rose by \$1.5 billion (45 percent) in 1993 to \$5.0 billion. The bulk of the rise was accounted for by imports from Canada, by far the leading supplier (95 percent of the total in 1993). Increases were also registered in U.S. lumber imports from most other sources, including relatively new ones such as Chile, New Zealand, and Mexico. The principal U.S. lumber import item, by far, is softwood lumber, which accounted for about 95 percent of the

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<sup>98</sup> Units of quantity vary among the products in this category.

**Table 16**  
**Forest products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
U.S. exports of domestic merchandise:				
Canada .....	4,614	4,833	219	4.7
Japan .....	4,215	4,634	419	9.9
Mexico .....	2,008	2,081	73	3.6
United Kingdom .....	1,075	950	-124	-11.6
Germany .....	873	815	-58	-6.6
Korea .....	914	817	-97	-10.6
Taiwan .....	533	564	32	5.9
China .....	310	276	-34	-10.9
Italy .....	677	449	-228	-33.7
Indonesia .....	171	130	-40	-23.7
All other .....	5,339	5,189	-150	-2.8
<b>Total .....</b>	<b>20,728</b>	<b>20,739</b>	<b>11</b>	<b>0.1</b>
EU-12 .....	4,374	3,648	-726	-16.6
OPEC .....	633	553	-80	-12.6
Latin America .....	3,248	3,434	187	5.7
CBERA .....	621	684	63	10.1
Asian Pacific Rim .....	7,344	7,695	351	4.8
ASEAN .....	612	636	23	3.8
Eastern Europe .....	52	24	-28	-54.3
U.S. imports for consumption:				
Canada .....	12,620	14,542	1,922	15.2
Japan .....	387	392	5	1.3
Mexico .....	509	516	6	1.2
United Kingdom .....	509	548	39	7.6
Germany .....	377	435	57	15.2
Korea .....	112	120	8	7.5
Taiwan .....	342	315	-28	-8.1
China .....	373	493	120	32.2
Italy .....	208	217	8	4.0
Indonesia .....	410	488	78	19.1
All other .....	2,849	3,328	479	16.8
<b>Total .....</b>	<b>18,698</b>	<b>21,394</b>	<b>2,695</b>	<b>14.4</b>
EU-12 .....	1,733	1,827	93	5.4
OPEC .....	435	523	88	20.2
Latin America .....	1,130	1,281	151	13.4
CBERA .....	57	66	9	15.6
Asian Pacific Rim .....	2,350	2,617	267	11.4
ASEAN .....	914	1,038	124	13.5
Eastern Europe .....	10	13	3	30.1
U.S. merchandise trade balance:				
Canada .....	-8,006	-9,708	-1,703	(2)
Japan .....	3,827	4,241	414	(2)
Mexico .....	1,498	1,565	67	r)
United Kingdom .....	565	402	-163	2
Germany .....	496	381	-115	(2)
Korea .....	802	697	-106	(2)
Taiwan .....	190	250	59	(2)
China .....	-63	-217	-154	(2)
Italy .....	468	232	-236	(2)
Indonesia .....	-239	-358	-119	(2)
All other .....	2,490	1,861	-629	(2)
<b>Total .....</b>	<b>2,030</b>	<b>-655</b>	<b>-2,685</b>	<b>(2)</b>

See footnotes at the end of table.

**Table 16—Continued**

**Forest products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
U.S. merchandise trade balance:				
EU-12 .....	2,641	1,821	-819	(2)
OPEC .....	197	30	-168	(2)
Latin America .....	2,118	2,153	35	(2)
CBERA .....	564	618	54	(2)
Asian Pacific Rim .....	4,995	5,078	84	(2)
ASEAN .....	-302	-402	-100	(2)
Eastern Europe .....	42	11	-31	(2)

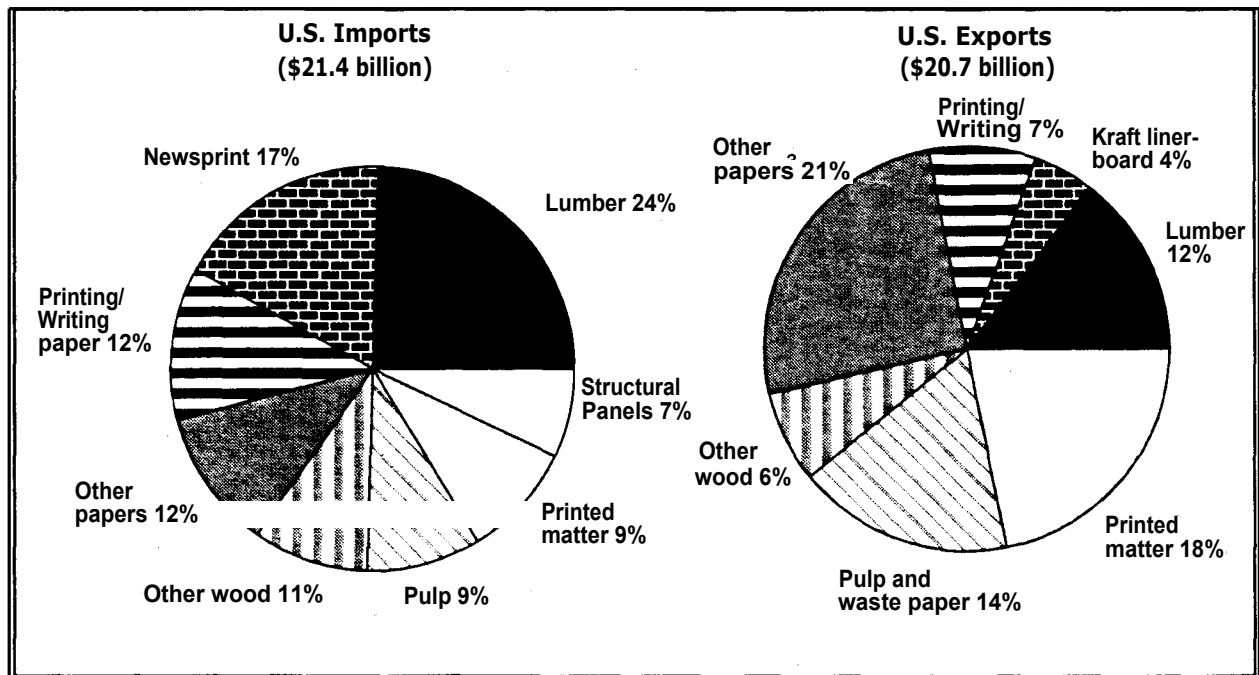
<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> Not meaningful for purposes of comparison.

Note.—Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Figure 31**  
**U.S. Forest products trade: By major groupings, 1993**



<sup>1</sup> Includes cork and rattan.

<sup>2</sup> Includes newsprint.

<sup>3</sup> Includes industrial papers (excluding linerboard), specialty papers, and other converted papers.

Source: Derived from official statistics of the U.S. Department of Commerce.

**Table 17**  
**Forest products sector: U.S. trade for selected commodity groups, 1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
AG046	Logs and rough wood products:				
	Exports .....	2,809	3,134	325	11.6
	Imports .....	349	387	38	10.9
	Trade balance .....	2,460	2,747	287	11.7
AG047	Lumber:				
	Exports .....	2,337	2,470	133	5.7
	Imports .....	3,481	5,032	1,551	44.6
	Trade balance .....	-1,144	-2,562	-1,418	-124.0
AG048	Moldings, millwork, and joinery:				
	Exports .....	444	458	14	3.2
	Imports .....	659	812	153	23.2
	Trade balance .....	-215	-354	-139	-64.7
AG049	Structural panel products:				
	Exports .....	858	921	63	7.3
	Imports .....	1,190	1,515	325	27.3
	Trade balance .....	-332	-594	-262	-78.9
AG050	Wooden containers:				
	Exports .....	73	83	10	13.7
	Imports .....	162	174	12	7.4
	Trade balance .....	-89	-91	-2	-2.2
AG051	Tools and tool handles of wood:				
	Exports .....	16	20	4	25.0
	Imports .....	86	94	8	9.3
	Trade balance .....	-70	-74	-4	-5.7
AG052	Miscellaneous articles of wood:				
	Exports .....	147	155	8	5.4
	Imports .....	428	465	37	8.6
	Trade balance .....	-281	-310	-29	-10.3
AG053	Cork and rattan:				
	Exports .....	44	44	(3)	(4)
	Imports .....	342	354	12	3.5
	Trade balance .....	-298	-310	-12	-4.0
AG054	Wood pulp and wastepaper.				
	Exports .....	3,862	2,999	-863	-22.3
	Imports .....	2,138	1,899	-239	-11.2
	Trade balance .....	1,724	1,100	-624	-36.2
AG055	Paper boxes and bags:				
	Exports .....	665	752	87	13.1
	Imports .....	315	358	43	13.7
	Trade balance .....	350	394	44	12.6
AG056	Industrial papers and paperboards:				
	Exports .....	3,328	3,331	3	0.1
	Imports .....	1,065	1,114	49	4.6
	Trade balance .....	2,263	2,217	-46	-2.0
AG057	Newsprint:				
	Exports .....	467	496	29	6.2
	Imports .....	3,599	3,593	-6	-0.2
	Trade balance .....	-3,132	-3,097	35	1.1
AG058	Printing and writing papers:				
	Exports .....	948	911	-37	-3.9
	Imports .....	2,168	2,634	466	21.5
	Trade balance .....	-1,220	-1,723	-503	-41.2
AG059	Certain specialty papers:				
	Exports .....	426	432	6	1.4
	Imports .....	476	512	36	7.6
	Trade balance .....	-50	-80	-30	-60.0

See footnotes at end of table.



**Table 17—Continued**  
**Forest products sector: U.S. trade for selected commodity groups, 1992 and 1993 <sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
AG060	Miscellaneous paper products:				
	Exports .....	635	706	71	11.2
	Imports .....	429	489	60	14.0
	Trade balance .....	206	217	11	5.3
AG061	Printed matter:				
	Exports .....	3,670	3,828	158	4.3
	Imports .....	1,813	1,962	149	8.2
	Trade balance .....	1,857	1,866	9	0.5

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

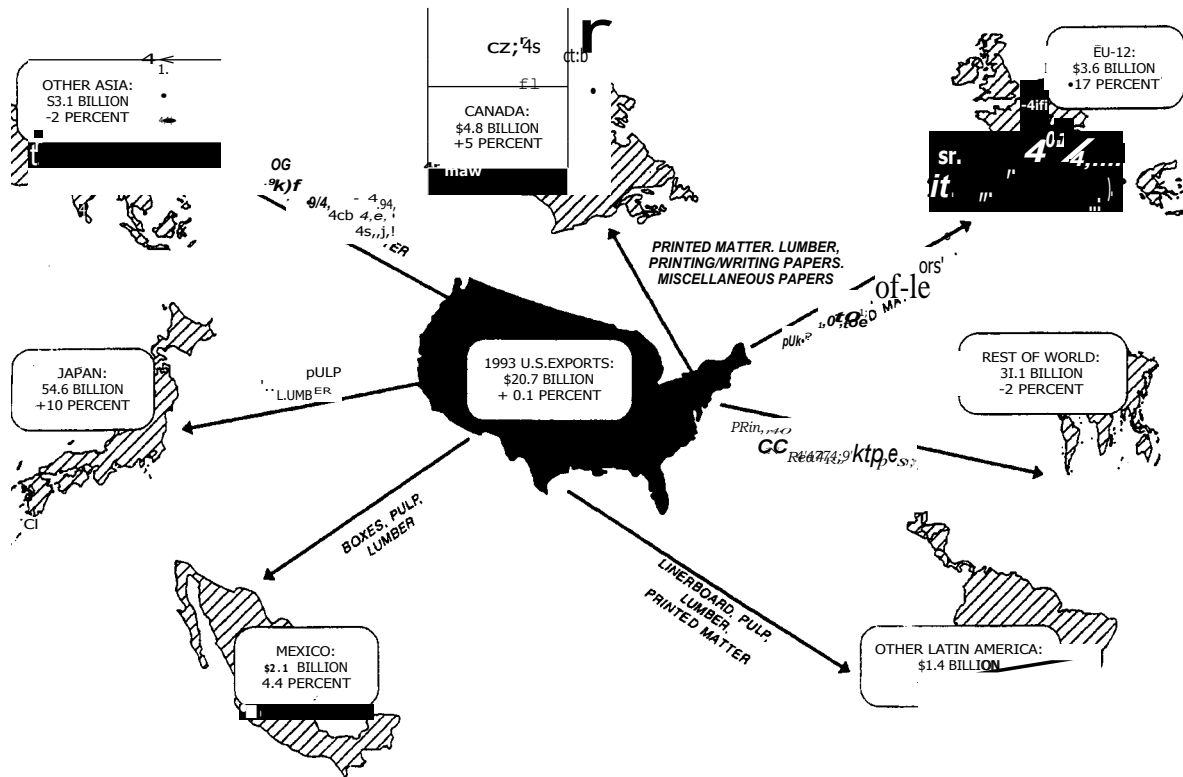
<sup>2</sup> This coding system is used by the U.S. International Trade Commission to identify major groupings of HTS import and export items for trade-monitoring purposes.

<sup>3</sup> Less than \$500,000.

<sup>4</sup> Less than 0.05 percent.

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Figure 32**  
**U.S. forest products sector exports, 1993: Leading U.S. exports, by major markets, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

category total in 1993. Domestic supply shortages in 1993, caused by environmental restrictions imposed on timber harvests, and rising domestic demand, fueled by a general economic recovery and low interest rates, contributed to record-high U.S. lumber prices and import levels.

U.S. lumber exports rose modestly in 1993 from \$2.3 billion to \$2.5 billion, or by 6 percent. Exports to the two primary markets of Japan (31 percent of the total in 1993) and Canada (15 percent) increased, while those to the EU members generally declined. The United States exports substantial amounts of both softwood and hardwood lumber.<sup>99</sup> U.S. softwood lumber exports declined in quantity from 6.1 million cubic meters in 1992 to 5.4 million cubic meters in 1993, or by 1-1 percent. The value of such exports was relatively steady, however, at about \$1.4 billion. Environmental restrictions on domestic supplies, relatively high domestic prices, and economic troubles in EU member states led to the decline in the quantity exported; higher prices and a favorable exchange rate with respect to Japan and nontraditional markets (such as South Korea, Taiwan, and Algeria) bolstered the value of U.S. softwood lumber exports in 1993. Exports of hardwood lumber rose slightly from 2.2 million cubic meters in 1992 to 2.3 million cubic meters in 1993; the value rose 11 percent to \$1.1 billion in 1993. The primary markets were Canada (22 percent of the total value in 1993) and Japan (14 percent). Increases were registered in most major markets except for most EU member states, which experienced poor economic conditions during the period under review. One exception was Germany, the third-leading single-country market, where U.S. exports increased 17 percent in value to \$94 million in 1993, as consumers shifted preferences from tropical hardwood to temperate hardwood species to the benefit of U.S. exports.

**Doug Newman**  
(202) 205-3328

## ***Wood pulp and waste paper***

The trade balance in wood pulp and waste paper went from a \$1.7 billion surplus to a \$1.1 billion surplus in 1993. The major underlying reason, however, was falling unit values for both exports and imports. In terms of quantity, pulp and waste paper exports declined by 11 percent (a 22 percent value decline), while pulp imports increased by 8 percent (although declining by 11 percent in value).

Wood pulp and waste paper exports from the United States accounted for 12 percent of the total

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<sup>99</sup> Softwood lumber is used primarily for construction while hardwood lumber is used primarily for furniture.

U.S. foreign trade in the forest products sector in 1993 and 24 percent of all pulp and paper trade. While the value of wood pulp and waste paper exports declined 22 percent (\$862 million) to \$3.0 billion in 1993, the quantity of wood pulp exports declined by only 10 percent to 6.0 mmt, and the quantity of waste paper exports declined by only 9 percent to 5.3 mmt.

The average unit value for wood pulp exports continued a 5-year downward trend, falling another 15 percent in 1993, from \$482 to \$408 per metric ton. Specifically, the unit value for the three major grades of pulp exports showed mixed activity in 1993. The average unit value for bleached softwood kraft pulp (43 percent of all pulp exports) declined by 12 percent to \$414 per metric ton, and the unit value for bleached hardwood kraft (26 percent of exports) declined by 26 percent to \$319 per metric ton in 1993. However, the average unit value of the premium dissolving grades (17 percent of all pulp exports) increased by 4 percent to \$693 per metric ton in 1993. The average unit value of waste paper exports continued on a 3-year decline, falling 10 percent, to \$100 per metric ton in 1993. The unit value of the dominant export grade of waste paper, old corrugated containers, declined by 11 percent to \$84 per metric ton in 1993.

Wood pulp and waste paper exports are widely marketed to many countries. Japan, the largest market for wood pulp exports, received about 20 percent of pulp exports, on a quantity basis. The largest two markets for waste paper exports, South Korea and Canada, also received about 20 percent each of waste paper exports, on a quantity basis.

The value of wood pulp imports also declined in 1993, falling by 11 percent to \$1.9 billion. The quantity of these imports actually increased by 8 percent to 4.9 million metric tons. Like exports, the average unit value of imports continued a 5-year downward trend. The average unit value of wood pulp imports was \$379 per metric ton in 1993, a decline of 18 percent from the level posted in 1992. The major component of wood pulp imports is bleached softwood kraft pulp from Canada. Bleached softwood kraft pulp from Canada accounted for more than 60 percent of all wood pulp imports in 1993. The quantity of bleached softwood kraft pulp from Canada actually increased by 6 percent to 3.0 million metric tons; however, the unit value declined by 17 percent to \$385 per metric ton in 1993.

**R.K. Rhodes**  
(202) 205-3322

## ***Printing/writing papers***

U.S. imports of printing/writing papers<sup>100</sup> accounted for 12 percent of all forest product imports and

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<sup>100</sup> Does not include newsprint.

25 percent of all pulp and paper imports in 1993. Imports increased by \$466 million in 1993, reaching \$2.6 billion. Canada supplied 54 percent of the imports in 1993, and Finland, 19 percent. Imports from Finland rose by over 50 percent in 1993, from \$335 million to \$509 million. Overall imports of printing/writing paper are estimated to account for more than 10 percent of apparent domestic consumption, whereas exports are estimated to account for about 5 percent of domestic production.

The important categories of printing/writins, paper imports are uncoated groundwood paperslul (accounting for 38 percent of all printing/writing paper imports), light-weight coated groundwood papers (19 percent), and uncoated nongroundwood papers weighing between 40 and 150 grams per square meter (18 percent). Imports of uncoated groundwood papers increased from 1.3 mmt, valued at \$860 million in 1992 to 1.6 mmt, valued at \$1.0 billion, in 1993. Canada and Finland provided 59 percent and 29 percent, respectively, of all uncoated groundwood paper imports in 1993. Imports of light-weight coated groundwood papers increased from 489,406 metric tons, valued at \$366 million, in 1992 to 669,313 metric tons, valued at \$511 million in 1993. Canada and Finland supplied 42 percent and 29 percent, respectively, of all light-weight coated groundwood printing/writing paper imports. Imports of uncoated nongroundwood papers weighing between 40 and 150 grams per square meters increased from 582,404 metric tons, valued at \$368 million, in 1992 to 728,849 metric tons, valued at \$473, million in 1993. Canada supplied 87 percent of all these imports.

The significant increase in imports combined with the decrease in exports contributed to the erosion of the trade balance from a \$1.2 million deficit to a \$1.7 million deficit in 1993. U.S. exports of printing/writing paper are much smaller than U.S. imports, and declined from \$948 million to \$911 million. Canada and Mexico are the largest markets for these exports, and received 39 percent and 16 percent of such exports, respectively, during 1993. Furthermore, U.S. exports to Mexico increased by 21 percent, from \$118 million to \$143 million, in 1993.

**R.K. Rhodes**  
**(202) 205-3322**

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<sup>101</sup> Printing/writing papers are generally classified as to whether they are coated or uncoated. These papers are further sorted as to whether or not they are predominantly made from fibers produced by mechanical or chemical pulping processes. For tariff purposes, if a paper contains more than 10 percent mechanically-produced fibers, it is considered a "groundwood" (or a mechanically-pulped) paper. Generally, mechanically-pulped papers are considered of lesser quality than primarily chemically-pulped papers, with some exceptions. Additionally, printing/writing papers are categorized according to their basis weight (in grams per square meter).

## **Logs and rough wood products**

The U.S. trade surplus in logs and rough wood products edged upward 12 percent from about \$2.5 billion in 1992 to \$2.7 billion in 1993. Although U.S. imports of these products rose 11 percent (\$38 million) in 1993, from \$349 million to \$387 million, the rise was outpaced by that of U.S. exports, which rose 12 percent (\$300 million). from \$2.8 billion to \$3.1 billion.

U.S. imports of products in this category rose both from Canada, traditionally the leading supplier (87 percent of 1993 imports), and from nontraditional sources, such as New Zealand and Colombia. The primary U.S. imports in 1993 included softwood logs; wood poles, piles, and posts; and wood chips. Imports of softwood logs rose 133 percent in quantity (to 388,119 cubic meters) and 124 percent in value (to \$41 million). Increased U.S. demand (caused mainly by a general economic recovery and historically low interest rates that spurred construction activity) and limited domestic supplies (caused mainly by environmental constraints on log harvesting) led to the rise in these imports.

U.S. exports of logs and rough wood products registered substantial increases to Japan, the primary market (73 percent of 1993 exports). Export performance to other major markets was mixed in 1993, with gains registered in South Korea, Canada, Turkey, and the Philippines and retractions experienced in China, the EU, and Mexico. Softwood logs compose the primary export product and accounted for about 70 percent of the value of total exports in this category. Although U.S. exports of softwood logs declined in quantity by 14 percent to about 12.0 million cubic meters in 1993 compared with the previous year,<sup>102</sup> the value of such exports rose 18 percent during the period to a record-high \$2.2 billion. The effect of restricted U.S. supplies was outweighed by higher prices and a favorable exchange rate for the U.S. dollar against the yen. Exports of hardwood logs, an order of magnitude lower than those of softwood logs, increased modestly in 1993 (about 6 percent in quantity and 7 percent in value). Increased exports to the primary markets of Canada (29 percent of the total value in 1993) and Japan (21 percent), caused mainly by stable demand, rising prices, and favorable exchange rates, offset declines in exports to EU countries that resulted mainly from poor economic conditions and unfavorable exchange rates.

**Doug Newman**  
**(202) 205-3328**

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<sup>102</sup> The volume of such exports has declined annually since 1988, when the total was 20.8 million cubic meters.



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# CHAPTER 6

## Chemicals and Energy

### ***Chemicals and related products***

The U.S. trade surplus in the chemicals and related products sector declined in 1993 by \$660 million to \$12.2 billion, as rising imports of \$2.1 billion more than offset the increase in exports of \$1.5 billion (table 18). The trade surplus in chemicals and related products also contracted in 1992<sup>103</sup> because the U.S. economy grew more rapidly than the recessionary economies of the other major industrial countries. Consequently, U.S. imports increased more rapidly than U.S. exports.

Certain commodity groupings in the chemicals and related products category experienced a significant deterioration in their trade balances, due primarily to reduced import demand in foreign markets; these included fertilizers (by \$735 million) and chlor-alkali chemicals (by \$160 million). Certain commodity groupings experienced a significant improvement in their trade balances due primarily to increased import demand in foreign markets; these included medicinal chemicals other than antibiotics (by \$433 million), benzenoid specialty chemicals (by \$350 million), and plastic or rubber semifabricated forms (by \$225 million).

### ***Energy-related products***

In 1993, the trade deficit for petroleum, natural gas, selected downstream products of petroleum and natural gas, and other energy-related products increased by \$2.2 billion to \$43.9 billion (table 19). This resulted from a decline in U.S. exports of \$1.5 billion and an increase in U.S. imports of \$707 million, marking the second consecutive year that the trade deficit for energy-related products increased.<sup>104</sup>

Commodity groupings in the energy-related products sector that experienced a significant shift in trade balances included coal, coke, and related products (a decline of \$1.2 billion in the trade surplus); natural gas and components (a decline of \$982 million in the trade deficit); and petro-

leum products (an increase of \$265 million in the trade deficit). The value of U.S. imports of crude petroleum held steady in 1993 relative to the previous year at \$38.2 billion, even though the United States became increasingly dependent on foreign sources of crude petroleum. The quantity of crude petroleum imports rose by 11.5 percent. The value of U.S. imports of crude petroleum held stable in 1993 because the increased volume of imports was offset by a decline in the average import price of crude petroleum.

### **U.S. Bilateral Trade**

#### ***Chemicals and related products***

The major U.S. trading partners in chemicals and related products during 1993 were the EU, Canada, Mexico, and Japan. Figure 33 illustrates the value and type of major U.S. exports to these countries as well as the overall percentage change from 1992 to 1993 in U.S. exports to these markets. Figure 34 does the same for U.S. imports of chemical and related products.

Reflecting a 7.3-percent decline in exports and a 2.7-percent increase in imports, the U.S.-EU bilateral trade balance in the chemicals and related products sector deteriorated by \$1.3 billion, shifting from a \$624 million surplus in 1992 to a \$640 million deficit in 1993.

The U.S. trade surpluses with Canada and Mexico increased in 1993 by \$386 million and \$451 million, respectively. Exports to Canada rose by \$1.2 billion and to Mexico by \$386 million, more than offsetting increased U.S. imports from Canada, which grew by \$783 million in 1993. According to industry observers, U.S. exports to Canada and Mexico increased in part because of the implementation of the CFTA and the NAFTA. Medicinals other than antibiotics, miscellaneous organic chemicals, benzenoid specialty chemicals, soaps, detergents, surface-active agents, paints, inks and related items, and a variety of plastic resins and plastic products accounted for much of the increased value of U.S. exports to Canada. Pneumatic tires and tubes, polyethylene resins in primary form, miscellaneous rubber or plastic products, and salts and

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<sup>103</sup> See *U.S. Trade Shifts in Selected Commodity Areas, 1992 Annual Report*, p. 77.  
<sup>104</sup> *Ibid.*, p. 77.

**Table 18**  
**Chemicals and related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993** <sup>1</sup>

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	9,419	10,588	1,169	12.4
Japan .....	4,309	4,590	281	6.5
Mexico .....	4,227	4,612	386	9.1
Germany .....	2,097	1,951	-146	-7.0
United Kingdom .....	2,033	1,968	-66	-3.2
Taiwan .....	1,925	2,028	103	5.3
France .....	1,361	1,272	-89	-6.5
Netherlands .....	2,531	2,304	-226	-8.9
Belgium .....	2,524	2,305	-219	-8.7
China .....	1,215	842	-373	-30.7
All other .....	16,703	17,372	669	4.0
<b>Total .....</b>	<b>48,345</b>	<b>49,833</b>	<b>1,488</b>	<b>3.1</b>
EU-12 .....	12,787	11,854	-932	-7.3
OPEC .....	1,845	1,811	-34	-1.9
Latin America .....	9,149	9,788	639	7.0
CBERA .....	1,260	1,225	-35	-2.8
Asian Pacific Rim .....	13,078	13,521	444	3.4
ASEAN .....	2,043	2,307	264	12.9
Eastern Europe .....	133	112	-21	-15.5
<b>U.S. imports for consumption:</b>				
Canada .....	6,414	7,197	783	12.2
Japan .....	4,857	5,442	585	12.1
Mexico .....	1,189	1,124	-65	-5.5
Germany .....	3,957	3,656	-301	-7.6
United Kingdom .....	2,550	2,862	313	12.3
Taiwan .....	1,376	1,276	-101	-7.3
France .....	1,856	1,994	139	7.5
Netherlands .....	705	733	28	4.0
Belgium .....	703	711	8	1.2
China .....	1,225	1,591	366	29.9
All other .....	10,616	11,009	393	3.7
<b>Total .....</b>	<b>35,448</b>	<b>37,596</b>	<b>2,148</b>	<b>6.1</b>
EU-12 .....	12,163	12,495	332	2.7
OPEC .....	754	860	106	14.1
Latin America .....	2,843	2,691	-152	-5.3
CBERA .....	683	527	-156	-22.8
Asian Pacific Rim .....	10,420	11,257	837	8.0
ASEAN .....	1,717	1,858	141	8.2
Eastern Europe .....	137	159	22	16.1
<b>U.S. merchandise trade balance:</b>				
Canada .....	3,005	3,391	386	(2)
Japan .....	-548	-852	-304	(2)
Mexico .....	3,038	3,489	451	(2)
Germany .....	-1,860	-1,706	154	(2)
United Kingdom .....	-517	-895	-378	(2)
Taiwan .....	549	753	203	(2)
France .....	-495	-722	-227	(2)
Netherlands .....	1,826	1,571	-254	(2)
Belgium .....	1,821	1,594	-227	(2)
China .....	-10	-749	-739	(2)
All other .....	6,087	6,363	276	(2)
<b>Total .....</b>	<b>12,897</b>	<b>12,237</b>	<b>-660</b>	<b>(2)</b>

See footnotes at the end of table.

**Table 18—Continued**

**Chemicals and related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance:</b>				
EU-12 .....	624	-640	-1,264	(2)
OPEC .....	1,091	951	-140	(2)
Latin America .....	6,306	7,097	791	(2)
CBERA .....	577	698	121	(2)
Asian Pacific Rim .....	2,658	2,265	-393	(2)
ASEAN .....	327	449	122	(2)
Eastern Europe .....	-4	-47	-43	(2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> Since some comparisons may not be meaningful for consistency, nothing is reported.

Note.—Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Table 19**  
**Energy-related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	1,588	1,463	-125	-7.9
Saudi Arabia .....	25	32	8	30.6
Venezuela .....	128	105	-24	-18.4
Mexico .....	1,323	1,114	-209	-15.8
Nigeria .....	18	37	19	101.7
United Kingdom .....	411	295	-116	-28.1
Japan .....	2,025	2,019	-6	-0.3
Angola .....	2	1	-1	-36.0
Kuwait .....	3	2	-2	-44.8
Algeria .....	28	19	-10	-34.3
All other .....	8,127	7,123	-1,004	-12.3
<b>Total .....</b>	<b>13,680</b>	<b>12,212</b>	<b>-1,468</b>	<b>-10.7</b>
EU-12 .....	3,696	2,685	-1,012	-27.4
OPEC .....	354	361	6	1.8
Latin America .....	3,133	2,756	-376	-12.0
CBERA .....	821	757	-64	-7.8
Asian Pacific Rim .....	4,291	4,385	94	2.2
ASEAN .....	560	707	147	26.2
Eastern Europe .....	107	92	-15	-14.2
<b>U.S. imports for consumption:</b>				
Canada .....	11,042	12,012	970	8.8
Saudi Arabia .....	10,132	7,577	-2,555	-25.2
Venezuela .....	6,768	6,835	67	1.0
Mexico .....	4,597	4,751	154	3.4
Nigeria .....	5,026	5,231	204	4.1
United Kingdom .....	2,059	2,557	498	24.2
Japan .....	195	170	-25	-13.0
Angola .....	2,264	2,093	-172	-7.6
Kuwait .....	271	1,758	1,487	548.0
Algeria .....	1,579	1,583	4	0.3
All other .....	11,458	11,532	74	0.6
<b>Total .....</b>	<b>55,391</b>	<b>56,098</b>	<b>707</b>	<b>1.3</b>
EU-12 .....	4,092	4,226	134	3.3
OPEC .....	26,166	25,408	-758	-2.9
Latin America .....	15,036	15,330	293	1.9
CBERA .....	1,476	1,295	-181	-12.3
Asian Pacific Rim .....	1,775	1,671	-104	-5.9
ASEAN .....	670	779	109	16.2
Eastern Europe .....	34	5	-29	-84.4
<b>U.S. merchandise trade balance:</b>				
Canada .....	-9,454	-10,549	-1,095	(2)
Saudi Arabia .....	-10,107	-7,544	2,562	(2)
Venezuela .....	-6,639	-6,730	-90	(2)
Mexico .....	-3,273	-3,637	-363	(2)
Nigeria .....	-5,008	-5,194	-186	(2)
United Kingdom .....	-1,648	-2,262	-613	(2)
Japan .....	1,830	1,850	20	(2)
Angola .....	-2,262	-2,091	171	(2)
Kuwait .....	-268	-1,756	-1,488	(2)
Algeria .....	-1,550	-1,564	-14	(2)
All other .....	-3,331	-4,409	-1,078	(2)
<b>Total .....</b>	<b>-41,712</b>	<b>-43,886</b>	<b>-2,175</b>	<b>(2)</b>

See footnotes at the end of table.



Table 19—Continued

Energy-related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance:</b>				
EU-12 .....	-395	-1,541	-1,146	(2)
OPEC .....	-25,812	-25,048	764	(2)
Latin America .....	-11,904	-12,573	-669	(2)
CBERA .....	-655	-538	117	(2)
Asian Pacific Rim .....	2,517	2,714	198	
ASEAN .....	-110	-72	38	(2)
Eastern Europe .....	73	87	14	(2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

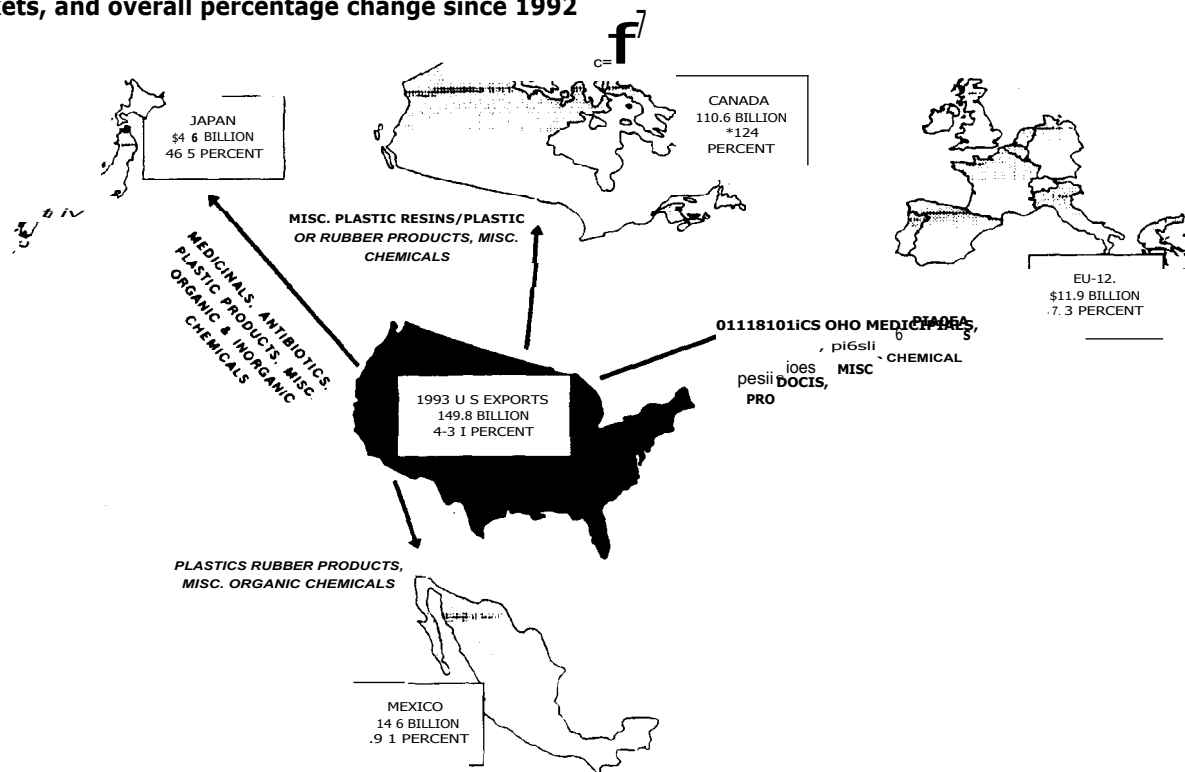
<sup>2</sup> Not meaningful for purposes of comparison.

Note.—Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.

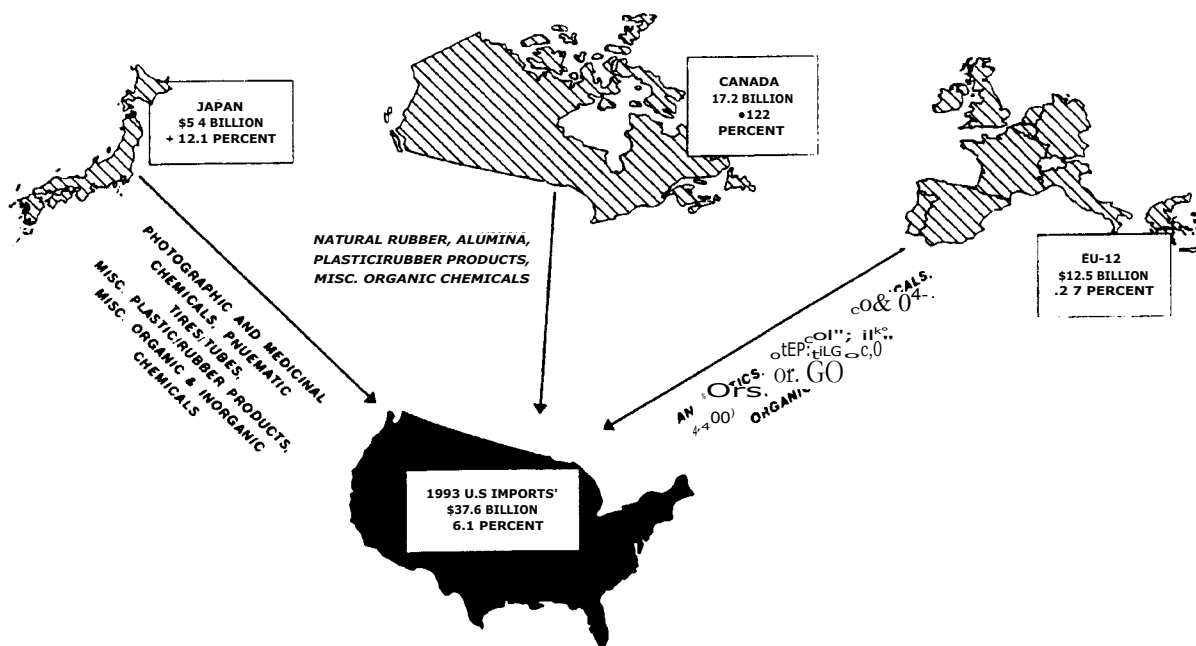
Figure 33

U.S. chemical and related products sector exports, 1993: Leading U.S. exports, by major markets, and overall percentage change since 1992



Source: Derived for official statistics of the U.S. Department of Commerce.

**Figure 34**  
**U.S. chemical and related products sector imports, 1993: Leading U.S. imports, by major sources, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

other inorganic chemicals accounted for a substantial portion of the increased value of U.S. imports from Canada in 1993. According to industry observers, increased domestic demand was a primary factor for the increased imports.

The U.S. trade balance in the chemicals and related products sector with China deteriorated by \$739 million in 1993 as exports, primarily fertilizers, fell by \$373 million, and imports, in large part miscellaneous rubber or plastic products, grew by \$366 million. The U.S. trade balance with China deteriorated in 1993 because of China's recently established program to increase chemical production capacity, which will increase its ability to export and reduce its need to import. The \$304-million decline in the U.S. trade balance with Japan was due to the \$585-million increase in imports, especially of benzenoid specialty chemicals, which more than offset increased exports of \$281 million.

U.S. imports from Japan may have increased because of an increase in domestic demand for some of the specialty chemicals that are produced only in Japan. The worsening of the U.S. balance of trade with China and Japan was offset partly in the Far East by an improved balance of trade with Taiwan (\$203 million). U.S. exports to Taiwan (principally

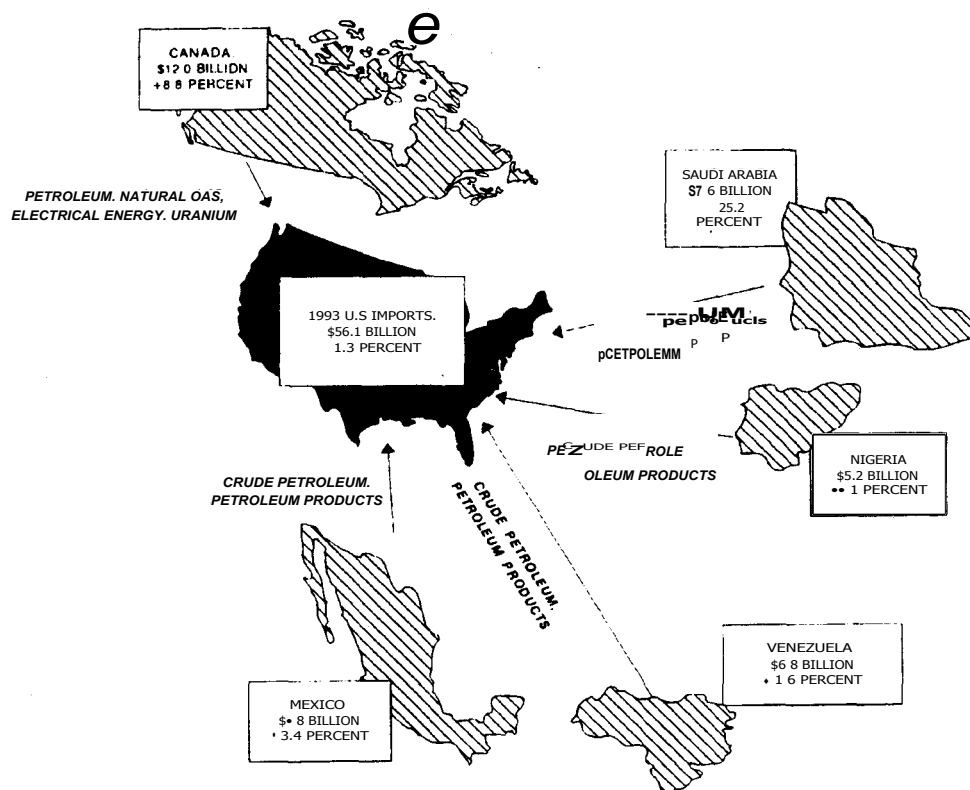
of benzenoid commodity chemicals) rose by \$103 million, while U.S. imports from Taiwan fell by \$101 million. Factors that may have accounted for the improved U.S. balance of trade with Taiwan in the chemicals and related products sector include higher labor costs in Taiwan that may have impeded U.S. imports and lower duties in Taiwan that may have stimulated U.S. exports.

## Energy-related products

The U.S. has historically maintained a trade deficit in the energy-related products sector primarily due to its reliance on imported crude petroleum from major trading partners like Saudi Arabia, Nigeria, Venezuela, Mexico, and Canada. Figure 35 illustrates the leading U.S. imports of energy-related products by major sources and the overall percentage change since 1992.

The U.S. trade deficit with Saudi Arabia in the energy-related products sector declined by \$2.6 billion in 1993, to \$7.5 billion, resulting from reduced imports of crude petroleum from that country. Yet, the U.S. trade deficit with all the Organization for Petroleum Exporting Countries (OPEC) declined by

**Figure 35**  
**U.S. energy-related products sector imports, 1993: Leading U.S. imports, by major sources, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

only \$764 million, from \$25.8 billion to \$25.0 billion. This was due in large part to increased imports of crude petroleum from Kuwait, which displaced imports from Saudi Arabia. U.S. imports of crude petroleum from Saudi Arabia have been abnormally high in recent years because Saudi crude production made up for the lost production capacity in Kuwait, which was destroyed by the Iraqi army during the Gulf War.

The U.S. trade deficit with the EU in the energy-related products sector increased by \$1.1 billion in 1993 to \$1.5 billion. The growing deficit primarily reflected reduced U.S. exports of \$1.0 billion to markets in the EU. The decline in U.S. exports to the EU in this sector reflects, in part, reduced U.S. exports of coal, which have declined because of the abundance of relatively inexpensive crude petroleum, the preferred energy source, on the world market. However, the U.S. trade deficit with the United Kingdom (\$613 million) worsened because U.S. imports from the United Kingdom (primarily crude petroleum) surged by 24 percent. Reflecting burgeoning demand for energy, the U.S. trade deficit in the energy-related products sector with Canada increased by \$1.1 billion. Major imports from Canada were natural gas and components, crude, petroleum, petroleum products, and electricity. The

U.S. trade deficit for energy-related products with Mexico also increased (by \$363 million), primarily as a result of significantly reduced exports, especially of natural gas and components, and significantly increased imports, especially of petroleum products.

## Commodity Analysis

### Coal, coke, and related chemical products

The United States, one of the world's largest suppliers of coal, remains a net exporter. However, in 1993, a decrease in exports combined with an increase in imports resulted in a \$1.2 billion deterioration in the trade surplus to \$2.98 billion. U.S. exports of coal, coke, and related products decreased from \$4.7 billion in 1992 to \$3.6 billion in 1993, attributable mainly to reduced demand for coal resulting from an abundance of relatively inexpensive crude petroleum (the preferred energy source) on the world market. The major markets for U.S. exports of these products continued to be Can-

ada and Japan. U.S. exports of bituminous and lignite coals accounted for about 90 percent of total exports; these are high-quality, low-sulfur coals used primarily for generation of electricity. The United States, which leads the world in total reserves and production of coal, is viewed as a secure source of coal on the world market.

U.S. imports of coal, coke, and related chemical products increased by 13 percent in 1993, from \$535 million to \$603 million. Canada was the leading source of U.S. imports of coal and related chemical products, while Japan was the top source of U.S. imports of coke. Historically, Japan has imported metallurgical coal from several nations, including the United States, to produce coke, which is used in the production of steel. Since the recent decline in Japanese steel production, there has been excess coke production in Japan, and it is being exported at low prices.

**Cynthia B. Foreso**

(202) 205-3348

## **Natural gas and components**

The value of imports of natural gas and components increased from \$3.6 billion in 1992 to more than \$4.4 billion in 1993, due primarily to increased imports from Canada. The most significant individual product contributing to the increase in Canadian imports was pipeline natural gas, which increased in value from \$2.7 billion in 1992 to more than \$3.2 billion in 1993, or by 19 percent, primarily because of an increase in quantity of 12 percent. Reflecting this rise, Canadian natural gas production increased 11 percent during the first half of 1993 compared with the same period in 1992.<sup>105</sup> Canada remained the United States' primary import source of natural gas and natural gas components in 1993, accounting for about 89 percent of all such imports in terms of value.

The trade deficit in natural gas increased by \$982 million in 1993. In addition to the increase in imports from Canada, 1993 trade in natural gas also continued to be influenced by the easing of certain trade barriers between the United States and Mexico brought about by the NAFTA. Exports of natural gas and components declined from \$759 million in 1992 to \$603 million in 1993. The primary reason for this decline was that U.S. exports of natural gas and components to Mexico slowed from the rapid increase of 140 percent during 1991-92. Exports to

Mexico of natural gas and components declined by 34 percent during 1992-93, to a value of \$216 million; exports of pipeline natural gas to Mexico declined from a value of \$191 million in 1992 to \$80 million in 1993. U.S. exports of liquefied natural gas (LNG) to Japan increased by about 3 percent.

**Eric Land**

(202) 205-3349

## **Fertilizers**

A small increase in U.S. imports, combined with a large export decrease, yielded a \$735 million deterioration of the trade surplus in fertilizers to \$277 million in 1993. U.S. fertilizer exports declined \$606 million (24 percent) to \$1.9 billion due to significant export decreases to China (by 54 percent), India (by 34 percent), and Brazil (by 25 percent). These declines characterize the purchasing patterns of China and India, which frequently exhibit significant annual changes. China is a major export market for U.S. nitrogenous and phosphatic fertilizers. Although China tends to purchase fertilizers from foreign suppliers during periods when the country has ample hard currency to pay for these products and when prices are as low as they were during 1993, other nonfiscal factors may take precedence in procurement decisions. Significant lag time of fertilizer distribution to end users in the Chinese market, caused by a lack of modern infrastructure, often disrupts procurement and can result in major shifts in fertilizer exports to China. India is a major export market for U.S. phosphatic fertilizers. Lower demand for fertilizer by India in 1993 largely reflected a destructive monsoon in the fall of 1992, which adversely affected India's agricultural production and fertilizer use well into 1993. Brazil is a major market for U.S. potash. In 1993, a significant portion of U.S. potash exported to Brazil was replaced by lower-priced potash originating from Russia and Belarus.

U.S. imports of fertilizers increased by \$129 million (9 percent) in 1993 to 1.6 billion. This increase was due primarily to nitrogenous and potassic fertilizers. According to U.S. Government sources, imports of nitrogenous fertilizers increased because the domestic nitrogenous fertilizer industry was unable to satisfy domestic demand in 1993, despite operating its plants at 100-percent capacity. The domestic potassic fertilizer industry lacks the natural resource base to satisfy domestic demand and therefore U.S. consumers must rely on imported material. The United States also sustained import reliance in nitrogenous fertilizers for many years. A significant shipment of urea from Bulgaria, which is not traditionally a major supplier to the United States, and reported increased purchases of nitrogenous fertilizers from Trinidad and Tobago

<sup>105</sup> Report by the Petroleum Monitoring and Energy Statistics Division of the Canadian Energy Department.

were the major contributors to the rise in the total value of fertilizer imports in 1993.

**Cynthia Trainor**

(202) 205-3354

## **Medicinal chemicals, except antibiotics**

In 1993, the U.S. trade surplus in all medicinal chemicals except antibiotics increased by \$433 million to \$793 million. U.S. exports of these products increased by \$442 million (8 percent) to \$5.7 billion. The three largest foreign pharmaceutical markets in 1993, by value, were Canada (16 percent), Germany (13 percent), and Japan (12 percent). The largest growth in U.S. exports of these products, however, occurred in three markets: Switzerland (an increase of 70 percent by value), Belgium (24 percent), and Canada (17 percent). This growth is largely attributed to increased related-party trade and, in the case of exports to Canada, changes in the Canadian patent system.

Related-party trade in bulk active ingredients and finished dosage-form products between U.S. companies and their overseas counterparts (parents or affiliates) accounted for much of the increase in exports to these countries, particularly Switzerland. This intracompany trade supplies demand generated by foreign markets and by ongoing clinical trials outside the United States.<sup>106</sup> U.S. firms are increasingly seeking marketing approval overseas before or during application for such approval in the United States because of a perception of shorter approval times outside the United States. Shorter approval times can help maximize the effective patent life of pharmaceutical products, thereby lengthening the period in which companies can recoup a portion of their R&D expenditures, which, in turn, can then be reinvested in R&D programs.

U.S. exports of these products to Canada in 1993 were also stimulated by the passage of legislation in January 1993 (commonly called C-91) that strengthened the Canadian patent system.<sup>107</sup> C-91

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<sup>106</sup> Clinical testing is one phase of the extensive pharmaceutical product authorization process required by most countries.

<sup>107</sup> This increase in exports of pharmaceuticals to Canada was projected to occur either as a result of C-91 or NAFTA, whichever was implemented first. USITC, *Potential Impact on the U.S. Economy and Selected Industries of the North American Free-Trade Agreement*, USITC publication 2596, Jan. 1992, pp. 9-1 and 9-2; Pharmaceutical Research and Manufacturers of America (formerly Pharmaceutical Manufacturers Association) Media Backgrounder, "Impact on the Pharmaceutical Industry of the North American Free Trade Agreement," Sept. 10, 1992.

ended the compulsory licensing system for pharmaceuticals in Canada, adopting much of the patent system proposed under the Uruguay Round of negotiations of the GATT.<sup>108</sup>

U.S. imports of all medicinal chemicals except antibiotics increased by \$9 million (0.2 percent) to \$4.9 billion in 1993. The major sources of these imports, by value, were the United Kingdom (20 percent), Germany (11 percent), and Japan (10 percent). Imports of bulk active ingredients accounted for almost 50 percent by value of total pharmaceutical imports in 1993, reflecting the continuing trend of many developed countries, including the United States, to import bulk product rather than finished dosage-form pharmaceutical preparations. As in past years, related party transactions accounted for a significant share of total U.S. imports because many of these products are currently protected by U.S. patents.

**Elizabeth R. Nesbitt**

(202) 205-3355

## **Plastic or rubber in semifabricated forms**

A substantial growth in exports combined with a slight increase in imports resulted in a \$225-million improvement in the trade surplus of semifabricated rubber and plastic articles in 1993. U.S. exports of these products rose by 11 percent (\$306 million), which contributed to the trade surplus of \$1.1 billion in 1993. Leading U.S. export markets and major growth markets in 1993 were Canada, Mexico, and The Netherlands. These countries accounted for 47 percent of 1993 exports, which were valued at \$3.1 billion. Large export markets for these products exist with Canada and Mexico because of close proximity to and interrelated markets with the United States (many of these products require additional processing before final consumption). Exports increased as a result of growth in world demand for packaging materials. Although U.S. imports of semifabricated rubber or plastic increased from \$1.9 billion in 1992 to \$2.0 billion in 1993, the import growth rate of 4 percent lagged that of export growth. Major import sources of semifabricated rubber or plastic goods were Canada (27 percent) and Japan (20 percent).

This category includes a variety of products such as waste, scrap, monofilaments, profile shapes, thread, cord, sheets, and film of plastic or rubber. The dominant category of traded goods, however, is plastic film and sheet. In 1993, film and sheet

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<sup>108</sup> "Stronger Patents and Curbs on Pricing in Canada," *SCRIP Magazine*, Sept. 1992, p. 55. The Canadian legislation reportedly paralleled the NAFTA provisions inasmuch as the NAFTA text was reportedly derived from the GATT TRIPS (or "Dunkel") text.

constituted 86 percent, by value, of U.S. imports and 91 percent of U.S. exports of these products. The majority of film and sheet is further processed into bags and other packaging materials, some of which is imported into the United States in association with manufactured products or as finished packaging. The United States maintained a trade deficit in plastic sacks and bags in 1992, which further deteriorated by 29 percent in 1993.

**Denby L Misurelli**  
(202) 205-3362

## ***Chlor-alkali chemicals***

The trade surplus in chlor-alkali chemicals decreased by \$160 million in 1993 to \$473 million, primarily reflecting a decline in the value of exports by \$205 million to \$598 million. The decline in the value of U.S. chlor-alkali chemical exports in 1993 was due mainly to reduced exports to Australia, which fell 52 percent, or by \$47 million to \$42.8 million. In addition, U.S. exports of these chemicals to Jamaica declined 66 percent in value, or by \$31 million to \$16 million. U.S. imports of these chemicals declined by \$44.7 million to \$125 million. U.S. exporters' reduced prices were the principal reason for the declines in exports and imports of these chemicals in 1993.

The products in this industry segment that experienced the greatest declines in trade in 1993 were exports of sodium hydroxide in aqueous solution (caustic soda) and potassium hydroxide (caustic potash). In 1993, exports of caustic soda rose 310,000 metric tons to 1.4 mmt; however, their value declined by \$120 million to \$121 million. Caustic soda is used for the production of aluminum, propylene oxide, and kraft paper/paperboard. The value of U.S. exports of caustic soda to Australia fell by \$34.3 million to \$32.7 million in 1993, but the quantity of these exports rose by 137,000 metric tons to 443,000 metric tons, owing to an estimated 134,000 metric ton increase in Australian aluminum production. Although the net volume of U.S. exports to Australia of caustic soda increased in 1993, the impact of a forest fire in Australia had a downward effect on prices because the Australian kraft paper/paperboard industry could use the coproduct, chlorine, whereas the Australian aluminum industry cannot use chlorine. It is very expensive to store chlorine, a hazardous substance. In addition, implementation of severe restrictions on the marketing and use of chlorine caused a decrease in unit sales in certain foreign markets. U.S. exports of caustic soda to Jamaica rose by almost 50,000 metric tons to 167,000 metric tons, but the value of these exports fell by \$14.2 million to \$13.9 million in 1993, owing to cost-cutting in the aluminum industry. Likewise, the U.S. import value declined by

\$55.5 million to \$65.5 million, owing to reduced quantity of 880,000 metric tons, 80,000 metric tons less than in 1992, and a 549,000-metric ton increase in domestic production.

U.S. exports of caustic potash declined by 41,000 metric tons and \$18.9 million in 1993 to 48,000 metric tons, valued at \$21.5 million; whereas, imports rose by \$2.5 million to \$7.4 million. The decline in U.S. exports of caustic potash resulted from a reduction in capacity of 51,000 metric tons, increased domestic demand, and declining prices.

**Kenneth J. Conant, III**  
(202) 205-3346

## ***Benzenoid specialty chemicals***

The U.S. trade surplus in benzenoid specialty chemicals increased from \$1.2 billion in 1992 to \$1.6 billion in 1993, due principally to an increase of \$202 million in U.S. exports of certain intermediate chemicals used in the production of pesticides and pharmaceutical products and a decrease of \$148 million in U.S. imports of similar products. The increase in U.S. exports of these chemicals, from \$3.5 billion in 1992, to \$3.7 billion in 1993, was due to increased consumer demand for downstream products in the major export markets. This demand resulted in increased related-party transactions between major multinational chemical firms and reflects the high degree of globalization in the industries served by producers of benzenoid specialty chemicals. The principal markets for U.S. exports in 1993 were Canada (16 percent), Belgium (10 percent), and Japan (9 percent). Benzenoid specialty chemicals are products purchased mainly on the basis of performance rather than price. Multinational chemical firms evaluate many factors (e.g., intellectual property rights protection, environmental laws, transportation infrastructure, modern and well-maintained public utilities, etc.) before determining where to locate production facilities for a particular chemical, and these plants become the sole source worldwide for a given product. Because it possesses a large number of favorable attributes for establishing production plants along with a well-developed, research-based chemical industry, the United States is a preferred location for manufacturing these complex chemical products; hence, the domestic industry remains a major global source for specialty chemicals. In 1993, the ratio of exports to production for these chemicals was 46.8 percent.

U.S. imports of benzenoid specialty chemicals decreased from \$2.2 billion in 1992 to \$2.1 billion in 1993 (or by 7 percent). The principal sources of U.S. imports of these products by value in 1993

were Japan (22 percent), the United Kingdom (14 percent), Germany (14 percent), and France (7 percent). The principal importers of these products were parties related to the foreign producers. In many cases, chemicals imported over this period were complementary with products produced domestically. Also, some chemicals were imported because they were available only from foreign sources. The ratio of U.S. imports to consumption in 1993 was 33 percent. The decrease in the quantity and value of such imports during 1992-93 was caused by a slowdown in domestic production and consumption of these chemicals.

**Ed Matusik**  
(202)205-3356

## ***Crude petroleum***

U.S. imports of crude petroleum, which accounted for nearly 30 percent of the total U.S. trade deficit or \$38.2 billion, accounted for more than 50 percent of domestic consumption of crude petroleum in 1993. U.S. imports began to increase in late 1985, when crude petroleum prices plummeted because of an oversupply of crude on the world market. The price decreases resulted in the reduced profitability of high-cost U.S. stripper wells, which were then shut down. Consequently, U.S. production declined steadily.

The quantity of U.S. imports of crude petroleum increased from 2.3 billion barrels (valued at \$38.1 billion) in 1992 to 2.5 billion barrels (valued at \$38.2 billion) in 1993. Saudi Arabia, Venezuela, Canada, and Mexico were the principal sources of U.S. imports. OPEC nations together accounted for more than 50 percent of total U.S. imports of crude petroleum in 1993.<sup>109</sup> Industry sources forecast that U.S. imports of crude petroleum could account for over 60 percent of domestic consumption by 2000 as demand increases and production decreases.

U.S. exports of crude petroleum are prohibited, except as approved by the U.S. Government; Canada has been the only consistent market for these exports as part of a commercial exchange agreement between U.S. and Canadian refiners approved by the Secretary of the Department of Energy. In 1987, small shipments of Alaskan North Slope crude petroleum were approved for export to Korea, Taiwan, and Australia. U.S. exports decreased from 1.4 million barrels (valued at \$26.6 million) in 1992 to 1.1 million barrels (valued at \$20.2 million) in 1993. Canada accounted for 65 percent of these U.S. exports, with the remaining exports slated for Korea.

**Cynthia B. Foreso**  
(202) 205-3348

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<sup>109</sup> See sections of this report on U.S. bilateral shifts in trade with Kuwait and Saudi Arabia for a discussion of shifts in sources of U.S. crude petroleum imports.

**Table 20**  
**Energy and chemicals sector: U.S. trade for selected commodity groups, by specified periods,**  
**1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
CH001	Electrical energy:				
	Exports .....	64	61	-3	-4.7
	Imports .....	590	662	72	12.2
	Trade balance .....	-526	-601	-75	-14.3
CH002	Nuclear materials:				
	Exports .....	1,247	1,139	-108	-8.7
	Imports .....	1,080	930	-150	-13.9
	Trade balance .....	167	209	42	25.2
CH003	Coal, coke, and related chemicals products:				
	Exports .....	4,723	3,587	-1,136	-24.1
	Imports .....	535	603	68	12.7
	Trade balance .....	4,188	2,984	-1,204	-28.7
CH004	Crude petroleum:				
	Exports .....	27	20	-7	-25.9
	Imports .....	38,104	38,248	144	0.4
	Trade balance .....	-38,077	-38,228	-151	-0.4
CH005	Petroleum products:				
	Exports .....	6,636	6,654	18	0.3
	Imports .....	11,288	11,041	-247	-2.2
	Trade balance .....	-4,652	-4,387	265	5.7
CH006	Natural gas and components:				
	Exports .....	759	603	-156	-20.6
	Imports .....	3,595	4,421	826	23.0
	Trade balance .....	-2,836	-3,818	-982	-34.6
CH007	Major primary olefins:				
	Exports .....	225	148	-77	-34.2
	Imports .....	200	193	-7	-3.5
	Trade balance .....	25	-45	-70	-280.0
CH008	Other olefins:				
	Exports .....	253	223	-30	-11.9
	Imports .....	32	35	3	9.4
	Trade balance .....	221	188	-33	-14.9
CH009	Primary aromatics:				
	Exports .....	106	145	39	36.8
	Imports .....	187	169	-18	-9.6
	Trade balance .....	-81	-24	57	70.4
CH010	Benzenoid commodity chemicals:				
	Exports .....	1,162	1,213	51	4.4
	Imports .....	313	339	26	8.3
	Trade balance .....	849	874	25	2.9
CH011	Benenoid specialty chemicals:				
	Exports .....	3,448	3,650	202	5.9
	Imports .....	2,211	2,063	-148	-6.7
	Trade balance .....	1,237	1,587	350	28.3
CH012	Miscellaneous organic chemicals:				
	Exports .....	4,842	4,886	44	0.9
	Imports .....	3,251	3,502	251	7.7
	Trade balance .....	1,591	1,384	-207	-13.0
CH013	Selected inorganic chemicals and elements:				
	Exports .....	768	781	13	1.7
	Imports .....	1,363	1,252	-111	-8.1
	Trade balance .....	-595	-471	124	20.8
CH014	Inorganic acids:				
	Exports .....	156	157	1	0.6
	Imports .....	142	144	2	1.4
	Trade balance .....	14	13	-1	-7.1

See footnotes at end of table.



**Table 20-Continued**  
**Energy and chemicals sector: U.S. trade for selected commodity groups, by specified periods,**  
**1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
CH015	Salts and other inorganic chemicals:				
	Exports .....	2,191	2,222	31	1.4
	Imports .....	1,471	1,812	341	23.2
	Trade balance .....	720	410	-310	-43.1
oH016	Chlor-alkali chemicals:				
	Exports .....	803	598	-205	-25.5
	Imports .....	170	125	-45	-26.5
	Trade balance .....	633	473	-160	-25.3
CH017	Industrial gases:				
	Exports .....	98	99	1	1.0
	Imports .....	39	39	(3)	(4)
	Trade balance .....	59	60	1	1.7
CH018	Fertilizers:				
	Exports .....	2,483	1,877	-606	-24.4
	Imports .....	1,471	1,600	129	8.8
	Trade balance .....	1,012	277	-735	-72.6
CH019	Paints, inks, and related item, and certain components thereof:				
	Exports .....	1,712	1,772	60	3.5
	Imports .....	930	980	50	5.4
	Trade balance .....	782	792	10	1.3
CH020	Synthetic organic pigments:				
	Exports .....	223	267	44	19.7
	Imports .....	274	294	20	7.3
	Trade balance .....	-51	-27	24	47.1
CH021	Synthetic dyes and azoic couplers:				
	Exports .....	192	200	8	4.2
	Imports .....	571	583	12	2.1
	Trade balance .....	-379	-383	-4	-1.1
CH022	Synthetics tanning agents:				
	Exports .....	11	10	-1	-9.1
	Imports .....	4	6	2	50.0
	Trade balance .....	7	4	-3	-42.9
CH023	Natural tanning and dyeing materials:				
	Exports .....	17	16	-1	-5.9
	Imports .....	65	64	-1	-1.5
	Trade balance .....	-48	-48	(3)	(4)
CH024	Photographic chemicals and preparations:				
	Exports .....	306	331	25	8.2
	Imports .....	496	554	58	11.7
	Trade balance .....	-190	-223	-33	-17.4
CH025	Pesticide products and formulations:				
	Exports .....	1,543	1,584	41	2.7
	Imports .....	806	825	19	2.4
	Trade balance .....	737	759	22	3.0
CH026	Adhesives and glues:				
	Exports .....	222	256	34	15.3
	Imports .....	111	118	7	6.3
	Trade balance .....	111	138	27	24.3
CH027	Medicinal chemicals, except antibiotics:				
	Exports .....	5,248	5,690	442	8.4
	Imports .....	4,888	4,897	9	0.2
	Trade balance .....	360	793	433	120.3
CH028	Antibiotics:				
	Exports .....	1,568	1,580	12	0.8
	Imports .....	1,138	1,226	88	7.7
	Trade balance .....	430	354	-76	-17.7

See footnotes at end of table.

**Table 20-Continued**  
**Energy and chemicals sector: U.S. trade for selected commodity groups, by specified periods,**  
**1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
CH029	Essential oils and other flavoring materials:				
	Exports .....	618	734	116	18.8
	Imports .....	555	557	2	0.4
	Trade balance .....	63	177	114	181.0
CH030	Perfumes, cosmetics, and toiletries:				
	Exports .....	1,228	1,415	187	15.2
	Imports .....	898	973	75	8.4
	Trade balance .....	330	442	112	33.9
CH031	Soaps, detergents, and surface-active agents:				
	Exports .....	1,156	1,263	107	9.3
	Imports .....	387	450	63	16.3
	Trade balance .....	769	813	44	5.7
CH032	Miscellaneous chemicals and specialties:				
	Exports .....	1,251	1,289	38	3.0
	Imports .....	673	603	-70	-10.4
	Trade balance .....	578	686	108	18.7
CH033	Explosives and propellant powders:				
	Exports .....	212	259	47	22.2
	Imports .....	216	209	-7	-3.2
	Trade balance .....	-4	50	54	1,350.0
CH034	Polyethylene resins in primary forms:				
	Exports .....	1,255	1,260	5	0.4
	Imports .....	462	571	109	23.6
	Trade balance .....	793	689	-104	-13.1
CH035	Polypropylene resins in primary forms:				
	Exports .....	522	432	-90	-17.2
	Imports .....	83	116	33	39.8
	Trade balance .....	439	316	-123	-28.0
CH036	PVC resins in primary forms:				
	Exports .....	488	500	12	2.5
	Imports .....	82	117	35	42.7
	Trade balance .....	406	383	-23	-5.7
CH037	Styrene polymers in primary forms:				
	Exports .....	539	600	61	11.3
	Imports .....	199	235	36	18.1
	Trade balance .....	340	365	25	7.4
CH038	Saturated polyester resins:				
	Exports .....	456	390	-66	-14.5
	Imports .....	88	108	20	22.7
	Trade balance .....	368	282	-86	-23.4
CH039	Other plastics in primary forms:				
	Exports .....	3,793	3,992	199	5.2
	Imports .....	1,208	1,386	178	14.7
	Trade balance .....	2,585	2,606	21	0.8
CH040	SBR rubber in primary forms:				
	Exports .....	258	255	-3	-1.2
	Imports .....	116	111	-5	-4.3
	Trade balance .....	142	144	2	1.4
CH041	Other synthetic rubber:				
	Exports .....	833	769	-64	-7.7
	Imports .....	403	445	42	10.4
	Trade balance .....	430	324	-106	-24.7
CH042	Pneumatic tires and tubes (new):				
	Exports .....	1,341	1,464	123	9.2
	Imports .....	2,410	2,661	251	10.4
	Trade balance .....	-1,069	-1,197	-128	-12.0

See footnotes at end of table.

**Table 20—Continued**  
**Energy and chemicals sector: U.S. trade for selected commodity groups, by specified periods,**  
**1992 and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
CH043	Other tires:				
	Exports .....	66	66	(3)	(4)
	Imports .....	94	107	13	13.8
	Trade balance .....	-28	-41	-13	-46.4
CH044	Plastic or rubber semifabricated forms:				
	Exports .....	2,833	3,139	306	10.8
	Imports .....	1,934	2,015	81	4.2
	Trade balance .....	899	1,124	225	25.0
CH045	Plastic containers and closures:				
	Exports .....	841	914	73	8.7
	Imports .....	738	845	107	14.5
	Trade balance .....	103	69	-34	-33.0
CH046	Hose, belting and plastic pipe:				
	Exports .....	829	880	51	6.2
	Imports .....	657	699	42	6.4
	Trade balance .....	172	181	9	5.2
CH047	Miscellaneous rubber or plastics products:				
	Exports .....	2,407	2,592	185	7.7
	Imports .....	3,448	3,815	367	10.6
	Trade balance .....	-1,041	-1,223	-182	-17.5
CH048	Gelatin:				
	Exports .....	33	35	2	6.1
	Imports .....	94	97	3	3.2
	Trade balance .....	-61	-62	-1	-1.6
CH049	Natural rubber:				
	Exports .....	31	27	-4	-12.9
	Imports .....	770	852	82	10.6
	Trade balance .....	-739	-825	-86	-11.6

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> This coding system is used by the U.S. International Trade Commission to identify major groupings of HTS import and export items for trade-monitoring purposes.

<sup>3</sup> Less than \$500,000.

<sup>4</sup> Less than 0.05 percent.

<sup>5</sup> Cannot be calculated.

Source: Compiled from official statistics of the U.S. Department of Commerce.



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# CHAPTER 7

## Textiles and Apparel<sup>11</sup> <sup>o</sup>

The U.S. trade deficit in textiles and apparel widened further in 1993, increasing by \$2.4 billion over the 1992 level to a new high of \$31.1 billion (table 21). The increase in the trade deficit was only half as much as that in 1992, when the deficit widened by almost \$4.8 billion after remaining fairly steady during 1989-91. The deficit in 1993 widened as exports grew by \$0.9 billion to a total of \$11.7 billion and imports recorded an even larger gain, advancing by \$3.3 billion to a level of \$42.8 billion. In percentage terms, both exports and imports expanded by 8 percent, which was well off the 1992 pace of 17 percent for imports and 11 percent for exports.

Slower growth in U.S. consumer spending on clothing curbed demand for apparel imports, which accounted for almost 80 percent of sector imports in 1993. Personal consumption expenditures on apparel that year rose by 3.4 percent in real terms, compared with 5.7 percent a year earlier. Sluggish economic activity in major foreign markets slowed the growth in U.S. sector exports, especially to the EU. Moreover, rapid growth in exports of garment parts to Mexico and the Caribbean nations subsided somewhat in 1993.

Bilateral quota agreements negotiated under the Multifiber Arrangement (MFA) regulate most U.S. imports of textiles and apparel. In 1993, imports of MFA products totaled \$36 billion. In the URA negotiations, signed by participating nations on April 15, 1994, in Marrakesh, Morocco, negotiators agreed on a 10-year phaseout of all quotas on textiles and apparel. In recognition of the quota phaseout, the United States agreed to cut tariffs on textiles and apparel by 11.5 percent, compared with about 34 percent for all merchandise.

### U.S. Bilateral Trade

One-half of the increase in the sector trade deficit in 1993 originated with China, the largest supplier by far (figures 36 and 37). Imports from China, after climbing by 32 percent in 1992, grew by another 20 percent, or \$1.2 billion, in 1993 to nearly \$7.2 billion (figure 38). Most of the increased

imports were non-MFA products, especially pure silk garments. Imports of MFA products from China rose by just 4 percent to \$4.8 billion. To curb the growth in imports of Chinese silk garments, the United States reached agreement with China early in 1994 to bring these products under quota for the first time. In a new and separate agreement covering MFA goods, China agreed to zero quota growth for 1994 and 1-percent growth for 1995 and 1996.

The traditional Big Three Asian suppliers, Hong Kong, Taiwan, and Korea, which generated one-third of the sector trade deficit in 1993, continued their relative decline. Their shipments fell by 5 percent to \$10.4 billion, or 24.3 percent of sector imports, down from 27.7 percent a year earlier. Rising operating costs, labor shortages, and limited annual quota growth in the U.S. market of roughly 1 percent have spurred the Big Three to invest and shift production to other Asian nations such as China and the Association of Southeast Asian Nations (ASEAN) group (Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand), and to Central America.

The growth in sector imports from the ASEAN nations, which accounted for 16 percent of the 1993 trade deficit, slowed considerably. Their imports rose by 8 percent in 1993 after having grown by 28 percent in 1992. Although most ASEAN nations posted slower growth in 1993, the slowdown mainly reflected a drop in imports from Singapore of 19 percent. Declining competitiveness has spurred the sector in Singapore to shift low-end production to neighboring nations and to develop into a service and trading center for the regional industry.

Countries covered by the Caribbean Basin Economic Recovery Act (CBERA) and Mexico have assumed a large and rapidly growing role in U.S. sector trade. Much of the trade with the region involves production sharing, in which U.S. firms ship apparel parts there for assembly and reimport the assembled garments for distribution in the U.S. market. Sector imports from the region rose by 21 percent to almost \$6 billion and exports grew by

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<sup>11</sup> <sup>o</sup> Footwear will be discussed separately at the end of this chapter. Discussions and data regarding trade in the textiles and apparel sector in general do not include footwear.

**Table 21**  
**Textiles and apparel: U.S. exports of domestic merchandise, imports for consumption,**  
**and merchandise trade balance, by selected countries and country groups, 1992 and**  
**1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
China .....	142	127	-15	-10.6
Hong Kong .....	302	296	-7	-2.2
Mexico .....	1,504	1,755	251	16.7
Canada .....	1,834	2,113	279	15.2
Korea .....	160	161	1	0.9
Taiwan .....	113	98	-14	-12.9
Dominican Rep .....	701	785	84	11.9
Japan .....	775	1,020	245	31.6
India .....	24	23	0	-1.2
Italy .....	182	124	-59	-99.3
All other .....	5,060	5,184	125	-99.0
<b>Total .....</b>	<b>10,796</b>	<b>11,686</b>	<b>890</b>	<b>8.2</b>
EU-12 .....	1,802	1,639	-163	-9.1
OPEC .....	595	554	-42	-7.0
Latin America .....	4,120	4,730	610	14.8
CBERA .....	1,946	2,294	348	17.9
Asian Pacific Rim .....	1,985	2,167	182	9.2
ASEAN .....	345	306	-40	-11.5
Eastern Europe .....	45	30	-15	-34.2
<b>U.S. imports for consumption:</b>				
China .....	5,964	7,164	1,201	20.1
Hong Kong .....	4,556	4,210	-347	-7.6
Mexico .....	1,551	1,857	306	19.8
Canada .....	1,135	1,342	208	18.3
Korea .....	3,316	3,200	-116	-3.5
Taiwan .....	3,068	2,990	-77	-2.5
Dominican Rep .....	1,249	1,465	215	17.2
Japan .....	827	808	-19	-2.3
India .....	1,339	1,539	200	15.0
Italy .....	1,389	1,378	-11	-0.8
All other .....	15,034	16,797	1,763	11.7
<b>Total .....</b>	<b>39,427</b>	<b>42,750</b>	<b>3,323</b>	<b>8.4</b>
EU-12 .....	3,453	3,510	57	1.7
OPEC .....	1,278	1,532	254	19.9
Latin America .....	5,888	6,929	1,041	17.7
CBERA .....	3,379	4,097	718	21.3
Asian Pacific Rim .....	22,288	23,191	903	4.1
ASEAN .....	4,982	5,399	418	8.4
Eastern Europe .....	280	275	-5	-1.8
<b>U.S. merchandise trade balance:</b>				
China .....	-5,822	-7,038	-1,216	(2)
Hong Kong .....	-4,254	-3,914	340	(2)
Mexico .....	-46	-102	-56	(2)
Canada .....	699	771	72	(2)
Korea .....	-3,156	-3,039	117	(2)
Taiwan .....	-2,955	-2,892	63	(2)
Dominican Rep .....	-548	-680	-132	(2)
Japan .....	-52	212	264	(2)
India .....	-1,315	-1,516	-201	(2)
Italy .....	-1,207	-1,254	-47	(2)
All other .....	-9,974	-11,613	-1,638	(2)
<b>Total .....</b>	<b>-28,631</b>	<b>-31,064</b>	<b>-2,433</b>	<b>(2)</b>

See footnotes at end of table.

**Table 21—Continued**

**Textiles and apparel: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance—Continued</b>				
EU-12 .....	-1,650	-1,871	-220	(2)
OPEC .....	-683	-979	-296	(2)
Latin America .....	-1,767	-2,199	-432	(2)
CBERA .....	-1,433	-1,802	-370	(2)
Asian Pacific Rim .....	-20,303	-21,024	-720	(2)
ASEAN .....	-4,636	-5,094	-458	(2)
Eastern Europe .....	-235	-245	-10	(2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

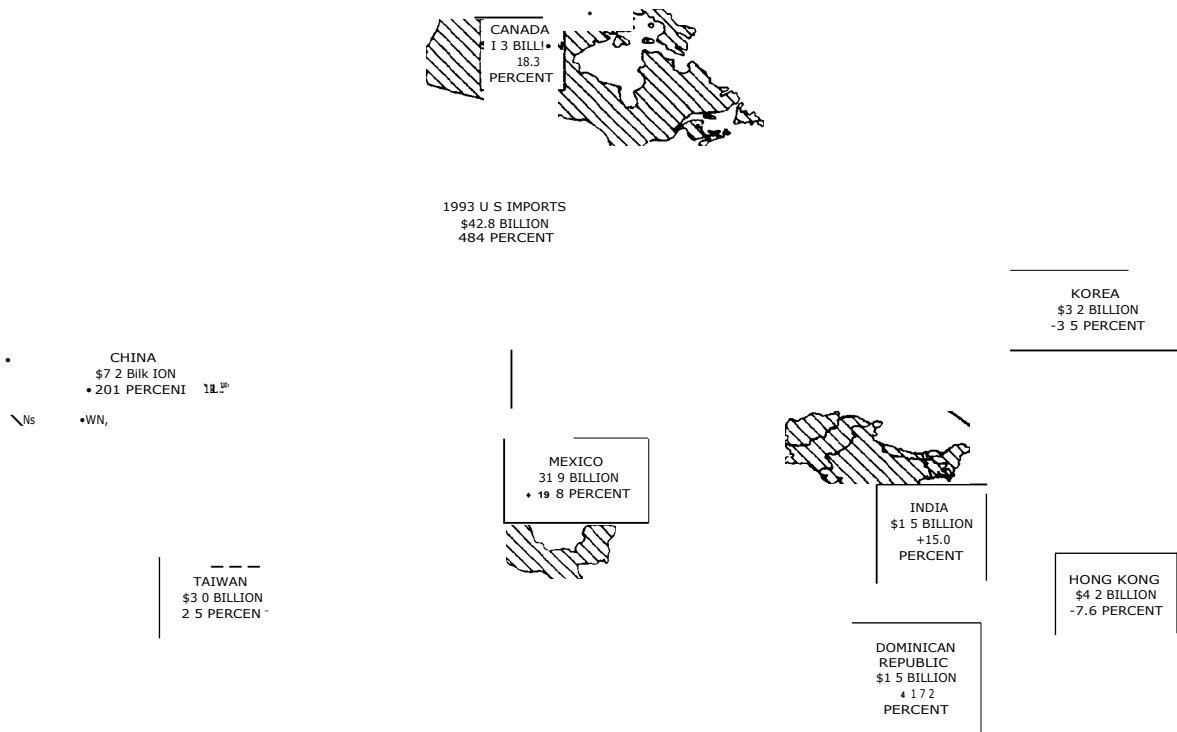
<sup>2</sup> Not meaningful for purposes of comparison.

Note.— Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.

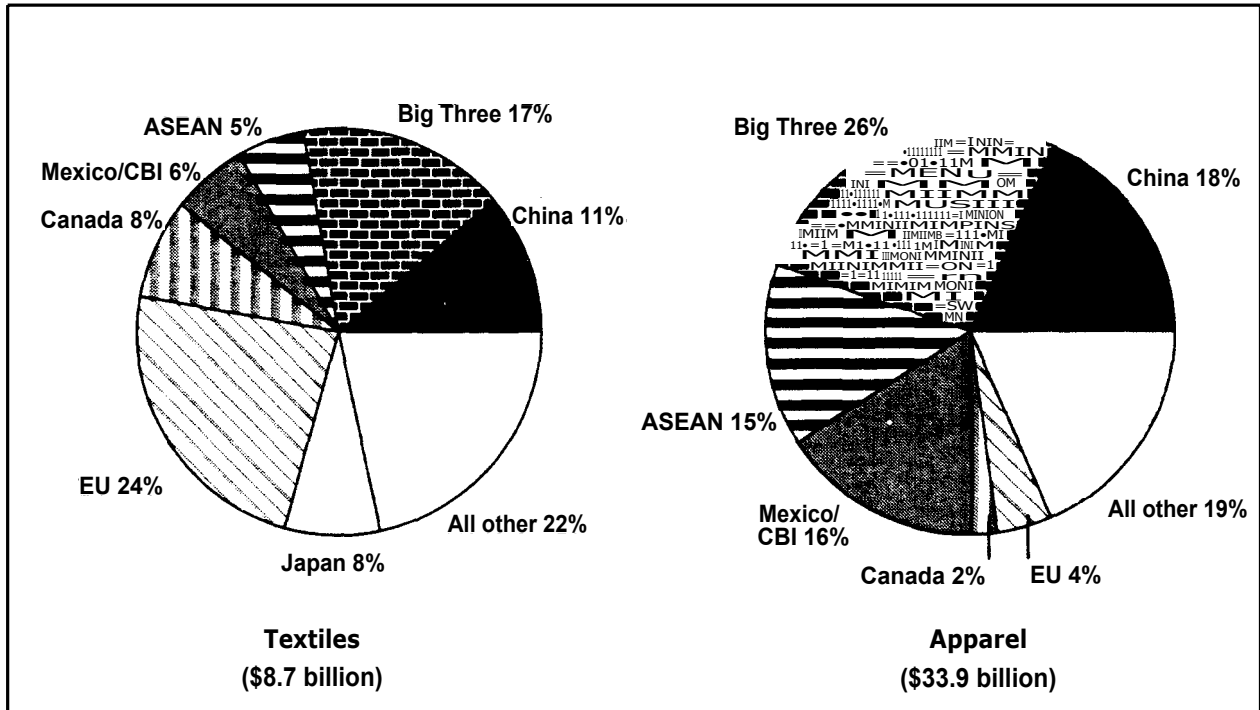
**Figure 36**

**U.S. textiles and apparel sector imports, 1993: U.S. imports by major sources, and overall percentage change since 1992**



Source: Derived from official statistics of the U.S. Department of Commerce.

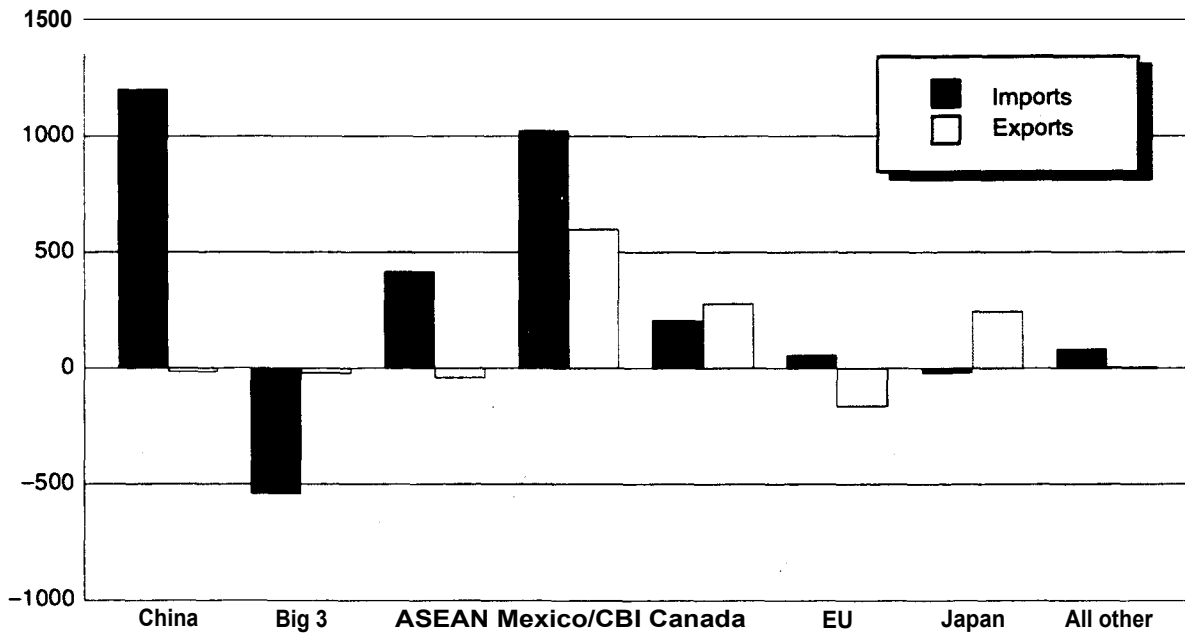
**Figure 37**  
**U.S. imports of textiles and apparel, by selected partners, 1993**



Source: Compiled from official statistics of the U.S. Department of Commerce.

**Figure 38**  
**Textiles and apparel: Change in trade with selected partners, 1992-93**

Million dollars



Source: Compiled from official statistics of the U.S. Department of Commerce.



17 percent to \$4 billion in 1993. The slowdown in U.S. apparel retail sales that year restrained the growth in regional trade from 1992 gains of 27 to 28 percent. Liberal market access and reduced duties have enabled many U.S. apparel firms with operations in the region to sharpen their competitive edge and preserve market share against cheaper imports from Asia. The growth in imports from Mexico also reflected anticipation of the adoption of the NAFTA, which on entering into force on January 1, 1994, eliminated all quotas and duties on Mexican products of U.S.-origin fabric.

The sector trade balance with developed countries showed divergent trends in 1993. The biggest improvement occurred in trade with Japan, in which a huge increase in apparel exports led to the first sector trade surplus with Japan in many years. Sector exports to Japan accelerated by 32 percent to just over \$1 billion, whereas sector imports from there fell by 2 percent to \$800 million, resulting in a turnaround in the bilateral trade balance from a \$52 million deficit in 1992 to a \$212 million surplus a year later. The sector trade picture with Canada also improved in 1993, as the trade surplus rose by \$72 million to a high of \$771 million. The improvement marked a continuation of the underlying trend prevailing since 1989, when the CFTA went into force. The increased bilateral deficit with the EU, a major foreign market for the U.S. sector, largely reflected a drop in exports for the second consecutive year. Exports of \$1.6 billion in 1993 were down by 9 percent from a year earlier and by 12 percent from their high of \$1.8 billion in 1991. Imports from the EU moved up slightly again in 1993, to \$3.5 billion, but they remain below their high of almost \$3.6 billion in 1990.

## Commodity Analysis

### Apparel<sup>11</sup>

The U.S. trade deficit in apparel in 1993 widened by \$2 billion to a record annual level of \$29.2 billion. The growth in apparel trade slowed considerably in 1993 as imports rose by 9 percent to \$33.9 billion and exports grew by 18 percent to \$4.8 billion. In 1992, imports had increased by 19 percent and exports by 28 percent. Despite the lower rate of import growth in 1993, imports increased their share of the domestic market to an estimated 43 percent in 1993 as consumption of apparel increased by 5 percent and production by 3 percent. The export increase accounted for about half of the value of the increase in apparel production, as

exports rose from 9 percent of industry shipments in 1992 to 11 percent in 1993. Shirts and blouses are the most important apparel item traded, accounting for 30 percent of imports and 18 percent of exports in 1993.

About half of the increase in the apparel trade deficit can be attributed to imports from China, the largest import source, which continued to rise despite tight quotas and little quota growth. China's apparel shipments to the United States rose by 22 percent, to \$6.2 billion, in 1993, although its shipments of apparel covered by the MFA grew by only 1 percent, compared with 20 percent in 1992. Most of the \$1.1-billion increase in imports from China is the result of an estimated \$800 million, or 73 percent, increase in China's shipments to the United States of uncontrolled, chiefly silk, apparel, about 60 percent of which is shirts and blouses. As a result of this gain, imports of silk apparel accounted for about 30 percent of total 1993 U.S. apparel imports from China. The new bilateral agreement establishing quotas on China's exports of silk apparel to the United States should control future growth of these shipments. China also achieved considerable growth in its much smaller shipments of leather, fur, rubber, and plastic apparel (also not covered by the MFA).

The competitiveness of the Big Three Asian suppliers continued to diminish in 1993. Imports from the Big Three declined by 7 percent to \$8.9 billion. The increase in apparel imports from other Asian countries, particularly the ASEAN nations, largely reflects the effects of investment and technical assistance from Big Three firms. U.S. apparel imports from the ASEAN nations grew by 9 percent in 1993, to \$4.9 billion. Among other important Asian suppliers, India's imports were up by 19 percent, to \$1.1 billion, and those from Pakistan were up by 11 percent, to \$442 million.

The apparel trade deficit with Mexico and the Caribbean Basin countries' grew by \$510 million in 1993 to \$2.8 billion. Imports from Mexico increased by 20 percent, to \$1.4 billion, and those from the Caribbean by 22 percent, to \$4.0 billion. The relative increases in exports to these markets approximated the import gains, as most trade with the region is the result of production-sharing operations through which parts cut in the United States are shipped abroad for assembly and subsequent return as finished garments. Export shipments to Mexico were up by 17 percent, to \$845 million, and to the Caribbean nations by 22 percent, to \$1.8 billion. U.S. imports resulting from production sharing benefit from tariff concessions, as duty is assessed only on the value added abroad, and from liberalized quota restraints if the fabric from which the parts were cut was of U.S. origin. The rise in trade with this region reflects the increasing use of offshore assembly by U.S. apparel firms to reduce costs and enhance their price competitiveness with each other and with imports, primarily from Asia.

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<sup>11</sup> I These articles are covered in commodity groups CH062 through CH080 excluding the nonwoven fabrics in CH079.

U.S. apparel trade with developed countries showed divergent trends. The U.S. apparel trade surplus with Japan grew by \$244 million, to \$599 million. This was the result of the most notable U.S. apparel export gain in 1993. The rise in shipments to Japan of 47 percent amounted to \$232 million and was one-third of the total increase in apparel exports. It reflects the popularity in the Japanese market of certain brand names and styles of U.S. apparel, largely casual clothing such as T-shirts, sweatshirts, woven shirts and blouses, and jeans.

In contrast, the apparel trade deficit with Canada deepened in 1993, by \$52 million, or to \$187 million. Imports were up 27 percent, to \$562 million, a second year of strong gains brought about largely by the effects of tariff reductions under the CFTA, the drop in value of Canadian currency, and increased U.S. consumer spending on apparel. The 22-percent gain, to \$375 million, in apparel exports to Canada in 1993 was below the 26-percent gain of 1992, as benefits of the ongoing tariff reductions under the CFFA were offset by exchange rate changes and sluggish Canadian consumer apparel expenditures.

The deficit in apparel trade with the EU remained at \$1 billion in 1993. Trade in both directions declined modestly. Imports from the EU declined by 4 percent to \$1.5 billion, and exports to that market declined by 11 percent to \$451 million. The export decline largely reflects the continuing poor economic conditions in the region during 1993.

**Mary Elizabeth Sweet**  
**(202)205-3455**

## **Textiles**<sup>112</sup>

The U.S. textile trade deficit widened considerably in 1993, rising by \$480 million over the 1992 level to \$1.9 billion. Although both imports and exports reached new highs in 1993 of \$8.7 billion and \$6.8 billion, the growth in imports of \$650 million, or 8 percent, far exceeded that for exports of \$169 million, or less than 3 percent. With U.S. producers' textile shipments increasing by just 1 percent in 1993, to an estimated \$85.6 billion, the share of the U.S. textile market supplied by imports rose slightly to almost 10 percent. Import penetration was considerably higher in certain specific product categories, such as cotton broadwoven fabric, where imports supplied just over 30 percent of apparent consumption.

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<sup>112</sup> Textiles includes manmade fibers, yarns, fabrics, home furnishings, carpets, and industrial textile products, such as bags, belting, and cordage. These articles are covered in commodity groups CH050 through CH061 and nonwoven fabric in CH079.

The deterioration of the textile trade balance largely reflected increased bilateral deficits with the EU and China. The widening deficit with the EU, the principal U.S. trading partner in textiles, resulted from a decline in exports of 9 percent, to \$1.2 billion, and an increase in imports of 6 percent, to \$2.0 billion. Recessionary conditions in the EU reduced demand for U.S. textiles, while encouraging expanded EU exports to the stronger U.S. market. The increased deficit with China stemmed mainly from a rise in imports of 8 percent to \$973 million. Most of the increase in imports from China consisted of cotton fabric and home furnishings such as bedspreads and terry towels.

In contrast, the United States increased its trade surplus with Canada by 15 percent (to \$950 million) and with Mexico by 12 percent (to \$445 million) in 1993. Canada and Mexico, the two largest single-country markets for U.S. textile exports, accounted for a 38-percent share of total U.S. textile exports in 1993. Exports to these countries accounted for all the growth in U.S. shipments abroad. Excluding shipments to Canada and Mexico, U.S. textile exports fell by 4 percent.

On a product basis, import growth in 1993 was concentrated largely in manmade fibers, broadwoven fabrics, home furnishings, and knit fabrics. The increase in imports of manmade fibers, which totaled \$1.1 billion in 1993, consisted principally of polyester staple from Korea and Taiwan and nylon filament from the EU and Canada. Increased imports of polyester staple resulted mainly from healthy domestic demand combined with the availability of lower priced Asian fiber.<sup>113</sup> Increased fiber imports from Canada, the EU, and Mexico largely reflected the globalization of the major U.S. and European manmade fiber producers, which shift supplies according to market demand and production capacity.

Strong demand for blue denim and rayon fabric in apparel production spurred much of the import growth in broadwoven fabrics. Imports of blue denim increased mainly from lower-cost producers, such as China and India, and from Germany and Canada. Most of the increase in rayon fabric imports was accounted for by Germany. Home furnishing imports, such as bed linens, table linens, and towels, increased mainly from lower wage countries such as India, China, Portugal, and Brazil. Knit fabrics experienced the largest percentage import increase, increasing by 32 percent or by \$68 million. Much of this growth was accounted for by pile and elastic knit fabrics from Taiwan and lower-valued cotton knit fabric, used mainly in the production of T-shirts, from Pakistan.

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<sup>113</sup> It is likely that 1994 fiber imports from Asia will fall as the demand for polyester is expected to increase in that region. Cotton production is predicted to decline in China, India, and Pakistan, resulting in increased demand for polyester as a replacement fiber.

Import growth in many product categories was restricted to some extent by quotas placed on shipments from the major developing country suppliers.<sup>114</sup> Roughly 25 percent of the broadwoven fabric imports, as well as a good percentage of cotton home furnishing imports, were subject to binding quotas. Binding quotas covered as much as 70 percent of the imports in many apparel fabrics; and two-thirds of the imports of cotton terry towels.

Export growth was concentrated in broadwoven fabrics and in various miscellaneous textiles such as wadding, wicks, felts, and narrow fabrics. This growth was largely cancelled out by reduced shipments of manmade fiber to the EU and spun yarn to the EU and the Far East. Exports accounted for roughly 7 percent of total U.S. textile shipments in 1993, with manmade fibers and broadwoven fabric accounting for almost one-half of these exports.

**Linda Shelton**  
(202) 205-3457

## Footwear

Boosted by a \$1.1 billion (33 percent) increase in shipments from China, U.S. imports of footwear in 1993 increased by \$965 million (10 percent) over the 1992 level to a record high of \$11.1 billion (table 22). With U.S. exports remaining flat at just over \$600 million, the U.S. deficit in footwear increased by \$1 billion to \$10.5 billion in 1993. Imports continued to expand their already dominant share of the U.S. footwear market, accounting for 86 percent of shoes sold in the United States in 1993, compared with 82 percent in 1992. China alone supplied 52 percent of the market and contributed 43 percent of the total U.S. footwear trade deficit in 1993 (figure 39).

Historically, footwear trade has shifted from high labor-cost countries to lower labor-cost countries. In the 1970s and early 1980s, trade shifted from Italy and Japan to Korea, Taiwan, and Brazil and, in recent years, from Korea and Taiwan to China, Indonesia, and Thailand. Korea and Taiwan, whose labor costs are lower than those of other industrialized countries, are now shifting production into more expensive market segments traditionally dominated by the United States and other high-wage countries of Western Europe.

China is the world's largest producer and exporter of footwear, as well as the leading supplier to the U.S. market. China accounted for 43 percent of the value (60 percent of the quantity) of total U.S. footwear imports in 1993. Imports from China,

after nearly tripling in quantity and increasing by 5 times in value between 1989 and 1992, grew by 20 percent in quantity and 33 percent in value to 804 million pairs, valued at \$4.5 billion in 1993. The prominence of China as the world's largest producer and exporter of footwear has resulted from structural changes in its industrial sector that attracted Western investors who assisted China with machinery, technical know-how, and joint ventures. In addition, China possesses a competitive advantage with its vast quantities of low-cost labor, energy, and material. In recent years, rapidly rising labor costs in Taiwan and Korea pressured the producers in those countries to move operations to China and form cooperative ventures to produce less expensive footwear, including athletic shoes.

Imports from Brazil, the second largest supplier of mostly low to medium-priced women's leather footwear, rose by 27 percent to \$1.4 billion. Imports from Indonesia, the fourth largest supplier of mainly low-priced footwear, increased by 25 percent to \$829 million in 1993, following a 60 percent rise in 1992. At the same time, imports from Korea and Taiwan continued to decline, with shipments from Korea falling by 32 percent to \$1.03 billion, and those from Taiwan by 31 percent to \$584 million. Imports from Thailand, which was a major beneficiary of trade shifts during the late 1980s, continued to grow slowly, rising by only 8 percent to \$353 million in 1993. Inadequate infrastructure and higher production costs are believed to be the major constraints inhibiting growth in Thai footwear exports. Imports from the Dominican Republic, the tenth largest supplier, increased by 15 percent to \$220 million. All but a small part of the imports from the Dominican Republic consisted of footwear uppers that enter duty free under the CBERA.<sup>115</sup>

The movement of production from Korea and Taiwan to China in recent years has resulted in significant trade shifts, especially of low-priced footwear. Between 1990 and 1992, U.S. imports of nonrubber footwear valued at less than \$16 per pair (customs value) from Korea and Taiwan declined by 165 million pairs, while those from China surged by 229 million pairs. In 1993, imports of this inexpensive footwear from Korea and Taiwan declined by another 55 million pairs, whereas those from China climbed by 116 million pairs.

China emerged as the dominant supplier of low- to medium-priced leather footwear in 1993. China supplied nearly 40 percent by quantity (226 million pairs) and 31 percent by value (\$2.2 billion) of U.S. leather footwear imports in 1993, compared with 32 percent and 24 percent, respectively, in

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<sup>114</sup> In general, quotas that are 85 percent or more filled are considered binding because there is uncertainty as to whether additional shipments will be permitted entry.

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<sup>115</sup> To be eligible for duty-free entry, these uppers must be made entirely from U.S.-origin parts and material.

**Table 22**  
**Footwear: U.S. exports of domestic merchandise, imports for consumption, and**  
**merchandise trade balance, by selected countries and country groups, 1992 and 1993 <sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
U.S. exports of domestic merchandise:				
China .....	3	4	1	22.2
Brazil .....	4	3	0	-4.8
Korea .....	23	23	-1	-2.3
Indonesia .....	3	3	0	3.1
Italy .....	27	24	-3	-11.7
Taiwan .....	11	10	-1	-5.2
Thailand .....	1	3	2	112.5
Mexico .....	89	100	11	12.6
Spain .....	20	7	-13	-65.6
Dominican Rep .....	27	32	5	-98.8
All other .....	395	395	0	-99.0
<b>Total .....</b>	<b>603</b>	<b>604</b>	<b>1</b>	<b>0.2</b>
EU-12 .....	154	131	-23	-14.9
OPEC .....	23	19	-4	-18.1
Latin America .....	183	192	9	5.2
CBERA .....	62	65	3	5.1
Asian Pacific Rim .....	127	134	7	5.9
ASEAN .....	10	15	5	52.8
Eastern Europe .....	3	5	1	42.5
U.S. imports for consumption:				
China .....	3,396	4,505	1,109	32.6
Brazil .....	1,110	1,408	299	26.9
Korea .....	1,520	1,033	-486	-32.0
Indonesia .....	663	829	166	25.1
Italy .....	785	759	-26	-3.3
Taiwan .....	842	584	-258	-30.7
Thailand .....	327	353	26	8.0
Mexico .....	212	215	3	1.4
Spain .....	272	246	-26	-9.5
Dominican Rep .....	191	220	29	15.2
All other .....	822	952	130	15.8
<b>Total .....</b>	<b>10,141</b>	<b>11,105</b>	<b>965</b>	<b>9.5</b>
EU-12 .....	1,316	1,279	-37	-2.8
OPEC .....	668	833	166	24.8
Latin America .....	1,615	1,954	340	21.0
CBERA .....	202	241	39	19.0
Asian Pacific Rim .....	6,617	7,174	557	8.4
ASEAN .....	1,052	1,259	207	19.7
Eastern Europe .....	85	87	2	2.9
U.S. merchandise trade balance:				
China .....	-3,393	-4,501	-1,108	(2)
Brazil .....	-1,106	-1,405	-299	(2)
Korea .....	-1,497	-1,011	486	(2)
Indonesia .....	-660	-826	-166	(2)
Italy .....	-758	-735	23	(2)
Taiwan .....	-831	-573	258	(2)
Thailand .....	-325	-350	-25	(2)
Mexico .....	-123	-115	8	(2)
Spain .....	-253	-240	13	(2)
Dominican Rep .....	-164	-188	-24	(2)
All other .....	-427	-557	-130	(2)
<b>Total .....</b>	<b>-9,538</b>	<b>-10,501</b>	<b>-963</b>	<b>(2)</b>

See footnotes at end of table.

**Table 22—Continued**

**Footwear: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance—Continued</b>				
EU-12 .....	-1,162	-1,148	14	(2)
OPEC .....	-645	-815	-170	(2)
Latin America .....	-1,432	-1,762	-330	(2)
CBERA .....	-141	-176	-35	(2)
Asian Pacific Rim .....	-6,491	-7,040	-549	(2)
ASEAN .....	-1,042	-1,245	-202	(2)
Eastern Europe .....	-81	-82	-1	(2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

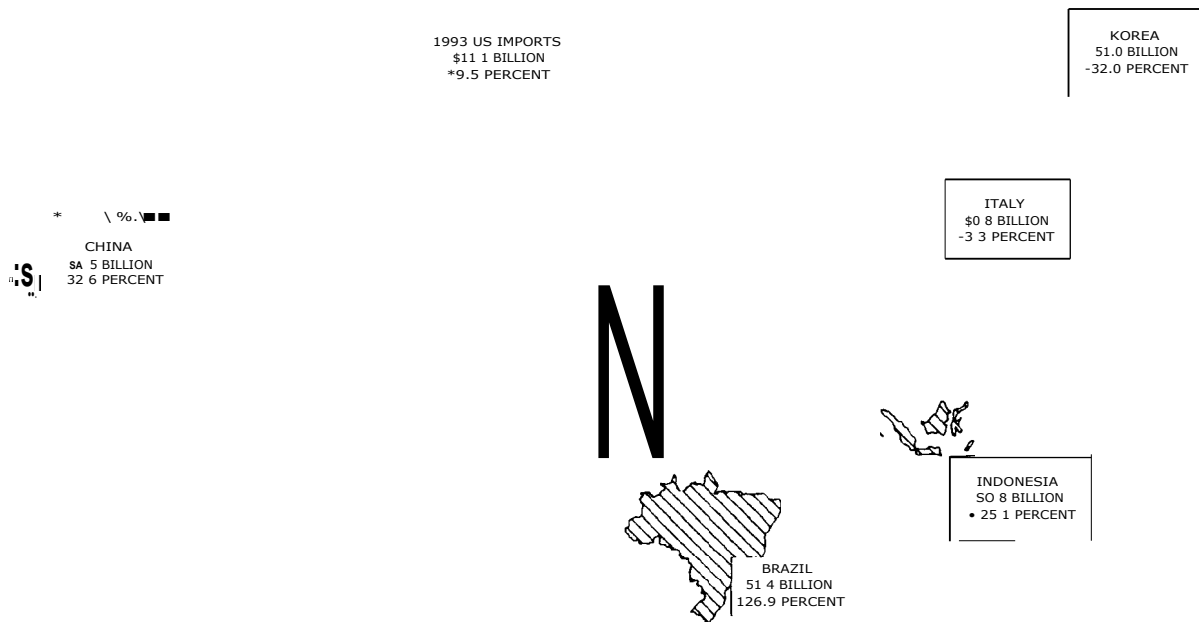
<sup>2</sup> Not meaningful for purposes of comparison.

Note.— Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.

**Figure 39**

**Footwear sector imports, 1993: U.S. imports by major sources, and overall percentage change since 1992**



Source: Derived from official statistics of the U.S. Department of Commerce.

**Table 23**  
**Fibers, textiles, apparel, and footwear sector: U.S. trade for selected commodity groups, 1992**  
**and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
CH050	Manmade fibers and filament yarns:				
	Exports .....	1,434	1,393	-41	-2.9
	Imports .....	900	1,126	226	25.1
	Trade balance .....	534	267	-267	-50.0
CH051	Spun yarns and miscellaneous yarns:				
	Exports .....	434	347	-87	-20.0
	Imports .....	474	497	23	4.9
	Trade balance .....	-40	-150	-110	-275.0
CH052	Boardwoven fabrics:				
	Exports .....	1,471	1,592	121	8.2
	Imports .....	3,223	3,339	116	3.6
	Trade balance .....	-1,752	-1,747	5	0.3
CH053	Knit fabrics:				
	Exports .....	328	322	-6	-1.8
	Imports .....	217	286	69	31.8
	Trade balance .....	111	36	-75	-67.6
CH054	Miscellaneous fabrics:				
	Exports .....	179	199	20	11.2
	Imports .....	100	105	5	5.0
	Trade balance .....	79	94	15	19.0
CH055	Coated, covered, impregnated, or laminated textile fabrics:				
	Exports .....	360	370	10	2.8
	Imports .....	200	206	6	3.0
	Trade balance .....	160	164	4	2.5
CH056	Cordage, nets, and netting:				
	Exports .....	52	50	-2	-3.8
	Imports .....	124	123	-1	-0.8
	Trade balance .....	-72	-73	-1	-1.4
CH057	Certain textile articles and fabrics suitable for industrial use:				
	Exports .....	268	277	9	3.4
	Imports .....	144	177	33	22.9
	Trade balance .....	124	100	-24	-19.4
CH058	Miscellaneous textiles and articles:				
	Exports .....	709	793	84	11.8
	Imports .....	894	983	89	10.0
	Trade balance .....	-185	-190	-5	-2.7
CH059	Sacks and bags of textile materials:				
	Exports .....	17	30	13	76.5
	Imports .....	43	50	7	16.3
	Trade balance .....	-26	-20	6	23.1
CH060	Carpets and rugs:				
	Exports .....	725	730	5	0.7
	Imports .....	709	671	-38	-5.4
	Trade balance .....	16	59	43	268.8
CH061	Home furnishings:				
	Exports .....	249	253	4	1.6
	Imports .....	827	939	112	13.5
	Trade balance .....	-578	-686	-108	-18.7
CH062	Men's and boys' suits and sports coats:				
	Exports .....	114	125	11	9.6
	Imports .....	662	664	2	0.3
	Trade balance .....	-548	-539	9	1.6

See footnotes at end of table.

**Table 23-Continued**  
**Fibers, textiles, apparel, and footwear sector: U.S. trade for selected commodity groups, 1992**  
**and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
CH063	Men's and boys' coats and jackets:				
	Exports .....	103	102	-1	-1.0
	Imports .....	1,285	1,563	278	21.6
	Trade balance .....	-1,182	-1,461	-279	-23.6
CH064	Men's and boy's trousers:				
	Exports .....	843	971	128	15.2
	Imports .....	2,675	2,797	122	4.6
	Trade balance .....	-1,832	-1,826	6	0.3
CH065	Women's and girls' trousers:				
	Exports .....	312	325	13	4.2
	Imports .....	3,342	3,354	12	0.4
	Trade balance .....	-3,030	-3,029	1	(4)
CH066	Shirts and blouses:				
	Exports .....	664	854	190	28.6
	Imports .....	9,173	10,042	869	9.5
	Trade balance .....	-8,509	-9,188	-679	-8.0
CH067	Sweaters:				
	Exports .....	27	32	5	18.5
	Imports .....	2,149	1,961	-188	-8.7
	Trade balance .....	-2,122	-1,929	193	9.1
CH068	Women's and girls' suits, skirts, and coats:				
	Exports .....	260	283	23	8.8
	Imports .....	3,011	3,244	233	7.7
	Trade balance .....	-2,751	-2,961	-210	-7.6
CH069	Women's and girls' dresses:				
	Exports .....	98	105	7	7.1
	Imports .....	1,011	1,082	71	7.0
	Trade balance .....	-913	-977	-64	-7.0
CH070	Robes, nightwear, and underwear:				
	Exports .....	382	512	130	34.0
	Imports .....	1,563	1,909	346	22.1
	Trade balance .....	-1,181	-1,397	-216	-18.3
CH071	Hosiery:				
	Exports .....	135	206	71	52.6
	Imports .....	178	231	53	29.8
	Trade balance .....	-43	-25	18	41.9
CH072	Body-supporting garments:				
	Exports .....	278	316	38	13.7
	Imports .....	557	639	82	14.7
	Trade balance .....	-279	-323	-44	-15.8
CH073	Neckwear, handkerchiefs, and scarves:				
	Exports .....	21	31	10	47.6
	Imports .....	294	322	28	9.5
	Trade balance .....	-273	-291	-18	-6.6
CH074	Gloves, including gloves for sports:				
	Exports .....	166	157	-9	-5.4
	Imports .....	1,124	1,349	225	20.0
	Trade balance .....	-958	-1,192	-234	-24.4
CH075	Headwear:				
	Exports .....	103	109	6	5.8
	Imports .....	687	778	91	13.2
	Trade balance .....	-584	-669	-85	-14.6
CH076	Leather apparel and accessories:				
	Exports .....	99	97	-2	-2.0
	Imports .....	1,411	1,418	7	0.5
	Trade balance .....	-1,312	-1,321	-9	-0.7

See footnotes at end of table.

**Table 23—Continued**  
**Fibers, textiles, apparel, and footwear sector: U.S. trade for selected commodity groups, 1992**  
**and 1993<sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
CH077	<b>Fur apparel and other fur articles:</b>				
	Exports .....	67	55	-12	-17.9
	Imports .....	140	173	33	23.6
	Trade balance .....	-73	-118	-45	-61.6
CH078	<b>Rubber, plastic, and coated-fabric apparel:</b>				
	Exports .....	48	70	22	45.8
	Imports .....	140	160	20	14.3
	Trade balance .....	-92	-90	2	2.2
CH079	<b>Nonwoven and related products:</b>				
	Exports .....	407	447	40	9.8
	Imports .....	436	435	-1	-0.2
	Trade balance .....	-29	12	41	141.4
CH080	<b>Other wearing apparel:</b>				
	Exports .....	368	452	84	22.8
	Imports .....	1,612	2,006	394	24.4
	Trade balance .....	-1,244	-1,554	-310	-24.9
CH081	<b>Apparel fasteners:</b>				
	Exports .....	75	81	6	8.0
	Imports .....	120	122	2	1.7
	Trade balance .....	-45	-41	4	8.9
CH082	<b>Footwear and footwear parts:</b>				
	Exports .....	603	604	1	0.2
	Imports .....	10,141	11,105	964	9.5
	Trade balance .....	-9,538	-10,501	-963	-10.1

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> This coding system is used by the U.S. International Trade Commission to identify major groupings of HTS import and export items for trade-monitoring purposes.

<sup>3</sup> Less than \$500,000.

<sup>4</sup> Less than 0.05 percent.

<sup>5</sup> Cannot be calculated.

Source: Compiled from official statistics of the U.S. Department of Commerce.

1992. Nearly one-half (\$2.2 billion) of imports from China consisted of leather footwear. This shift occurred as more of Korea's leather footwear operations reportedly moved to China and was reflected in the decline in U.S. leather footwear imports from Korea from \$991 million in 1992 to \$555 million in 1993.

**Sundar Shetty**  
**(202) 205-3486**



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# CHAPTER 8

## Minerals and Metals

The minerals and metals sector, after experiencing an 8-percent increase in its trade deficit in 1992, registered an improvement in its trade balance in 1993. The \$631 million decline in the trade deficit to \$13.4 billion in 1993 reflects a 16-percent increase (\$4.5 billion) in U.S. exports, which rose to \$32.8 billion, and a 9-percent increase (\$3.8 billion) in imports, which grew to \$46.2 billion (table 24).

Although the minerals and metals sector was the only major product sector to record an improvement in its trade position in 1993, the improvement was almost entirely the result of a 103-percent increase (\$5.1 billion) in exports of precious metals and related products (mostly gold bullion), which totaled \$9.9 billion in 1993. Virtually all of the exported gold bullion was shipped to the United Kingdom and Switzerland in response to relatively high levels of financial and speculative activity in those countries.

Despite the overall improved sector trade balance, significant negative trade shifts were recorded among other principal product categories, including natural and synthetic gemstones (which registered a deficit increase of \$1.1 billion), unwrought aluminum (a deficit increase of \$1.0 billion), and steel mill products (a \$973 million rise in its deficit). These negative trade balance shifts stemmed mainly from unstable economic conditions in principal foreign markets, which reduced demand for U.S. exports of cut gemstones, unwrought aluminum, and steel mill products.

U.S. imports of unwrought aluminum from Russia, which increased by \$451 million in 1993, enhanced the negative trade shift as Russian aluminum producers began looking to the United States and other countries to market a growing domestic surplus of unwrought aluminum. In addition, a revived market in the United States, as reflected in increased economic activity in the automotive, construction, and appliance industries, contributed to a 9-percent (\$738 million) increase in U.S. imports of steel mill products.

### U.S. Bilateral Trade

The principal U.S. trading partners in the minerals and metals sector were Canada, the United King-

dom, Japan, Mexico, Switzerland, and Taiwan (figures 40 and 41). U.S. imports from these countries accounted for an aggregate 48 percent of total sector imports and U.S. exports to these countries represented 71 percent of total sector exports. Trade with these principal trading partners shifted from a deficit of \$2.8 billion in 1992 to a trade surplus of \$1.1 billion during 1993. As with the sector as a whole, the product transaction that had the most significant impact on the positive trade shift with the principal trading partners during the period was the \$4.0 billion shipment of precious metals and related products (gold bullion) to the United Kingdom. A noteworthy positive trade shift (\$109 million) was also recorded in shipments of steel mill products to Canada, which totaled \$1.2 billion in 1993. Continued growth in the construction industry in Mexico stimulated U.S. exports of builders hardware and industrial fasteners, as the aggregate trade shift of these products to Mexico totaled \$41 million during 1993.

Contributing to the negative side of the bilateral trade balance ledger in 1993 was a \$478 million increase in imports of steel mill products from Canada, which reflected the strong recovery in U.S. automobile production. In addition, continued depressed demand from the engineering, construction, industrial machinery, and automotive sectors in Japan contributed to a \$169 million decline in U.S. exports of steel mill products to that country in 1993.

### Commodity Analysis

#### *Precious metals and related articles*

The 1993 U.S. trade balance in precious metals and related articles exhibited an improvement of \$5.1 billion as the trade surplus rose from \$786 million in 1992 to \$5.9 billion in 1993. This was the largest improvement experienced by any commodity group in all sectors.

**Table 24**  
**Minerals and metals: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993 <sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
U.S. exports of domestic merchandise:				
Canada .....	7,912	8,913	1,001	12.7
United Kingdom .....	1,973	4,818	2,845	144.2
Japan .....	2,692	2,184	-508	-18.9
Mexico .....	3,572	3,272	-301	-8.4
Switzerland .....	801	3,114	2,313	289.0
Taiwan .....	1,191	1,120	-71	-6.0
Germany .....	839	850	11	1.4
Belgium .....	552	398	-154	-27.9
Korea .....	939	1,055	116	12.4
China .....	452	407	-46	-10.1
All other .....	7,451	6,756	-696	-9.3
<b>Total .....</b>	<b>28,374</b>	<b>32,887</b>	<b>4,512</b>	<b>15.9</b>
EU-12 .....	5,214	7,669	2,455	47.1
OPEC .....	1,001	848	-153	-15.3
Latin America .....	5,034	4,883	-151	-3.0
CBERA .....	541	604	64	11.8
Asian Pacific Rim .....	7,288	6,566	-723	-9.9
ASEAN .....	949	910	-39	-4.1
Eastern Europe .....	44	35	-9	-20.9
U.S. imports for consumption:				
Canada .....	9,942	11,064	1,122	11.3
United Kingdom .....	1,531	1,615	84	5.5
Japan .....	4,462	4,236	-226	-5.1
Mexico .....	2,076	2,322	247	11.9
Switzerland .....	504	573	69	13.7
Taiwan .....	2,387	2,467	80	3.3
Germany .....	2,200	2,401	201	9.1
Belgium .....	1,579	1,874	295	18.7
Korea .....	1,184	984	-200	-16.9
China .....	1,242	1,529	287	23.1
All other .....	15,259	17,181	1,922	12.6
<b>Total .....</b>	<b>42,364</b>	<b>46,246</b>	<b>3,881</b>	<b>9.2</b>
EU-12 .....	8,984	10,071	1,087	12.1
OPEC .....	645	732	86	13.4
Latin America .....	5,255	5,405	150	2.9
CBERA .....	396	373	-22	-5.6
Asian Pacific Rim .....	10,650	10,513	-136	-1.3
ASEAN .....	823	879	55	6.7
Eastern Europe .....	259	238	-21	-8.0
U.S. merchandise trade balance:				
Canada .....	-2,030	-2,151	-122	(.2)
United Kingdom .....	442	3,203	2,761	(2)
Japan .....	-1,770	-2,052	-282	(2)
Mexico .....	1,497	949	-547	(.2)
Switzerland .....	297	2,541	2,244	(.2)
Taiwan .....	-1,196	-1,347	-151	(2)
Germany .....	-1,361	-1,551	-190	(2)
Belgium .....	-1,027	-1,476	-449	(2)
Korea .....	-245	71	316	(.2)
China .....	-790	-1,122	-332	(2)
All other .....	-7,807	-10,425	-2,618	(.2)
<b>Total .....</b>	<b>-13,990</b>	<b>-13,359</b>	<b>631</b>	<b>(2)</b>

See footnotes at the end of table.

**Table 24—Continued**  
**Minerals and metals: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993**

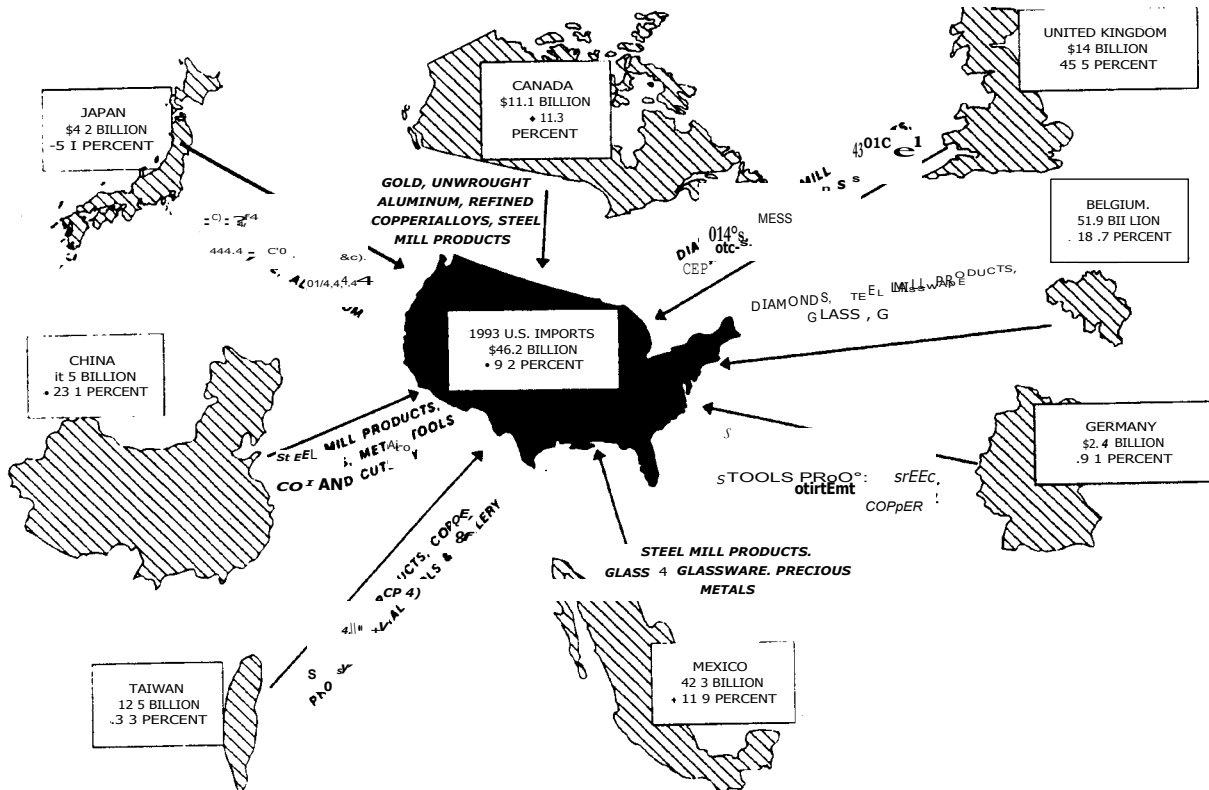
Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance—Continued</b>				
EU-12 .....	-3,769	-2,402	1,367	(2)
OPEC .....	356	116	-239	(2)
Latin America .....	-221	-522	-301	(2)
CBERA .....	145	231	86	(2)
Asian Pacific Rim .....	-3,361	-3,947	-586	(2)
ASEAN .....	126	32	-94	(2)
Eastern Europe .....	-216	-204	12	(2)

1 Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.  
 2 Since some comparisons may not be meaningful for consistency, nothing is reported.

Note.— Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

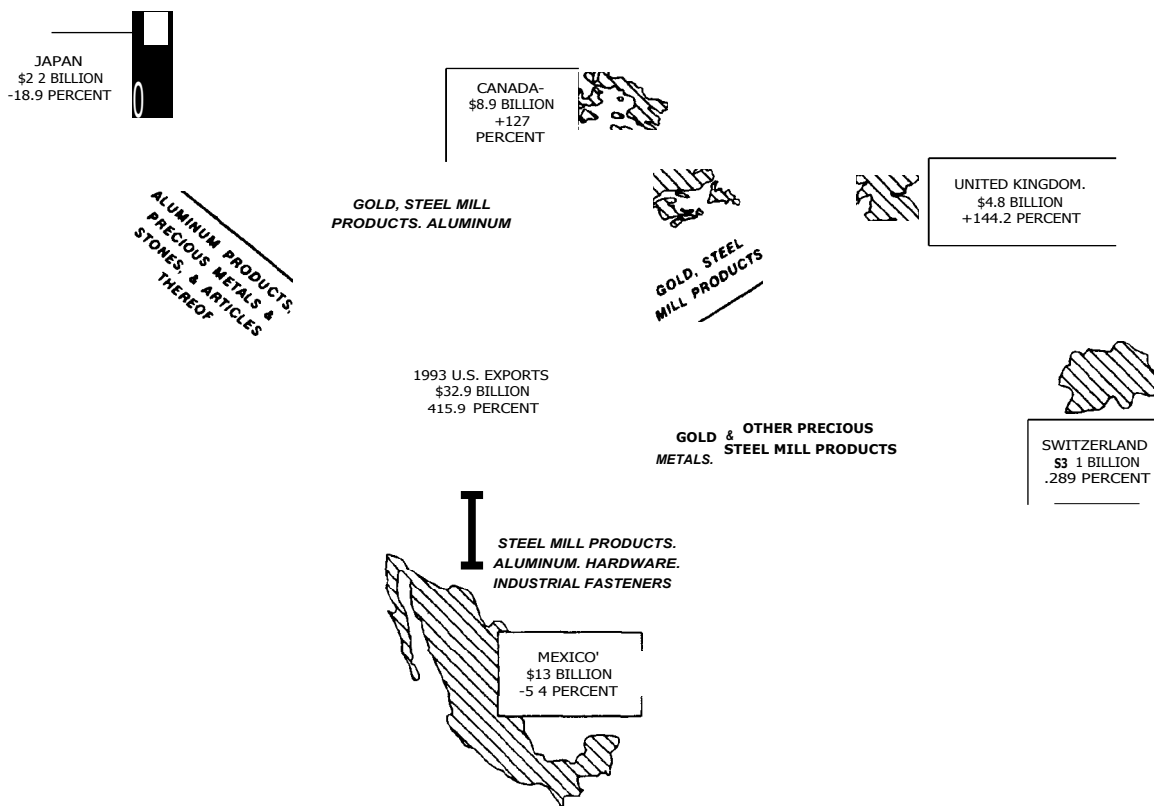
Source: Compiled from official statistics of the U.S. Department of Commerce.

**Figure 40**  
**U.S. minerals and metals sector imports, 1993: U.S. imports, by major sources, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

**Figure 41**  
**U.S. minerals and metals sector exports, 1993: Leading U.S. exports, by major markets, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

U.S. exports of precious metals more than doubled in 1993, growing by \$5.0 billion over the 1992 level to \$9.9 billion in 1993. Much of this improvement was attributable to a 4-fold increase in U.S. exports of gold bullion to principal financial centers in the United Kingdom and Switzerland in response to financial considerations. U.S. exports of precious metals to the United Kingdom totaled \$4.0 billion in 1993; U.S. exports to Switzerland totaled \$2.9 billion.

Increased exports of gold bullion also spurred the 52-percent growth in total U.S. exports to Canada, with a \$322-million increase to \$938 million in 1993. Additional U.S. exports were also directed to Germany in 1993, rising by 62 percent (\$87 million) to \$228 million, most of which was gold bullion and waste and scrap. In contrast, U.S. exports of precious metals to a number of smaller markets, including Taiwan, France, Hong Kong, and Mexico, declined by a total of \$492 million in 1993.

U.S. imports of precious metals experienced a 2-percent decline in 1993 to \$4.0 billion, a shift of \$89 million. U.S. imports from South Africa fell by 12 percent (\$99 million) to \$740 million in

1993. Most of this decline was due to the 55-percent drop in the price of rhodium, for which South Africa is the world's principal supplier. In addition, U.S. imports of precious metals from the United Kingdom fell by 22 percent (\$57 million) to \$197 million in 1993.

In contrast, imports from Canada, the leading U.S. supplier, rose by \$357 million (25 percent) to \$1.8 billion in 1993. Canada is one of the principal gold producers for which U.S. firms provide refinery services; the United States also serves as a financial center for flows of Canadian gold bullion. During 1993, U.S. imports of precious metals from Switzerland rose by 64 percent to \$108 million.

**Deborah A. McNay**  
 (202) 205-3425

## **Natural and synthetic gemstones**

Rising discretionary income continued to prompt increased domestic demand for natural and synthetic gemstones (principally cut diamonds) in 1993, re-

suiting in a 20-percent increase (\$956 million) in imports to \$5.7 billion. In contrast, depressed economic conditions in foreign markets resulted in decreased demand for U.S. exports of large cut diamonds over one-half carat, contributing to a 51-percent (\$244 million) downward shift in exports. These trends caused a continued expansion of the trade deficit in 1993, from \$4.3 billion to \$5.5 billion.

The combined value of imports from Israel, Belgium, and India—major diamond-cutting and trading centers—increased by 24 percent (\$831 million) to \$4.3 billion. These countries continued to account for the bulk of imports and represented 75 percent of the import value of natural and synthetic gemstones in 1993.<sup>116</sup>

Switzerland, Canada, Hong Kong, Japan, and India together accounted for 73 percent (\$169 million) of total U.S. exports of natural and synthetic gemstones in 1993. With the exception of Canada, these countries are established jewelry manufacturing and diamond markets. Exports to Canada are largely unsorted diamonds, thought to be recovered from subsidiary gold mining operations in the United States. Exports of large U.S. cut diamonds to the more traditional markets decreased from \$53 million to \$2 million for Belgium, \$40 million to \$4 million for Israel, and \$32 million to \$3 million for the United Kingdom. Although substantial, these decreases are not inconsistent with the cyclical nature of international trade in the product group.

**Linda White**  
**(202) 205-3427**

## **Steel mill products**

The trade deficit in steel mill products increased by \$973 million to \$5.9 billion in 1993, as U.S. exports decreased by 8 percent (\$236 million) in 1993 to \$2.8 billion and U.S. imports increased by 9 percent (\$738 million) to \$8.7 billion.<sup>117</sup>

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<sup>116</sup> Although imports from most countries increased, imports from Switzerland and Thailand decreased by 5 percent (\$10 million) and 10 percent (\$16 million), respectively. This was due primarily to the stronger demand for the larger diamonds. Imports of these stones from Switzerland increased, but not by enough to compensate for the decrease in their color gemstones (nondiamond stones). In contrast, imports of diamonds from Thailand (which is new to the diamond-cutting industry, and the country is not yet established in the larger stones) decreased. Thailand showed an increase in color gemstones shipped to the United States, but it was not enough to compensate for their decrease in diamonds.

<sup>117</sup> Accompanying the rise in imports in 1992-93 were antidumping (AD) and countervailing duty (CVD) cases filed by U.S. producers. Cases were filed on a variety of products, including certain flat-rolled products, wire rod, bar, and pipe

Growth in demand from the automotive, construction, and appliance industries, all principal consumers of steel, led to a 9-percent increase in U.S. apparent consumption of steel mill products in 1993 compared with 1992 consumption. The growth was supplied by increases in both domestic shipments and imports of steel mill products.<sup>118</sup>

A better domestic market and less favorable global economic conditions contributed to lower levels of U.S. exports of steel mill products in 1993, continuing a decline in exports that began in 1991. Neighboring Canada and Mexico were the primary export markets, together receiving 66 percent of U.S. exports in 1993. The sharpest declines in exports from 1991 to 1993 were to Korea and Japan. Steady steel capacity expansion in Korea, which has better enabled that country to supply its steel needs internally and to reduce its reliance on imports, combined with limitations by the Korean Government on the number of construction permits granted in 1992, led to a \$275 million reduction in U.S. steel exports to Korea. Declining demand from the engineering, construction, industrial machinery, and automotive sectors in Japan contributed to a decrease in U.S. steel exports to that country of \$169 million from 1991 to 1993. Recessionary conditions in the EU have led to a \$98 million drop in U.S. exports to that region from 1991 to 1993.

Imports in most product categories in 1993 increased from 1992, with the most significant change occurring in semifinished imports, which more than doubled. Linked to this development, and a notable exception to the rise in imports, was a 10-percent decline in the value of imports of sheet and strip in 1993. Foreign producers have in part replaced their exports of flat-rolled products to the United States by increasing their exports of slab, the raw material for producing flat-rolled

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<sup>117</sup>—Continued

and tube. Certain flat-rolled products include plate, hot-rolled sheet and strip, cold-rolled sheet and strip, and corrosion-resistant products (primarily galvanized sheet and strip). The cases on certain flat-rolled products represented the bulk of the trade affected, and in July 1993, the ITC found that there was no material injury or threat of material injury from \$1.7 billion worth of imports of certain flat-rolled steel products, representing half of the total value of trade in certain flat-rolled products (\$3.4 billion) subject to the AD and CVD cases filed against various foreign producers. The negative determinations meant that no countervailing duties or antidumping duties were imposed on the products involved in the investigations in which the Commission made negative determinations.

<sup>118</sup> Raw steel production also increased during this period, and capacity declined, contributing to a 7-percent point increase in capacity utilization. The capacity decline reflects both continuing efforts to modernize, which removed capacity at times during the year, and changes in product mix toward more sophisticated products requiring additional processing, but requiring less raw steelmaking capacity.

products. The ability of U.S. producers of flat-rolled products to supply growing demand in the automotive sector has reportedly been constrained by insufficient melting and casting capacity and by planned equipment outages. Domestic steel producers, including some who joined in the filing of AD/CVD petitions, are importing slabs for further processing to raise their output of finished products, thereby shifting the composition of steel import tonnage to lower-value-added products.

There were also shifts among countries exporting to the United States. Imports from Canada, the single largest country supplier, increased by 19 percent (\$341 million) from 1992 to 1993, offsetting lower imports from Japan. A strong recovery in U.S. automobile production largely contributed to the increase in imports from Canada.

The decrease in imports from East Asia can be tied to several factors. Japanese steelmakers have invested heavily in the U.S. steel industry and some imports have been displaced by increased production at domestic joint ventures. Declining imports from Japan and Korea can also be attributed in part to final affirmative findings in July 1993 in the antidumping (AD) and countervailing duty (CVD) cases on certain cold-rolled and corrosion-resistant flat-rolled products from Korea, and in the AD case on certain corrosion-resistant, flat-rolled products from Japan. In both Japan and Korea, steelmakers directed more of their exports to China, where steel demand has expanded substantially in recent years.

**Nancy Fulcher**  
(202) 205-3434

## ***Unwrought aluminum***

The U.S. trade deficit in unwrought aluminum in 1992 increased by \$1.0 billion to \$2.0 billion in 1993, due largely to increased imports from the former Soviet Union. This continued the reversal of the trade balance improvement of 1989-91, when the deficit decreased from \$517 million to \$179 million. This decline in the U.S. trade position was the ninth largest experienced by any commodity group in all sectors.

U.S. imports of unwrought aluminum rose by 31 percent (\$654 million) to \$2.8 billion in 1993. Russia, one of the world's largest aluminum producing countries, accounted for most of this increase. The decline in domestic demand for aluminum in Russia, particularly from the defense market, contributed to significant flows of Russian aluminum to world markets. U.S. imports from Russia increased from \$17 million in 1992 to \$451 million in 1993. Minor increases occurred in imports from Canada and Brazil.

U.S. exports of unwrought aluminum declined by 33 percent (\$383 million) to \$771 million in 1993. This shift was attributable primarily to a 46-percent drop of \$318 million in the value of exports to Japan, which declined to \$375 million due to weak industrial demand. Exports to the smaller markets of Taiwan and Mexico also decreased by 30 percent and 14 percent, respectively, largely in response to sluggish economic conditions. U.S. exports to Taiwan declined by \$16 million to \$38 million in 1993, and U.S. exports to Mexico fell by \$13 million to \$90 million in the same year.

**Deborah A. McNay**  
(202) 205-3425

## ***Zinc ores and residues***

The trade surplus in zinc ores and residues decreased by \$85 million in 1993 to \$119 million. Zinc, like most metals, is a globally traded commodity that is priced in the market. The London Metal Exchange (LME) is an established forum for trading this commodity, with warehouses of commodity stocks in many countries including the United States. The reported amount of LME global stocks, along with the average sale price of a metal sold through the LME (referred to here as the LME price), is a common indicator of market conditions and fair price for a given metal. U.S. zinc market conditions, like those in most zinc-producing countries, are tied to the LME.

As a consequence of LME market changes, U.S. exports of zinc ores and residues decreased by 45 percent (\$113 million) in 1993, from almost \$250 million in 1992 to \$137 million. Specifically, LME zinc stocks increased by 98 percent, from 458,000 to 907,000 metric tons, while apparent world consumption remained relatively stable. As a result, LME zinc prices decreased by 22 percent, from about \$1,235 to \$970 per metric ton. This was followed by a 4-percent decrease in U.S. mined zinc, from 524,000 metric tons to 505,000 metric tons in 1993. In conjunction with U.S. exports, imports decreased 61-percent, from \$46 million to \$18 million, for an \$85 million net decrease to the U.S. trade surplus to \$119 million.

The global zinc market situation resulted in decreased exports to all major foreign markets during 1993. Combined shipments to Canada, Japan, Belgium, Germany, and the United Kingdom fell by 47 percent (\$107 million) to \$121 million. These countries accounted for 88 percent of U.S. exports.

The value of combined imports from Canada and Peru decreased 71 percent (\$24 million), while imports from Mexico increased 6 percent (\$463,000). These countries are the principal source of foreign supplies and accounted for 98-percent of the import

value. Imports from some of the smaller suppliers increased by 77 percent (\$118,000), specifically those from Belgium, the Dominican Republic, Guatemala, and Jamaica.

**Linda White**  
(202) 205-3427

## ***Copper ores and concentrates***

Lower world demand, especially in Western Europe, and an increasingly self-sufficient U.S. copper industry caused significant decreases in both U.S. exports and imports of copper ores and concentrates. Exports declined 23 percent (\$103 million) in 1993 to \$342 million, and imports declined 61 percent (\$65 million) to \$42 million, which resulted in a declining trade surplus to \$300 million. Both quantity and price changes contributed to the shifts. For example, the decline in exports was only 15 percent in quantity terms (as measured by the copper content), indicating that a reduction in the price of copper ores and concentrates also contributed to the decrease in export value. This price is directly related to the price of refined copper, which declined 14 percent in 1993 because of weak world demand, as indicated by the doubling of refined copper stocks on the LME (one of the major copper exchanges in the world). Reduced U.S. exports to Korea, Japan, China, and Australia and smaller U.S. imports from Indonesia, Mexico, and Canada accounted for the most significant decreases in trade.

The self-sufficiency of the U.S. copper industry improved as a result of the expansion of downstream processing facilities completed by two U.S. primary producers in 1993. In addition, one producer has expanded U.S. ore and concentrate production over the last several years to feed its U.S. smelters, which historically relied partly on foreign suppliers.

**David Lundy**  
(202) 205-3439

## ***Certain ores, concentrates, ash, and residues***<sup>119</sup>

The U.S. trade balance in certain ores, concentrates, ash, and residues moved further into deficit in

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<sup>119</sup> Includes ores, concentrates, ash, and residues of manganese, nickel, cobalt, tin, chromium, tungsten, uranium, molybdenum, titanium, zirconium, and other miscellaneous metals.

1993, to \$285 million, as U.S. exports declined by \$89 million, due principally to weakened demand in major Western European markets, while imports remained unchanged. This continued the pattern evident during 1990-92, when the trade deficit increased from \$134 million to \$195 million.

U.S. exports of certain ores, concentrates, ash, and residues totaled \$191 million in 1993, a 32-percent decline from the 1992 level. The decline in exports was primarily attributable to a 27-percent decrease in U.S. exports of molybdenum ores and concentrates to \$91 million and a 44-percent decrease in U.S. exports of other ash and residues to \$60 million. U.S. exports of molybdenum to major Western European and Japanese steelmakers fell by 37 percent in 1993 due to weakened demand for steel by oil- and defense-related industries, primary users of steels alloyed with molybdenum. A decline in exports to The Netherlands to \$28 million was the most significant bilateral reduction in U.S. exports of molybdenum.

U.S. exports of miscellaneous ash and residues to principal Western European and Japanese markets also dropped in 1993, due to lower demand by secondary metals producers for residues, reflecting lower demand for scrap materials. U.S. exports to Japan decreased by 50 percent to \$21 million, while exports to Belgium fell by 39 percent to \$14 million in 1993.

U.S. imports of certain ores, concentrates, ash, and residues totaled \$476 million in 1993, up less than 1 percent from the 1992 level. U.S. imports from South Africa, the leading U.S. supplier, increased by \$40 million (26 percent) to \$195 million in 1993, largely reflecting increased imports of natural rutile concentrate. Imports from Australia, the second leading U.S. supplier, declined by \$27 million (21 percent) to \$99 million, due principally to a decline in imports of synthetic rutile concentrate. Because natural and synthetic rutile are substitute products, shifts in demand for these products are largely attributable to changes in price and supply availability.

**Vincent DeSapio**  
(202) 205-3435

**Table 25**  
**Minerals and metals sector: U.S. trade for selected commodity groups, 1992 and 1993 <sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MM001	Clays and nonmetallic minerals and products, not elsewhere specified or included:				
	Exports .....	847	855	8	0.9
	Imports .....	97	125	28	28.9
	Trade balance .....	750	730	-20	-2.7
MM002	Certain miscellaneous mineral substances:				
	Exports .....	3	3	(3)	(4)
	Imports .....	36	33	-3	-8.3
	Trade balance .....	-33	-30	3	9.1
MM003	Iron ores and concentrates:				
	Exports .....	187	167	-20	-10.7
	Imports .....	396	415	19	4.8
	Trade balance .....	-209	-248	-39	-18.7
MM004	Copper ores and concentrates:				
	Exports .....	445	342	-103	-23.1
	Imports .....	107	42	-65	-60.7
	Trade balance .....	338	300	-38	-11.2
MM005	Lead ores and residues:				
	Exports .....	32	14	-18	-56.3
	Imports .....	2	( <sup>3</sup> )	-2	-100.0
	Trade balance .....	30	14	-16	-53.3
MM006	Zinc ores and residues:				
	Exports .....	250	137	-113	-45.2
	Imports .....	46	18	-28	-60.9
	Trade balance .....	204	119	-85	-41.7
MM007	Certain ores, concentrates, ash, and residues:				
	Exports .....	280	191	-89	-31.8
	Imports .....	475	476	1	0.2
	Trade balance .....	-195	-285	-90	-46.2
MM008	Precious metal ores and concentrates:				
	Exports .....	5	-3	-40.0	
	Imports .....	4	20	16	400.0
	Trade balance .....	1	-17	-18	1,800.0
MM009	Certain nonmetallic minerals and articles:				
	Exports .....	926	861	-65	-7.0
	Imports .....	1,304	1,438	134	10.3
	Trade balance .....	-378	-577	-199	-52.6
MM010	Industrial ceramics:				
	Exports .....	386	387	1	0.3
	Imports .....	301	330	29	9.6
	Trade balance .....	85	57	-28	-32.9
MM011	Ceramic bricks and miscellaneous ceramic construction articles:				
	Exports .....	17	17	(3)	(4)
	Imports .....	21	22	1	4.8
	Trade balance .....	-4	-5	-1	-25.0
MM012	Ceramic floor and wall tiles:				
	Exports .....	19	23	4	21.1
	Imports .....	419	472	53	12.6
	Trade balance .....	-400	-449	-49	-12.3
MM013	Ceramic household articles:				
	Exports .....	103	110	7	6.8
	Imports .....	1,391	1,426	35	2.5
	Trade balance .....	-1,288	-1,316	-28	-2.2

See footnotes at end of table.



**Table 25-Continued**  
**Minerals and metals sector: U.S. trade for selected commodity groups, 1992 and 1993**<sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MM014	Flat glass and certain flat glass products:				
	Exports .....	836	951	115	13.8
	Imports .....	599	698	99	16.5
	Trade balance .....	237	253	16	6.8
MM015	Glass containers:				
	Exports .....	155	133	-22	-14.2
	Imports .....	263	265	2	0.8
	Trade balance .....	-108	-132	-24	-22.2
MM016	Household glassware:				
	Exports .....	150	167	17	11.3
	Imports .....	533	568	35	6.6
	Trade balance .....	-383	-401	-18	-4.7
MM017	Certain glass and glass products:				
	Exports .....	369	387	18	4.9
	Imports .....	400	408	8	2.0
	Trade balance .....	-31	-21	10	32.3
MM018	Fiber glass products:				
	Exports .....	392	387	-5	-1.3
	Imports .....	160	200	40	25.0
	Trade balance .....	232	187	-45	-19.4
MM019	Natural and synthetic gemstones:				
	Exports .....	476	231	-245	-51.5
	Imports .....	4,783	5,739	956	20.0
	Trade balance .....	-4,307	-5,508	-1,201	-27.9
MMO20	Precious metals and related articles:				
	Exports .....	4,869	9,895	5,026	103.2
	Imports .....	4,083	3,994	-89	-2.2
	Trade balance .....	786	5,901	5,115	650.8
MMO21	Primary iron products:				
	Exports .....	8	8	(3)	(a)
	Imports .....	130	213	83	63.8
	Trade balance .....	-122	-205	-83	-68.0
MMO22	Ferroalloys:				
	Exports .....	110	95	-15	-13.6
	Imports .....	807	760	-47	-5.8
	Trade balance .....	-697	-665	32	4.6
MMO23	Iron and steel waste and scrap:				
	Exports .....	1,107	1,323	216	19.5
	Imports .....	155	182	27	17.4
	Trade balance .....	952	1,141	189	19.9
MMO24	Abrasive and ferrous powders:				
	Exports .....	380	398	18	4.7
	Imports .....	495	545	50	10.1
	Trade balance .....	-115	-147	-32	-27.8
MMO25	Steel mill products, all grades:				
	Exports .....	3,046	2,811	-235	-7.7
	Imports .....	7,932	8,670	738	9.3
	Trade balance .....	-4,886	-5,859	-973	-19.9
MMO26	Steel pipe and tube fittings, and certain cast products:				
	Exports .....	525	484	-41	-7.8
	Imports .....	285	310	25	8.8
	Trade balance .....	240	174	-66	-27.5

See footnotes at end of table.

**Table 25-Continued**  
**Minerals and metals sector: U.S. trade for selected commodity groups, 1992 and 1993** <sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MMO27	Fabricated structurals:				
	Exports .....	99	117	18	18.2
	Imports .....	45	85	40	88.9
	Trade balance .....	54	32	-22	-40.7
MMO28	Metal construction components:				
	Exports .....	396	407	11	2.8
	Imports .....	124	138	14	11.3
	Trade balance .....	272	269	-3	-1.1
MMO29	Metallic containers:				
	Exports .....	647	635	-12	-1.9
	Imports .....	271	282	11	4.1
	Trade balance .....	376	353	-23	-6.1
MM030	Wire products of iron, steel, aluminum, copper, and nickel:				
	Exports .....	297	337	40	13.5
	Imports .....	642	668	26	4.1
	Trade balance .....	-345	-331	14	4.1
MM031	Chain:				
	Exports .....	311	326	15	4.8
	Imports .....	498	556	58	11.6
	Trade balance .....	-187	-230	-43	-23.0
MM032	Industrial fasteners of base metal:				
	Exports .....	719	743	24	3.3
	Imports .....	1,469	1,643	174	11.8
	Trade balance .....	-750	-900	-150	-20.0
MM033	Cooking and kitchen ware:				
	Exports .....	209	216	7	3.3
	Imports .....	822	881	59	7.2
	Trade balance .....	-613	-665	-52	-8.5
MM034	Metal and ceramic sanitary ware:				
	Exports .....	135	165	30	22.2
	Imports .....	182	204	22	12.1
	Trade balance .....	-47	-39	8	17.0
MM035	Iron construction castings and other nonmalleable cast-iron articles:				
	Exports .....	27	29	2	7.4
	Imports .....	48	57	9	18.8
	Trade balance .....	-21	-28	-7	-33.3
MM036	Copper and related articles:				
	Exports .....	1,528	1,562	34	2.2
	Imports .....	1,908	2,068	160	8.4
	Trade balance .....	-380	-506	-126	-33.2
MM037	Unwrought aluminum:				
	Exports .....	1,154	771	-383	-33.2
	Imports .....	2,120	2,774	654	30.8
	Trade balance .....	-966	-2,003	-1,037	-107.4
MM038	Aluminum mill products:				
	Exports .....	1,761	1,728	-33	-1.9
	Imports .....	1,015	1,096	81	8.0
	Trade balance .....	746	632	-114	-15.3
MM039	Lead and related articles:				
	Exports .....	78	64	-14	-17.9
	Imports .....	119	97	-22	-18.5
	Trade balance .....	-41	-33	8	19.5

See footnotes at end of table.

**Table 25—Continued**  
**Minerals and metals sector: U.S. trade for selected commodity groups, 1992 and 1993 <sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MM040	Zinc and related articles:				
	Exports .....	75	58	-17	-22.7
	Imports .....	832	746	-86	-10.3
	Trade balance .....	-757	-688	69	9.1
MM041	Certain base metals and chemical elements:				
	Exports .....	905	808	-97	-10.7
	Imports .....	1,636	1,472	-164	-10.0
	Trade balance .....	-731	-664	67	9.2
MM042	Nonpowered handtools:				
	Exports .....	1,192	1,315	123	10.3
	Imports .....	1,450	1,789	339	23.4
	Trade balance .....	-258	-474	-216	-83.7
MM043	Cutlery other than tableware, certain sewing implements, and related products:				
	Exports .....	280	308	28	10.0
	Imports .....	484	525	41	8.5
	Trade balance .....	-204	-217	-13	-6.4
MM044	Table flatware and related products:				
	Exports .....	24	21	-3	-12.5
	Imports .....	216	209	-7	-3.2
	Trade balance .....	-192	-188	4	2.1
MM045	Certain builders' hardware:				
	Exports .....	495	553	58	11.7
	Imports .....	590	646	56	9.5
	Trade balance .....	-95	-93	2	2.1
MM046	Miscellaneous products of base metal:				
	Exports .....	2,122	2,344	222	10.5
	Imports .....	2,669	2,936	267	10.0
	Trade balance .....	-547	-592	-45	-8.2

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> This coding system is used by the U.S. International Trade Commission to identify major groupings of HTS import and export items for trade-monitoring purposes.

<sup>3</sup> Less than \$500,000.

<sup>4</sup> Less than 0.05 percent.

<sup>5</sup> Cannot be calculated.

Source: Compiled from official statistics of the U.S. Department of Commerce.



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# Chapter 9

## Machinery and Transportation

After posting a modest trade surplus of \$125 million in 1992, the U.S. machinery and transportation sector registered a trade deficit of approximately \$13 billion in 1993 (table 26). The trade deficit resulted from a \$15.4 billion growth in imports that more than counterbalanced a \$2.3 billion increase in exports. This surge in imports may be partly attributed to a continuing recovery of the U.S. automotive and automobile parts industry in 1993. Furthermore, a slowdown in the economic growth rates (averaging approximately 1 percent in 1993) of major U.S. trading partners, such as the EU, Mexico, and Japan, resulted in a modest decline in U.S. exports of machinery and transportation equipment to those markets.<sup>120</sup>

Automobiles, trucks, buses, and motor-vehicle parts accounted for nearly 74 percent of the total U.S. import growth for machinery and transportation equipment in 1993. Imports of these products totaled \$83.3 billion in 1993, representing an increase of \$9.6 billion (24 percent) from 1992. Japan and Canada were the source of approximately two-thirds of total imports of automobiles, trucks, buses, and motor vehicle parts. This increase in imports was largely attributable to an expanding U.S. market for automobiles, trucks, and buses, and to increased sourcing of motor-vehicle parts from Japan by Japanese-owned automakers in the United States.

Other leading products of import growth were internal-combustion piston engines (for motor vehicles) and miscellaneous equipment, principally machines for plastic and rubber injection molding. An increase in U.S. demand for internal-combustion piston engines by Japanese-owned automakers and by the U.S. Big Three automakers (General Motors, Ford, and Chrysler) led to a \$6.3 billion (13 percent) rise in imports in 1993. Japan and Canada were the principal suppliers of these products accounting for \$3.3 billion of total imports. The increase in U.S. imports from Canada was primarily the result of continued rationalization of U.S. and Canadian automotive production. U.S. imports of miscellaneous machinery increased by 17 percent to \$6.1 billion in 1993. The largest subgroup in this sector was machinery for working rubber and plastics. Responding to a general upturn in the U.S.

economy, major supplier nations such as Japan and Canada increased their exports of these items to the U.S. market, predominantly the automotive industry.

The most significant decline in trade in the machinery and transportation sector occurred in large civil aircraft and aircraft engines. The U.S. trade surplus in these products declined by \$3.6 billion to approximately \$27 billion. This decline was the result of a contraction in the global market for large civil aircraft and aircraft engines and the worldwide trend toward downsizing military forces.

The most significant improvement in the U.S. trade balance in the machinery and transportation sector occurred in certain motor-vehicle parts. The U.S. trade surplus in this commodity group grew by \$1.1 billion to \$3.8 billion in 1993. This improvement in the U.S. trade position was the second largest recorded for any commodity group in all industry sectors. U.S. exports of certain motor-vehicle parts (e.g., airbags and antilock braking systems) rose by \$2.4 billion to \$18.5 billion in 1993. The rise in export demand for motor-vehicle parts is attributable to an expansion of automotive production in Canada and Germany; a favorable U.S. exchange rate, particularly relative to the Japanese yen; and increased emphasis by U.S. suppliers on exporting technologically advanced motor-vehicle parts that are competitive in world automotive markets.

### U.S. Bilateral Trade

Canada, the EU, Japan, and Mexico were the major U.S. trading partners in the machinery and transportation sector in 1993. These countries represented 89 percent of total U.S. imports and 59 percent of total U.S. exports. In 1993, Japan and Canada collectively accounted for 59 percent of total U.S. imports, whereas, Canada and the EU jointly accounted for 45 percent of U.S. exports. Principal imported products included automobiles, trucks, and buses; motor-vehicle parts; aircraft and related equipment; miscellaneous equipment; and aircraft engines (figure 42). Major exported products consisted of aircraft and related equipment; automobiles, trucks, and buses; motor-vehicle parts; aircraft engines; and miscellaneous equipment (figure 43).

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<sup>120</sup> U.S. Department of Commerce, *U.S. Industrial Outlook /1994*, p. 9.

**Table 26**  
**Machinery and transportation: U.S. exports of domestic merchandise, imports for consumption,**  
**and merchandise trade balance, by selected countries and country groups, 1992 and 1993**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	34,876	39,560	4,68	13.4
Japan .....	8,500	7,858	-642	-7.6
Mexico .....	13,177	12,877	-301	-2.3
Germany .....	6,603	5,175	-1,427	-21.6
United Kingdom .....	6,265	6,518	253	4.0
France .....	5,527	4,879	-648	-11.7
Taiwan .....	4,464	4,904	440	9.8
China .....	3,310	4,719	1,409	42.6
Korea .....	4,159	3,982	-177	-4.3
Italy .....	2,277	1,337	-940	-41.3
All other .....	51,406	51,112	-294	-0.6
<b>Total .....</b>	<b>140,566</b>	<b>142,921</b>	<b>2,355</b>	<b>1.7</b>
EU-12 .....	28,448	24,586	-3,862	-13.6
OPEC .....	11,364	9,921	-1,443	-12.7
Latin America .....	24,370	23,291	-1,078	-4.4
CBERA .....	2,018	2,303	285	14.1
Asian Pacific Rim .....	31,999	34,383	2,384	7.4
ASEAN .....	7,586	8,882	1,296	17.1
Eastern Europe .....	653	723	70	10.7
<b>U.S. imports for consumption:</b>				
Canada .....	36,977	42,810	5,833	15.8
Japan .....	43,449	48,395	4,946	11.4
Mexico .....	11,383	13,325	1,943	17.1
Germany .....	13,714	14,290	576	4.2
United Kingdom .....	6,151	6,381	230	3.7
France .....	6,378	6,344	-34	-0.5
Taiwan .....	2,844	2,901	57	2.0
China .....	1,724	2,199	475	27.6
Korea .....	2,084	2,125	40	1.9
Italy .....	2,872	3,353	481	16.7
All other .....	12,865	13,782	918	7.1
<b>Total .....</b>	<b>140,441</b>	<b>155,905</b>	<b>15,464</b>	<b>11.0</b>
EU-12 .....	32,318	34,114	1,795	5.6
OPEC .....	126	172	47	37.0
Latin America .....	12,982	14,996	2,015	15.5
CBERA .....	90	100	9	10.1
Asian Pacific Rim .....	52,145	57,700	5,555	10.7
ASEAN .....	1,620	1,834	214	13.2
Eastern Europe .....	285	313	29	10.1
<b>U.S. merchandise trade balance:</b>				
Canada .....	-2,100	-3,250	-1,149	(2)
Japan .....	-34,949	-40,537	-5,588	(2)
Mexico .....	1,795	-449	-2,243	(2)
Germany .....	-7,111	-9,114	-2,003	(2)
United Kingdom .....	114	137	23	(2)
France .....	-851	-1,465	-614	(2)
Taiwan .....	1,621	2,003	382	(2)
China .....	1,586	2,520	934	(2)
Korea .....	2,074	1,857	-217	(2)
Italy .....	-595	-2,016	-1,421	(2)
All other .....	38,541	37,330	-1,212	(2)
<b>Total .....</b>	<b>125</b>	<b>-12,984</b>	<b>-13,109</b>	<b>(2)</b>

See footnotes at the end of table.

Table 26—Continued

Machinery and transportation: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance—Continued.</b>				
EU-12 .....	-3,870	-9,528	-5,657	(2)
OPEC .....	11,238	9,748	-1,490	(2)
Latin America .....	11,388	8,295	-3,093	(2)
CBERA .....	1,928	2,204	276	(2)
Asian Pacific Rim .....	-20,146	-23,317	-3,171	(2)
ASEAN .....	5,966	7,048	1,082	(2)
Eastern Europe .....	368	410	41	(2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

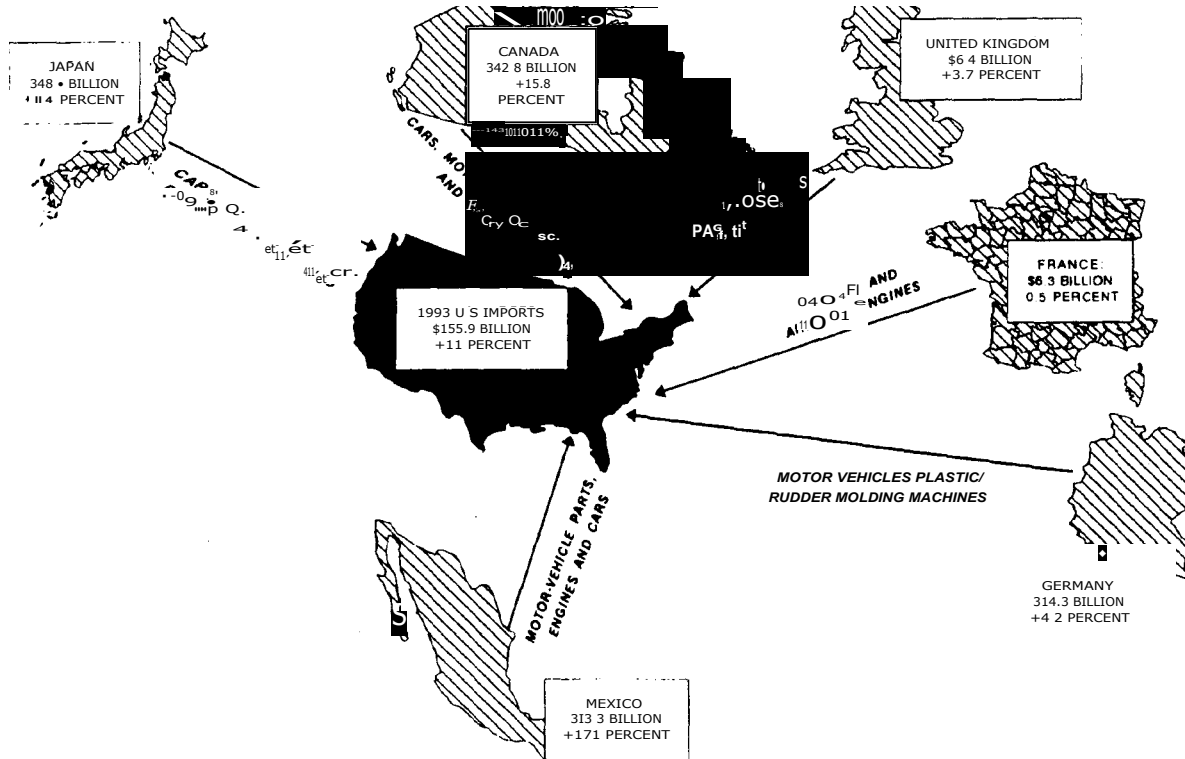
<sup>2</sup> Since some comparisons may not be meaningful for consistency, nothing is reported.

Note.—Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.

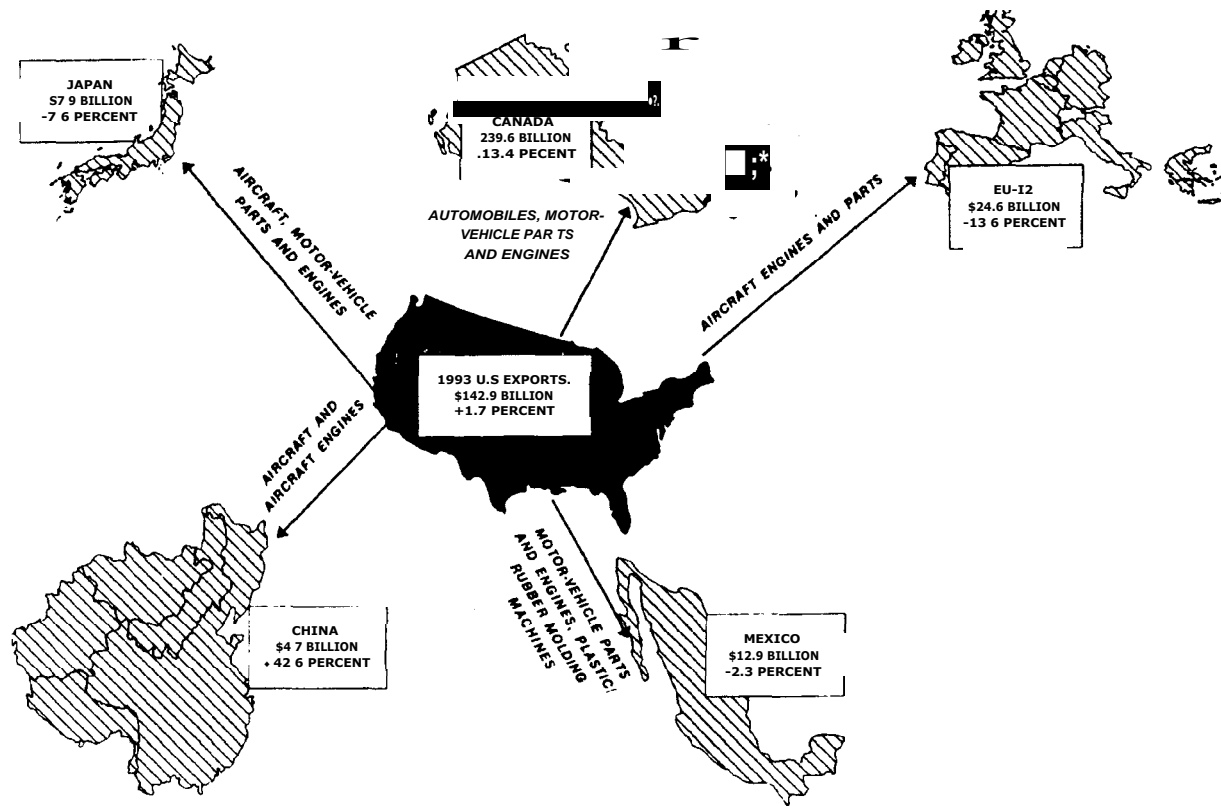
Figure 42

U.S. machinery and transportation sector imports, 1993: Leading U.S. imports, by major sources, and overall percentage change since 1992



Source: Derived for official statistics of the U.S. Department of Commerce.

**Figure 43**  
**U.S. machinery and transportation sector exports, 1993: Leading U.S. exports, by major markets, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

Significant shifts in trade in the machinery and transportation sector resulted from continued integration of U.S., Canadian, and Mexican industries. U.S. imports of these products from Canada increased by 16 percent in 1993 to approximately \$43 billion, and U.S. exports to Canada rose by 13.4 percent to \$39.5 billion, resulting in an increase of \$3.5 billion in the U.S. trade deficit for this sector. U.S. exports of machinery and transportation equipment to Canada consisted principally of automobiles, trucks, buses, automotive engines, motor-vehicle parts, and construction and mining equipment. The rise in U.S. exports is largely attributable to continued manufacturing investments in Canada by the Big Three automotive producers, coupled with a sustained 3-year cycle of economic growth in Canada. U.S. imports of machinery and transportation equipment from Canada consisted of automobiles, motor-vehicles parts, internal combustion engines, and miscellaneous vehicles and transportation-related equipment. In 1993, U.S. imports of these products from Canada rose mainly as a result of vigorous U.S. demand for all types of Canadian-produced transportation machinery.

U.S. trade with Mexico in 1993 reflected three currents: (1) recovery in the U.S. economy, (2) dampening of demand in Mexico because of the Government's measures to control inflation, and (3) further integration of the North American motor-vehicle industry. U.S. imports of machinery and transportation equipment from Mexico increased by 17 percent to \$13.3 billion in 1993, whereas, U.S. exports decreased by 2.3 percent to \$12.9 billion in 1993. U.S. imports of machinery and transportation equipment from Mexico consisted predominantly of motor-vehicle parts and automotive engines. U.S. auto parts producers have invested heavily in motor-vehicle parts assembly operations in recent years in response to Mexican reforms that have liberalized foreign investment regulations, opened the market to foreign competition, and stimulated demand in the Mexican market; anticipated implementation of the NAFTA; and pressure to reduce production costs.

Principal exports of machinery and transportation equipment to Mexico were motor-vehicle parts and construction and mining equipment. In 1993, Mexi-



can demand for construction machinery continued to increase; however, demand for nearly all other U.S. exports of machinery and transportation equipment decreased modestly. Mexican demand for U.S. exports of construction equipment increased because the Government of Mexico continued its program of public works expenditures to repair and replace public utility facilities and mass transit infrastructure. The modest decrease in U.S. exports of other types of machinery and equipment was attributable, in part, to a sluggish Mexican economy that grew by only 0.9 percent in 1993.

## Commodity Analysis

### ***Automobiles, trucks, buses, and bodies and chassis***

The U.S. trade deficit in automobiles, trucks, buses, and bodies and chassis increased by \$7.4 billion to \$50.1 billion in 1993. The U.S. deficit with Japan and Canada accounted for 53 percent (\$26.7 billion) and 34 percent (\$17.0 billion), respectively, of the total U.S. trade deficit for the sector. The trade deficit with Japan increased by \$2.0 billion, while that with Canada climbed by \$3.1 billion, despite increased U.S. exports to both countries.

U.S. imports of automobiles, trucks, buses, and bodies and chassis totaled \$68.6 billion in 1993, representing an increase of \$8.2 billion (14 percent) from 1992. More than half of the rise was from increased U.S. imports from Japan, caused by a continuing recovery of the U.S. automobile market in 1993. Nearly one-third of the increase in U.S. imports was a result of increased imports from Canada, which also benefited from stronger U.S. motor-vehicle sales, as well as production of a new passenger auto in Canada (the Chrysler LH-based car) that is popular in the U.S. market.

U.S. exports increased by \$876 million (5 percent) in 1993, to \$18.6 billion. The largest increase (\$995 million) was to Canada. U.S.-owned Ford and Chrysler increased their share of the Canadian market, whereas most foreign competitors in the Canadian market experienced market share losses. U.S. exports to China rose substantially in 1993, climbing from \$151 million to \$624 million, following a Chinese Government decision to purchase a significant number of U.S. passenger automobiles and light trucks.

**Michael Hagey**  
**(202) 205-3392**

## ***Certain motor-vehicle parts*** 121

The U.S. trade surplus in this commodity group grew by \$1.1 billion to \$3.8 billion in 1993. This improvement in the U.S. trade position was the second largest recorded for any commodity group in all sectors. The improvement was largely attributable to: (1) improving international competitiveness of the U.S. parts industry; (2) U.S. firms' ability to produce components with specific technology requirements (e.g., airbags, antilock braking systems, and catalytic converters) that are competitive with similar products manufactured by major foreign suppliers; and (3) rationalization of North-American production by the U.S. Big Three automakers in anticipation of the trade liberalization effects of the NAFTA.

U.S. exports of certain motor-vehicle parts rose by \$2.4 billion to \$18.5 billion in 1993, representing a 15-percent increase. U.S. exports to Canada, the leading export market, rose by \$1.6 billion, or by 18 percent, to \$10.4 billion in 1993. The increase in exports to Canada was attributable to a 33-percent rise in Canadian production of motor vehicles in 1993.<sup>122</sup> Concurrently, U.S. exports to Mexico increased by \$242 million (6 percent) to \$4.0 billion in 1993. These increases in U.S. exports to Canada and Mexico also reflect the greater overall rationalization of the North American automotive industry. In addition, U.S. exports to Germany increased by 13 percent to \$576 million in 1993, allowing that country to displace Japan as the third largest U.S. export market for these products. The rise in U.S. exports to Germany was attributable largely to increased German outsourcing of parts, as well as expanded production at GM subsidiaries located in Germany, including at newly opened subsidiaries (e.g., GM's Opel plant in Eisenach) in the former East Germany.

U.S. imports of certain motor-vehicle parts also grew in 1983, but by a lesser amount and at a slower rate than the rise in exports. Imports increased by \$1.3 billion (10 percent) in 1993, to \$14.6 billion. U.S. imports from Canada, the leading foreign source of certain motor-vehicle

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<sup>121</sup> Products contained in this group include body stampings, bumpers, brakes and parts, gear boxes, axles, wheels, shock absorbers, radiators, exhaust systems, clutches, steering wheels, and miscellaneous parts and accessories. The total sum of these products accounted for approximately 70 percent of all motor-vehicle parts and accessories produced worldwide in 1993.

<sup>122</sup> This increase was largely a result of: GM's peak production at its Sainte-Therese plant (Chevrolet Camaro and Pontiac Firebird); the newly introduced Chrysler LH models produced at the company's Bramalea, Ontario, facility; and the Canadian Automobile Manufacturing, Inc.'s (CAMI) increased production of the Geo Metro at its Ingersoll, Ontario, plant.

parts, rose by \$608 million to \$6.0 billion in 1993, representing an 11-percent increase. U.S. imports from Japan, the second-leading foreign source of these commodities, increased by 10 percent, or by \$339 million, to \$3.8 billion in 1993. This increase was largely attributable to increased sourcing from Japan by Japanese-owned automakers in the United States and the expanding U.S. market for automobiles. U.S. imports of certain motor-vehicle parts from Mexico rose by \$327 million to \$2.1 billion in 1993, representing a 19-percent increase. The increase in imports from Mexico reflects the expansion of U.S. investment in the Mexican motor-vehicle parts industry and the growing importance of Mexico as a producer of certain motor-vehicle parts.

**Adam Topolansky**  
(202) 205-3394

## **Miscellaneous machinery**<sup>123</sup>

In 1993, the trade surplus in miscellaneous machinery totaled \$880,000, a slight decline from 1992. U.S. imports of miscellaneous machinery increased by \$889,000 (17 percent) in 1993 to \$6.8 billion. The leading sources of these items in 1993 were Japan and Canada, both of which were able to increase their shipments of these items to the U.S. market in response to a general upturn in the U.S. economy. U.S. imports of miscellaneous machinery from Japan and Canada increased by 31 and 27 percent, respectively, in 1993, to \$2 billion and \$1.1 billion. U.S. imports of rubber and plastics injection molding machines from Japan more than doubled in value in 1993, rising to \$244 million. The increase in imports from Japan is related in part to Toshiba's re-entry into the U.S. industrial machinery market after the expiration of a ban that was imposed by the U.S. Government on certain

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<sup>123</sup> Products contained in this group include super-heated water boilers; producer and gas generators and parts; instantaneous or storage water heaters; medical, surgical, or laboratory sterilizers; mechanical appliances for projecting, dispensing, or spraying liquids or powders; fire extinguishers, spray guns, and similar appliances; steam or sand blasting machines and similarly jet projecting machines, and parts; pulley tackle and hoists other than ship hoists; other lifting, handling, loading, or unloading machinery, and parts; machinery for preparing, tanning, or working hides, skins, or leather, or for making or repairing footwear or other articles of hides, skins, or leather; converters, ladles, ingot molds and casting machines; machinery and apparatus for soldering, brazing, or welding, and parts; machines for assembling electric or electronic lamps, tubes, or flashbulbs, and parts; machinery for working plastics and rubber, and parts; machinery for preparing or making tobacco; molding boxes for metal foundry, mold bases, molding patterns, and molds for metal, metal carbides, glass, rubber, or plastics; and machinery and mechanical appliances having individual functions, not specified or included elsewhere in Chapter 84 of the Harmonized Tariff Schedule (HTS), including semiconductor manufacturing equipment and robots.

Toshiba products related to its violation of Coordinating Committee on Multilateral Export Controls (COCOM) rules governing the control of exports of sensitive military technology to the Soviet Union and other Communist countries. The devaluation of the Canadian dollar gave Canadian manufacturers, especially those making machinery for working rubber and plastics and molds for rubber and plastics, a price advantage in the U.S. market during 1993.

U.S. exports of miscellaneous machinery increased by 12 percent in 1993, from \$6.8 billion to \$7.6 billion. The leading markets for U.S. exports of these products in 1993 were Canada and Mexico, together accounting for 21 percent of total U.S. exports. Despite an overall downturn in market demand in Canada for industrial equipment, demand in certain niche markets such as material handling equipment and sprayers, dusters, and irrigation systems grew during 1993. Demand for these same products also increased in Mexico as it restructured its agricultural sector by moving away from a traditional collectivist system of communal farming to large corporate farms utilizing more modern equipment.

**William Greene**  
(202) 205-3405

## **Internal combustion piston engines, other than for aircraft**

The U.S. trade surplus in internal combustion piston engines (for motor vehicles) grew by \$88 million in 1993, reaching \$1.1 billion. This improvement was largely attributable to increased U.S. exports of engines to Canada (an increase of \$700 million), which *exceeded* the rise in imports of engines from Japan (an increase of \$402 million). This boost in exports is primarily the result of a continued rationalization of North American production patterns by the U.S. Big Three automakers.

U.S. exports of internal combustion piston engines increased by \$810 million (12 percent) in 1993, to \$7.5 billion. U.S. exports to Canada, the leading U.S. export market, increased by 21 percent to \$4.0 billion in 1993. This increase was attributable to surging Canadian motor-vehicle production (a 33-percent rise in 1993). U.S. exports to Mexico, the second-leading U.S. export market, decreased by \$109 million (11 percent) to \$893 million in 1993, largely as a result of sluggish and/or receding production and sales of motor vehicles in Mexico.<sup>124</sup>

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<sup>124</sup> As the U.S. economy improved in 1993, coupled with stronger U.S. auto production and sales, increased U.S. exports of motor vehicles to Mexico have displaced some of Mexican production of motor vehicles, which in turn, required that fewer parts be imported from the United States.

U.S. imports of internal combustion piston engines increased by \$723 million (13 percent) in 1993, to \$6.3 billion. Most of this growth was due to a 22-percent rise in imports from Japan (from \$1.8 billion in 1992 to \$2.2 billion in 1993), and a 20-percent increase in imports from Canada (from \$1.5 billion in 1992 to \$1.8 billion in 1993), the two leading foreign sources of these engines. The increase in U.S. imports of engines from Japan was largely attributable to growing Japanese sourcing of these products by Japanese-owned automakers in the United States and by the U.S. Big Three automakers. The increase in U.S. imports from Canada was primarily the result of continued rationalization of U.S. and Canadian automotive production and sourcing by the U.S. Big Three automakers. U.S. imports of engines from Germany and Mexico (the third and fourth largest sources of these products) decreased slightly by 8 and 9 percent, respectively, during the period. These decreases are likely to be temporary, as they are primarily the result of shifting sourcing decisions by U.S. motor-vehicle producers.

**Adam Topolansky**  
(202) 205-3394

## ***Ships, tugs, pleasure boats, and other vessels***<sup>125</sup>

During 1992-93, the U.S. trade balance in ships, tugs, pleasure boats, and similar vessels shifted from a surplus of \$1.06 billion in 1992 to a deficit of \$17 million in 1993. This change was the result of a \$439-million decline in exports coupled with a \$641-million increase in imports in 1993. Nearly 68 percent of the increase in imports was the result of an increase in imports from Italy, up from \$7 million in 1992 to \$435 million in 1993. However, this is unlikely to reflect a continuing trend, as most of the increase was a result of two purchases: \$397 million was attributable to a drilling and/or submersible production platform, and \$21 million was attributable to a fishing vessel and/or factory ship. Imports from Canada, the primary foreign source of imports in this product group during recent years, rose from \$151 million in 1992 to \$232 million in 1993. The rise was largely attributable to the decline in duties under the CFTA.

Sector exports declined primarily as a result of the contraction in the global market for pleasure boats; these craft comprise the primary exports in this sector. The market for pleasure boats is directly related

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<sup>125</sup> Pleasure boats include yachts, inboard/outboard motorboats, canoes, inflatables, and other sportboats. Other vessels consist of fishing vessels, dredgers, floating docks, production platforms, warships, hulls, and vessels for scrapping.

to levels of disposable income, which has declined as most economies continue in a recessionary mode. The primary export markets for this sector, Venezuela, Canada, and several European countries, showed declines in the level of U.S. exports in 1993. Exports to Canada fell from \$148 million to \$126 million, and exports to Venezuela decreased from \$181 million to \$153 million. As the Venezuelan economy has adjusted to trade liberalization measures of past years, U.S. exports may be stabilizing at a lower level. In addition, political and consequent economic instability in Venezuela may have reached a point where purchasers of luxury goods, such as power boats, have decided to defer their purchases.

**Kathleen Lahey**  
(202) 205-3409

## ***Construction and mining equipment***

The U.S. trade surplus in construction and mining equipment declined by \$705.5 million in 1993, to \$4.4 billion. Imports of construction equipment rose, largely in response to an increase in certain construction activity in the United States. There was a notable expansion in public works spending, as well as residential construction, home improvement, and institutional building (e.g., hospitals) in 1993. Public works spending was especially high at the federal, state, and local levels for highway construction and mass transit projects, and for repair of bridges and road surfaces. This increase in imports was coupled with a slight decline in U.S. exports of construction and mining equipment, reflecting the continuing economic recession felt in many foreign markets, and the subsequent postponement of foreign construction projects and mining activities.

U.S. imports of construction and mining equipment rose from \$1.7 billion in 1991 to \$2.3 billion in 1992, or by 34 percent, reflecting the rebounding U.S. market for construction and mining equipment, and strong foreign competition. In 1992, the leading sources of construction and mining equipment imports were Japan and the United Kingdom, followed by Canada, France, and Germany. Imports from Japan increased by 43 percent, from \$603 million in 1992 to \$865 million in 1993. Imports from the United Kingdom increased by 32 percent, from \$167 million in 1992 to \$221 million in 1993.

U.S. exports of construction and mining equipment decreased slightly in 1993, from \$6.8 billion in 1992 to \$6.7 billion. The leading markets for U.S. construction and mining equipment exports in 1993 were Canada, Venezuela, Mexico, Singapore, and Russia. During 1992-93, exports to the leading mar-

ket, Canada, increased by 23 percent (to \$746 million), whereas exports to the second-leading market, Venezuela, decreased by 33 percent (to \$381 million).

**Laura Stonitsch**  
(202) 205-3408

## ***Aircraft and reaction engines, other gas turbines, and parts***

The U.S. trade surplus in aircraft engines, reaction (rocket) engines, other gas turbines, and parts increased by \$423 million in 1993, to \$2.5 billion. The improvement in the trade balance reflected reduced U.S. imports at a time when exports were nearly flat. Financial difficulties in the airline industry prompted many carriers to delay purchases of new aircraft and retire some aging aircraft. These actions led, in part, to a \$450-million decrease in U.S. imports in this product group in 1993, to \$5.8 billion. France, the United Kingdom, and Canada were the principal sources of U.S. imports of these products; together, these countries accounted for 79 percent of total U.S. imports of these goods, or \$4.5 billion. In 1993, imports from France and the United Kingdom declined by 9 percent and 10 percent, respectively. This decrease was caused by the decline in U.S. shipments of large civil aircraft during 1993, which represent the major market for these products. Imports from Canada grew by 20 percent in 1993. This rise was attributable to a strong demand for parts of jet engines, such as turbopropeller engines, because the principal market for these parts, the commuter airline industry, experienced strong demand and, therefore, increased use of its aircraft in 1993.

U.S. exports of aircraft engines, reaction engines, other gas turbines, and parts declined by less than 1 percent in 1993, to \$8.3 billion. The largest markets for U.S. exports in 1993 were France, the United Kingdom, and Canada, which together accounted for 45 percent of the total. U.S. exports to France declined by 7 percent (to \$2.1 billion); exports to the United Kingdom climbed by 10 percent (\$913 million); and exports to Canada slipped by

2 percent (\$773 million). The largest commodity within this product group, parts of civil turbojet and turbopropeller aircraft engines, fell by 10 percent, to \$2.4 billion. This decline was offset by a more than 50-percent rise in U.S. exports of nonaircraft gas turbines, to \$896 million. This increase was due to the rise in world demand for stationary power generation equipment, primarily in the field of electrical power generation. During 1993, Iran, the United Kingdom, and Malaysia were the principal markets for this equipment.

**Peder Andersen**  
(202) 205-3388

## ***Aircraft, spacecraft, and parts***

The U.S. trade surplus in aircraft, spacecraft, and parts declined by \$4.0 billion in 1993, to \$24.4 billion. This trade balance deterioration was the result of a contraction in the global market for large civil aircraft (LCA), and the worldwide trend toward downsizing military forces. The primary market for LCA consists of the world's airlines. During 1993, these airlines were recovering from their unprecedented financial losses of the preceding 3-year period; therefore, many orders and deliveries of LCA were either deferred or cancelled. Deliveries of military aircraft were similarly affected, largely because of the global recession and defense restructuring.

U.S. exports of aircraft, spacecraft, and parts dropped by 14 percent (\$5.0 billion) in 1993, to \$30.7 billion. The leading foreign markets were Japan, the United Kingdom, and China. Japan received \$2.8 billion in exports in 1993, down \$962 million (26 percent) from 1992; the United Kingdom received \$2.6 billion, up about \$100 million (3 percent); and China received \$2.2 billion, a rise of \$263 million (13 percent). Trends in U.S. exports during 1993 mirrored the fortunes of each of these country's principal source of air transportation; for example, Japan Airlines was unprofitable, British Airways was financially stable, and most Chinese airlines expanded services and purchased more U.S.-built aircraft. In fact, in the near future, China may supplant Japan as the top customer for U.S. aircraft, spacecraft, and related equipment.

Imports of aircraft, spacecraft, and parts fell by \$1.0 billion (14 percent) in 1993, to \$6.3 billion. Imports from France, the leading source of these products, rose by \$213 million to \$2.1 billion (up 12 percent); the bulk of these imports were LCA such as French-assembled Airbus aircraft. Airbus's high-technology aircraft are becoming increasingly popular with U.S. airlines that are making strong efforts to reduce operating costs. Imports from Can-

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<sup>126</sup> The Canadian economy experienced a moderate recovery in 1993, with real economic growth advancing 3.0 percent compared with 2.9 percent in the United States. The Venezuelan economy, however, suffered as the country endured a prolonged period of political instability associated with accusations of corruption against the administration of President Carlos Andes Perez. Questions of impeachment and presidential succession led to suspension of foreign investment, flight of domestic capital, and funding crisis for construction projects.

ada fell by 26 percent to \$1.3 billion during the same period. Imports from Canada consisted mainly of complete aircraft and parts for aircraft. The decline in imports again reflected the soft U.S. market for these products.

**Peder Andersen**  
**(202) 205-3388**

## **Miscellaneous vehicles and transportation-related equipment<sup>127</sup>**

The U.S. trade surplus in miscellaneous vehicles and transportation-related equipment declined by \$572 million in 1993, to \$976 million. The reduction in the trade surplus reflected stronger economic growth in the United States than in traditional export markets.

U.S. imports of miscellaneous vehicles and transportation-related equipment rose by \$312 million (27 percent) in 1993, to \$1.5 billion. The leading sources of these imports in 1993 were Canada, Japan, Mexico, Taiwan, and Germany. Canada remained the leading source of U.S. imports of these vehicles and equipment for the fourth consecutive year; imports from Canada increased by 26 percent, from \$648 million in 1992 to \$814 million in 1993. Imports from Japan, the second-leading supplier, increased by 36 percent, from \$264 million to \$361 million. The products that experienced the largest import increase in 1993 were concrete mixers, attributable to the improved U.S. construction

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<sup>127</sup> Products included in this grouping are snow mobiles, golf carts, all-terrain vehicles, mobile cranes, mobile drilling derricks, fire fighting vehicles, concrete mixers, tanks and other armored fighting vehicles, motorized invalid carriages, trailers and semi-trailers for housing or camping, self-loading or self-unloading trailers and semi-trailers for agricultural purposes, tanker trailers and tanker semi-trailers, other trailers and semi-trailers for the transport of goods, industrial hand trucks, and portable luggage cans.

market; motorized invalid carriages; and tanker trailers and tanker semi-trailers for the transport of goods. The leading foreign supplier for each of these products in 1993 was Canada.

U.S. exports of miscellaneous vehicles and transportation-related equipment decreased by 10 percent in 1993, from \$2.7 billion to \$2.4 billion. The leading markets for these exports in 1993 were Canada, Egypt, Saudi Arabia, Mexico, and Taiwan. Exports to the two leading markets in 1993, Canada and Egypt, increased by 1 percent (to \$674 million) and 4 percent (to \$327 million), respectively. The largest decrease in exports in this category was a 60-percent decrease in certain trailers and semi-trailers<sup>128</sup> (exports to Saudi Arabia decreased from \$65.6 million to \$12.4 million). Other decreases include a 49-percent decrease in exports of tanker trailers and tanker semi-trailers (exports to Mexico decreased from \$16.4 million to \$6.6 million and exports to Taiwan decreased from \$4.2 million to \$390,000); and a 48-percent decrease in tracked and half-tracked vehicles (exports to Turkey decreased from \$12.6 million to \$4.6 million, exports to Bahrain decreased from \$8.3 million to \$83,000, and exports to South Korea decreased from \$22.2 million to \$1.9 million). Contrary to the overall trend in U.S. exports of miscellaneous vehicles and transportation-related equipment in 1993, there was a 145-percent increase in U.S. exports of mobile drilling derricks. The bulk of this increase in U.S. exports was to Russia; exports increased from \$230,000 in 1992 to \$39.4 million in 1993. This is attributable to Russian efforts to develop its economy through natural resource exploration and an infusion of foreign investment that provided foreign exchange to finance these imports.

**Laura Stonitsch**  
**(202) 205-3408**

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<sup>128</sup> These include, but are not limited to, public works trailers, refrigerator or insulated trailers, removal trailers, single- or double-decker trailers.

**Table 27**  
**Machinery and transportation sector: U.S. trade for selected commodity groups, 1992 and 1993** <sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MT001	Aircraft engines and gas turbines:				
	Exports .....	8,293	8,266	-27	-0.3
	Imports .....	6,185	5,735	-450	-7.3
	Trade balance .....	2,108	2,531	423	20.1
MT002	Internal combustion piston engines, other than for aircraft:				
	Exports .....	6,640	7,450	810	12.2
	Imports .....	5,618	6,340	722	12.9
	Trade balance .....	1,022	1,110	88	8.6
MT003	Pumps for liquids:				
	Exports .....	1,857	2,043	186	10.0
	Imports .....	1,294	1,477	183	14.1
	Trade balance .....	563	566	3	0.5
MT004	Air-conditioning equipment and parts:				
	Exports .....	3,533	3,739	206	5.8
	Imports .....	2,824	3,055	231	8.2
	Trade balance .....	709	684	-25	-3.5
MT005	Certain industrial thermal-processing equipment and certain furnaces:				
	Exports .....	1,440	1,532	92	6.4
	Imports .....	813	794	-19	-2.3
	Trade balance .....	627	738	111	17.7
MT006	Commercial Machinery:				
	Exports .....	1,734	1,870	136	7.8
	Imports .....	890	964	74	8.3
	Trade balance .....	844	906	62	7.3
MT007	Electrical household appliances and certain heating equipment:				
	Exports .....	2,100	2,277	177	8.4
	Imports .....	3,373	3,570	197	5.8
	Trade balance .....	-1,273	-1,293	-20	-1.6
MT008	Centrifuges and filtering and purifying equipment				
	Exports .....	1,703	1,728	25	1.5
	Imports .....	650	706	56	8.6
	Trade balance .....	1,053	1,022	-31	-2.9
MT009	Wrapping, packaging, and can-sealing machinery:				
	Exports .....	606	672	66	10.9
	Imports .....	699	719	20	2.9
	Trade balance .....	-93	-47	46	49.5
MT010	Scales and weighing machinery:				
	Exports .....	105	108	3	2.9
	Imports .....	157	162	5	3.2
	Trade balance .....	-52	-54	-2	-3.8
MT011	Forklift trucks and similar industrial vehicles:				
	Exports .....	570	566	-4	-0.7
	Imports .....	712	721	9	1.3
	Trade balance .....	-142	-155	-13	-9.2
MT012	Construction and mining equipment:				
	Exports .....	6,773	6,651	-122	-1.8
	Imports .....	1,716	2,299	583	34.0
	Trade balance .....	5,057	4,352	-705	-13.9
MT013	Mineral processing machinery:				
	Exports .....	537	539	2	0.4
	Imports .....	200	236	36	18.0
	Trade balance .....	337	303	-34	-10.1
MT014	Farm and garden machinery and equipment:				
	Exports .....	3,449	3,724	275	8.0
	Imports .....	2,242	2,469	227	10.1
	Trade balance .....	1,207	1,255	48	4.0

See footnotes at end of table.

**Table 27-Continued**  
**Machinery and transportation sector: U.S. trade for selected commodity groups, 1992 and 1993** <sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MT015	Industrial food-processing and related machinery:				
	Exports .....	595	609	14	2.4
	Imports .....	445	411	-34	-7.6
	Trade balance .....	150	198	48	32.0
MT016	Pulp, paper, and paperboard machinery:				
	Exports .....	586	655	69	11.8
	Imports .....	637	709	72	11.3
	Trade balance .....	-51	-54	-3	-5.9
MT017	Printing, typesetting, and bookbinding machinery and printing plates:				
	Exports .....	1,120	1,125	5	0.4
	Imports .....	1,242	1,366	124	10.0
	Trade balance .....	-122	-241	-119	-97.5
MT018	Textile machinery and parts:				
	Exports .....	659	657	-2	-0.3
	Imports .....	1,502	1,843	341	22.7
	Trade balance .....	-843	-1,186	-343	-40.7
MT019	Metal rolling mills and parts thereof:				
	Exports .....	182	265	83	45.6
	Imports .....	103	144	41	39.8
	Trade balance .....	79	121	42	53.2
MT020	Machine tools for cutting metal and parts; tool holders, work holders; dividing heads and other special attachments for machine tools:				
	Exports .....	1,270	1,292	22	1.7
	Imports .....	1,960	2,188	228	11.6
	Trade balance .....	-690	-896	-206	-29.9
MT021	Machine tools for metal forming and parts thereof:				
	Exports .....	779	737	-42	-5.4
	Imports .....	552	644	92	16.7
	Trade balance .....	227	93	-134	-59.0
MT022	Non-metalworking machine tools and parts thereof:				
	Exports .....	474	665	191	40.3
	Imports .....	633	681	48	7.6
	Trade balance .....	-159	-16	143	89.9
MT023	Semiconductor equipment, robots, and other machinery:				
	Exports .....	6,787	7,574	787	11.6
	Imports .....	5,242	6,131	889	17.0
	Trade balance .....	1,545	1,443	-102	-6.6
MT024	Taps, cocks, valves, and similar devices:				
	Exports .....	1,521	1,665	144	9.5
	Imports .....	2,057	2,175	118	5.7
	Trade balance .....	-536	-510	26	4.9
MT025	Ball and roller bearings:				
	Exports .....	713	719	6	0.8
	Imports .....	990	1,114	124	12.5
	Trade balance .....	-277	-395	-118	-42.6
MT026	Gear boxes and other speed changers; torque converters; ball screws; flywheels and pulleys; clutches and shaft couplings; universal joints; and parts thereof:				
	Exports .....	592	652	60	10.1
	Imports .....	964	1,102	138	14.3
	Trade balance .....	-372	-450	-78	-21.0

See footnotes at end of table.

**Table 27-Continued**  
**Machinery and transportation sector: U.S. trade for selected commodity groups, 1992 and 1993** <sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MT027	Boilers, turbines, and related machinery:				
	Exports .....	857	1,134	277	32.3
	Imports .....	230	306	76	33.0
	Trade balance .....	627	828	201	32.1
MT028	Electric motors, generators, and related equipment:				
	Exports .....	2,742	2,925	183	6.7
	Imports .....	2,658	2,974	316	11.9
	Trade balance .....	84	-49	-133	-158.3
MT029	Electrical transformers, static converters, and inductors:				
	Exports .....	1,206	1,421	215	17.8
	Imports .....	2,130	2,467	337	15.8
	Trade balance .....	-924	-1,046	-122	-13.2
MT030	Primary cells and batteries and electric storage batteries:				
	Exports .....	848	957	109	12.9
	Imports .....	947	1,079	132	13.9
	Trade balance .....	-99	-122	-23	-23.2
MT031	Portable electric handtools:				
	Exports .....	260	323	63	24.2
	Imports .....	381	370	-11	-2.9
	Trade balance .....	-121	-47	74	61.2
MT032	Nonelectrically powered hand tools and parts thereof:				
	Exports .....	381	378	-3	-0.8
	Imports .....	470	550	80	17.0
	Trade balance .....	-89	-172	-83	-93.3
MT033	Ignition, starting, lighting, and other electrical equipment:				
	Exports .....	1,122	1,432	310	27.6
	Imports .....	1,296	1,495	199	15.4
	Trade balance .....	-174	-63	111	63.8
MT034	Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lamps:				
	Exports .....	671	712	41	6.1
	Imports .....	882	965	83	9.4
	Trade balance .....	-211	-253	-42	-19.9
MT035	Electric and gas welding and soldering equipment:				
	Exports .....	406	405	-1	-0.2
	Imports .....	345	502	157	45.5
	Trade balance .....	61	-97	-158	-259.0
MT036	Insulated electrical wire and cable, and conduit; glass and ceramic insulators:				
	Exports .....	2,567	2,991	424	16.5
	Imports .....	3,154	3,564	410	13.0
	Trade balance .....	-587	-573	14	2.4
MT037	Rail locomotive and rolling stock:				
	Exports .....	580	574	-6	-1.0
	Imports .....	744	729	-15	-2.0
	Trade balance .....	-164	-155	9	5.5
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing:				
	Exports .....	17,679	18,555	876	5.0
	Imports .....	60,376	68,607	8,231	13.6
	Trade balance .....	-42,697	-50,052	-7,355	-17.2
MT039	Certain motor-vehicle parts:				
	Exports .....	16,046	18,469	2,423	15.1
	Imports .....	13,304	14,646	1,342	10.1
	Trade balance .....	2,742	3,823	1,081	39.4

See footnotes at end of table.



**Table 27—Continued**  
**Machinery and transportation sector: U.S. trade for selected commodity groups, 1992 and 1993** <sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MT040	Motorcycles, mopeds, and parts:				
	Exports .....	497	506	9	1.8
	Imports .....	803	877	74	9.2
	Trade balance .....	-306	-371	-65	-21.2
MT041	Miscellaneous vehicles and transportation- related equipment:				
	Exports .....	2,701	2,441	-260	-9.6
	Imports .....	1,153	1,465	312	27.1
	Trade balance .....	1,548	976	-572	-37.0
MT042	Aircraft, spacecraft, and related equipment:				
	Exports .....	35,712	30,673	-5,039	-14.1
	Imports .....	7,262	6,255	-1,007	-13.9
	Trade balance .....	28,450	24,418	-4,032	-14.2
MT043	Ships, tugs, pleasure boats, and similar vessels:				
	Exports .....	1,441	1,002	-439	-30.5
	Imports .....	378	1,019	641	169.6
	Trade balance .....	1,063	-17	-1,080	-101.6
MT044	Motors and engines, except internal combustion, aircraft, or electric:				
	Exports .....	231	244	13	5.6
	Imports .....	230	283	53	23.0
	Trade balance .....	1	-39	-40	-4,000.0

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> This coding system is used by the U.S. International Trade Commission to identify major groupings of HTS import and export items for trade-monitoring purposes.

<sup>3</sup> Less than \$500,000.

<sup>4</sup> Less than 0.05 percent.

<sup>5</sup> Cannot be calculated.

Source: Compiled from official statistics of the U.S. Department of Commerce.



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# CHAPTER 10

## Electronic Products

The U.S. trade deficit in electronic products increased by \$9.0 billion in 1993, to \$26.6 billion. The growth in the deficit was due to a \$15.7 billion increase in imports that more than offset a \$6.7 billion increase in exports (table 28).

U.S. imports in the electronic products sector increased by 15 percent, from \$104.9 billion to \$120.7 billion. The sectors in which imports grew most were automatic data processing (ADP) equipment, which grew by 20 percent to \$37.9 billion, and semiconductors, which grew by 26 percent to \$19.5 billion. Increased imports in both sectors resulted in part from strong U.S. consumer demand for personal computers (PCs). The demand for PCs among U.S. consumers is satisfied mainly by computers assembled from commodity-grade components imported into the United States. The increase in imports of semiconductors was caused by increased demand for PCs, for which commodity semiconductor memory is an important input. The rise in demand for PCs also increased U.S. imports of printed circuit boards, switches, connectors, fuses, and other apparatus for making, breaking, protecting, or connecting electrical circuits. Most of the increase in U.S. imports of semiconductors and other electronic components was from Japan and other Pacific-Rim countries, the world's major commodity electronic component producing areas.

Exports increased by 8 percent in 1993, from \$87.3 billion to \$94.0 billion. Those sectors showing the greatest increase in exports were semiconductors, which grew 20 percent to \$13.8 billion, and telephonic and telegraphic equipment, which grew 25 percent, to \$5.2 billion. Semiconductor exports grew in part as a result of the increased demand worldwide for PCs and other information processing equipment that rely on semiconductor technology. Exports of telephone and telegraph apparatus grew as a result of the efforts of U.S. trading partners to expand and modernize telecommunications infrastructures, especially in light of recently liberalized procurement processes.

Those sectors in which the trade balance improved most were telephone and telegraph equipment and prerecorded media. The U.S. trade deficit in telephone equipment was reduced by 34 percent, to \$944 million, while the trade surplus for prerecorded media increased by 19 percent, to \$2.7 bil-

lion. Those sectors in which the trade balance worsened most were ADP equipment and semiconductors.

### U.S. Bilateral Trade

The major U.S. trading partners in electronic products in 1993 were Japan, Canada, Mexico, and Singapore, which together accounted for 47 percent of U.S. trade in the sector. The United States increased its exports to nine of its top 10 trading partners in 1993, the exception being Germany (figure 44). Imports from nine of the top 10 also increased, in this case the exception being Canada (figure 45)..

The U.S. deficit with Japan increased by \$4.0 billion to \$30.9 billion. The United States increased its trade surplus with Canada by \$723 million to \$6.3 billion. However, its surplus with Germany decreased by \$293 million to \$2.2 billion, and its surplus with the United Kingdom remained flat at \$3.4 billion. The \$248 million trade surplus with Mexico in 1992 became a \$230 million trade deficit in 1993.

### Commodity Analysis

#### *Automatic data processing machines*

The trade deficit in ADP equipment rose from \$6.6 billion in 1992 to \$12.5 billion in 1993. Imports of ADP equipment grew from \$31.6 billion in 1992 to \$37.9 billion in 1993, a 20-percent increase. Among leading supplier countries, 1993 imports grew fastest from Malaysia and Korea. The value of imports from these two countries rose by 63 percent and 60 percent, respectively. Increases in imports of portable computers, peripheral devices (mainly printers and monitors), and computer parts were particularly significant in 1993. Taken together, increased imports of these three categories of goods accounted for 79 percent of the overall increase in ADP machine imports.

**Table 28**  
**Electronic products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993 <sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
Japan .....	9,018	9,512	494	5.5
Canada .....	13,066	13,784	717	5.5
Mexico .....	6,951	7,761	810	11.7
Singapore .....	3,754	4,609	855	22.8
Taiwan .....	3,177	3,556	380	11.9
United Kingdom .....	6,711	6,967	256	3.8
Korea .....	2,744	3,220	476	17.4
Germany .....	6,537	6,278	-258	-4.0
Malaysia .....	1,954	2,648	694	35.5
China .....	1,005	1,406	401	39.9
All other .....	32,415	34,315	1,900	5.9
<b>Total .....</b>	<b>87,330</b>	<b>94,056</b>	<b>6,726</b>	<b>7.7</b>
EU-12 .....	26,855	25,922	-933	-3.5
OPEC .....	2,152	2,246	94	4.4
Latin America .....	11,753	13,628	1,875	15.9
CBERA .....	908	1,010	102	11.3
Asian Pacific Rim .....	27,339	31,303	3,964	14.5
ASEAN .....	7,812	9,893	2,082	26.6
Eastern Europe .....	384	354	-30	-7.8
<b>U.S. imports for consumption:</b>				
Japan .....	35,880	40,414	4,534	12.6
Canada .....	7,475	7,470	-5	-0.1
Mexico .....	6,703	7,991	1,288	19.2
Singapore .....	8,494	10,010	1,517	17.9
Taiwan .....	8,281	9,502	1,220	14.7
United Kingdom .....	3,290	3,553	263	8.0
Korea .....	5,953	7,265	1,313	22.1
Germany .....	4,047	4,081	35	0.9
Malaysia .....	5,588	7,671	2,084	37.3
China .....	3,351	4,731	1,380	41.2
All other .....	15,886	17,993	2,107	13.3
<b>Total .....</b>	<b>104,948</b>	<b>120,683</b>	<b>15,735</b>	<b>15.0</b>
EU-12 .....	12,281	13,208	927	7.6
OPEC .....	367	586	219	59.8
Latin America .....	7,530	8,880	1,350	17.9
CBERA .....	394	468	74	18.7
Asian Pacific Rim .....	72,154	84,947	12,794	17.7
ASEAN .....	18,299	22,983	4,684	25.6
Eastern Europe .....	40	38	-2	-4.5
<b>U.S. merchandise trade balance:</b>				
Japan .....	-26,863	-30,902	-4,040	(2)
Canada .....	5,591	6,313	722	(2)
Mexico .....	248	-230	-478	(5)
Singapore .....	-4,740	-5,402	-662	(2)
Taiwan .....	-5,105	-5,946	-841	(2)
United Kingdom .....	3,422	3,414	-8	(2)
Korea .....	-3,209	-4,045	-836	(2)
Germany .....	2,490	2,197	-293	(2)
Malaysia .....	-3,634	-5,023	-1,389	(2)
China .....	-2,346	-3,325	-979	(2)
All other .....	16,528	16,322	-206	(2)
<b>Total .....</b>	<b>-17,617</b>	<b>-26,627</b>	<b>-9,009</b>	<b>(2)</b>

Table 28—Continued

Electronic products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance—Continued</b>				
EU-12 .....	14,574	12,714	-1,860	(2)
OPEC .....	1,785	1,660	-126	(2)
Latin America .....	4,223	4,747	524	(2)
CBERA .....	513	542	29	(2)
Asian Pacific Rim .....	-44,815	-53,644	-8,830	(2)
ASEAN .....	-10,488	-13,090	-2,602	(2)
Eastern Europe .....	345	316	-28	(2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

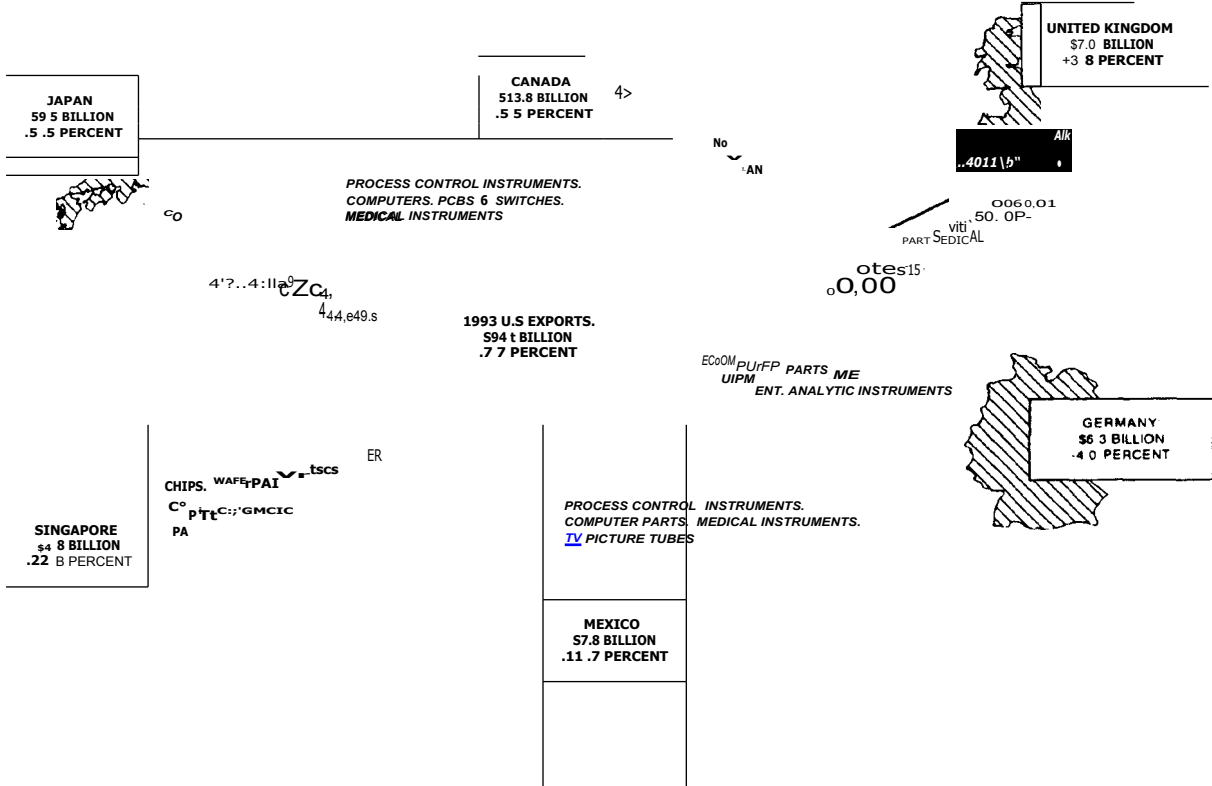
<sup>2</sup> Since some comparisons may not be meaningful for consistency, nothing is reported.

Note.—Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.

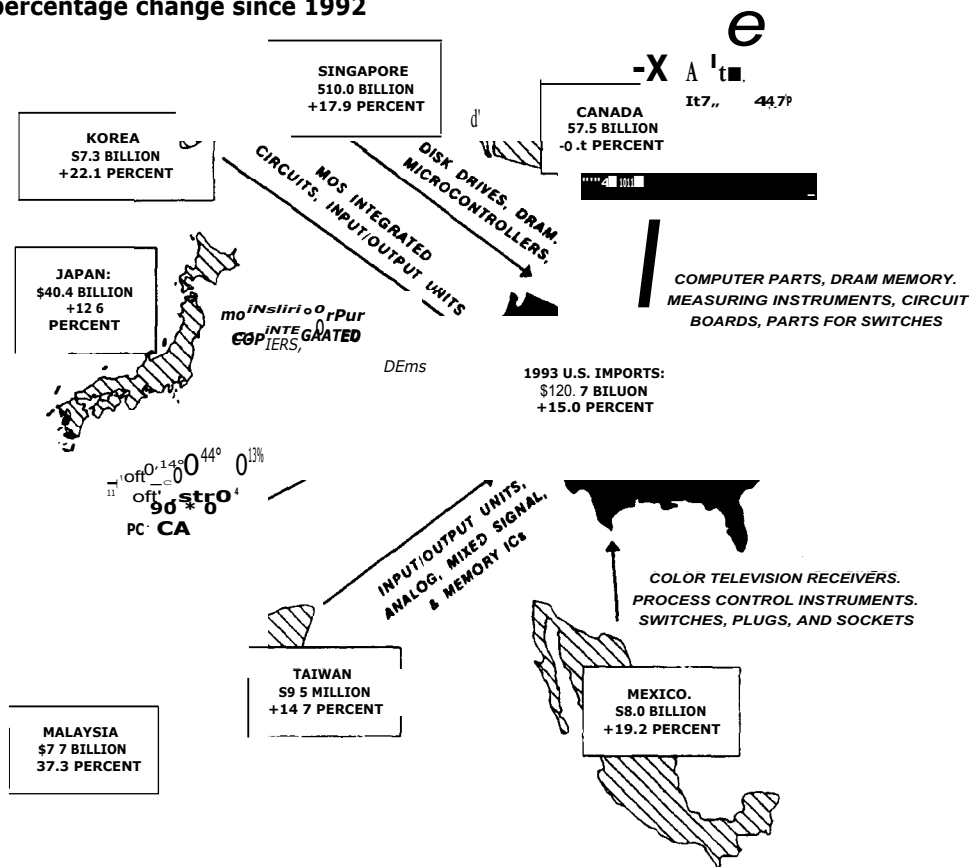
Figure 44

U.S. electronic products sector exports, 1993: Leading U.S. exports, by major markets, and overall percentage change since 1992



Source: Derived for official statistics of the U.S. Department of Commerce.

**Figure 45**  
**U.S. electronic products sector imports, 1993: Leading U.S. imports, by major sources, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

During 1993, intense price competition in desktop and portable PC markets was the single most important factor contributing to the surge in U.S. imports. As the unit cost of key computer and printer components such as microprocessors and memory chips has fallen, manufacturers have reduced prices on finished equipment incorporating these components. Concurrently, consumer interest in PCs has been sparked by steady improvements in the processing power of PC-based networks, which are quickly drawing buyers away from more expensive mainframes and minicomputers. Unlike mainframes and minicomputers, PCs can be assembled quickly from off-the-shelf components that are purchased from a variety of overseas sources. In order to remain competitive in price-sensitive markets, U.S.-based computer and peripheral makers continued to reduce production costs in 1993 by purchasing low-cost components from suppliers in Asia. A 26-percent increase in the value of imported parts, primarily printed circuit boards and other so-called "subassemblies," reflected the growing importance of global sourcing. Imported parts accounted for

30 percent of the total value of imports of ADP equipment in 1993. U.S. imports of parts from Singapore and Taiwan grew by 41 percent and 25 percent, respectively, in 1993.

In the U.S. market for portable PCs, imports of finished computers play a large role. Supply bottlenecks faced by some key U.S. portable PC manufacturers led U.S. consumers to purchase portable PCs imported from Japan, Singapore, and Taiwan. U.S. imports of portable PCs grew by 74 percent (\$1.0 billion) in 1993 to \$2.4 billion. Imports of portable PCs from Japan grew by 143 percent (\$671 million) in 1993 to \$1.1 billion.

By comparison, U.S. exports of ADP equipment increased 2 percent (\$412 million) in 1993 to \$25.4 billion. The growth in exports was led by input/output units and disk drives. Canada, Japan, and the United Kingdom were the top markets for these exports in 1993.

**William Warlick**  
 (202) 205-3459

## **Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices**

The U.S. trade deficit in semiconductors increased by \$1.8 billion in 1993, rising to \$5.7 billion. U.S. imports and exports both grew significantly. However, U.S. imports rose more rapidly than U.S. exports as growth in semiconductor demand in the United States was higher than that in the rest of the world.

U.S. exports of semiconductors grew by \$2.3 billion (20 percent) in 1993 to \$13.8 billion. Growth resulted from stronger global demand for PCs and other sophisticated information processing equipment that incorporate semiconductors. This equipment can significantly enhance the ability to manage and process information, which increases productivity.

U.S. semiconductor exports also grew in 1993 because of increasing demand for more advanced microprocessors. In particular, Intel 80386 microprocessors that dominated the microprocessor market in 1992 were displaced by higher-priced 80486 microprocessors.<sup>129</sup> These microprocessors account for about 25 percent of U.S. semiconductor production.

U.S. semiconductor exports were also boosted by the displacement of desk-top PCs by portable and notebook PCs. Unlike desk-top PCs, which are assembled mainly in the United States, these smaller PCs are more economically assembled abroad. Still, these smaller PCs, like all PCs, require microprocessors and other advanced semiconductors that are produced mainly in the United States.

The Asia-Pacific Rim region and the EU accounted for most of the growth in U.S. exports of semiconductors. These regions produce a large portion of their domestic consumption of information processing equipment and, after the United States, accounted for most of the 1993 growth in global demand for such equipment. Both regions are also principal exporters of this equipment. In addition, the Asia-Pacific Rim region assembles and tests most U.S.-made microprocessors and other semiconductors.

U.S. imports of semiconductors increased by \$4.1 billion (26 percent) in 1993 to \$19.5 billion. Growth was attributed to the rise in U.S. demand for computers and other information processing

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<sup>129</sup> The price of 80486-microprocessors ranged from \$200-\$300 in 1993, while the price of 80386-microprocessors ranged from \$50-\$75 in 1992.

equipment. U.S. computer production, which accounts for more than half the country's semiconductor consumption, increased from \$50.9 billion to \$55.1 billion in 1993. Japanese, South Korean, and Taiwanese products accounted for almost 60 percent of the semiconductor import growth. These countries principally supply the United States with dynamic random access memories (DRAMs), whose use is particularly intensive in the 80486 microprocessor-based PCs that became predominant in 1993. Malaysia, Singapore, Hong Kong, and the Philippines, the world's primary sites for assembling and testing semiconductors, accounted for most of the remaining increase in U.S. imports.

**Andrew F. Malison**  
(202) 205-3391

## **Telephone and telegraph apparatus**

U.S. exports of telecommunication apparatus increased by \$1 billion in 1993, reaching \$5.2 billion. This 25-percent increase primarily was driven by the efforts of many U.S. trading partners to expand and modernize national telecommunication infrastructures. Also contributing to the increase was the global trend toward liberalization of monopoly service providers, which opened new opportunities to equipment suppliers. During the same period, U.S. imports of telecommunication equipment grew by a comparatively modest 10 percent, allowing the overall trade deficit in equipment to continue its decline from \$1.4 billion in 1992 to \$944 million in 1993.

U.S. exports to Asia, Latin America, and Japan grew dramatically during 1993. U.S. exports to China increased by 246 percent (to \$329 million); to Korea by 45 percent (to \$285 million); and to Hong Kong by 28 percent (to \$144 million). For Korea and Hong Kong, the increases in exports were large enough to shift the U.S. trade balance from deficits to surpluses. All of these countries are working to improve telecommunication infrastructures and increase main line penetration ratios.<sup>130</sup> China, in particular, has implemented an aggressive plan to expand its networks and hopes to have 100 million phone lines in operation by the year 2000. These efforts require extensive imports of equipment, consequently providing important wireline and wireless markets for U.S. companies. U.S. exports to Latin America have expanded for similar reasons. Most of these countries are modernizing infrastructure and are turning to U.S. companies for a large portion of the necessary equipment. Brazil, which boasts the largest telecommunication market in Latin America, receives over 30 percent of its telecommunication imports from the United States.

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<sup>130</sup> These ratios reflect the number of telecommunication lines per 100 people in a country.

U.S. exports to Japan also increased significantly, particularly in the areas of switching equipment and private branch exchanges (PBXs). The increase is largely explained by a contract signed in early 1993 between Northern Telecom and Nippon Telegraph and Telephone (NTT), in which Northern agreed to supply NTT with digital switches from its North Carolina plant. Sales of cellular switches by other U.S. companies also contributed to the increase.

U.S. export growth also has been encouraged by increased trade liberalization in foreign markets. As countries open procurement processes, the monopoly enjoyed by traditional overseas equipment suppliers in their own markets is gradually disappearing. For instance, Korea opened its telecommunication equipment procurement to foreign competition in 1993 allowing AT&T to provide 19 percent of the equipment being procured.

Exports of parts for switches, parts for telephone apparatus, repeaters, PBXs, and central office switches grew significantly in 1993. Increased efforts by other countries, including developing countries, to produce telecommunication systems account for the high levels of "parts" exports. Increased exports of repeaters and central office switches, which are basic requirements for telecommunication networks, reflect efforts by U.S. trading partners to improve national telecommunication infrastructures. Increases in other product areas, including PBXs, reflect efforts by many multinational firms to enhance competitiveness by updating and improving corporate communication systems.

By comparison, U.S. imports of telecommunication equipment grew by \$536 million in 1993 to \$6.1 billion. Mexico and China topped growth among major foreign suppliers of telecommunication equipment to the U.S. market, with import increases concentrated in parts for answering machines and parts for terminal equipment, respectively.

**Lori Hylton**  
(202) 205-3450

## ***Measuring, testing, controlling, and analyzing instruments***

Reflecting the continued technological superiority of the U.S. industry, U.S. exports of measuring, testing, controlling, and analyzing instruments rose by \$841 million (10 percent) in 1993 to \$9.0 billion, more than offsetting a \$539 million growth in imports. This shift caused a \$302 million expansion in the U.S. trade surplus in instruments which reached \$4.5 billion in 1993. Canada was the largest U.S.

market for U.S.-made instruments in 1993, accounting for 16 percent of total U.S. exports (\$1.4 billion), followed by Mexico and Japan with 11 percent (\$1.0 billion) each. These markets also experienced the largest growth in shipments from the United States. Exports to Canada rose by \$225 million (19 percent); to Mexico by \$192 million (23 percent); and to Japan by \$72 million (8 percent). The substantial increase in U.S. exports to Canada was due in large part to the 44-percent increase in U.S. shipments of automatic regulating and controlling instruments. The growth in U.S. exports to Mexico was generated by increased U.S. shipments of parts and components to U.S. subsidiaries located in Mexico for further assembly, as well as U.S. shipments of instruments needed by Mexico's expanding industrial infrastructure. U.S. imports of instruments climbed from \$4.0 billion in 1992 to \$4.6 billion in 1993, an increase of 13 percent.

One of the key factors that contributed to the growth in U.S. exports in 1993 was that technology-intensive instruments are increasingly being used by all segments of industry to increase productivity and to attain greater consistency in the quality of manufactured products. Because the United States is the leading producer of advanced-technology instruments, U.S. exports continued to grow in those sectors encompassing a high percentage of technology-intensive instruments, such as automatic regulating and controlling instruments, up by 22 percent, to \$1.8 billion; analytical instruments, up by 9 percent, to \$2.0 billion; and instruments for measuring flow, level, pressure, and other variables, up by 7 percent, to \$735 million. Another factor that has contributed to the rise in U.S. exports has been the growing number of U.S. manufacturers that have become more export-oriented. In addition, the CFTA has stimulated the rationalization of trade between the United States and Canada and contributed to the growth in U.S. exports to Canada.

Japan was the leading source of U.S. imports of instruments in 1993, accounting for 24 percent (\$1.1 billion) of the total, followed by Mexico with 14 percent (\$643 million), Germany with 12 percent (\$576 million), Canada with 11 percent (\$517 million), and the United Kingdom with 10 percent (\$479 million). Imports from Mexico and Japan showed the greatest increases in 1993. Imports from Mexico rose by 69 percent, or \$263 million, mostly due to an 8-fold increase in U.S. imports of speedometers and tachometers. The leading U.S. automobile manufacturers were the principal importers, and intra-corporate trade between U.S. automobile manufacturers and their subsidiaries in Mexico accounted for most of the increase in U.S. imports from that country. U.S. imports from Japan grew by 17 percent (\$167 million), mostly generated by a 40-percent increase in U.S. imports of automatic regulating and controlling instruments



(\$74 million), a 31-percent rise in U.S. imports of other measuring and checking instruments<sup>131</sup> (\$54 million), and a 40-percent rise in imports of speedometers and tachometers (\$42 million). It is believed that intra-corporate trade between Japanese companies and their subsidiaries in the United States also contributed to the rise in U.S. imports of Japanese instruments.

**Ruben Moller**  
**(202) 205-3495**

## ***Radio transmission and reception apparatus, and combinations thereof***

As a result of the increase in exports, the trade deficit in radio transmission and reception apparatus, and combinations thereof, decreased from \$2.4 billion in 1992 to \$2.1 billion in 1993, or by 12 percent. U.S. exports to French Guiana, Japan, and Canada increased the most, by \$269 million, \$139 million, and \$126 million, respectively.

Exports of radio transmission and reception apparatus, and combinations thereof, increased by 21 percent in 1993, from \$3.5 billion to \$4.3 billion. The greatest increases were for miscellaneous parts, which increased by \$135 million, or 12 percent; miscellaneous radio transceivers for frequencies greater than 400 MHz, which increased by \$131 million, or 28 percent; and communications satellites, which increased by \$124 million, or 50 percent. These products also composed the majority of U.S. exports in 1993, with miscellaneous parts accounting for \$1.3 billion, or 30 percent of all exports; transceivers accounting for \$607 million, or 14 percent; and satellites accounting for \$371 million, or 9 percent.

The major markets for this equipment were Mexico, Canada, French Guiana, and Japan, which accounted for 15 percent, 14 percent, 7 percent, and 6 percent of total exports, respectively. The major exports to Mexico were miscellaneous parts, accounting for \$310 million, or 49 percent of total exports to Mexico. Major exports to Canada were miscellaneous parts, accounting for \$121 million, or 21 percent of total exports; radiobroadcast receivers for motor vehicles, accounting for \$110 million, or 19 percent; and radiobroadcast receivers for motor vehicles combined with sound recording or repro-

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<sup>131</sup> Other measuring and checking instruments include, in part, test benches, profile projectors, optical instruments for inspecting photomasks, and equipment for testing the characteristics of internal combustion engines.

ducing apparatus, accounting for \$90 million, or 15 percent.

The increase in exports of transceivers is attributed in part to the growth in cellular telephone services, as transceivers are necessary components of cell sites. Increased exports of communications satellites resulted from the need to send satellites to a facility in French Guiana for launching into space.

Imports increased by 8 percent in 1993, from \$6.0 billion to \$6.4 billion. The major sources of imports were Japan, Malaysia, and China. While Japan remains the major source of U.S imports, its share has been shrinking since 1990, from 28 percent to 25 percent, while imports from Malaysia and China have grown steadily from a combined 22 percent to 33 percent. The greatest increases in imports were for radiobroadcast receiver/tape player combinations and portable radiobroadcast receiver/tape player combinations, which increased by 135 percent and 48 percent, respectively, to \$729 million and \$725 million.

**John Kitzmiller**  
**(202) 205-3387**

## ***Office machines***

**The U.S. trade** deficit for office machines increased by \$707 million to \$3.3 billion in 1993, as imports increased and exports declined. Imports of office machines increased 10 percent in 1993, or by \$474 million, to \$5.1 billion. U.S. exports of office machines registered a decline of 11 percent, falling by \$233 million to \$1.8 billion.

The principal imported items were plain paper electrostatic copying machines and parts for photocopying apparatus, which together accounted for 59 percent of total imports. Japanese low- and mid-range copiers have made significant inroads in the U.S. market place through price competition. At the same time, U.S. producers of photocopying apparatus are continuing to source components from many countries, which accounts for the 9-percent increase (\$537 million) in imports of parts of photocopying apparatus in 1993.

The principal source of U.S. imports of office machines in 1993 was Japan, which accounted for 60 percent of the total. Of the imports from Japan, 78 percent were office copying machines and parts for photocopying apparatus. Taiwan and China were the second and third principal sources of imports, accounting for 5 and 4 percent of imports, respectively. The principal imports from Taiwan were cash registers (38 percent) and hand-held calculators (24 percent). For China, the principal imports were calculators of all types and parts of calculators (60 percent) and miscellaneous office machines (22 percent).

The two principal export product groups were photocopying apparatus and parts, which accounted for 42 percent of total exports, and parts for various types of office machines other than photocopiers, which accounted for 20 percent. Exports of both of these product groups declined between 1992 and 1993, contributing to the increased trade deficit. Exports of photocopying apparatus and parts decreased by \$46 million (6 percent) and exports of parts of other office machines decreased by \$98 million (16 percent).

In 1993, the principal markets for U.S. exports were Canada, Mexico, and The Netherlands, which absorbed 21 percent, 14 percent, and 10 percent of U.S. exports, respectively. Since Canada and The Netherlands are the principal destinations for exports of parts of photocopying apparatus, most of the trade in these items is believed to be intracompany transfers, because a major U.S. manufacturer of photocopying apparatus has facilities in both countries.

**Scott Baker**

(202) 205-3386

**Table 29**  
**Electronic technology sector: U.S. trade for selected commodity groups, 1992 and 1993** <sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
ST001	Office machines:				
	Exports .....	2,003	1,770	-233	-11.6
	Imports .....	4,578	5,052	474	10.4
	Trade balance .....	-2,575	-3,282	-707	-27.5
ST002	Telephone and telegraph apparatus:				
	Exports .....	4,170	5,199	1,029	24.7
	Imports .....	5,606	6,143	537	9.6
	Trade balance .....	-1,436	-944	492	34.3
ST003	Microphones, loudspeakers, audio amplifiers and combinations thereof:				
	Exports .....	720	851	131	18.2
	Imports .....	1,241	1,473	232	18.7
	Trade balance .....	-521	-622	-101	-19.4
ST004	Tape recorders, tape players, video cassette recorders, turntables, and compact disc players:				
	Exports .....	627	579	-48	-7.7
	Imports .....	5,444	5,445	1	(4)
	Trade balance .....	-4,817	-4,866	-49	-1.0
ST005	Unrecorded magnetic tapes, discs, and other media:				
	Exports .....	1,743	1,675	-68	-3.9
	Imports .....	1,729	1,928	199	11.5
	Trade balance .....	14	-253	-267	-1,907.1
ST006	Records, tapes, compact discs, computer software, and other recored media:				
	Exports .....	2,756	3,281	525	19.0
	Imports .....	522	616	94	18.0
	Trade balance .....	2,234	2,665	431	19.3
ST007	Radio transmission and reception apparatus, and combinations thereof:				
	Exports .....	3,528	4,283	755	21.4
	Imports .....	5,958	6,420	462	7.8
	Trade balance .....	-2,430	-2,137	293	12.1
ST008	Radio navigational aid, radar, and remote control apparatus:				
	Exports .....	1,111	1,249	138	12.4
	Imports .....	446	408	-38	-8.5
	Trade balance .....	665	841	176	26.5
ST009	Television receivers and video monitors and combinations including television receivers:				
	Exports .....	1,224	1,340	116	9.5
	Imports .....	3,532	4,100	568	16.1
	Trade balance .....	-2,308	-2,760	-452	-19.6
ST010	Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus:				
	Exports .....	229	198	-31	-13.5
	Imports .....	2,236	2,143	-93	-4.2
	Trade balance .....	-2,007	-1,945	62	3.1
ST011	Electric sound and visual signaling apparatus:				
	Exports .....	483	560	77	15.9
	Imports .....	1,073	1,261	188	17.5
	Trade balance .....	-590	-701	-111	-18.8
ST012	Electrical capacitors, and resistors:				
	Exports .....	898	960	62	6.9
	Imports .....	1,022	1,181	159	15.6
	Trade balance .....	-124	-221	-97	-78.2

See footnotes at end of table.

**Table 29-Continued**  
**Electronic technology sector: U.S. trade for selected commodity groups, 1992 and 1993**<sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits:				
	Exports .....	4,924	5,224	300	6.1
	Imports .....	5,445	6,254	809	14.9
	Trade balance .....	-521	-1,030	-509	-97.7
ST014	Television picture tubes and other cathode ray tubes:				
	Exports .....	602	769	167	27.7
	Imports .....	758	822	64	8.4
	Trade balance .....	-156	-53	103	66.0
ST014	Television picture tubes and other cathode ray tubes:				
	Exports .....	602	769	167	27.7
	Imports .....	758	822	64	8.4
	Trade balance .....	-156	-53	103	66.0
ST015	Special-purpose tubes:				
	Exports .....	169	159	-10	-5.9
	Imports .....	170	168	-2	-1.2
	Trade balance .....	-1	-9	-8	-800.0
ST016	Diodes, transistors, integrated circuits and similar semiconductor solid-state devices:				
	Exports .....	11,527	13,813	2,286	19.8
	Imports .....	15,449	19,466	4,017	26.0
	Trade balance .....	-3,922	-5,653	-1,731	-44.1
ST017	Electrical and electronic articles, apparatus, and parts not elsewhere provided for:				
	Exports .....	1,682	1,871	189	11.2
	Imports .....	928	987	59	6.4
	Trade balance .....	754	884	130	17.2
ST018	Automatic data processing machines:				
	Exports .....	24,985	25,397	412	1.6
	Imports .....	31,564	37,906	6,342	20.1
	Trade balance .....	-6,579	-12,509	-5,930	-90.1
ST019	Photographic supplies:				
	Exports .....	1,669	1,636	-33	-2.0
	Imports .....	1,610	1,702	92	5.7
	Trade balance .....	59	-66	-125	-211.9
ST020	Exposed photographic plates, film, and paper:				
	Exports .....	102	100	-2	-2.0
	Imports .....	124	156	32	25.8
	Trade balance .....	-22	-56	-34	-154.5
ST021	Optical fibers, optical fiber bundles and cables:				
	Exports .....	293	325	32	10.9
	Imports .....	85	90	5	5.9
	Trade balance .....	208	235	27	13.0
ST022	Optical goods, including ophthalmic goods:				
	Exports .....	1,194	1,150	-44	-3.7
	Imports .....	2,098	2,181	83	4.0
	Trade balance .....	-904	-1,031	-127	-14.0
ST023	Photographic cameras and equipment:				
	Exports .....	936	940	4	0.4
	Imports .....	1,703	1,968	265	15.6
	Trade balance .....	-767	-1,028	-261	-34.0

See footnotes at end of table.

**Table 29—Continued**  
**Electronic technology sector: U.S. trade for selected commodity groups, 1992 and 1993**<sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
ST024	Medical goods:				
	Exports .....	6,940	7,360	420	6.1
	Imports .....	3,997	4,381	384	9.6
	Trade balance .....	2,943	2,979	36	1.2
ST025	Surveying and navigational instruments:				
	Exports .....	1,709	1,556	-153	-9.0
	Imports .....	562	477	-85	-15.1
	Trade balance .....	1,147	1,079	-68	-5.9
ST026	Watches:				
	Exports .....	117	138	21	17.9
	Imports .....	1,869	2,048	179	9.6
	Trade balance .....	-1,752	-1,910	-158	-9.0
ST027	Clocks and timing devices:				
	Exports .....	90	97	7	7.8
	Imports .....	350	400	50	14.3
	Trade balance .....	-260	-303	-43	-16.5
ST028	Arms and ammunition:				
	Exports .....	2,534	2,372	-162	-6.4
	Imports .....	563	682	119	21.1
	Trade balance .....	1,971	1,690	-281	-14.3
ST029	Balances of a sensitivity of 5 cg or better:				
	Exports .....	16	18	2	12.5
	Imports .....	41	38	-3	-7.3
	Trade balance .....	-25	-20	5	20.0
ST030	Drawing and mathematical calculating or measuring instruments:				
	Exports .....	166	162	-4	-2.4
	Imports .....	231	235	4	1.7
	Trade balance .....	-65	-73	-8	-12.3
ST031	Measuring, testing, controlling, and analyzing instruments:				
	Exports .....	8,185	9,026	841	10.3
	Imports .....	4,014	4,553	539	13.4
	Trade balance .....	4,171	4,473	302	7.2

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> This coding system is used by the U.S. International Trade Commission to identify major groupings of HTS import and export items for trade-monitoring purposes.

<sup>3</sup> Less than \$500,000.

<sup>4</sup> Less than 0.05 percent.

<sup>5</sup> Cannot be calculated.

Source: Compiled from official statistics of the U.S. Department of Commerce.



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# CHAPTER 11

## Miscellaneous Manufactures <sup>132</sup>

U.S. imports dominate the trade flow in the miscellaneous manufactures sector. Paced by surges in imports of labor-intensive toys, Christmas decorations, and low-end furniture and lamps from China, high-tech, copyrighted video games from Japan, and precious jewelry from Italy, U.S. imports rose \$3.4 billion, or by 12 percent, to \$32.6 billion in 1993. U.S. exports of miscellaneous manufactures rose by \$422 million to \$9.6 billion in 1993 (table 30). Because of the relatively small export base, the U.S. trade deficit in the miscellaneous manufactures sector expanded to \$23.1 billion, a rise of \$3 billion.

### U.S. Bilateral Trade

The major U.S. trading partners for miscellaneous manufactures during 1993 were China, the EU, Japan, Canada, Taiwan, and Mexico. These markets together accounted for 73 percent of total U.S. exports of miscellaneous manufactures during 1993, a proportion nearly unchanged from 1990. The share of exports accounted for by the EU decreased by 5 percent to \$1.9 billion in 1993, while the share to Canada increased by 10 percent to \$2.4 billion. Principal products exported were furniture, home video game consoles, arcade and casino games, and sporting goods (especially golf clubs, and exercise/gymnasium equipment) (figure 46).

U.S. imports from the major trading partners represented 78 percent of the value of total imports of miscellaneous manufactures in 1993. With the exception of Taiwan, the value of imports from each of these nations increased in 1993. China's share rose from 22 percent to 24 percent, making that country the largest source of goods in the miscellaneous manufactures sector. The shares supplied by most other major sources remained unchanged in 1993. The EU supplied 16 percent; Japan, 12 percent; Canada, 6 percent; and Mexico, 5 percent. Taiwan's share declined from 16 percent to 13 per-

cent. Principal products imported were furniture, video games, jewelry, works of art, and Christmas decorations (figure 47).

Canada was the only major trading partner with which the United States maintained a trade surplus in the miscellaneous manufactures sector in 1993. Nevertheless, the \$289 million surplus with Canada declined by \$186 million from the level in 1992. Because so many of the products in the miscellaneous manufactures sector require labor intensive and/or mature production technologies, China has become by far the leading supplier of sector goods in recent years. The U.S. trade deficit with China grew by \$1.4 billion in 1993, totalling \$7.8 billion. Both U.S. and foreign suppliers continued to shift manufacturing resources to China in order to take advantage of the country's low labor costs. Although the trade deficit with Taiwan improved by \$505 million in 1993, the U.S. sectoral trade deficit with Taiwan ranked second only to that with China in 1993, totalling \$4.1 billion. The U.S. trade deficit with Japan increased by \$596 million to \$2.9 billion and the trade deficit with the EU rose by \$535 billion to \$3.3 billion.

### Commodity Analysis

#### *Furniture and selected furnishings*

The deficit for U.S. trade in furniture and selected furnishings, mostly generated by an increase in imports from Canada and China, grew by \$502 million to reach \$3.4 billion in 1993. U.S. imports of furniture rose by \$743 million in 1993 to \$6.3 billion, while exports rose by \$241 million to \$2.9 billion. The U.S. trade deficit with Canada rose by \$171 million in 1993 to \$305 million, and that with China increased by \$150 million to \$487 million. The trade deficit with Mexico reached \$197 million in 1993, a widening of \$50 million. Canada and Mexico, the most significant markets for exports, accounted for two-thirds of the total U.S. exports in this sector.

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<sup>132</sup> Miscellaneous manufactures include a wide range of consumer products such as luggage, handbags, musical instruments, silverware, jewelry, bicycles, furniture, writing instruments, lamps, sporting goods, brushes, brooms, toys, dolls, games, umbrellas, Christmas ornaments, artificial flowers, typewriter ribbons, objects of art, and antiques.

**Table 30**  
**Miscellaneous manufactures: U.S. exports of domestic merchandise, imports for consumption,**  
**and merchandise trade balance, by selected countries and country groups, 1992 and 1993 <sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
China .....	42	78	36	85.7
Japan .....	1,120	1,140	20	1.7
Canada .....	2,180	2,388	208	9.5
Taiwan .....	162	210	49	30.2
Mexico .....	1,241	1,278	37	3.0
Italy .....	127	128	1	0.5
United Kingdom .....	620	605	-15	-2.4
Korea .....	207	249	42	20.4
Thailand .....	66	80	13	20.1
France .....	322	324	2	0.6
All other .....	3,063	3,093	30	1.0
<b>Total .....</b>	<b>9,151</b>	<b>9,573</b>	<b>422</b>	<b>4.6</b>
EU-12 .....	1,971	1,881	-91	-4.6
OPEC .....	384	369	-15	-4.0
Latin America .....	1,898	2,007	109	5.7
CBERA .....	244	263	19	7.9
Asian Pacific Rim .....	2,040	2,285	245	12.0
ASEAN .....	244	303	59	24.3
Eastern Europe .....	27	18	-9	-33.1
<b>U.S. imports for consumption:</b>				
China .....	6,492	7,900	1,408	21.7
Japan .....	3,447	4,062	615	17.8
Canada .....	1,707	2,102	394	23.1
Taiwan .....	4,733	4,277	-456	-9.6
Mexico .....	1,498	1,758	260	17.4
Italy .....	2,000	2,164	164	8.2
United Kingdom .....	895	974	79	8.8
Korea .....	1,267	1,087	-180	-14.2
Thailand .....	1,040	1,192	152	14.6
France .....	720	901	181	25.1
All other .....	5,452	6,226	775	14.2
<b>Total .....</b>	<b>29,252</b>	<b>32,643</b>	<b>3,391</b>	<b>11.6</b>
EU-12 .....	4,766	5,211	445	9.3
OPEC .....	250	363	113	45.5
Latin America .....	2,162	2,548	385	17.8
CBERA .....	254	290	36	14.2
Asian Pacific Rim .....	17,940	19,556	1,616	9.0
ASEAN .....	2,074	2,486	411	19.8
Eastern Europe .....	153	120	-33	-21.5
<b>U.S. merchandise trade balance:</b>				
China .....	-6,450	-7,822	-1,372	( <sup>2</sup> )
Japan .....	-2,327	-2,922	-596	( <sup>3</sup> )
Canada .....	473	287	-186	
Taiwan .....	-4,571	-4,066	505	
Mexico .....	-256	-479	-223	( <sup>2</sup> )
Italy .....	-1,873	-2,036	-163	( <sup>2</sup> )
United Kingdom .....	-276	-370	-94	( <sup>2</sup> )
Korea .....	-1,060	-838	222	( <sup>2</sup> )
Thailand .....	-974	-1,113	-139	( <sup>2</sup> )
France .....	-398	-577	-179	( <sup>2</sup> )
All other .....	-2,388	-3,133	-745	( <sup>2</sup> )
<b>Total .....</b>	<b>-20,101</b>	<b>-23,070</b>	<b>-2,969</b>	<b>(<sup>2</sup>)</b>



**Table 30—Continued**

**Miscellaneous manufactures: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1992 and 1993<sup>1</sup>**

Item	1992	1993	Change 1993 from 1992	
			Amount	Percent
<i>Million dollars</i>				
<b>U.S. merchandise trade balance—Continued.</b>				
EU-12 .....	-2,795	-3,330	-535	(2)
OPEC .....	135	6	-129	(2)
Latin America .....	-264	-541	-277	(2)
CBERA .....	-10	-27	-17	(2)
Asian Pacific Rim .....	-15,900	-17,271	-1,371	(2)
ASEAN .....	-1,830	-2,182	-352	(2)
Eastern Europe .....	-125	-101	24	(2)

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

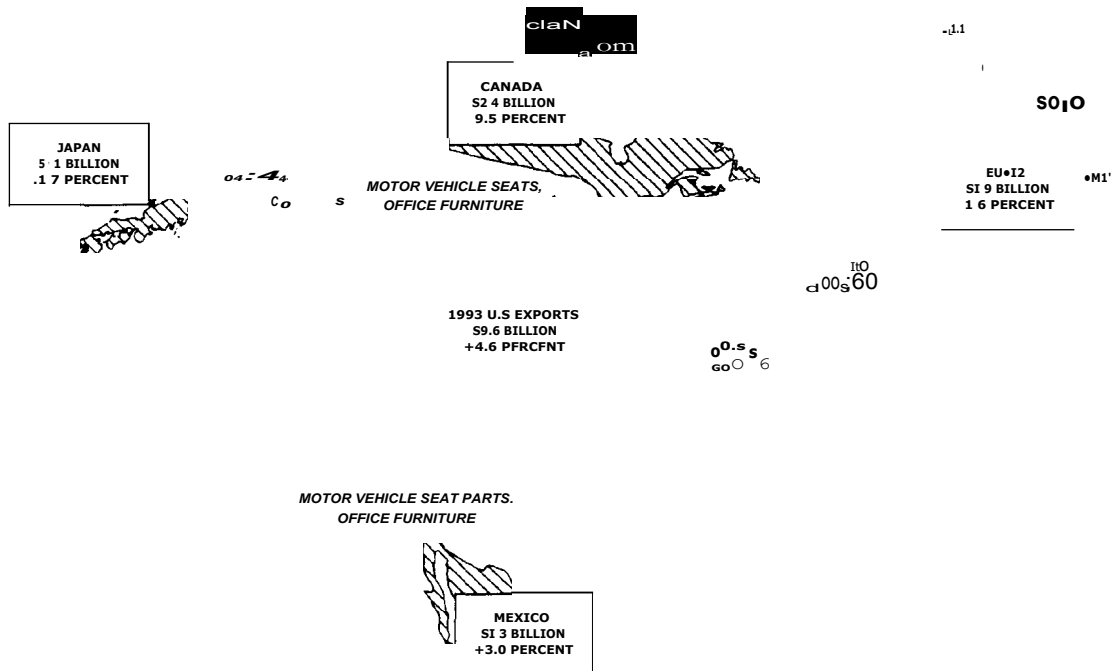
<sup>2</sup> Since some comparisons may not be meaningful for consistency, nothing is reported.

Note.—Because of rounding, figures may not add to the totals shown. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1993.

Source: Compiled from official statistics of the U.S. Department of Commerce.

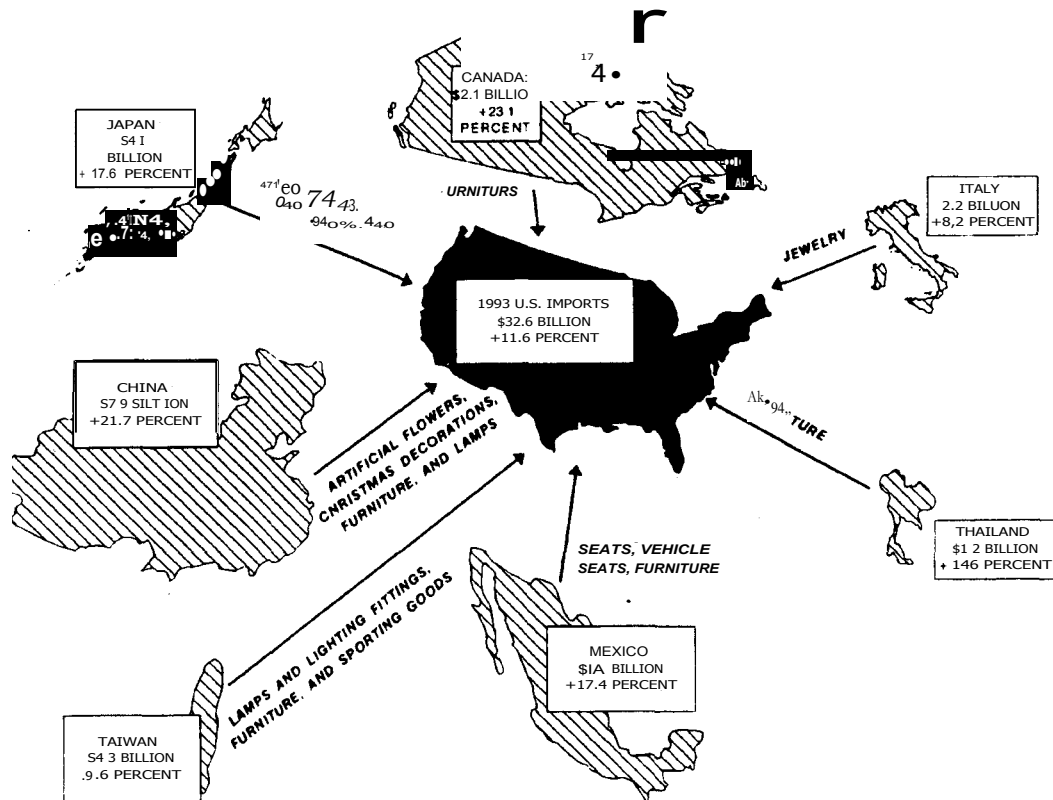
**Figure 46**

**U.S. miscellaneous manufactures sector exports, 1993: Leading U.S. exports, by major markets, and overall percentage change since 1992**



Source: Derived from official statistics of the U.S. Department of Commerce.

**Figure 47**  
**U.S. miscellaneous manufactures sector imports, 1993: Leading U.S. imports, by major sources, and overall percentage change since 1992**



Source: Derived for official statistics of the U.S. Department of Commerce.

Canada is the largest supplier of U.S. imports, is the largest market for U.S. exports, and contributed the greatest increase in the U.S. deficit for furniture. Although the implementation of the CFTA caused a shake-out in the Canadian household furniture industry, the firms that survived are capable of competing on an international level. A number of Canadian firms have been particularly successful at selling "modified European contemporary" furniture in the U.S. market. Canadian participation in the U.S. market has been a priority because of a weak Canadian market due to the recession and subsequent high unemployment. U.S. imports of furniture from Canada rose by 23 percent in 1993 to \$1.6 billion. The growth in U.S. exports of furniture to Canada in 1993 lagged by 10 percent to \$1.3 billion. The U.S. trade deficit with Canada in office furniture expanded by \$90 million in 1993 from \$141 million to \$231 million. A significant portion of Canadian office furniture production is accounted for by Canadian subsidiaries of U.S. producers.

Motor-vehicle seats constitute a significant portion of all furniture trade with Canada and Mexico and reflect the highly rationalized nature of North

American car production. Motor-vehicle seats accounted for 34 percent of U.S. furniture imports from Canada and 33 percent of U.S. exports to Canada in 1993. They also accounted for 60 percent of U.S. furniture imports from Mexico and 66 percent of U.S. exports to Mexico. U.S. imports from Canada are usually top-of-the-line, electronically adjustable car seats, while a large portion of the imports from Mexico are seat covers. The bulk of the imports from both countries are assembled from U.S.-made parts and materials. Most U.S. exports of vehicle seats to both countries are destined for car assembly facilities wholly or jointly owned by the Big Three in Detroit. A significant portion of the assembled vehicles are destined for the U.S. market. U.S. imports of motor-vehicle seats from Canada rose by 10 percent in 1993, to \$530 million; such exports to Canada rose by 23 percent to \$413 million. Concurrently, U.S. imports of motor vehicle seats from Mexico in 1993 rose by 16 percent to \$530 million; while U.S. exports to Mexico rose by 7 percent to \$451 million.

The Mexican furniture industry's competitive strength lies in its highly skilled yet low cost labor force and its proximity to the United States. Be-

sides motor-vehicle seats, Mexican producers have a particular advantage in the U.S. market for upholstered furniture and highly crafted wood furniture. The Mexican quality is comparable to that of some Italian producers; despite having low-tech manufacturing methods, the low-cost labor allows for more man-hours per product. U.S. imports of furniture from Mexico, including motor-vehicle seats, rose by 13 percent in 1993, to \$884 million, while total U.S. exports of furniture to Mexico rose by 8 percent to \$687 million. In addition to motor vehicle seats, office furniture made up a substantial portion of U.S. exports to Mexico in 1993.

China, Malaysia, Thailand, and Indonesia are highly successful producers of low-end wood furniture. Manufacturers located in these countries benefit from low-cost labor and significant sources of rubber wood and tropical hardwoods. Because the furniture industries in these East Asian countries are characterized by low levels of automation, they have made efforts to modernize their factories and increase their access to foreign markets by forming joint ventures with companies in the newly industrialized countries of Korea, Singapore, and Taiwan. Most of the furniture is knockdown (KD) and much of it is shipped semi-finished for painting and assembly by importers. U.S. imports from these four East Asian suppliers in 1993 rose by 53 percent to \$1 billion. China accounted for 50 percent of these imports.

U.S. imports of furniture from China in 1993 consisted of KD rubber wood household furniture (30 percent), woven rattan furniture (13 percent), and metal household furniture (15 percent). Rubber wood comes from trees that are initially grown for their natural latex sap. It machines well and can be made to look like oak or pine. Rattan is the most popular material used in the weaving of furniture. It is derived from the stems of rattan palms that can only be found in the Asian tropics and subtropics (primarily Indonesia, Singapore, Vietnam, Malaysia, Thailand, and the Philippines). Metal furniture is more costly for lesser-developed countries to produce because so much of the steel must be bought from foreign suppliers. Cotton quilts accounted for 32 percent of U.S. imports of furniture and selected furnishings from China in 1993. (China is one of the world's largest producers of cotton). U.S. imports of cotton quilts from China rose by 24 percent in 1993 to \$156 million.

Taiwan, the country with which the United States continues to have the largest deficit in furniture trade (\$1.2 billion), has invested in the most advanced and sophisticated wood-working machinery available. This strategy has helped producers in Taiwan offset their rising labor costs and maintain

an overall price advantage over U.S. producers in the markets for KD wood furniture and stackable metal and plastic chairs.

**Josephine Spalding**  
(202) 205-3498

## **Games and fairground amusements**

Reflecting a surge in the video game market begun in 1992, the U.S. trade deficit in the games and fairground equipment sector increased \$615 million in 1993, to \$2.5 billion. Imports climbed \$731 million (27 percent) in 1993 while exports were up \$116 million (13 percent) over 1992. Home video game systems, their cartridges, and hand-held video games and parts accounted for 94 percent (\$687 million) of the increase in imports in the games and fairground amusements commodity group. Exports of arcade and casino games, bowling equipment, and fairground amusements grew by \$125 million, offsetting a decline in exports of other commodities in this sector. Of these products, only bowling equipment also experienced a major increase in 1992. The adoption of bowling as an Olympic sport and U.S. technological advantages has aided U.S. exports of bowling equipment.

The 1993 U.S. trade deficit in games and fairground amusements resulted from the increase in U.S. imports of video games. Imports of home video game systems rose by \$222 million (22 percent) to \$1.2 billion; home video game cartridges, by \$301 million (35 percent) to \$1.2 billion; and hand-held video games, by \$164 million (35 percent) to \$632 million.

Imports of games and fairground amusements from Japan expanded by \$601 million (31 percent) in 1993 to \$2.6 billion, as Japan accounted for 74 percent of total sector imports in 1993. China overtook Taiwan as the second largest supplier, reflecting the increased movement of assembly plants from other Asian countries to China. China accounted for 10 percent (\$347 million) of total imports compared with 8 percent (\$210 million) in 1992, while imports from Taiwan dropped from 11 percent (\$305 million) of total imports in 1992 to 8 percent (\$290 million) in 1993. The main imports from Japan included home video game consoles, CD-ROM players, cartridges, CD games, and hand-held video games; imports from China consisted largely of the hand-held video games; and imports from Taiwan were primarily home video game consoles, game cartridges, and hand-held video games. The surge in video game sales was due to continued consumer excitement over 16-bit game systems with their advanced graphics, action-packed complex games, and use of CD-ROM technology introduced in 1992.

Most video game concepts created and developed in the United States are manufactured (converted into cartridges) in Japan because the world's top video game companies are based in Japan.

U.S. exports of games and fairground amusements increased by 13 percent in 1993 to \$1.0 billion. The leading markets for U.S. exports were Canada, Korea, Taiwan, and Japan, all of which had large increases in 1993. U.S. exports to Canada increased 20 percent to \$173 million; exports to Korea, 23 percent to \$126 million; exports to Taiwan, 94 percent (\$51 million) to \$105 million; and exports to Japan, 63 percent to \$100 million. Home video game consoles, arcade video games, pinball machines, and casino games were the main exports to Canada; exports to Korea consisted primarily of bowling equipment; and the chief exports to Taiwan and Japan were arcade and casino games and bowling equipment. Two Nevada-based companies are the world's leading producers of casino games, especially those using technology from the arcade video game industry, while Illinois-based companies are the world's leading producers of pinball machines and bowling equipment.

The European market accounted for 46 percent (\$181 million) of U.S. exports of coin- or token-operated game machines and parts, while the Asian market accounted for 79 percent (\$228 million) of bowling equipment

**Dana D. Abrahamson**  
(202) 205-3430

## ***Precious jewelry and related products***

Fueled by the combination of a 16-percent rise in imports and an 18-percent drop in exports, the U.S. trade deficit in precious jewelry and related articles increased by 5525 million to \$2.8 billion in 1993, compared with the \$2.3 billion deficit recorded in 1992. The rise in the total value of U.S. imports of precious jewelry and related articles during the period (\$437 million or 16 percent) was led by products from Italy (up \$154 million or 14 percent), Thailand (up \$56 million or 19 percent), India (up \$36 million or 28 percent), and Hong Kong (up \$31 million or 12 percent). The U.S. market for precious jewelry and related articles is the largest in the world and renewed consumer confidence in the U.S. economy resulted in an expansion of the U.S. market during 1993. Conversely, the lack of or decline in growth in major U.S. export markets for precious jewelry resulted in a decrease in total exports of such products (down \$88 million or 18 percent), and was principally accounted for by reduced shipments to Switzerland (down \$61 million or 48 percent) and Japan (down \$20 million or 24 percent).

Precious jewelry products from Italy, the leading supplier of precious jewelry to the United States for nearly a decade, continue to benefit from a reputation for high-quality and overall good designs. Italy supplied 39 percent of total U.S. imports of precious jewelry and related articles in 1993 and accounted for 35 percent of the increase in such imports that year. The majority of jewelry from Italy consists of gold necklaces and bracelets.

Products imported from Thailand, India, and Hong Kong consist mainly of gemstone jewelry (principally rings, earrings, and necklaces) and benefit from relatively good quality at moderate prices. Imports from Thailand accounted for 11 percent of total imports of precious jewelry and for 13 percent of the increase in imports of these goods during the period. Imports of precious jewelry from India accounted for 5 percent of the total and 8 percent of the increase in precious jewelry, as producers in India attempted to increase the value added to the abundant natural supply of gemstones available in India. Imports from Hong Kong represented 9 percent of the total and 7 percent of the increase in imports of precious jewelry in 1993.

Switzerland, Japan, Thailand, and Canada were the principal markets for U.S. exports of precious jewelry and related articles in 1993. However, slowed economic conditions in Switzerland and Japan, the leading markets, resulted in substantial declines in U.S. exports of precious jewelry of \$61 million (48 percent) and \$20 million (24 percent), respectively. Similarly, Switzerland's share of total U.S. exports decreased to 16 percent from 25 percent and Japan's share declined from 17 percent to 15 percent. In contrast, shipments to Canada showed the most significant rise in U.S. exports of precious jewelry and related articles, up \$16 million (56 percent) to \$44 million. The largest sectors of U.S. exports of precious jewelry, necklaces and rings, benefit from reputations for good quality and continued an upward trend in the Canadian market. Exports of such articles to Canada rose by \$15 million (68 percent) in 1993 to \$37 million.

**Richardo Witherspoon**  
(202) 205-3489

## ***Miscellaneous articles***

The deficit in U.S. trade in miscellaneous articles<sup>133</sup> grew by \$833 million to \$3.2 billion in 1993. Most of the rise in the deficit was accounted for by trade in works of art,<sup>134</sup> followed by Christ-

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<sup>133</sup> Miscellaneous articles include a heterogeneous conglomeration of products. The product categories that accounted for the bulk of U.S. trade were works of art, antiques, artificial flowers, and holiday decorations.

<sup>134</sup> U.S. trade in works of art involves mainly the re-sale of rare works by well-known artists. There is no "industry" producing these goods. In 1993, U.S. imports totaled \$2.7 billion; U.S. exports totaled \$952 million.

mas decorations and artificial flowers. The U.S. trade deficit in works of art rose from \$993 million to \$1.7 billion in 1993. According to industry sources, U.S. buyers are currently dominating the market, accounting for sharply rising imports by 29 percent in 1993 to \$2.7 billion, as U.S. exports fell by 11 percent to \$952 million. The world art market is on an upswing after three years of decline. Several trends could signal a period of sustained growth. Dealers have begun to buy; massive inventories—created by the market downturn in 1990—have finally dwindled; and major works of art have been selling at above their estimated value for almost a full year. However, the world art market may soften if the Japanese sell the huge num-

ber of paintings accumulated in the 1980s. (Paintings worth an estimated \$500 million have recently been repossessed from Japanese investors by Japanese banks.)

The combined deficit for U.S. trade in Christmas decorations and artificial flowers, principally from China, rose by \$57 million to \$1.2 billion in 1993. A number of Taiwanese and Korean producers have formed joint ventures with Chinese companies to reduce manufacturing costs with lower-cost Chinese labor, while giving Chinese manufacturers greater access to export markets.

**Josephine Spalding**  
**(202) 205-3498**

**Table 31**  
**Miscellaneous manufactures sector: U.S. trade for selected commodity groups, 1992 and 1993 <sup>1</sup>**

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MM047	Luggage, handbags, and flatgoods:				
	Exports .....	194	199	5	2.6
	Imports .....	2,437	2,584	147	6.0
	Trade balance .....	-2,243	-2,385	-142	-6.3
MM048	Certain other leather goods:				
	Exports .....	74	79	5	6.8
	Imports .....	158	168	10	6.3
	Trade balance .....	-84	-89	-5	-6.0
MM049	Musical instruments and accessories:				
	Exports .....	341	354	13	3.8
	Imports .....	824	861	37	4.5
	Trade balance .....	-483	-507	-24	-5.0
MM050	Umbrellas, whips, riding crops, and canes:				
	Exports .....	11	9	-2	-18.2
	Imports .....	173	180	7	4.0
	Trade balance .....	-162	-171	-9	-5.6
MM051	Silverware and certain other articles of precious metal or metal clad with precious metal:				
	Exports .....	138	87	-51	-37.0
	Imports .....	64	109	45	70.3
	Trade balance .....	74	-22	-96	-129.7
MM052	Precious jewelry and related articles:				
	Exports .....	495	407	-88	-17.8
	Imports .....	2,795	3,232	437	15.6
	Trade balance .....	-2,300	-2,825	-525	-22.8
MM053	Costume jewelry and related articles:				
	Exports .....	114	120	6	5.3
	Imports .....	532	544	12	2.3
	Trade balance .....	-418	-424	-6	-1.4
MM054	Bicycles and certain parts:				
	Exports .....	175	197	22	12.6
	Imports .....	734	841	107	14.6
	Trade balance .....	-559	-644	-85	-15.2
MM055	Furniture and selected furnishings:				
	Exports .....	2,700	2,941	241	8.9
	Imports .....	5,555	6,298	743	13.4
	Trade balance .....	-2,855	-3,357	-502	-17.6
MM056	Writing instruments and related articles:				
	Exports .....	258	242	-16	-6.2
	Imports .....	513	568	55	10.7
	Trade balance .....	-255	-326	-71	-27.8
MM057	Lamps and lighting fittings:				
	Exports .....	449	472	23	5.1
	Imports .....	1,499	1,712	213	14.2
	Trade balance .....	-1,050	-1,240	-190	-18.1
MM058	Prefabricated buildings:				
	Exports .....	273	329	56	20.5
	Imports .....	64	71	7	10.9
	Trade balance .....	209	258	49	23.4
MM059	Children's vehicles:				
	Exports .....	30	34	4	13.3
	Imports .....	194	228	34	17.5
	Trade balance .....	-164	-194	-30	-18.3
MM060	Dolls:				
	Exports .....	29	27	-2	-6.9
	Imports .....	901	885	-16	-1.8
	Trade balance .....	-872	-858	14	1.6
MM061	Toys and models:				
	Exports .....	427	468	41	9.6
	Imports .....	3,597	3,666	69	1.9
	Trade balance .....	-3,170	-3,198	-28	-0.9

See footnotes at end of table.

**Table 31—Continued**  
**Miscellaneous manufactures sector: U.S. trade for selected commodity groups, 1992 and 1993**<sup>1</sup>

USITC code <sup>2</sup>	Commodity group	1992	1993	Change 1993 from 1992	
				Amount	Percent
<i>Million dollars</i>					
MM062	Games and fairground amusements:				
	Exports .....	884	1,000	116	13.1
	Imports .....	2,729	3,461	732	26.8
	Trade balance .....	-1,845	-2,461	-616	-33.4
MM063	Sporting goods:				
	Exports .....	1,024	1,140	116	11.3
	Imports .....	2,148	2,159	11	0.5
	Trade balance .....	-1,124	-1,019	105	9.3
MM064	Smokers' articles:				
	Exports .....	73	74	1	1.4
	Imports .....	148	137	-11	-7.4
	Trade balance .....	-75	-63	12	16.0
MM065	Brooms, brushes, and hair grooming articles:				
	Exports .....	110	143	33	30.0
	Imports .....	468	491	23	4.9
	Trade balance .....	-358	-348	10	2.8
MM066	Miscellaneous articles:				
	Exports .....	1,352	1,250	-102	-7.5
	Imports .....	3,718	4,449	731	19.7
	Trade balance .....	-2,366	-3,199	-833	-35.2

<sup>1</sup> Import values are based on Customs value; export values are based on f.a.s. value, U.S. port of export.

<sup>2</sup> This coding system is used by the U.S. International Trade Commission to identify major groupings of HTS import and export items for trade-monitoring purposes.

<sup>3</sup> Less than \$500,000.

<sup>4</sup> Less than 0.05 percent.

<sup>5</sup> Cannot be calculated.

Source: Compiled from official statistics of the U.S. Department of Commerce.





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**Appendix A**  
**Listing of Commodity/industry**  
**Groups Covered in the Report**

## **Agriculture, animal, and vegetable products sector**

AG001 Certain miscellaneous live animals, offals, meat, and animal products  
AG002 Cattle and beef  
AG003 Swine and pork  
AG004 Sheep and meat of sheep  
AG005 Poultry  
AG006 Fresh or chilled fish  
AG007 Frozen fish  
AG008 Fish canned, cured, or otherwise prepared, and live fish  
AG009 Shellfish  
AG010 Dairy produce  
AG011 Eggs  
AG012 Sugar and other sweeteners  
AG013 Animal feeds  
AG014 Live plants  
AG015 Seeds  
AG016 Cut flowers  
AGO 17 Miscellaneous vegetable substances  
AG018 Fresh, chilled, or frozen vegetables  
AG019 Prepared or preserved vegetables, mushrooms, and olives  
AG020 Edible nuts  
AG021 Tropical fruit  
AG022 Citrus fruit  
AG023 Deciduous fruit  
AG024 Other fresh fruit  
AG025 Dried fruit other than tropical  
AG026 Frozen fruit  
AG027 Prepared or preserved fruit  
AG028 Coffee and tea  
AG029 Spices  
AG030 Cereals  
AG031 Milled grains, malts, and starches  
AG032 Oilseeds  
AG033 Animal or vegetable fats and oils  
AG034 Edible preparations  
AG035 Cocoa, chocolate, and confectionery  
AG036 Fruit and vegetable juices  
AG037 Nonalcoholic beverages, excluding fruit and vegetable juices  
AG038 Malt beverages  
AG039 Wine and certain other fermented beverages  
AG040 Distilled spirits  
AG041 Unmanufactured tobacco  
AG042 Cigars, and certain other manufactured tobacco  
AG043 Cigarettes  
AG044 Hides, skins, and leather  
AG045 Furskins

## **Forest products sector**

AG046 Logs and rough wood products  
AG047 Lumber  
AG048 Moldings, millwork, and joinery  
AG049 Structural panel products  
AG050 Wooden containers  
AG051 Tools and tool handles of wood  
AG052 Miscellaneous articles of wood  
AG053 Cork and rattan  
AG054 Wood pulp and wastepaper  
AG055 Paper boxes and bags  
AG056 Industrial papers and paperboards  
AG057 Newsprint  
AG058 Printing and writing papers  
AG059 Certain specialty papers  
AG060 Miscellaneous paper products  
AG061 Printed matter  
AG062 Ethyl alcohol for nonbeverage purposes  
AG063 Wool and other animal hair  
AG064 Cotton, not carded or combed

## **Energy and Chemicals sector**

CH001 Electrical energy  
CH002 Nuclear materials  
CH003 Coal, coke and related chemicals products  
CH004 Crude petroleum  
CH005 Petroleum products  
CH006 Natural gas and components  
CH007 Major primary olefins  
CH008 Other olefins  
CH009 Primary aromatics  
CH010 Benzenoid commodity chemicals  
CH011 Benzenoid specialty chemicals  
CH012 Miscellaneous organic chemicals  
CH013 Selected inorganic chemicals and elements  
CH014 Inorganic acids  
CH015 Salts and other inorganic chemicals  
CH016 Chlor-alkali chemicals  
CH017 Industrial gases  
CH018 Fertilizers  
CH019 Paints, inks and related item, and certain components thereof  
CH020 Synthetic organic pigments  
CH021 Synthetic dyes and azoic couplers  
CH022 Synthetic tanning agents  
CH023 Natural tanning and dyeing materials  
CH024 Photographic chemicals and preparations  
CH025 Pesticide products and formulations  
CH026 Adhesives and glues  
CH027 Medicinal chemicals, except antibiotics  
CH028 Antibiotics

## **Energy and Chemicals sector— Continued**

CH029 Essential oils and other flavoring materials  
CH030 Perfumes, cosmetics, and toiletries  
CH031 Soap, detergents, and surface-active agents  
CH032 Miscellaneous chemical and specialties  
CH033 Explosives and propellant powders  
CH034 Polyethylene resins in primary forms  
CH035 Polypropylene resins in primary forms  
CH036 PVC resins in primary forms  
CH037 Styrene polymers in primary forms  
CH038 Saturated polyester resins  
CH039 Other plastics in primary forms  
CH040 SBR rubber in primary forms  
CH041 Other synthetic rubbers  
CH042 Pneumatic tires and tubes (new)  
CH043 Other tires  
CH044 Plastic or rubber semifabricated forms  
CH045 Plastic containers and closures  
CH046 Hose, belting, and plastic pipe  
CH047 Miscellaneous rubber or plastic products  
CH048 Gelatin  
CH049 Natural rubber

## **Textiles and apparel sector**

CH050 Manmade fibers and filament yarns  
CH051 Spun yarns and miscellaneous yarns  
CH052 Broadwoven fabrics  
CH053 Knit fabrics  
CH054 Miscellaneous fabrics  
CH055 Coated, covered, impregnated, or laminated textile fabrics  
CH056 Cordage, nets, and netting  
CH057 Certain textile articles and fabrics suitable for industrial use  
CH058 Miscellaneous textiles and articles  
CH059 Sacks and bags of textile materials  
CH060 Carpets and rugs  
CH061 Home furnishings  
CH062 Mens' and boys' suits and sports coats  
CH063 Mens' and boys' coats and jackets .  
CH064 Mens' and boys' trousers  
CH065 Women's and girls' trousers  
CH066 Shirts and blouses  
CH067 Sweaters  
CH068 Women's and girls' suits, skirts, and coats  
CH069 Women's and girls' dresses  
CH070 Robes, nightwear, and underwear  
CH071 Hosiery  
CH072 Body-supporting garments  
CH073 Neckwear, handkerchiefs, and scarves

CH074 Gloves, including gloves for sports  
CH075 Headwear  
CH076 Leather apparel and accessories  
CH077 Fur apparel and other fur articles  
CH078 Rubber, plastic, and coated-fabric apparel  
CH079 Nonwoven and related products  
CH080 Other wearing apparel  
CH081 Apparel fasteners  
CH082 Footwear and footwear parts

## **Minerals and Metals sector**

MM001 Clays and nonmetallic minerals and products, not elsewhere specified or included  
MM002 Certain miscellaneous minerals substances  
MM003 Iron ores and concentrates  
MM004 Copper ores and concentrates  
MM005 Lead ores and residues  
MM006 Zinc ores and residues  
MM007 Certain ores, concentrates, ash, and residues  
MM008 Precious metal ores and concentrates  
MM009 Certain nonmetallic minerals and articles  
MM010 Industrial ceramics  
MM011 Ceramic bricks and miscellaneous ceramic construction articles  
MM012 Ceramic floor and wall tiles  
MM013 Ceramic household articles  
MM014 Flat glass and certain flat glass products  
MM015 Glass containers  
MM016 Household glassware  
MM017 Certain glass and glass products  
MM018 Fiber glass products  
MM019 Natural and synthetic gemstones  
MM020 Precious metals and related articles  
MM021 Primary iron products  
MM022 Ferroalloys  
MM023 Iron and steel waste and scrap  
MM024 Abrasive and ferrous products  
MM025 Steel mill products, all grades  
MM026 Steel pipe and tube fittings, and certain cast products  
MM027 Fabricated structurals  
MM028 Metal construction components  
MM029 Metallic containers  
MM030 Wire products of iron, steel, aluminum, copper, and nickel  
MM031 Chain  
MM032 Industrial fasteners of base metal  
MM033 Cooking and kitchen ware  
MM034 Metal and ceramic sanitary ware  
MM035 Iron construction castings and other nonmalleable cast-iron articles  
MM036 Copper and related articles

## **Minerals and Metals sector— Continued**

MM037	Unwrought aluminum
MM038	Aluminum mill products
MM039	Lead and related articles
MM040	Zinc and related articles
MM041	Certain base metals and chemical elements
MM042	Nonpowered hand tools
MM043	Cutlery other than tableware, certain sewing implements, and related products
MM044	Table flatware and related products
MM045	Certain builders' hardware
MM046	Miscellaneous products of base metal

## **Miscellaneous manufactures sector**

MM047	Luggage, handbags, and flat goods
MM048	Certain other leather goods
MM049	Musical instruments and accessories
MM050	Umbrellas, whips, riding crops, and canes
MM051	Silverware and certain other articles of precious metal or metal clad with precious metal
MM052	Precious jewelry and related articles
MM053	Costume jewelry and related articles
MM054	Bicycles and certain parts
MM055	Furniture and selected furnishings
MM056	Writing instruments and related articles
MM057	Lamps and lighting fittings
MM058	Prefabricated buildings
MM059	Children's vehicles
MM060	Dolls
MM061	Toys and models
MM062	Games and fairground amusements
MM063	Sporting goods
MM064	Smokers' articles
MM065	Brooms, brushes, and hair grooming articles
MM 066	Miscellaneous articles

## **Machinery and Transportation sector**

MT001	Aircraft engines and gas turbines
MT002	Internal combustion piston engines, other than for aircraft
MT003	Pumps, for liquids
MT004	Air-conditioning equipment and parts
MT005	Certain industrial thermal-processing equipment and certain furnaces
MT006	Commercial machinery
MT007	Electrical household appliances and certain heating equipment
MT008	Centrifuges and filtering and purifying equipment

MT009	Wrapping packaging, and can-sealing machinery
MT010	Scales and weighing machinery
MT011	Forklift trucks and similar industrial vehicles
MT012	Construction and mining equipment
MT013	Mineral processing machinery
MT014	Farm and garden machinery and equipment
MT015	Industrial food-processing and related machinery
MT016	Pulp, paper, and paperboard machinery
MT017	Printing, typesetting, and bookbinding machinery and printing plates
MT018	Textile machinery and parts
MT019	Metal rolling mills and parts thereof
MT020	Machine tools for cutting metal and parts; tool holders, work holders; dividing heads and other special attachments for machine tools
MT021	Machine tools for metal forming and parts thereof
MT022	Non-metalworking machine tools and parts thereof
MT023	Semiconductor equipment, robots, and other machinery
MT024	Taps, cocks, valves, and similar devices
MT025	Ball and rollers bearings
MT026	Gear boxes and other speed changers; torque converters; ball screws; flywheels and pulleys; clutches and shaft couplings; universal joints; and parts thereof
MT027	Boilers, turbines, and related machinery
MT028	Electric motors, generators, and related equipment
MT029	Electrical transformers, static converters, and inductors
MT030	Primary cells and batteries and electric storage batteries
MT031	Portable electric handtools
MT032	Nonelectrically powered hand tools and parts thereof
MT033	Ignition, starting, lighting, and other electrical equipment
MT034	Flashlights and other similar electric light, lights bulbs and fluorescent tubes; arc lamps
MT035	Electric and gas welding and soldering equipment
MT036	Insulated electrical wire and cable and conduit; glass and ceramic insulators
MT037	Rail locomotive and rolling stock
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing
MT039	Certain motor-vehicles parts
MT040	Motorcycles, mopeds, and parts
MT041	Miscellaneous vehicles and transportation-related equipment

## **Machinery and Transportation sector**

MT042 Aircraft, spacecraft, and related equipment  
MT043 Ships, tugs, pleasure boats, and similar vessels  
MT044 Motors and engines, except internal combustion, aircraft, or electric

ST027 Clocks and timing devices  
ST028 Arms and ammunition  
ST029 Balances of a sensitivity of 5 cgs or better  
ST030 Drawing and mathematical calculating and measuring instruments  
ST031 Measuring, testing, controlling, and analyzing instruments

## **Electronic technology sector**

ST001 Office machines  
ST002 Telephone and telegraph apparatus  
ST003 Microphones, loudspeakers, audio amplifiers and combinations thereof  
ST004 Tape recorders, tape players, video cassette recorders, turntables, and compact disc players  
ST005 Unrecorded magnetic tapes, discs, and other media  
ST006 Record, tapes, compact discs, computer software, and other recorded media  
ST007 Radio transmission and reception apparatus, and combinations thereof  
ST008 Radio navigational aid, radar, and remote control apparatus  
ST009 Television receivers and video monitors and combinations including television receivers  
ST010 Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus  
ST011 Electric sound and visual signaling apparatus  
ST012 Electric capacitors, and resistors  
ST013 Apparatus for making, breaking, protecting, or connecting electrical circuits  
ST014 Television picture tubes and other cathode ray tubes  
ST015 Special-purpose tubes  
ST016 Diodes, transistors, integrated circuits and similar semiconductor solid-state devices  
ST017 Electrical and electronic articles, apparatus and parts not elsewhere provided for  
ST018 Automatic data processing machines  
ST019 Photographic supplies  
ST020 Exposed photographic plates, film and paper  
ST021 Optical fibers, optical fiber bundles and cables  
ST022 Optical goods, including ophthalmic goods  
ST023 Photographic cameras and equipment  
ST024 Medical goods  
ST025 Surveying and navigational instruments  
ST026 Watches



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# Appendix B

## Profile of U.S. Industry and Market, by Commodity/Industry Groups 1989-93

Note.—These data have been estimated by the Commission's international trade analysts on the basis of primary and secondary data sources including discussions with various Government and industry contacts. These estimated data are subject to change either from future secondary sources or from the detailed surveys the Commission often conducts in the course of statutory investigations or other work. Further, these data may undergo adjustments based on revisions in tariff nomenclature, classification practices, or redefinitions of industry classes.

**Table B-1**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S.**  
**industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	Agriculture, fisheries, and forest products					
AG001	Certain miscellaneous live animals, meat, offals, and animal products:					
	Establishments (number) .....	163,183	156,865	150,397	147,000	143,766
	Employees (thousands) .....	205	203	189	167	147
	Capacity utilization (percent) ..	(1)	(1)	(1)	(1)	(1)
	U.S. productions (million dollars) .....	5,600	6,100	6,200	6,700	6,700
	U.S. exports (million dollars) ....	1,222	1,392	1,549	1,509	1,456
	U.S. imports (million dollars) ....	950	1,010	1,004	905	914
	Apparent U.S. consumption (million dollars) .....	5,328	5,718	5,655	6,096	6,158
	Trade balance (million dollars) ..	272	382	545	604	542
	Ratio of imports to apparent consumption (percent) .....	17.8	17.7	17.8	14.8	14.8
	Ratio of exports to shipments (percent) .....	21.8	22.8	25.0	22.5	21.7
AG002	Cattle and beef:					
	Establishments (number) .....	1,324,500	1,289,600	1,230,870	1,233,400	1,225,990
	Employees (thousands) .....	1,409	1,373	1,367	1,347	1,339
	Capacity utilization (percent) ....	(1)	(1)	(1)	(1)	(1)
	U.S. productions (million dollars) .....	40,600	42,900	47,000	50,000	50,000
	U.S. exports (million dollars) ....	1,428	1,570	1,816	2,120	2,016
	U.S. imports (million dollars) ....	2,127	2,643	2,643	2,906	3,045
	Apparent U.S. consumption (million dollars) .....	41,299	43,973	47,827	50,786	51,029
	Trade balance (million dollars) ..	-699	-1,073	-827	-786	-1,029
	Ratio of imports to apparent consumption (percent) .....	5.2	6.0	5.5	5.7	6.0
	Ratio of exports to shipments (percent) .....	3.5	3.7	3.9	4.2	4.0
AG003	Swine and pork:					
	Establishments (number) .....	307,324	279,040	257,418	237,500	235,840
	Employees (thousands) .....	364	334	336	323	321
	Capacity utilization (percent) ....	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) .....	15,600	18,000	17,500	17,000	17,540
	U.S. exports (million dollars) ....	312	290	304	400	438
	U.S. imports (million dollars) ....	495	606	573	436	501
	Apparent U.S. consumption (million dollars) .....	15,783	18,316	17,769	17,036	17,603
	Trade balance (million dollars) ..	-183	-316	-269	-36	-63
	Ratio of imports to apparent consumption (percent) .....	3.1	3.3	3.2	2.6	2.8
	Ratio of exports to shipments (percent) .....	2.0	1.6	1.7	2.4	2.5
AG004	Sheep and meat of sheep:					
	Establishments (number) .....	111,140	108,940	105,710	101,792	98,230
	Employees (thousands) .....	111	109	106	103	99
	Capacity utilization (percent) ....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) .....	475	460	487	470	485
	U.S. exports (million dollars) ....	17	24	36	36	39
	U.S. imports (million dollars) ....	47	40	37	46	62
	Apparent U.S. consumption (million dollars) <sup>3</sup> .....	505	476	488	480	508
	Trade balance (million dollars) ..	-30	-16	-1	-10	-23
	Ratio of imports to apparent consumption (percent) .....	9.3	8.4	7.6	9.6	12.2
	Ratio of exports to shipments (percent) .....	3.6	5.2	7.4	7.7	8.0

See footnotes at end of table.



**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	Agriculture, fisheries, and forest products-Continued					
AG005	Poultry:					
	Establishments (number) .....	350	300	300	300	300
	Employees (thousands) .....	194	177	183	188	190
	Capacity utilization (percent) .....	90	90	90	90	90
	U.S. production (million dollars) .....	20,283	20,928	21,625	22,825	23,738
	U.S. exports (million dollars) .....	600	776	930	1,051	1,229
	U.S. imports (million dollars) .....	27	29	28	22	24
	Apparent U.S. consumption (million dollars) .....	19,710	20,181	20,723	21,796	22,533
	Trade balance (million dollars) ..	573	747	902	1,029	1,205
	Ratio of imports to consumption (percent) .....	0.1	0.1	0.1	0.1	0.1
	Ratio of exports to shipments (percent) .....	3.0	3.7	4.3	4.6	5.2
AG006	Fresh or chilled fish:					
	Establishments (number) .....	90,000	90,000	90,000	82,000	80,000
	Employees (thousands) .....	225	225	200	180	150
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) .....	2,500	2,500	2,500	2,700	2,500
	U.S. exports (million dollars) .....	155	164	160	190	196
	U.S. imports (million dollars) .....	611	592	615	601	652
	Apparent U.S. consumption (million dollars) .....	2,956	2,928	2,955	3,111	2,956
	Trade balance (million dollars) ..	-456	-28	-455	-411	-456
	Ratio of imports to apparent consumption (percent) .....	20.7	20.2	20.8	19.3	22.1
	Ratio of exports to shipments (percent) .....	6.2	6.6	6.4	7.0	7.8
AG007	Frozen fish:					
	Establishments (number) .....	900	900	860	880	880
	Employees (thousands) .....	70	70	65	70	70
	Capacity utilization (percent) .....	75	75	75	70	70
	U.S. shipments (million dollars) ..	600	600	600	650	650
	U.S. exports (million dollars) .....	1,236	1,572	1,641	1,886	1,526
	U.S. imports (million dollars) .....	1,485	1,377	1,467	1,302	1,293
	Apparent U.S. consumption (million dollars) .....	849	405	426	66	417
	Trade balance (million dollars) ..	-249	195	174	584	233
	Ratio of imports to apparent consumption (percent) .....	174.9	340.0	344.4	1972.7	310.1
	Ratio of exports to shipments (percent) .....	206.0	262.0	273.5	290.2	234.8
AG008	Fish, canned, cured, or otherwise prepared, and live fish:					
	Establishments (number) .....	700	700	650	600	600
	Employees (thousands) .....	26	26	20	18	18
	Capacity utilization (percent) .....	80	85	75	80	85
	U.S. shipments (million dollars) ..	1,700	1,800	1,600	1,500	1,600
	U.S. exports (million dollars) .....	342	317	427	446	417
	U.S. imports (million dollars) .....	724	677	760	683	617
	Apparent U.S. consumption (million dollars) .....	2,082	2,160	1,933	1,737	1,800
	Trade balance (million dollars) ..	-382	-360	-333	-237	-200
	Ratio of imports to apparent consumption (percent) .....	34.8	31.3	39.3	39.3	34.3
	Ratio of exports to shipments (percent) .....	20.1	17.6	26.7	29.7	26.1

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	Agriculture, fisheries, and forest products-Continued					
AG009	Shellfish:					
	Establishments (number) .....	850	800	800	800	800
	Employees (thousands) .....	57	60	60	60	60
	Capacity utilization (percent) .....	66	66	66	66	66
	U.S. production (million dollars) .....	1,512	1,600	1,600	1,600	1,600
	U.S. exports (million dollars) .....	577	748	852	872	860
	U.S. imports (million dollars) .....	2,623	2,555	2,793	3,067	3,243
	Apparent U.S. consumption (million dollars) .....	3,558	3,407	3,541	3,795	3,983
	Trade balance (million dollars) .....	-2,046	-1,807	-10941	-2,195	-2,383
	Ratio of imports to apparent consumption (percent) .....	73.7	75.0	78.9	80.8	81.4
	Ratio of exports to shipments (percent) .....	38.2	46.8	53.3	54.5	53.8
AG010	Dairy produce:					
	Establishments (number) .....	205,000	195,000	183,000	174,000	162,000
	Employees (thousands) .....	790	785	770	733	682
	Capacity utilization (percent) .....	82	82	82	(1)	(1)
	U.S. shipments (million dollars) .....	44,127	44,228	44,360	48,000	47,000
	U.S. exports (million dollars) .....	365	282	325	593	655
	U.S. imports (million dollars) .....	815	853	756	845	836
	Apparent U.S. consumption (million dollars) .....	44,577	44,799	44,791	48,252	47,181
	Trade balance (million dollars) .....	(450)	-571	-431	-252	-181
	Ratio of imports to apparent consumption (percent) .....	1.8	1.9	1.7	1.8	1.8
	Ratio of exports to shipments (percent) .....	0.8	0.6	0.7	1.2	1.4
AG011	Eggs:					
	Establishments (number) .....	80	80	75	75	75
	Employees (thousands) .....	9	9	8	8	8
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. production (million dollars) .....	4,386	4,574	4,600	4,600	5,152
	U.S. exports (million dollars) .....	88	99	140	134	133
	U.S. imports (million dollars) .....	28	24	20	27	35
	Apparent U.S. consumption (million dollars) .....	4,326	4,499	4,480	4,493	5,054
	Trade balance (million dollars) ..	60	75	120	107	98
	Ratio of imports to apparent consumption (percent) .....	0.6	0.5	0.4	0.6	0.7
	Ratio of exports to shipments (percent) .....	2.0	2.2	3.0	2.9	2.6
AG012	Sugar and other sweeteners:					
	Establishments (number) .....	103	100	100	100	100
	Employees (thousands) .....	33	32	32	31	31
	Capacity utilization (percent) .....	88	86	87	89	89
	U.S. shipments (million dollars) .....	7,920	7,920	8,000	8,000	8,200
	U.S. exports (million dollars) .....	305	407	362	300	269
	U.S. imports (million dollars) .....	776	978	844	857	812
	Apparent U.S. consumption (million dollars) .....	8,391	8,491	8,482	8,557	8,743
	Trade balance (million dollars) ..	-471	-571	-482	-557	-543
	Ratio of imports to apparent consumption (percent) .....	9.2	11.5	10.0	10.0	9.3
	Ratio of exports to shipments (percent) .....	3.9	5.1	4.5	3.8	3.3

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG013	Animal feeds:					
	Establishments (number) .....	2,445	2,445	2,445	2,200	2,200
	Employees (thousands) .....	60	60	60	55	55
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. production (million dollars) .....	24,000	25,000	26,000	27,000	27,000
	U.S. exports (million dollars) .....	3,132	2,950	3,323	3,656	3,616
	U.S. imports (million dollars) .....	380	378	399	450	543
	Apparent U.S. consumption (million dollars) .....	21,248	22,428	23,076	23,794	23,927
	Trade balance (million dollars) ..	2,752	2,572	2,924	3,206	3,073
	Ratio of imports to apparent consumption (percent) .....	1.8	1.7	1.7	1.9	2.3
	Ratio of exports to shipments (percent) .....	13.1	11.8	12.8	13.5	13.4
AG014	Live plants:					
	Establishments (number) .....	25,000	25,000	25,000	25,000	25,000
	Employees (thousands) .....	125	125	125	125	125
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) ..	7,433	8,291	8,100	8,904	(1)
	U.S. exports (million dollars) .....	52	104	106	103	94
	U.S. imports (million dollars) .....	147	162	177	200	216
	Apparent U.S. consumption (million dollars) .....	7,528	8,349	8,171	9,001	122
	Trade balance (million dollars) ..	-95	-58	-71	-97	-122
	Ratio of imports to apparent consumption (percent) .....	2.0	1.9	2.2	2.2	177.0
	Ratio of exports to shipments (percent) .....	0.7	1.3	1.3	1.2	(1)
AG015	Seeds:					
	Establishments (number) .....	15,000	15,000	15,000	15,000	15,000
	Employees (thousands) .....	230	230	200	200	200
	Capacity utilization (percent) .....	85	85	80	85	85
	U.S. shipments (million dollars) ..	2,000	2,000	2,000	2,000	2,000
	U.S. exports (million dollars) .....	266	296	289	316	319
	U.S. imports (million dollars) .....	127	122	135	154	156
	Apparent U.S. consumption (million dollars) .....	1,861	1,826	1,846	1,838	1,837
	Trade balance (million dollars) ..	139	174	154	162	163
	Ratio of imports to apparent consumption (percent) .....	6.8	6.7	7.3	8.4	8.5
	Ratio of exports to shipments (percent) .....	13.3	14.8	14.5	15.8	16.0
AG016	Cut flowers:					
	Establishments (number) .....	3,000	3,000	3,000	3,000	3,000
	Employees (thousands) .....	39	39	39	39	39
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) ..	507	528	507	493	500
	U.S. exports (million dollars) .....	11	30	34	33	39
	U.S. imports (million dollars) .....	316	326	322	352	382
	Apparent U.S. consumption (million dollars) .....	812	824	795	812	843
	Trade balance (million dollars) ..	-305	-296	-288	-319	-343
	Ratio of imports to apparent consumption (percent) .....	38.9	39.6	40.5	43.3	45.3
	Ratio of exports to shipments (percent) .....	2.2	5.7	6.7	6.7	7.8
AG017	Miscellaneous vegetable substances:					
	Firms (number) .....	112	112	112	100	100
	Employees (thousands) .....	2	2	2	2	2

See footnotes at end of table.

**Table 8-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<i>Agriculture, fisheries, and forest products-Continued</i>					
AG017	Miscellaneous vegetable substances-Continued.					
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. production (million dollars) <sup>3</sup> .....	850	850	850	800	800
	U.S. exports (million dollars) .....	345	362	392	462	436
	U.S. imports (million dollars) .....	464	516	556	545	568
	Apparent U.S. consumption (million dollars) .....	969	1,004	1,014	883	932
	Trade balance (million dollars) ..	-119	-154	-164	-83	-132
	Ratio of imports to apparent consumption (percent) .....	47.9	51.4	54.8	61.7	60.9
	Ratio of exports to shipments (percent) .....	40.6	42.6	46.1	57.8	54.5
AG018	Fresh, chilled, or frozen vegetables:					
	Establishments (number) .....	38,000	36,500	34,000	38,000	36,500
	Employees (thousands) .....	45	43	42	42	40
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. production (million dollars) .....	4,036	4,120	4,220	4,376	3,938
	U.S. exports (million dollars) .....	426	802	903	972	1,058
	U.S. imports (million dollars) .....	939	1,157	1,048	966	1,253
	Apparent U.S. consumption (million dollars) .....	4,549	4,475	4,365	4,370	4,133
	Trade balance (million dollars) ..	-513	-355	-145	6	-195
	Ratio of imports to apparent consumption (percent) .....	20.6	25.9	24.0	22.1	30.3
	Ratio of exports to shipments (percent) .....	10.6	19.5	21.4	22.2	26.9
AG019	Prepared or preserved vegetables, mushrooms, and olives					
	Establishments (number) .....	2,070	2,020	2,010	1,990	1,750
	Employees (thousands) .....	5	5	5	4	4
	Capacity utilization (percent) .....	85	78	82	81	83
	U.S. production (million dollars) .....	7,123	7,542	7,631	7,799	8,189
	U.S. exports (million dollars) .....	751	950	953	955	1,075
	U.S. imports (million dollars) .....	814	785	774	788	777
	Apparent U.S. consumption (million dollars) .....	7,186	7,377	7,452	7,632	7,891
	Trade balance (million dollars) ..	-63	165	179	167	298
	Ratio of imports to apparent consumption (percent) .....	11.3	10.6	10.4	10.3	9.8
	Ratio of exports to shipments (percent) .....	10.5	12.6	12.5	12.2	13.1
AG020	Edible nuts:					
	Establishments (number) .....	70,000	70,000	70,000	70,000	70,000
	Employees (thousands) .....	350	350	325	325	300
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) .....	2,137	2,421	2,690	2,703	2,552
	U.S. exports (million dollars) .....	885	1,019	1,067	1,188	1,224
	U.S. imports (million dollars) .....	339	401	429	461	460
	Apparent U.S. consumption (million dollars) .....	1,591	1,803	2,052	1,976	1,788
	Trade balance (million dollars) ..	546	618	638	727	764
	Ratio of imports to apparent consumption (percent) .....	21.3	22.2	20.9	23.3	25.7
	Ratio of exports to shipments (percent) .....	41.4	42.1	39.7	44.0	48.0

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG021	Tropical fruit:					
	Establishments (number) .....	3,000	3,000	3,000	3,000	3,000
	Employees (thousands) .....	10	10	10	10	10
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) ..	351	307	300	234	256
	U.S. exports (million dollars) .....	42	55	57	64	69
	U.S. imports (million dollars) .....	963	1,062	1,132	1,233	1,217
	Apparent U.S. consumption (million dollars) .....	1,272	1,314	1,375	1,403	1,404
	Trade balance (million dollars) ..	-921	-1,007	-1,075	-1,169	-1,148
	Ratio of imports to apparent consumption (percent) .....	75.7	80.8	82.3	87.9	86.7
	Ratio of exports to shipments (percent) .....	12.0	17.9	19.0	27.4	27.0
AG022	Citrus fruit:					
	Establishments (number) .....	17,200	16,900	16,600	16,500	16,300
	Employees (thousands) .....	100	98	98	97	95
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) ..	2,663	2,243	2,409	2,452	1,966
	U.S. exports (million dollars) .....	593	583	614	649	647
	U.S. imports (million dollars) .....	75	89	148	134	119
	Apparent U.S. consumption (million dollars) .....	2,145	1,749	1,943	1,937	1,438
	Trade balance (million dollars) ..	518	494	466	515	528
	Ratio of imports to apparent consumption (percent) .....	3.5	5.1	7.6	6.9	8.3
	Ratio of exports to shipments (percent) .....	22.3	26.0	25.5	26.5	32.9
AG023	Deciduous fruit:					
	Farms (number) .....	93,000	93,000	93,000	93,000	93,000
	Employees (thousands) .....	100	100	100	100	100
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) .....	1,515	1,936	2,118	1,820	2,030
	U.S. exports (million dollars) .....	302	477	517	607	596
	U.S. imports (million dollars) .....	115	114	127	163	146
	Apparent U.S. consumption (million dollars) .....	1,328	1,573	1,728	1,376	1,580
	Trade balance (million dollars) ..	187	363	390	444	450
	Ratio of imports to apparent consumption (percent) .....	8.7	7.2	7.3	11.8	9.2
	Ratio of exports to shipments (percent) .....	19.9	24.6	24.4	33.4	29.4
AG024	Other fresh fruit:					
	Establishments (number) .....	20,000	20,000	20,000	20,000	19,500
	Employees (thousands) .....	30	30	30	30	28
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) ..	709	818	798	840	830
	U.S. exports (million dollars) .....	225	405	414	409	437
	U.S. imports (million dollars) .....	421	506	511	486	473
	Apparent U.S. consumption (million dollars) .....	905	919	895	917	866
	Trade balance (million dollars) ..	-196	-101	-97	-77	-36
	Ratio of imports to apparent consumption (percent) .....	46.5	55.1	57.1	53.0	54.6
	Ratio of exports to shipments (percent) .....	31.7	49.5	51.9	48.7	52.7
AG025	Dried fruit, other than tropical:					
	Establishments (number) .....	10,000	10,000	10,000	10,000	10,000
	Employees (thousands) .....	20	20	20	20	20
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

US1TC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG025	Dried fruit, other than tropical:					
	U.S. shipments (million dollars) ..	624	513	550	558	560
	U.S. exports (million dollars) .....	276	326	344	357	360
	U.S. imports (million dollars) .....	34	33	34	34	42
	Apparent U.S. consumption (million dollars) .....	382	220	240	235	242
	Trade balance (million dollars) .....	242	293	310	323	318
	Ratio of imports to apparent consumption (percent) .....	8.9	15.0	14.2	14.5	17.4
	Ratio of exports to shipments (percent) .....	44.2	63.5	62.5	64.0	64.3
AG026	Frozen fruit:					
	Establishments (number) .....	200	200	200	200	200
	Employees (thousands) .....	40	40	40	40	40
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) .....	416	461	580	481	500
	U.S. exports (million dollars) .....	32	50	48	58	58
	U.S. imports (million dollars) .....	51	59	61	57	63
	Apparent U.S. consumption (million dollars) .....	435	470	593	480	505
	Trade balance (million dollars) ..	-19	-9	-13	1	-5
	Ratio of imports to apparent consumption (percent) .....	11.7	12.6	10.3	11.9	12.5
	Ratio of exports to shipments (percent) .....	7.7	10.8	8.3	12.1	11.6
AG027	Prepared or preserved fruit:					
	Establishments (number) .....	200	200	200	200	200
	Employees (thousands) .....	40	40	40	40	40
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) .....	3,228	3,349	3,429	3,704	3,600
	U.S. exports (million dollars) .....	97	113	149	167	166
	U.S. imports (million dollars) .....	319	316	355	417	421
	Apparent U.S. consumption (million dollars) .....	3,450	3,552	3,635	3,954	3,855
	Trade balance (million dollars) ..	-222	-203	-206	-250	-255
	Ratio of imports to apparent consumption (percent) .....	9.2	8.9	9.8	10.5	10.9
	Ratio of exports to shipments (percent) .....	3.0	3.4	4.3	4.5	4.6
AG028	Coffee and tea:					
	Establishments (number) .....	165	171	172	172	172
	Employees (thousands) .....	16	16	16	17	17
	Capacity utilization (percent) .....	70	68	90	73	85
	U.S. shipments (million dollars) .....	8,704	9,053	10,000	10,200	10,200
	U.S. exports (million dollars) .....	111	106	118	160	187
	U.S. imports (million dollars) .....	2,566	2,049	1,999	1,871	1,705
	Apparent U.S. consumption (million dollars) .....	11,159	10,996	11,881	11,911	11,718
	Trade balance (million dollars) ..	-2,455	-1,943	-1,881	-1,711	-1,518
	Ratio of imports to apparent consumption (percent) .....	23.0	18.6	16.8	15.7	14.6
	Ratio of exports to shipments (percent) .....	1.3	1.2	1.2	1.6	1.8

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG029	Spices:					
	Establishments (number) .....	75	78	76	74	74
	Employees (thousands) .....	8	9	8	8	8
	Capacity utilization (percent) .....	78	78	(1)	(1)	(1)
	U.S. shipments (million dollars) .....	1,253	1,278	1,300	1,325	1,350
	U.S. exports (million dollars) .....	24	34	38	43	51
	U.S. imports (million dollars) .....	258	198	223	234	223
	Apparent U.S. consumption (million dollars) .....	1,487	1,442	1,485	1,516	1,522
	Trade balance (million dollars) .....	-234	-164	-185	-191	-172
	Ratio of imports to apparent consumption (percent) .....	17.4	13.7	15.0	15.4	14.7
	Ratio of exports to shipments (percent) .....	1.9	2.7	2.9	3.2	3.8
AG030	Cereals:					
	Establishments (number) .....	715,000	684,474	655,503	627,754	627,000
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. production (million dollars) .....	35,000	35,000	35,000	28,000	30,000
	U.S. exports (million dollars) .....	14,814	11,941	10,096	11,245	10,728
	U.S. imports (million dollars) .....	381	314	354	513	586
	Apparent U.S. consumption (million dollars) .....	20,567	23,373	26,258	17,268	19,858
	Trade balance (million dollars) .....	14,433	11,627	9,742	10,732	10,142
	Ratio of imports to apparent consumption (percent) .....	1.9	1.3	1.3	3.0	3.0
	Ratio of exports to shipments (percent) .....	42.3	34.1	28.8	40.2	35.8
AG031	Milled grains, malts, and starches:					
	Establishments (number) .....	583	583	583	500	450
	Employees (thousands) .....	35	35	35	25	20
	Capacity utilization (percent) .....	85	85	85	85	90
	U.S. production (million dollars) .....	8,300	8,300	8,400	8,500	8,600
	U.S. exports (million dollars) .....	448	357	370	387	445
	U.S. imports (million dollars) .....	91	71	58	70	96
	Apparent U.S. consumption (million dollars) .....	7,943	8,014	8,088	8,183	8,251
	Trade balance (million dollars) ..	357	286	312	317	349
	Ratio of imports to apparent consumption (percent) .....	1.1	0.9	0.7	0.9	1.2
	Ratio of exports to shipments (percent) .....	5.4	4.3	4.4	4.6	5.2
AG032	Oilseeds:					
	Establishments (number) .....	475,000	461,000	450,000	440,000	430,000
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. production (million dollars) ..	12,439	11,663	12,065	12,000	13,100
	U.S. exports (million dollars) .....	4,087	3,705	4,124	4,564	4,758
	U.S. imports (million dollars) .....	161	196	118	122	155
	Apparent U.S. consumption (million dollars) .....	8,513	8,154	8,059	7,558	8,497
	Trade balance (million dollars) ..	3,926	3,509	4,006	4,442	4,603
	Ratio of imports to apparent consumption (percent) .....	1.9	2.4	1.5	1.6	1.8
	Ratio of exports to shipments (percent) .....	32.9	31.8	34.2	38.0	36.3

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG033	Animal or vegetable fats and oils:					
	Establishments (number) .....	322	300	280	260	220
	Employees (thousands) .....	32	32	32	33	33
	Capacity utilization (percent) .....	87	84	84	84	84
	U.S. shipments (million dollars) .....	5,900	5,900	5,900	5,400	6,100
	U.S. exports (million dollars) .....	1,329	1,172	1,123	1,439	1,454
	U.S. imports (million dollars) .....	663	684	734	966	856
	Apparent U.S. consumption (million dollars) .....	5,234	5,412	5,511	4,927	5,502
	Trade balance (million dollars) ..	666	488	389	473	598
	Ratio of imports to apparent consumption (percent) .....	12.7	12.6	13.3	19.6	15.6
	Ratio of exports to shipments (percent) .....	22.5	19.9	19.0	26.6	23.8
AG034	Edible preparations:					
	Establishments (number) .....	5,100	5,100	5,100	5,100	5,100
	Employees (thousands) .....	395	395	395	395	397
	Capacity utilization (percent) .....	84	85	84	84	85
	U.S. production (million dollars) .....	83,335	89,168	93,742	94,700	96,600
	U.S. exports (million dollars) .....	951	1,348	1,925	2,156	2,522
	U.S. imports (million dollars) .....	860	949	1,113	1,249	1,348
	Apparent U.S. consumption (million dollars) .....	83,244	88,769	92,930	93,793	95,426
	Trade balance (million dollars) ..	91	399	812	907	1,174
	Ratio of imports to apparent consumption (percent) .....	1.0	1.1	1.2	1.3	1.4
	Ratio of exports to shipments (percent) .....	1.1	1.5	2.1	2.3	2.6
AG035	Cocoa, chocolate, and confectionery:					
	Establishments (number) .....	685	685	685	685	685
	Employees (thousands) .....	57	57	57	57	57
	Capacity utilization (percent) .....	70	68	65	65	66
	U.S. shipments (million dollars) ..	8,682	8,004	9,710	10,265	10,500
	U.S. exports (million dollars) .....	237	328	345	438	560
	U.S. imports (million dollars) .....	1,158	1,267	1,302	1,347	1,299
	Apparent U.S. consumption (million dollars) .....	9,603	8,943	10,667	11,174	11,239
	Trade balance (million dollars) ..	-921	-939	-957	-909	-739
	Ratio of imports to apparent consumption (percent) .....	12.1	14.2	12.2	12.1	11.6
	Ratio of exports to shipments (percent) .....	2.7	4.1	3.6	4.3	5.3
AG036	Fruit and vegetable juices:					
	Establishments (number) .....	100	100	100	100	100
	Employees (thousands) .....	150	150	150	150	150
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) .....	2,000	2,000	2,000	1,950	2,100
	U.S. exports (million dollars) .....	291	375	385	461	470
	U.S. imports (million dollars) .....	739	1,000	793	812	653
	Apparent U.S. consumption (million dollars) .....	2,448	2,625	2,408	2,301	2,283
	Trade balance (million dollars) ..	-448	-625	-408	-351	-183
	Ratio of imports to apparent consumption (percent) .....	30.2	38.1	32.9	35.3	28.6
	Ratio of exports to shipments (percent) .....	14.6	18.8	19.3	23.6	22.4

See footnotes at end of table.



**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG037	Nonalcoholic beverages, excluding fruit and vegetable juices:					
	Establishments (number) .....	3,000	3,000	3,100	3,100	3,200
	Employees (thousands) .....	115	113	112	112	110
	Capacity utilization (percent) .....	75	75	75	75	75
	U.S. shipments (million dollars) ..	34,000	36,000	37,000	38,000	40,000
	U.S. exports (million dollars) .....	104	117	154	191	220
	U.S. imports (million dollars) .....	206	218	242	250	277
	Apparent U.S. consumption (million dollars) .....	34,102	36,101	37,088	38,059	40,057
	Trade balance (million dollars) ..	-102	-101	-88	-59	-57
	Ratio of imports to apparent consumption (percent) .....	0.6	0.6	0.7	0.7	0.7
	Ratio of exports to shipments (percent) .....	0.3	0.3	0.4	0.5	0.6
AG038	Matt beverages:					
	Establishments (number) <sup>5</sup> .....	134	138	134	134	134
	Employees (thousands) .....	41	40	40	38	38
	Capacity utilization (percent) .....	89	90	86	84	84
	U.S. shipments (million dollars) ..	14,321	15,186	15,925	16,299	16,980
	U.S. exports (million dollars) .....	107	139	169	194	202
	U.S. imports (million dollars) .....	839	907	813	854	929
	Apparent U.S. consumption (million dollars) .....	15,053	15,954	16,569	16,959	17,707
	Trade balance (million dollars) ..	-732	-768	-644	-660	-727
	Ratio of imports to apparent consumption (percent) .....	5.6	5.7	4.9	5.0	5.2
	Ratio of exports to shipments (percent) .....	0.7	0.9	1.1	1.2	1.2
AG039	Wine and certain other fermented beverages:					
	Establishments (number) .....	1,573	1,610	1,610	1,590	1,590
	Employees (thousands) .....	16	13	17	17	17
	Capacity utilization (percent) .....	61	58	83	83	83
	U.S. shipments (million dollars) ..	3,539	3,658	3,586	3,220	4,075
	U.S. exports (million dollars) .....	99	127	147	176	177
	U.S. imports (million dollars) .....	937	924	920	1,094	984
	Apparent U.S. consumption (million dollars) .....	4,377	4,455	4,359	4,138	4,882
	Trade balance (million dollars) ....	-838	-797	-773	-918	-807
	Ratio of imports to apparent consumption (percent) .....	21.4	20.7	21.1	26.4	20.2
	Ratio of exports to shipments (percent) .....	2.8	3.5	4.1	5.5	4.3
AG040	Distilled spirits:					
	Establishments (number) .....	71	69	65	65	65
	Employees (thousands) .....	11	10	10	9	9
	Capacity utilization (percent) .....	77	80	77	78	78
	U.S. shipments (million dollars) .....	3,602	3,474	3,656	4,038	3,969
	U.S. exports (million dollars) .....	230	257	279	343	344
	U.S. imports (million dollars) .....	1,368	1,523	1,304	1,552	1,442
	Apparent U.S. consumption (million dollars) .....	4,740	4,740	4,681	5,247	5,067
	Trade balance (million dollars) ..	-1,138	-1,266	-1,025	-1,209	-1,098
	Ratio of imports to apparent consumption (percent) .....	28.9	32.1	27.9	29.6	28.5
	Ratio of exports to shipments (percent) .....	6.4	7.4	7.6	8.5	8.7

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG037	Nonalcoholic beverages, excluding fruit and vegetable juices:					
AG041	Unmanufactured tobacco:					
	Establishments (number) .....	137,000	130,150	122,341	113,777	104,675
	Employees (thousands) .....	411	390	367	341	314
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. production (million dollars) ..	2,415	2,741	2,886	2,961	3,000
	U.S. exports (million dollars) .....	1,341	1,441	1,428	1,651	1,306
	U.S. imports (million dollars)? .....	550	583	736	1,475	1,370
	Apparent U.S. consumption (million dollars) .....	1,624	1,883	2,194	2,785	3,064
	Trade balance (million dollars) .....	791	858	692	176	-64
	Ratio of imports to apparent consumption (percent) .....	33.9	31.0	33.5	53.0	44.7
	Ratio of exports to shipments (percent) .....	55.5	52.6	49.5	55.8	43.5
AG042	Cigars, and certain other manufactured tobacco:					
	Establishments (number) .....	54	54	55	55	55
	Employees (thousands) .....	13	13	15	16	16
	Capacity utilization (percent) .....	87	88	87	85	85
	U.S. shipments (million dollars) ..	1,660	1,866	2,089	2,150	2,250
	U.S. exports (million dollars) .....	263	279	342	317	327
	U.S. imports (million dollars) .....	60	63	79	85	107
	Apparent U.S. consumption (million dollars) .....	1,457	1,650	1,826	1,918	2,030
	Trade balance (million dollars) ..	203	216	263	232	220
	Ratio of imports to apparent consumption (percent) .....	4.1	3.8	4.3	4.4	5.3
	Ratio of exports to shipments (percent) .....	15.8	15.0	16.4	14.7	14.5
AG043	Cigarettes:					
	Establishments (number) .....	12	11	11	11	10
	Employees (thousands) .....	36	34	35	34	34
	Capacity utilization (percent) .....	89	93	90	87	87
	U.S. shipments (million dollars) .....	21,825	25,522	27,111	27,309	22,682
	U.S. exports (million dollars) .....	3,369	4,761	4,232	4,192	3,926
	U.S. imports (million dollars) .....	28	31	120	199	360
	Apparent U.S. consumption (million dollars) .....	18,484	20,792	22,999	23,316	19,116
	Trade balance (million dollars) .....	3,341	4,730	4,112	3,993	3,566
	Ratio of imports to apparent consumption (percent) .....	0.2	0.1	0.5	0.9	1.9
	Ratio of exports to shipments (percent) .....	15.4	18.7	15.6	15.4	17.3
AG044	Hides, skins, and leather:					
	Establishments (number) .....	1,494	1,389	1,301	1,235	1,235
	Employees (thousands) .....	19	19	17	18	18
	Capacity utilization (percent) .....	76	76	76	76	76
	U.S. shipments (million dollars) .....	4,595	4,989	4,919	4,194	4,337
	U.S. exports (million dollars) .....	2,197	2,372	1,967	1,974	1,977
	U.S. imports (million dollars) .....	855	788	695	767	868
	Apparent U.S. consumption (million dollars) .....	3,253	3,405	3,647	2,987	3,228
	Trade balance (million dollars) .....	1,342	1,584	1,272	1,207	1,109
	Ratio of imports to apparent consumption (percent) .....	26.3	23.1	19.1	25.7	26.9

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	Agriculture, fisheries, and forest products-Continued					
AG044	Hides, skins, and leather-Continued:					
	Ratio of exports to shipments (percent) .....	47.8	47.5	40.0	47.1	45.6
AG045	Furskins:					
	Establishments (number) .....	940	771	682	571	542
	Employees (thousands) .....	4	3	3	3	3
	Capacity utilization (percent) .....	81	73	71	65	59
	U.S. shipments (million dollars) .....	220	205	166	164	146
	U.S. exports (million dollars) .....	232	205	154	134	128
	U.S. imports (million dollars) .....	146	100	75	83	83
	Apparent U.S. consumption (million dollars) .....	134	100	87	113	101
	Trade balance (million dollars) .....	86	105	79	51	45
	Ratio of imports to apparent consumption (percent) .....	109.0	100.0	86.2	73.5	82.2
	Ratio of exports to shipments (percent) .....	105.5	100.0	92.8	81.7	87.7
AG046	Logs and rough wood products:					
	Establishments (number) .....	11,100	10,800	10,000	9,900	9,800
	Employees (thousands) .....	75	72	70	69	65
	Capacity utilization (percent) .....	85	80	70	82	92
	U.S. shipments (million dollars) ..	12,000	12,300	11,600	12,700	13,000
	U.S. exports (million dollars) .....	2,862	2,969	2,765	2,809	3,134
	U.S. imports (million dollars) .....	304	119	299	349	387
	Apparent U.S. consumption (million dollars) .....	9,442	9,450	9,134	10,240	10,253
	Trade balance (million dollars) ..	2,558	2,850	2,466	2,460	2,747
	Ratio of imports to apparent consumption (percent) .....	3.2	1.3	3.3	3.4	3.8
	Ratio of exports to shipments (percent) .....	23.9	24.1	23.8	22.1	24.1
AG047	Lumber:					
	Establishments (number) .....	5,710	5,690	5,680	5,585	5,500
	Employees (thousands) .....	144	142	133	132	130
	Capacity utilization (percent) .....	90	85	85	85	85
	U.S. shipments (million dollars) ..	17,151	16,448	15,626	16,845	16,700
	U.S. exports (million dollars) .....	2,047	2,138	2,220	2,337	2,470
	U.S. imports (million dollars) .....	3,024	2,671	2,644	3,481	5,032
	Apparent U.S. consumption (million dollars) .....	18,128	16,981	16,050	17,989	19,262
	Trade balance (million dollars) ..	-977	-533	-424	-1,144	-2,562
	Ratio of imports to apparent consumption (percent) .....	16.7	15.7	16.5	19.4	26.1
	Ratio of exports to shipments (percent) .....	11.9	13.0	14.2	13.9	14.8
AG048	Moldings, millwork, and joinery:					
	Establishments (number) .....	2,600	2,600	2,500	2,500	2,500
	Employees (thousands) .....	91	89	81	87	85
	Capacity utilization (percent) .....	80	75	77	68	68
	U.S. shipments (million dollars) ..	8,960	8,700	8,600	9,500	10,000
	U.S. exports (million dollars) .....	248	331	366	444	458
	U.S. imports (million dollars) .....	602	766	531	659	812
	Apparent U.S. consumption (million dollars) .....	9,314	9,135	8,765	9,715	10,354
	Trade balance (million dollars) ..	-354	-435	-165	-215	-354
	Ratio of imports to apparent consumption (percent) .....	6.5	8.4	6.1	6.8	7.8
	Ratio of exports to shipments (percent) .....	2.8	3.8	4.3	4.7	4.6

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	Agriculture, fisheries, and forest products-Continued					
AG049	Structural panel products:					
	Establishments (number) .....	600	600	600	600	600
	Employees (thousands) .....	80	78	70	71	71
	Capacity utilization (percent) .....	85	80*	80	80	80
	U.S. production (million dollars) ..	10,700	10,600	10,400	11,000	11,500
	U.S. exports (million dollars) .....	643	770	748	858	921
	U.S. imports (million dollars) .....	1,011	993	858	1,190	1,515
	Apparent U.S. consumption (million dollars) .....	11,068	10,823	10,510	11,332	12,094
	Trade balance (million dollars) ..	-368	-223	-110	-332	-594
	Ratio of imports to apparent consumption (percent) .....	9.1	9.2	8.2	10.5	12.5
	Ratio of exports to shipments (percent) .....	6.0	7.3	7.2	7.8	8.0
AG050	Wooden containers:					
	Establishments (number) .....	2,600	2,600	2,600	2,600	2,600
	Employees (thousands) .....	29	29	29	28	28
	Capacity utilization (percent) .....	80	75	77	74	74
	U.S. production (million dollars) ..	1,800	1,900	1,950	2,000	2,000
	U.S. exports (million dollars) .....	52	70	76	73	83
	U.S. imports (million dollars) .....	152	149	142	162	174
	Apparent U.S. consumption (million dollars) .....	1,900	1,979	2,016	2,089	2,091
	Trade balance (million dollars) ..	-100	-79	-66	-89	-91
	Ratio of imports to apparent consumption (percent) .....	8.0	7.5	7.0	7.8	8.3
	Ratio of exports to shipments (percent) .....	2.9	3.7	3.9	3.7	4.2
AG051	Tools and tool handles of wood:					
	Establishments (number) .....	138	136	135	135	135
	Employees (thousands) .....	3	3	3	3	3
	Capacity utilization (percent) .....	75	70	73	70	70
	U.S. shipments (million dollars) ..	155	150	155	160	160
	U.S. exports (million dollars) .....	11	13	14	16	20
	U.S. imports (million dollars) .....	77	75	76	86	94
	Apparent U.S. consumption (million dollars) .....	221	212	217	230	234
	Trade balance (million dollars) ..	-66	-62	-62	-70	-74
	Ratio of imports to apparent consumption (percent) .....	34.8	35.4	35.0	37.4	40.2
	Ratio of exports to shipments (percent) .....	7.1	8.7	9.0	10.0	12.5
AG052	Miscellaneous articles of wood:					
	Establishments (number) .....	680	680	680	680	680
	Employees (thousands) .....	32	30	30	30	30
	Capacity utilization (percent) .....	75	70	73	73	75
	U.S. shipments (million dollars) ..	2,400	2,400	2,500	2,575	2,600
	U.S. exports (million dollars) .....	123	155	156	147	155
	U.S. imports (million dollars) .....	367	378	394	428	465
	Apparent U.S. consumption (million dollars) .....	2,644	2,623	2,738	2,856	2,910
	Trade balance (million dollars) ..	-244	-223	-238	-281	-310
	Ratio of imports to apparent consumption (percent) .....	13.9	14.4	14.4	15.0	16.0
	Ratio of exports to shipments (percent) .....	5.1	6.5	6.2	5.7	6.0
AG053	Cork and rattan:					
	Establishments (number) .....	35	30	31	31	31
	Employees (thousands) .....	2	2	2	2	2
	Capacity utilization (percent) .....	75	70	73	(1)	70
	U.S. shipments (million dollars) ..	60	60	62	64	60

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG053	Cork and rattan:					
	U.S. exports (million dollars) .....	25	38	35	44	44
	U.S. imports (million dollars) .....	322	318	306	342	354
	Apparent U.S. consumption (million dollars) .....	357	340	333	362	370
	Trade balance (million dollars) .....	-297	-280	-271	-298	-310
	Ratio of imports to apparent consumption (percent) .....	90.2	93.5	91.9	94.5	95.7
	Ratio of exports to shipments (percent) .....	41.7	63.3	56.5	68.8	73.3
AG054	Wood pulp and wastepaper:					
	Establishments (number) .....	(1)	(1)	(1)	(1)	(1)
	Employees (thousands) .....	12	12	13	13	13
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) ..	10,700	9,000	7,900	8,100	7,700
	U.S. exports (million dollars) .....	4,362	4,056	3,616	3,862	2,999
	U.S. imports (million dollars) .....	3,084	2,886	2,176	2,138	1,899
	Apparent U.S. consumption (million dollars) .....	9,422	7,830	6,460	6,376	6,600
	Trade balance (million dollars) ..	1,278	1,170	1,440	1,724	1,100
	Ratio of imports to apparent consumption (percent) .....	32.7	36.9	33.7	33.5	28.8
	Ratio of exports to shipments (percent) .....	40.8	45.1	45.8	47.7	38.9
AG055	Paper boxes and bags:					
	Establishments (number) .....	2,600	2,600	2,600	2,600	2,600
	Employees (thousands) .....	190	180	180	180	180
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) ..	35,000	34,900	34,000	36,100	36,500
	U.S. exports (million dollars) .....	372	473	547	665	752
	U.S. imports (million dollars) .....	192	225	246	315	358
	Apparent U.S. consumption (million dollars) .....	34,820	34,652	33,699	35,750	36,106
	Trade balance (million dollars) ..	180	248	301	350	394
	Ratio of imports to apparent consumption (percent) .....	0.6	0.6	0.7	0.9	1.0
	Ratio of exports to shipment (percent) .....	1.1	1.4	1.6	1.8	2.1
AG056	Industrial papers and paperboards:					
	Establishments (number) .....	700	700	700	700	700
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) ..	43,000	44,000	42,000	42,000	42,000
	U.S. exports (million dollars) .....	2,534	2,960	3,314	3,328	3,331
	U.S. imports (million dollars) .....	1,210	1,136	936	1,065	1,114
	Apparent U.S. consumption (million dollars) .....	41,676	42,176	39,622	39,737	39,783
	Trade balance (million dollars) ..	1,324	1,824	2,378	2,263	2,217
	Ratio of imports to apparent consumption (percent) .....	2.9	2.7	2.4	2.7	2.8
	Ratio of exports to shipments (percent) .....	5.9	6.7	7.9	7.9	7.9
AG057	Newsprint:					
	Establishments (number) .....	20	18	18	18	(1)
	Employees (thousands) .....	9	9	9	9	(1)
	Capacity utilization (percent) .....	96	92	90	96	(1)
	U.S. shipments (million dollars) ..	4,000	4,500	4,600	4,700	4,700
	U.S. exports (million dollars) .....	357	293	388	467	496
	U.S. imports (million dollars) .....	4,487	4,247	3,979	3,599	3,593
	Apparent U.S. consumption (million dollars) .....	8,130	8,454	8,191	7,832	7,797

See footnotes at end of table.

**Table B-1-Continued**

**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	Agriculture, fisheries, and forest products-Continued					
	<i>Newsprint-Continued:</i>					
AG057	Trade balance (million dollars) ..	-4,130	-3,954	-3,591	-3,132	-3,097
	Ratio of imports to apparent consumption (percent) .....	55.2	50.2	48.6	46.0	46.1
	Ratio of exports to shipments (percent) .....	8.9	6.5	8.4	9.9	10.6
AG058	Printing and writing papers:					
	Establishments (number) .....	130	132	132	132	132
	Employees (thousands) .....	134	134	134	134	(1)
	Capacity utilization (percent) .....	(1)	(1)	(1)	90	(1)
	U.S. shipments (million dollars) ..	20,450	20,600	19,250	19,750	19,700
	U.S. exports (million dollars) .....	401	575	871	948	911
	U.S. imports (million dollars) .....	1,940	2,142	2,092	2,168	2,634
	Apparent U.S. consumption (million dollars) .....	21,989	22,167	20,471	20,970	21,423
	Trade balance (million dollars) ..	-1,539	-1,567	-1,221	-1,220	-1,723
	Ratio of imports to apparent consumption (percent) .....	8.8	9.7	10.2	10.3	12.3
	Ratio of exports to shipments (percent) .....	2.0	2.8	4.5	4.8	4.6
AG059	Certain specialty papers:					
	Establishments (number) .....	(1)	(1)	(1)	(1)	(1)
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) ..	4,825	4,800	4,700	4,900	4,800
	U.S. exports (million dollars) .....	263	386	431	426	432
	U.S. imports (million dollars) .....	445	464	441	476	512
	Apparent U.S. consumption (million dollars) .....	5,007	4,878	4,710	4,950	4,880
	Trade balance (million dollars) ..	-182	-78	-10	-50	-80
	Ratio of imports to apparent consumption (percent) .....	8.9	9.5	9.4	9.6	10.5
	Ratio of exports to shipments (percent) .....	5.5	8.0	9.2	8.7	9.0
AG060	Miscellaneous paper products:					
	Establishments (number) .....	(1)	(1)	(1)	(1)	(1)
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) ..	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) ..	20,500	20,850	20,000	20,000	20,000
	U.S. exports (million dollars) .....	357	398	577	635	706
	U.S. imports (million dollars) .....	321	343	376	429	486
	Apparent U.S. consumption (million dollars) .....	20,464	20,795	19,799	19,794	19,780
	Trade balance (million dollars) ..	36	55	201	206	220
	Ratio of imports to apparent consumption (percent) .....	1.6	1.6	1.9	2.2	2.5
	Ratio of exports to shipments (percent) .....	1.7	1.9	2.9	3.2	3.5
AG061	Printed matter:					
	Establishments (number) .....	53,000	60,000	60,000	60,000	60,000
	Employees (thousands) .....	1,400	1,500	1,500	1,500	1,500
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. shipments (million dollars) ..	150,000	157,000	157,000	160,000	166,000
	U.S. exports (million dollars) .....	2,569	3,072	3,470	3,670	3,828
	U.S. imports (million dollars) .....	1,566	1,616	1,649	1,813	1,962
	Apparent U.S. consumption (million dollars) .....	148,997	<b>155,544</b>	155,179	158,143	164,134
	Trade balance (million dollars) ..	1,003	1,456	1,821	1,857	1,866
	Ratio of imports to apparent consumption (percent) .....	1.1	1.0	1.1	1.1	1.2
	Ratio of exports to shipments (percent) .....	1.7	2.0	2.2	2.3	2.3

See footnotes at end of table.

**Table B-1-Continued**  
**Agricultural, animal, and vegetable products sector and forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	<b>Agriculture, fisheries, and forest products-Continued</b>					
AG062	<b>Ethyl alcohol for nonbeverages purposes:</b>					
	Firms (number) .....	7	8	9	9	10
	Employees (thousands) .....	2	3	3	3	3
	Capacity utilization (percent) .....	89	90	92	93	94
	U.S. shipments (million dollars) ..	1,100	1,100	1,209	1,239	1,178
	U.S. exports (million dollars) .....	31	169	79	38	71
	U.S. imports (million dollars) .....	103	80	84	114	143
	Apparent U.S. consumption (million dollars) .....	1,172	1,011	1,214	1,315	1,250
	Trade balance (million dollars) ..	-72	89	-5	-76	-72
	Ratio of imports to apparent consumption (percent) .....	8.8	7.9	6.9	8.7	11.4
	Ratio of exports to shipments (percent) .....	2.8	15.4	6.5	3.1	6.0
AG063	<b>Wool and other animal hair:</b>					
	Establishments (number) <sup>8</sup> .....	82,072	72,502	66,091	63,268	60,737
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. production (million dollars) <sup>9</sup> ..	138	85	68	74	51
	U.S. exports (million dollars) .....	40	25	21	19	14
	U.S. imports (million dollars) .....	305	171	170	172	175
	Apparent U.S. consumption (million dollars) .....	403	231	217	227	212
	Trade balance (million dollars) ..	-265	-146	-149	-153	-161
	Ratio of imports to apparent consumption (percent) .....	75.7	74.0	78.3	75.8	82.5
	Ratio of exports to shipments (percent) .....	29.0	29.4	30.9	25.7	27.5
AG064	<b>Cotton, not carded or combed:</b>					
	Establishments (number) <sup>10</sup> .....	43,000	43,000	43,000	43,000	43,000
	Employees (thousands) .....	12,548	12,348	14,052	13,240	13,660
	Capacity utilization (percent) .....	(2)	(2)	(2)	(2)	(2)
	U.S. production (million dollars) ..	3,875	4,994	4,912	4,250	4,247
	U.S. exports (million dollars) .....	2,250	2,783	2,480	1,999	1,528
	U.S. imports (million dollars) .....	3	(1)	(1)	(1)	(1)
	Apparent U.S. consumption (million dollars) .....	1,628	2,211	2,436	2,251	2,719
	Trade balance (million dollars) ..	2,247	2,783	2,476	1,999	1,528
	Ratio of imports to apparent consumption (percent) .....	0.2	(1)	0.2	(1)	(1)
	Ratio of exports to shipment (percent) .....	58.1	55.7	50.5	47.0	36.0

<sup>1</sup> Not available.

<sup>2</sup> Capacity utilization is not meaningful in this industry.

<sup>3</sup> Does not reflect changes in inventory.

<sup>4</sup> Does not include gums and resins. Production data for gums and resins is no longer reported.

<sup>5</sup> Figures do not include microbreweries and brewpubs. The total number of establishments licensed to brew malt beverages (including microbreweries and brewpubs) was 392 during the year ending Sept. 30, 1992, as reported by the Bureau of Alcohol Tobacco, and Firearms (BATF).

<sup>6</sup> Figures represent the number of bonded wine cellars as reported by the BATF.

<sup>7</sup> In 1992, initial official published statistics for U.S. imports of unmanufactured tobacco were overstated by \$123 million. A correction to these import statistics was issued and is reflected in this number.

<sup>8</sup> Figures represent the number of payments made under the Federal Wool Incentive program.

<sup>9</sup> Figures represent value of shorn wool production (greasy basis) and mohair production.

<sup>10</sup> Estimated from 1987 Census of Agriculture.

**Table B-2**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH001	Electrical energy:					
	Establishments (number) .....	3,225	3,225	3,225	3,225	3,225
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) .....	100	100	100	100	100
	U.S. shipments (million dollars) .....	212,451	167,403	145,800	153,831	163,261
	U.S. exports (million dollars) .....	180	491	54	64	61
	U.S. imports (million dollars) .....	558	463	487	590	662
	Apparent U.S. consumption (million dollars) .....	212,829	167,375	146,233	154,357	<b>163,862</b>
	Trade balance (million dollars) .....	-378	28	-433	-526	-601
	Ratio of imports to apparent consumption (percent) .....	0.3	0.3	0.3	0.4	0.4
	Ratio of exports to shipments (percent) .....	0.1	0.3	(1)	(1)	(1)
CH002	Nuclear materials:					
	Establishments (number) .....	45	43	40	(1)	(1)
	Employees (thousands) .....	32	32	30	(1)	(1)
	Capacity utilization (percent) .....	60	60	58	(1)	(1)
	U.S. shipments (million dollars) .....	4,200	4,000	3,800	(1)	(1)
	U.S. exports (million dollars) .....	1,308	1,068	1,120	1,247	1,139
	U.S. imports (million dollars) .....	945	1,015	1,092	1,080	930
	Apparent U.S. consumption (million dollars) .....	3,837	3,947	3,772	(1)	(1)
	Trade balance (million dollars) .....	363	53	28	167	209
	Ratio of imports to apparent consumption (percent) .....	24.6	25.7	29.0	(1)	(1)
	Ratio of exports to shipments (percent) .....	31.1	26.7	29.5	(1)	(1)
CH003	Coal, coke, and related chemical products:					
	Establishments (number) .....	526	525	525	523	520
	Employees (thousands) .....	135	135	129	160	155
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. production (million dollars) .....	22,381	22,690	22,346	23,461	20,980
	U.S. exports (million dollars) .....	4,808	5,003	4,990	4,723	3,587
	U.S. imports (million dollars) .....	679	582	453	536	603
	Apparent U.S. consumption (million dollars) .....	18,252	18,269	17,809	19,274	17,996
	Trade balance (million dollars) .....	4,129	4,421	4,537	4,187	2,984
	Ratio of imports to apparent consumption (percent) .....	3.7	3.2	2.5	2.8	3.4
	Ratio of exports to production (percent) .....	21.5	22.0	22.3	20.1	17.1
CH004	Crude petroleum:					
	Establishments (number) .....	18,000	18,000	18,000	18,000	18,000
	Employees (thousands) .....	204	204	204	204	204
	Capacity utilization (percent) .....	100	100	100	100	100
	U.S. production (million dollars) .....	44,031	46,904	45,800	41,750	40,000
	U.S. exports (million dollars) .....	62	2	35	27	20
	U.S. imports (million dollars) .....	35,041	43,833	37,374	38,104	38,248
	Apparent U.S. consumption (million dollars) .....	79,010	90,735	83,139	79,827	78,228
	Trade balance (million dollars) .....	-34,979	-43,831	-37,339	-38,077	-38,228
	Ratio of imports to apparent consumption (percent) .....	44.4	48.3	45.0	47.7	48.9
	Ratio of exports to production (percent) .....	0.1	0.0	0.1	0.1	0.1

See footnotes at end of table.



**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH005	Petroleum products:					
	Establishments (number) .....	193	194	190	190	190
	Employees (thousands) .....	75	75	75	75	75
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	147,138	150,628	129,291	120,565	127,488
	U.S. exports (million dollars) .....	5,587	7,302	7,461	6,603	6,654
	U.S. imports (million dollars) .....	13,161	16,138	12,578	11,260	11,041
	Apparent U.S. consumption (million dollars) .....	154,712	159,464	134,408	125,222	131,875
	Trade balance (million dollars) .....	-7,574	-8,836	-5,117	-4,657	-4,387
	Ratio of imports to apparent consumption (percent) .....	8.5	10.1	9.4	9.0	8.4
	Ratio of exports to shipments (percent) .....	3.8	4.8	5.8	5.5	5.2
CH006	Natural gas and components:					
	Establishments (number) .....	(1)	(1)	(1)	(1)	(1)
	Employees (thousands) .....	200	200	200	200	200
	Capacity utilization (percent) .....	80	80	80	80	80
	U.S. shipments (million dollars) .....	65,000	73,000	75,000	75,000	77,000
	U.S. exports (million dollars) .....	472	493	700	759	603
	U.S. imports (million dollars) .....	2,412	3,229	3,358	3,595	4,421
	Apparent U.S. consumption (million dollars) .....	66,940	75,736	77,658	77,836	80,818
	Trade balance (million dollars) .....	-1,940	-2,736	-2,658	-2,836	-3,818
	Ratio of imports to apparent consumption (percent) .....	3.6	4.3	4.3	4.6	5.5
	Ratio of exports to shipments (percent) .....	0.7	0.7	0.9	1.0	0.8
CH007	Major primary olefins:					
	Firms (number) .....	38	37	37	37	37
	Employees (thousands) .....	5	5	5	5	5
	Capacity utilization (percent) .....	97	95	93	95	94
	U.S. production (million dollars) .....	13,200	12,943	11,589	12,100	<b>12,300</b>
	U.S. exports (million dollars) .....	157	209	222	225	148
	U.S. imports (million dollars) .....	250	265	188	200	193
	Apparent U.S. consumption (million dollars) .....	13,293	12,999	11,555	12,075	12,345
	Trade balance (million dollars) .....	-93	-56	34	25	-45
	Ratio of imports to apparent consumption (percent) .....	1.9	2.0	1.6	1.7	1.6
	Ratio of exports to production (percent) .....	1.2	1.6	1.9	1.9	1.2
CH008	Other olefins:					
	Firms (number) .....	24	23	23	23	23
	Employees (thousands) .....	1	1	1	1	1
	Capacity utilization (percent) .....	90	85	85	88	87
	U.S. production (million dollars) .....	925	900	910	920	940
	U.S. exports (million dollars) .....	259	263	285	253	223
	U.S. imports (million dollars) .....	31	14	19	32	35
	Apparent U.S. consumption (million dollars) .....	697	651	644	699	752
	Trade balance (million dollars) .....	228	249	266	221	188
	Ratio of imports to apparent consumption (percent) .....	4.4	2.2	3.0	4.6	4.7
	Ratio of exports to production (percent) .....	28.0	29.2	31.3	27.5	23.7

See footnotes at end of table.

**Table 6-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH009	Primary aromatics:					
	Firms (number) .....	31	31	31	31	31
	Employees (thousands) .....	2	2	2	2	2
	Capacity utilization (percent) .....	60	60	63	66	73
	U.S. production (million dollars) .....	3,400	3,300	3,700	3,600	3,931
	U.S. exports (million dollars) .....	182	276	105	106	145
	U.S. imports (million dollars) .....	115	124	196	187	169
	Apparent U.S. consumption (million dollars) .....	3,333	3,148	3,791	3,681	3,955
	Trade balance (million dollars) .....	67	152	-91	-81	-24
	Ratio of imports to apparent consumption (percent) .....	3.5	3.9	5.2	5.1	4.3
	Ratio of exports to production (percent) .....	5.4	8.4	2.8	2.9	3.7
CH010	Benzenoid commodity chemicals:					
	Firms (number) .....	54	54	54	54	53
	Employees (thousands) .....	15	15	15	15	15
	Capacity utilization (percent) .....	89	90	85	82	82
	U.S. production (million dollars) .....	13,345	13,600	14,150	14,000	13,500
	U.S. exports (million dollars) .....	1,693	1,517	1,385	1,162	1,213
	U.S. imports (million dollars) .....	446	492	364	313	339
	Apparent U.S. consumption (million dollars) .....	12,098	12,575	13,129	13,151	12,626
	Trade balance (million dollars) .....	1,247	1,025	1,021	849	874
	Ratio of imports to apparent consumption (percent) .....	3.7	3.9	2.8	2.4	2.7
	Ratio of exports to production (percent) .....	12.7	11.2	9.8	8.3	9.0
CH011	Benzenoid specialty chemicals:					
	Firms (number) .....	250	250	250	250	250
	Employees (thousands) .....	95	95	95	95	95
	Capacity utilization (percent) .....	95	95	89	87	82
	U.S. production (million dollars) .....	7,550	7,700	7,930	8,175	7,800
	U.S. exports (million dollars) .....	2,749	2,753	3,244	3,448	3,650
	U.S. imports (million dollars) .....	1,714	1,888	1,999	2,211	2,063
	Apparent U.S. consumption (million dollars) .....	6,515	6,835	6,685	6,938	6,213
	Trade balance (million dollars) .....	1,035	865	1,245	1,237	1,587
	Ratio of imports to apparent consumption (percent) .....	26.3	27.6	29.9	31.9	33.2
	Ratio of exports to production (percent) .....	36.4	35.8	40.9	42.2	46.8
CH012	Miscellaneous organic chemicals:					
	Firms (number) .....	102	103	100	100	104
	Employees (thousands) .....	86	87	80	70	70
	Capacity utilization (percent) .....	85	83	80	85	85
	U.S. shipments (million dollars) .....	39,312	40,767	39,300	40,000	40,200
	U.S. exports (million dollars) .....	4,480	4,457	4,745	4,842	4,886
	U.S. imports (million dollars) .....	2,637	2,552	2,792	3,251	3,502
	Apparent U.S. consumption (million dollars) .....	37,469	38,862	37,347	38,409	38,816
	Trade balance (million dollars) .....	1,843	1,905	1,953	1,591	1,384
	Ratio of imports to apparent consumption (percent) .....	7.0	6.6	7.5	8.5	9.0
	Ratio of exports to shipments (percent) .....	11.4	10.9	12.1	12.1	12.2

See footnotes at end of table.

**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH013	Selected inorganic chemicals and elements:					
	Firms (number) .....	480	480	480	(1)	(1)
	Employees (thousands) .....	73	77	79	(1)	(1)
	Capacity utilization (percent) .....	77	77	(1)	(1)	(1)
	U.S. shipments (million dollars) .....	2,767	3,111	2,651	2,526	2,390
	U.S. exports (million dollars) .....	859	842	893	768	781
	U.S. imports (million dollars) .....	1,694	1,738	1,573	1,363	1,252
	Apparent U.S. consumption (million dollars) .....	3,602	4,007	3,331	3,121	2,861
	Trade balance (million dollars) .....	-835	-896	-680	-595	-471
	Ratio of imports to apparent consumption (percent) .....	47.0	43.4	47.2	43.7	43.8
	Ratio of exports to shipments (percent) .....	31.0	27.1	33.7	30.4	32.7
CH014	Inorganic acids:					
	Establishments (number) .....	145	145	145	145	145
	Employees (thousands) .....	9	9	9	9	9
	Capacity utilization (percent) .....	80	80	80	80	80
	U.S. shipments (million dollars) .....	2,611	2,379	2,426	2,499	2,550
	U.S. exports (million dollars) .....	104	109	129	156	157
	U.S. imports (million dollars) .....	180	179	168	142	144
	Apparent U.S. consumption (million dollars) .....	2,687	2,449	2,465	2,485	2,537
	Trade balance (million dollars) .....	-76	-70	-39	14	13
	Ratio of imports to apparent consumption (percent) .....	6.7	7.3	6.8	5.7	(1)
	Ratio of exports to shipments (percent) .....	4.0	4.6	5.3	6.2	(1)
CH015	Salts and other inorganic chemicals:					
	Establishments (number) .....	239	235	230	225	220
	Employees (thousands) .....	36	36	35	34	33
	Capacity utilization (percent) .....	70	75	72	72	72
	U.S. shipments (million dollars) .....	7,003	7,043	7,000	7,315	7,403
	U.S. exports (million dollars) .....	1,833	2,452	1,958	2,191	2,222
	U.S. imports (million dollars) .....	1,218	1,337	1,354	1,471	1,812
	Apparent U.S. consumption (million dollars) .....	6,388	5,928	6,396	6,595	6,993
	Trade balance (million dollars) .....	615	1,115	604	720	410
	Ratio of imports to apparent consumption (percent) .....	19.1	22.6	21.2	22.3	25.9
	Ratio of exports to shipments (percent) .....	26.2	34.8	28.0	30.0	30.0
CH016	Chlor-alkali chemicals:					
	Firms (number) .....	27	27	27	27	27
	Employees (thousands) .....	6	6	6	6	6
	Capacity utilization (percent) .....	94	(1)	94	96	95
	U.S. shipments (million dollars) .....	3,661	4,033	3,864	3,682	3,700
	U.S. exports (million dollars) .....	822	453	912	803	598
	U.S. imports (million dollars) .....	191	180	177	170	125
	Apparent U.S. consumption (million dollars) .....	3,030	3,760	3,129	3,049	3,227
	Trade balance (million dollars) .....	631	273	735	633	473
	Ratio of imports to apparent consumption (percent) .....	6.3	4.8	5.7	5.6	3.9
	Ratio of exports to shipments (percent) .....	22.5	11.2	23.6	21.8	16.2

See footnotes at end of table.

**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
CH017	Industrial gases:						
	Firms (number) .....	103	103	103	103	103	
	Employees (thousands) .....	8	9	9	9	9	
	Capacity utilization (percent) .....	79	74	73	73	73	
	U.S. shipments (million dollars) .....	2,550	2,696	2,815	3,131	3,200	
	U.S. exports (million dollars) .....	86	84	95	98	99	
	U.S. imports (million dollars) .....	33	36	38	39	39	
	Apparent U.S. consumption (million dollars) .....	2,497	2,648	2,758	3,072	3,140	
	Trade balance (million dollars) .....	53	48	57	59	60	
	Ratio of imports to apparent consumption (percent) .....	1.3	1.4	1.4	1.3	1.2	
	Ratio of exports to shipments (percent) .....	3.4	3.1	3.4	3.1	3.1	
	CH018	Fertilizers:					
		Establishments (number) .....	650	650	650	650	650
Employees (thousands) .....		41	41	41	41	41	
Capacity utilization (percent) .....		80	80.	80	80	80	
U.S. shipments (million dollars) .....		8,252	8,281	8,332	8,391	8,560	
U.S. exports (million dollars) .....		2,952	2,697	3,138	2,483	1,877	
U.S. imports (million dollars) .....		1,641	1,513	1,536	1,471	1,600	
Apparent U.S. consumption (million dollars) .....		6,941	7,097	6,730	7,379	8,283	
Trade balance (million dollars) .....		1,311	1,184	1,602	1,012	277	
Ratio of imports to apparent consumption (percent) .....		23.6	21.3	22.8	19.9	19.3	
Ratio of exports to shipments (percent) .....		35.8	32.6	37.7	29.6	21.9	
CH019		Paints, inks, and related item, certain components thereof:					
		Firms (number) .....	1,580	1,580	1,580	1,580	1,580
	Employees (thousands) .....	14	14	13	14	14	
	Capacity utilization (percent) .....	90	90	80	82	84	
	U.S. shipments (million dollars) .....	16,500	17,300	17,360	17,793	18,250	
	U.S. exports (million dollars) .....	1,247	1,487	1,554	1,712	1,772	
	U.S. imports (million dollars) .....	774	800	826	930	980	
	Apparent U.S. consumption (million dollars) .....	16,027	16,613	16,632	17,011	17,458	
	Trade balance (million dollars) .....	473	687	728	782	792	
	Ratio of imports to apparent consumption (percent) .....	4.8	4.8	5.0	5.5	5.6	
	Ratio of exports to shipments (percent) .....	7.6	8.6	9.0	9.6	9.7	
	CH020	Synthetic organic pigments:					
		Firms (number) .....	32	32	32	32	32
Employees (thousands) .....		6	6	6	6	6	
Capacity utilization (percent) .....		85	85	85	85	85	
U.S. shipments (million dollars) .....		702	725	644	789	770	
U.S. exports (million dollars) .....		178	214	200	223	267	
U.S. imports (million dollars) .....		177	208	249	274	294	
Apparent U.S. consumption (million dollars) .....		701	719	693	840	797	
Trade balance (million dollars) .....		1	6	-49	-51	-27	
Ratio of imports to apparent consumption (percent) .....		25.2	28.9	35.9	32.6	36.9	
Ratio of exports to shipments (percent) .....		25.4	29.5	31.1	28.3	34.7	

See footnotes at end of table.

**Table B-2—Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH021	Synthetic dyes and azoic couples:					
	Firms (number) .....	32	32	32	32	32
	Employees (thousands) .....	8	8	8	8	8
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	858	870	858	860	859
	U.S. exports (million dollars) .....	139	193	178	192	200
	U.S. imports (million dollars) .....	388	459	497	571	583
	Apparent U.S. consumption (million dollars) .....	1,107	1,136	1,177	1,239	1,242
	Trade balance (million dollars) .....	-249	-266	-319	-379	-383
	Ratio of imports to apparent consumption (percent) .....	35.0	40.4	42.2	46.1	46.9
	Ratio of exports to shipments (percent) .....	16.2	22.2	20.7	22.3	23.3
CH022	Synthetic tanning agents:					
	Firms (number) .....	5	5	5	5	5
	Employees (thousands) .....	1	1	1	1	1
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	20	20	20	20	19
	U.S. exports (million dollars) .....	12	11	13	11	10
	U.S. imports (million dollars) .....	3	3	4	4	6
	Apparent U.S. consumption (million dollars) .....	11	12	11	13	15
	Trade balance (million dollars) .....	9	8	9	7	4
	Ratio of imports to apparent consumption (percent) .....	27.3	25.0	36.4	30.8	40.0
	Ratio of exports to shipments (percent) .....	60.0	55.0	65.0	55.0	52.6
CH023	Natural tanning and dyeing materials:					
	Firms (number) .....	10	10	10	10	10
	Employees (thousands) .....	1	1	1	1	1
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	10	10	10	10	10
	U.S. exports (million dollars) .....	9	11	12	17	16
	U.S. imports (million dollars) .....	57	49	56	65	64
	Apparent U.S. consumption (million dollars) .....	58	48	54	58	58
	Trade balance (million dollars) .....	-48	-38	-44	-48	-48
	Ratio of imports to apparent consumption (percent) .....	98.3	102.1	103.7	112.1	110.3
	Ratio of exports to shipments (percent) .....	90.0	110.0	120.0	170.0	160.0
CH024	Photographic chemicals and preparations: <sup>2</sup>					
	Firms (number) .....	5	5	5	5	5
	Employees (thousands) .....	1	1	1	1	1
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	(1)	(1)	(1)	(1)	(1)
	U.S. exports (million dollars) .....	198	245	287	306	331
	U.S. imports (million dollars) .....	355	370	405	496	554
	Apparent U.S. consumption (million dollars) .....	(1)	(1)	(1)	(1)	(1)
	Trade balance (million dollars) .....	-157	-125	-118	-190	-223
	Ratio of imports to apparent consumption (percent) .....	(1)	(1)	(1)	(1)	(1)
	Ratio of exports to shipments (percent) .....	(1)	(1)	(1)	(1)	(1)

See footnotes at end of table.

**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH025	Pesticide products and formulations:					
	Firms (number) .....	59	59	59	59	59
	Employees (thousands) .....	22	22	22	22	22
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	5,203	5,205	5,203	5,203	5,203
	U.S. exports (million dollars) .....	1,518	1,586	1,509	1,543	•1,584
	U.S. imports (million dollars) .....	648	642	681	806	825
	Apparent U.S. consumption (million dollars) .....	4,333	4,261	4,375	4,466	4,444
	Trade balance (million dollars) .....	870	944	828	737	759
	Ratio of imports to apparent consumption (percent) .....	15.0	15.1	15.6	18.0	18.6
	Ratio of exports to shipments (percent) .....	29.2	30.5	29.0	29.7	30.4
CH026	Adhesives and glues:					
	Establishments (number) .....	658	663	650	660	670
	Employees (thousands) .....	18	18	17	17	17
	Capacity utilization (percent) .....	86	87	82	80	80
	U.S. shipments (million dollars) .....	2,680	3,000	3,060	3,110	3,110
	U.S. exports (million dollars) .....	140	179	194	222	256
	U.S. imports (million dollars) .....	72	89	93	111	118
	Apparent U.S. consumption (million dollars) .....	2,612	2,910	2,959	2,999	2,972
	Trade balance (million dollars) .....	68	90	101	111	138
	Ratio of imports to apparent consumption (percent) .....	2.8	3.1	3.1	3.7	4.0
	Ratio of exports to shipments (percent) .....	5.2	6.0	6.3	7.1	8.2
CH027	Medicinal chemicals, except antibiotics:					
	Firms (number) .....	750	750	750	750	750
	Employees (thousands) .....	155	157	154	155	158
	Capacity utilization (percent) .....	79	80	80	80	80
	U.S. shipments (million dollars) .....	38,500	42,280	46,050	48,000	50,428
	U.S. exports (million dollars) .....	3,297	3,950	4,458	5,248	5,690
	U.S. imports (million dollars) .....	3,049	3,268	3,918	4,888	4,897
	Apparent U.S. consumption (million dollars) .....	38,252	41,598	45,510	47,640	49,635
	Trade balance (million dollars) .....	248	682	540	360	793
	Ratio of imports to apparent consumption (percent) .....	8.0	7.9	8.6	10.3	9.9
	Ratio of exports to shipments (percent) .....	8.6	9.3	9.7	10.9	11.3
CH028	Antibiotics:					
	Firms (number) .....	20	20	20	20	20
	Employees (thousands) .....	29	31	34	36	39
	Capacity utilization (percent) .....	79	80	80	80	80
	U.S. shipments (million dollars) .....	5,300	5,552	5,830	7,600	8,000
	U.S. exports (million dollars) .....	1,144	1,230	1,380	1,568	1,580
	U.S. imports (million dollars) .....	525	677	986	1,138	1,226
	Apparent U.S. consumption (million dollars) .....	4,681	4,999	5,436	7,170	7,646
	Trade balance (million dollars) .....	619	553	394	430	354
	Ratio of imports to apparent consumption (percent) .....	11.2	13.5	18.1	15.9	16.0
	Ratio of exports to shipments (percent) .....	21.6	22.2	23.7	20.6	19.8

See footnotes at end of table.

**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
CH029	Essential oils and other flavoring materials:						
	Establishments (number) .....	58	58	58	58	58	
	Employees (thousands) .....	53	53	51	49	50	
	Capacity utilization (percent) .....	75	75	80	75	77	
	U.S. shipments (million dollars) .....	2,440	2,880	2,950	2,700	2,800	
	U.S. exports (million dollars) .....	497	593	614	618	734	
	U.S. imports (million dollars) .....	421	484	490	555	557	
	Apparent U.S. consumption (million dollars) .....	2,364	2,771	2,826	2,637	2,623	
	Trade balance (million dollars) .....	76	109	124	63	177	
	Ratio of imports to apparent consumption (percent) .....	17.8	17.5	17.3	21.0	21.2	
	Ratio of exports to shipments (percent) .....	20.4	20.6	20.8	22.9	26.2	
	CH030	Perfumes, cosmetics, and toiletries:					
		Establishments (number) .....	648	650	650	650	650
Employees (thousands) .....		55	56	55	56	57	
Capacity utilization (percent) .....		83	83	80	83	85	
U.S. shipments (million dollars) .....		15,100	15,800	16,700	17,200	17,900	
U.S. exports (million dollars) .....		653	852	1,075	1,228	1,415	
U.S. imports (million dollars) .....		598	638	716	898	973	
Apparent U.S. consumption (million dollars) .....		15,045	15,586	16,341	16,870	17,458	
Trade balance (million dollars) .....		55	214	359	330	442	
Ratio of imports to apparent consumption (percent) .....		4.0	4.1	4.4	5.3	5.6	
Ratio of exports to shipments (percent) .....		4.3	5.4	6.4	7.1	7.9	
CH031		Soaps, detergents, and surface-active agents:					
		Establishments (number) .....	950	950	950	950	950
	Employees (thousands) .....	44	45	46	47	47	
	Capacity utilization (percent) .....	83	83	80	83	85	
	U.S. shipments (million dollars) .....	12,400	13,400	14,500	14,900	15,400	
	U.S. exports (million dollars) .....	641	856	1,018	1,158	1,263	
	U.S. imports (million dollars) .....	254	327	364	387	450	
	Apparent U.S. consumption (million dollars) .....	12,013	12,871	13,846	14,129	14,587	
	Trade balance (million dollars) .....	387	529	654	771	813	
	Ratio of imports to apparent consumption (percent) .....	2.1	2.5	2.6	2.7	3.1	
	Ratio of exports to shipments (percent) .....	5.2	6.4	7.0	7.8	8.2	
	CH032	Miscellaneous chemicals and specialties:					
		Establishments (number) .....	(1)	(1)			(1)
Employees (thousands) .....		(1)	(1)	(1)	(1)	(1)	
Capacity utilization (percent) .....		(1)	(1)	(1)	(1)	(1)	
U.S. shipments (million dollars) .....		(1)	(1)	(1)	(1)	(1)	
U.S. exports (million dollars) .....		844	930	1,117	1,251	1,289	
U.S. imports (million dollars) .....		401	437	505	673	603	
Apparent U.S. consumption (million dollars) .....		(1)	(1)	(1)	(1)	(1)	
Trade balance (million dollars) .....		443	493	612	578	686	
Ratio of imports to apparent consumption (percent) .....		(1)	(1)	(1)	(1)	(1)	
Ratio of exports to shipments (percent) .....		(1)	(1)	(1)	(1)	(1)	

See footnotes at end of table.

**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH033	Explosives and propellant powders:					
	Firms (number) .....	135	135	135	135	135
	Employees (thousands) .....	15	15	15	15	15
	Capacity utilization (percent) .....	90	90	90	90	92
	U.S. shipments (million dollars) .....	1,300	1,350	1,380	1,410	(1)
	U.S. exports (million dollars) .....	164	157	169	212	259
	U.S. imports (million dollars) .....	149	156	178	216	209
	Apparent U.S. consumption (million dollars) .....	1,285	1,349	1,389	(1)	(1)
	Trade balance (million dollars) .....	15	1	-9	-4	50
	Ratio of imports to apparent consumption (percent) .....	11.6	11.6	12.8	(1)	(1)
	Ratio of exports to shipments (percent) .....	12.6	11.6	12.2	(1)	(1)
CH034	Polyethylene resins in primary forms:					
	Establishments (number) .....	35	36	37	40	40
	Employees (thousands) .....	23	22	22	22	21
	Capacity utilization (percent) .....	85	87	87	86	86
	U.S. production (million dollars) .....	8,222	8,617	7,355	7,916	6,890
	U.S. exports (million dollars) .....	1,140	1,106	1,460	1,255	1,260
	U.S. imports (million dollars) .....	408	528	448	462	571
	Apparent U.S. consumption (million dollars) .....	7,490	8,039	6,343	7,123	6,201
	Trade balance (million dollars) .....	732	578	1,012	793	689
	Ratio of imports to apparent consumption (percent) .....	5.4	6.6	7.1	6.5	9.2
	Ratio of exports to production (percent) .....	13.9	12.8	19.9	15.9	18.3
CH035	Polypropylene resins in primary forms:					
	Establishments (number) .....	20	19	19	21	23
	Employees (thousands) .....	5	5	5	5	5
	Capacity utilization (percent) .....	82	92	88	85	86
	U.S. production (million dollars) .....	2,523	2,772	1,998	2,048	2,801
	U.S. exports (million dollars) .....	629	730	788	522	432
	U.S. imports (million dollars) .....	33	38	64	83	116
	Apparent U.S. consumption (million dollars) .....	1,927	2,080	1,274	1,609	2,485
	Trade balance (million dollars) .....	596	692	724	439	316
	Ratio of imports to apparent consumption (percent) .....	1.7	1.8	5.0	5.2	4.7
	Ratio of exports to production (percent) .....	24.9	26.3	39.4	25.5	15.4
CH036	PVC resins in primary forms:					
	Establishments (number) .....	27	27	26	27	27
	Employees (thousands) .....	8	8	8	8	7
	Capacity utilization (percent) .....	91	97	95	97	97
	U.S. production (million dollars) .....	3,802	3,525	2,659	2,788	3,243
	U.S. exports (million dollars) .....	388	419	549	488	500
	U.S. imports (million dollars) .....	45	67	54	82	117
	Apparent U.S. consumption (million dollars) .....	3,459	3,173	2,164	2,382	2,860
	Trade balance (million dollars) .....	343	352	495	406	383
	Ratio of imports to apparent consumption (percent) .....	1.3	2.1	2.5	3.4	4.1
	Ratio of exports to production (percent) .....	10.2	11.9	20.6	17.5	15.4

See footnotes at end of table.



**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH037	Styrene polymers in primary forms:					
	Establishments (number) .....	69	70	68	68	68
	Employees (thousands) .....	11	11	11	11	11
	Capacity utilization (percent) .....	85	90	84	91	90
	U.S. production (million dollars) .....	5,315	5,688	4,204	4,077	4,611
	U.S. exports (million dollars) .....	457	516	550	539	600
	U.S. imports (million dollars) .....	117	138	132	199	235
	Apparent U.S. consumption (million dollars) .....	4,975	5,310	3,786	3,737	4,246
	Trade balance (million dollars) .....	340	378	418	340	365
	Ratio of imports to apparent consumption (percent) .....	2.4	2.6	3.5	5.3	5.5
	Ratio of exports to production (percent) .....	8.6	9.1	13.1	13.2	13.0
CH038	Saturated polyester resins:					
	Establishments (number) .....	50	47	48	49	49
	Employees (thousands) .....	6	6	6	6	6
	Capacity utilization (percent) .....	61	64	72	77	79
	U.S. production (million dollars) .....	2,856	2,925	2,972	3,066	3,221
	U.S. exports (million dollars) .....	68	107	408	456	390
	U.S. imports (million dollars) .....	44	41	69	88	108
	Apparent U.S. consumption (million dollars) .....	2,832	2,859	2,633	2,698	2,939
	Trade balance (million dollars) .....	24	66	339	368	282
	Ratio of imports to apparent consumption (percent) .....	1.6	1.4	2.6	3.3	3.7
	Ratio of exports to production (percent) .....	2.4	3.7	13.7	14.9	12.1
CH039	Other plastics in primary forms:					
	Establishments (number) .....	279	282	280	279	279
	Employees (thousands) .....	34	34	33	33	32
	Capacity utilization (percent) .....	89	91	89	89	90
	U.S. production (million dollars) .....	13,726	12,236	13,020	13,956	14,012
	U.S. exports (million dollars) .....	2,941	3,111	3,647	3,793	3,992
	U.S. imports (million dollars) .....	928	963	1,046	1,208	1,386
	Apparent U.S. consumption (million dollars) .....	11,713	10,088	10,419	11,371	11,406
	Trade balance (million dollars) .....	2,013	2,148	2,601	2,585	2,606
	Ratio of imports to apparent consumption (percent) .....	7.9	9.5	10.0	10.6	12.2
	Ratio of exports to production (percent) .....	21.4	25.4	28.0	27.2	28.5
CH040	SBR rubber in primary forms:					
	Establishments (number) .....	12	11	10	10	11
	Employees (thousands) .....	6	6	5	5	5
	Capacity utilization (percent) .....	90	90	90	90	89
	U.S. production (million dollars) .....	1,057	1,107	884	1,033	968
	U.S. exports (million dollars) .....	203	206	219	258	255
	U.S. imports (million dollars) .....	98	94	92	116	111
	Apparent U.S. consumption (million dollars) .....	952	995	757	891	824
	Trade balance (million dollars) .....	105	112	127	142	144
	Ratio of imports to apparent consumption (percent) .....	10.3	9.4	12.2	13.0	13.5
	Ratio of exports to production (percent) .....	19.2	18.6	24.8	25.0	26.3

See footnotes at end of table.

**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
CH041	Other synthetic rubber:						
	Establishments (number) .....	36	36	34	34	34	
	Employees (thousands) .....	13	13	12	11	11	
	Capacity utilization (percent) .....	79	81	79	80	79	
	U.S. production (million dollars) .....	3,251	3,381	3,340	3,401	2,906	
	U.S. exports (million dollars) .....	651	789	772	833	769	
	U.S. imports (million dollars) .....	427	423	376	403	445	
	Apparent U.S. consumption (million dollars) .....	3,027	3,015	2,944	2,971	2,582	
	Trade balance (million dollars) .....	224	366	396	430	324	
	Ratio of imports to apparent consumption (percent) .....	14.1	14.0	12.8	13.6	17.2	
	Ratio of exports to production (percent) .....	20.0	23.3	23.1	24.5	26.5	
	CH042	Pneumatic tires and tubes (new):					
		Establishments (number) .....	39	38	38	39	39
Employees (thousands) .....		66	65	63	62	63	
Capacity utilization (percent) .....		98	96	95	95	95	
U.S. shipments (million dollars) .....		10,700	10,500	10,200	10,500	10,600	
U.S. exports (million dollars) .....		812	1,097	1,215	1,402	1,464	
U.S. imports (million dollars) .....		2,644	2,522	2,223	2,448	2,661	
Apparent U.S. consumption (million dollars) .....		12,532	11,925	11,208	11,546	11,797	
Trade balance (million dollars) .....		-1,832	-1,425	-1,008	-1,046	-1,197	
Ratio of imports to apparent consumption (percent) .....		21.1	21.1	19.8	21.2	22.6	
Ratio of exports to shipments (percent) .....		7.6	10.4	11.9	13.4	13.8	
CH043		Other tires:					
		Establishments (number) .....	2,210	1,970	1,850	1,800	1,750
	Employees (thousands) .....	8	7	6	6	6	
	Capacity utilization (percent) .....	85	83	88	85	88	
	U.S. shipments (million dollars) .....	2,000	2,100	2,000	2,000	1,800	
	U.S. exports (million dollars) .....	51	49	58	66	66	
	U.S. imports (million dollars) .....	77	67	78	94	107	
	Apparent U.S. consumption (million dollars) .....	2,026	2,118	2,020	2,028	1,841	
	Trade balance (million dollars) .....	-26	-18	-20	-28	-41	
	Ratio of imports to apparent consumption (percent) .....	3.8	3.2	3.9	4.6	5.8	
	Ratio of exports to shipments (percent) .....	2.6	2.3	2.9	3.3	3.7	
	CH044	Plastic or rubber semifabricated forms:					
		Establishments (number) .....	1,530	1,535	1,540	1,546	1,551
Employees (thousands) .....		101	101	100	101	103	
Capacity utilization (percent) .....		80	80	79	81	81	
U.S. shipments (million dollars) .....		15,921	16,092	16,770	16,914	17,462	
U.S. exports (million dollars) .....		2,038	2,519	2,603	2,833	3,139	
U.S. imports (million dollars) .....		1,528	1,660	1,752	1,934	2,015	
Apparent U.S. consumption (million dollars) .....		15,411	15,233	15,919	16,015	16,338	
Trade balance (million dollars) .....		510	859	851	899	1,124	
Ratio of imports to apparent consumption (percent) .....		9.9	10.9	11.0	12.1	12.3	
Ratio of exports to shipments (percent) .....		12.8	15.7	15.5	16.7	18.0	

See footnotes at end of table.

**Table B-2--Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH045	Plastic containers and closures:					
	Establishments (number) .....	1,845	1,882	1,860	1,860	1,860
	Employees (thousands) .....	71	73	74	75	77
	Capacity utilization (percent) .....	92	90	90	90	90
	U.S. shipments (million dollars) .....	8,607	8,783	8,962	9,039	9,280
	U.S. exports (million dollars) .....	418	575	681	841	914
	U.S. imports (million dollars) .....	659	697	665	738	845
	Apparent U.S. consumption (million dollars) .....	8,848	8,905	8,946	8,936	9,211
	Trade balance (million dollars) .....	-241	-122	16	103	69
	Ratio of imports to apparent consumption (percent) .....	7.4	7.8	7.4	8.3	9.2
	Ratio of exports to shipments (percent) .....	4.9	6.5	7.6	9.3	9.8
CH046	Hose, belting and plastic pipe:					
	Establishments (number) .....	439	439	438	438	438
	Employees (thousands) .....	39	38	36	36	36
	Capacity utilization (percent) .....	72	70	71	71	72
	U.S. shipments (million dollars) .....	5,146	5,133	5,159	5,204	5,355
	U.S. exports (million dollars) .....	528	634	739	829	880
	U.S. imports (million dollars) .....	533	587	594	657	699
	Apparent U.S. consumption (million dollars) .....	5,151	5,086	5,014	5,032	5,174
	Trade balance (million dollars) .....	-5	47	145	172	181
	Ratio of imports to apparent consumption (percent) .....	10.3	11.5	11.8	13.1	13.5
	Ratio of exports to shipments (percent) .....	10.3	12.4	14.3	15.9	16.4
CH047	Miscellaneous rubber or plastics products:					
	Establishments (number) .....	13,000	13,000	12,900	12,800	12,900
	Employees (thousands) .....	672	665	620	600	605
	Capacity utilization (percent) .....	85	85	85	90	85
	U.S. shipments (million dollars) .....	73,500	71,500	70,000	72,000	70,000
	U.S. exports (million dollars) .....	1,286	1,770	1,997	2,407	2,592
	U.S. imports (million dollars) .....	2,790	2,917	2,929	3,448	3,815
	Apparent U.S. consumption (million dollars) .....	75,004	72,647	70,932	73,041	71,223
	Trade balance (million dollars) .....	-1,504	-1,147	-932	-1,041	-1,223
	Ratio of imports to apparent consumption (percent) .....	3.7	4.0	4.1	4.7	5.4
	Ratio of exports to shipments (percent) .....	1.7	2.5	2.9	3.3	3.7
CH048	Gelatin:					
	Establishments (number) .....	8	8	8	8	8
	Employees (thousands) .....	1	1	1	1	1
	Capacity utilization (percent) .....	91	88	88	92	90
	U.S. shipments (million dollars) .....	125	125	135	145	148
	U.S. exports (million dollars) .....	23	30	31	33	35
	U.S. imports (million dollars) .....	67	66	80	94	97
	Apparent U.S. consumption (million dollars) .....	169	161	184	206	210
	Trade balance (million dollars) .....	-44	-36	-49	-61	-62
	Ratio of imports to apparent consumption (percent) .....	39.6	41.0	43.5	45.6	46.2
	Ratio of exports to shipments (percent) .....	18.4	24.0	23.0	22.8	23.6

See footnotes at end of table.

**Table B-2--Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH049	Natural rubber:					
	Establishments (number) .....	(1)		(1)	(1)	(1)
	Employees (thousands) .....	(1)		(1)	(1)	(1)
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. production (million dollars) .....	0	0	0	0	0
	U.S. exports (million dollars) .....	50	33	36	31	27
	U.S. imports (million dollars) .....	958	707	663	770	852
	Apparent U.S. consumption (million dollars) .....	908	674	627	739	825
	Trade balance (million dollars) .....	-908	-674	-627	-739	-825
	Ratio of imports to apparent consumption (percent) .....	105.5	104.9	105.7	104.2	103.3
	Ratio of exports to production (percent) .....	(1)	(1)	(1)	(1)	(1)
	CH050	Manmade fibers and filament yarns:				
Establishments (number) .....		135	137	140	147	147
Employees (thousands) .....		76	75	75	73	69
Capacity utilization (percent) .....		86	82	83	82	(1)
U.S. shipments (million dollars) .....		11,687	11,191	10,930	11,094	11,416
U.S. exports (million dollars) .....		1,419	1,570	1,608	1,434	1,393
U.S. imports (million dollars) .....		580	700	780	900	1,126
Apparent U.S. consumption (million dollars) .....		10,848	10,321	10,102	10,560	11,149
Trade balance (million dollars) .....		839	870	828	534	267
Ratio of imports to apparent consumption (percent) .....		5.3	6.8	7.7	8.5	10.1
Ratio of exports to shipments (percent) .....		12.1	14.0	14.7	12.9	12.2
CH051		Spun yarns and miscellaneous yarns:				
	Establishments (number) .....	595	597	611	623	623
	Employees (thousands) .....	41	39	40	41	41
	Capacity utilization (percent) .....	77	83	87	86	(1)
	U.S. shipments (million dollars) .....	10,662	10,951	11,069	11,235	11,179
	U.S. exports (million dollars) .....	348	451	494	434	347
	U.S. imports (million dollars) .....	429	357	404	474	497
	Apparent U.S. consumption (million dollars) .....	10,743	10,857	10,979	11,275	11,329
	Trade balance (million dollars) .....	-81	94	90	-40	-150
	Ratio of imports to apparent consumption (percent) .....	4.0	3.3	3.7	4.2	4.4
	Ratio of exports to shipments (percent) .....	3.3	4.1	4.5	3.9	3.1
	CH052	Broadwoven fabrics:				
Establishments (number) .....		1,082	1,065	1,044	983	980
Employees (thousands) .....		198	186	177	173	171
Capacity utilization (percent) .....		87	82	85	89	92
U.S. shipments (million dollars) .....		15,429	14,862	14,888	15,319	15,204
U.S. exports (million dollars) .....		993	1,236	1,321	1,471	1,592
U.S. imports (million dollars) .....		2,609	2,657	2,950	3,223	3,339
Apparent U.S. consumption (million dollars) .....		17,045	16,283	16,517	17,071	16,951
Trade balance (million dollars) .....		-1,616	-1,421	-1,629	-1,752	-1,747
Ratio of imports to apparent consumption (percent) .....		15.3	16.3	17.9	18.9	19.7
Ratio of exports to shipments (percent) .....		6.4	8.3	8.9	9.6	10.5

See footnotes at end of table.

**Table B-2--Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH053	Knit fabrics:					
	Establishments (number) .....	525	521	508	523	523
	Employees (thousands) .....	44	44	44	45	45
	Capacity utilization (percent) .....	75	72	77	74	(1)
	U.S. shipments (million dollars) .....	6,575	5,923	6,541	6,888	6,847
	U.S. exports (million dollars) .....	121	218	287	328	332
	U.S. imports (million dollars) .....	117	144	183	217	286
	Apparent U.S. consumption (million dollars) .....	6,571	5,849	6,437	6,777	6,801
	Trade balance (million dollars) .....	4	74	104	111	46
	Ratio of imports to apparent consumption (percent) .....	1.8	2.5	2.8	3.2	4.2
	Ratio of exports to shipments (percent) .....	1.8	3.7	4.4	4.8	4.8
CH054	Miscellaneous fabrics:					
	Establishments (number) .....	549	581	549	540	540
	Employees (thousands) .....	29	28	28	28	25
	Capacity utilization (percent) .....	76	77	79	78	78
	U.S. shipments (million dollars) .....	1,341	1,418	1,340	1,407	1,477
	U.S. exports (million dollars) .....	116	147	174	179	199
	U.S. imports (million dollars) .....	90	90	86	100	105
	Apparent U.S. consumption (million dollars) .....	1,315	1,361	1,252	1,328	1,383
	Trade balance (million dollars) .....	26	57	88	79	94
	Ratio of imports to apparent consumption (percent) .....	6.8	6.6	6.9	7.5	7.6
	Ratio of exports to shipments (percent) .....	8.7	10.4	13.0	12.7	13.5
CH055	Coated, covered, impregnated or laminated textile fabric					
	Establishments (number) .....	245	254	250	260	279
	Employees (thousands) .....	12	12	11	11	10
	Capacity utilization (percent) .....	68	68	81	77	78
	U.S. shipments (million dollars) .....	2,075	1,960	1,868	2,055	2,100
	U.S. exports (million dollars) .....	239	287	313	360	370
	U.S. imports (million dollars) .....	172	185	189	200	206
	Apparent U.S. consumption (million dollars) .....	2,008	1,858	1,744	1,895	1,936
	Trade balance (million dollars) .....	67	102	124	160	164
	Ratio of imports to apparent consumption (percent) .....	8.6	10.0	10.8	10.6	10.6
	Ratio of exports to shipments (percent) .....	11.5	14.6	16.8	17.5	17.6
CH056	Cordage, nets, and netting:					
	Establishments (number) .....	205	200	198	215	210
	Employees (thousands) .....	7	7	7	7	7
	Capacity utilization (percent) .....	78	74	75	82	80
	U.S. shipments (million dollars) .....	591	576	566	564	559
	U.S. exports (million dollars) .....	32	44	48	52	50
	U.S. imports (million dollars) .....	127	137	127	124	123
	Apparent U.S. consumption (million dollars) .....	686	669	645	636	632
	Trade balance (million dollars) .....	-95	-93	-79	-72	-73
	Ratio of imports to apparent consumption (percent) .....	18.5	20.5	19.7	19.5	19.5
	Ratio of exports to shipments (percent) .....	5.4	7.6	8.5	9.2	8.9

See footnotes at end of table.

**Table B-2--Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH057	Certain textile articles and fabrics suitable for industry use:					
	Establishments (number) .....	68	74	75	78	80
	Employees (thousands) .....	15	14	15	15	14
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	3,102	3,020	3,050	3,100	3,250
	U.S. exports (million dollars) .....	153	184	211	268	277
	U.S. imports (million dollars) .....	112	135	142	144	177
	Apparent U.S. consumption (million dollars) .....	3,061	2,971	2,981	2,976	3,150
	Trade balance (million dollars) .....	41	49	69	124	100
	Ratio of imports to apparent consumption (percent) .....	3.7	4.5	4.8	4.8	5.6
	Ratio of exports to shipments (percent) .....	4.9	6.1	6.9	8.6	8.5
	CH058	Miscellaneous textiles and articles:				
Establishments (number) .....		3,685	3,761	3,800	3,800	3,800
Employees (thousands) .....		83	82	83	83	86
Capacity utilization (percent) .....		85	85	85	85	85
U.S. shipments (million dollars) .....		5,653	6,501	7,000	7,200	7,500
U.S. exports (million dollars) .....		466	531	605	709	793
U.S. imports (million dollars) .....		527	622	794	894	983
Apparent U.S. consumption (million dollars) .....		5,714	6,592	7,189	7,385	7,690
Trade balance (million dollars) .....		-61	-91	-189	-185	-190
Ratio of imports to apparent consumption (percent) .....		9.2	9.4	11.0	12.1	12.8
Ratio of exports to shipments (percent) .....		8.2	8.2	8.6	9.8	10.6
CH059		Sacks and bags of textile materials:				
	Establishments (number) .....	122	140	135	140	130
	Employees (thousands) .....	5	5	5	5	4
	Capacity utilization (percent) .....	88	82	77	73	70
	U.S. shipments (million dollars) .....	281	290	285	295	305
	U.S. exports (million dollars) .....	12	15	16	17	30
	U.S. imports (million dollars) .....	30	41	52	43	50
	Apparent U.S. consumption (million dollars) .....	299	316	321	321	325
	Trade balance (million dollars) .....	-18	-26	-36	-26	-20
	Ratio of imports to apparent consumption (percent) .....	10.0	13.0	16.2	13.4	15.4
	Ratio of exports to shipments (percent) .....	4.3	5.2	5.6	5.8	9.8
	CH060	Carpets and rugs:				
Establishments (number) .....		580	596	566	560	608
Employees (thousands) .....		62	62	57	58	60
Capacity utilization (percent) .....		82	76	75	82	84
U.S. shipments (million dollars) .....		9,826	9,611	8,555	9,000	9,279
U.S. exports (million dollars) .....		383	551	704	725	730
U.S. imports (million dollars) .....		613	598	591	709	671
Apparent U.S. consumption (million dollars) .....		10,056	9,658	8,442	8,984	9,220
Trade balance (million dollars) .....		-230	-47	113	16	59
Ratio of imports to apparent consumption (percent) .....		6.1	6.2	7.0	7.9	7.3
Ratio of exports to shipments (percent) .....		3.9	5.7	8.2	8.1	7.9

See footnotes at end of table.

**Table B-2--Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH061	Home furnishings:					
	Establishments (number) .....	2,045	2,123	2,080	2,100	2,081
	Employees (thousands) .....	70	68	67	66	65
	Capacity utilization (percent) .....	70	68	68	82	80
	U.S. shipments (million dollars) .....	5,890	6,010	6,100	6,214	6,320
	U.S. exports (million dollars) .....	144	191	251	249	253
	U.S. imports (million dollars) .....	738	751	726	827	939
	Apparent U.S. consumption (million dollars) .....	6,484	6,570	6,575	6,792	7,006
	Trade balance (million dollars) .....	-594	-560	-475	-578	-686
	Ratio of imports to apparent consumption (percent) .....	11.4	11.4	11.0	12.2	13.4
	Ratio of exports to shipments (percent) .....	2.4	3.2	4.1	4.0	4.0
CH062	Men's and boys' suits and sport coats:					
	Establishments (number) .....	370	348	345	330	325
	Employees (thousands) .....	55	50	48	45	43
	Capacity utilization (percent) .....	84	82	88	85	(1)
	U.S. shipments (million dollars) .....	2,798	2,744	2,485	2,510	2,282
	U.S. exports (million dollars) .....	51	85	98	114	125
	U.S. imports (million dollars) .....	579	513	561	662	664
	Apparent U.S. consumption (million dollars) .....	3,326	3,172	2,948	3,058	2,821
	Trade balance (million dollars) .....	-528	-428	-463	-548	-539
	Ratio of imports to apparent consumption (percent) .....	17.4	16.2	19.0	21.6	23.5
	Ratio of exports to shipments (percent) .....	1.8	3.1	3.9	4.5	5.5
CH063	Men's and boys' coats and jackets:					
	Establishments (number) .....	370	348	345	330	325
	Employees (thousands) .....	55	50	48	45	43
	Capacity utilization (percent) .....	84	82	88	85	(1)
	U.S. shipments (million dollars) .....	1,201	1,163	1,037	1,186	1,153
	U.S. exports (million dollars) .....	34	50	81	103	102
	U.S. imports (million dollars) .....	1,058	1,166	1,039	1,285	1,563
	Apparent U.S. consumption (million dollars) .....	2,225	2,279	1,995	2,368	2,614
	Trade balance (million dollars) .....	-1,024	-1,116	-958	-1,182	-1,461
	Ratio of imports to apparent consumption (percent) .....	47.6	51.2	52.1	54.3	59.8
	Ratio of exports to shipments (percent) .....	2.8	4.3	7.8	8.7	8.8
CH064	Men's and boys' trousers:					
	Establishments (number) .....	1,167	1,203	1,205	1,155	1,150
	Employees (thousands) .....	154	146	151	153	152
	Capacity utilization (percent) .....	87	86	86	90	(1)
	U.S. shipments (million dollars) .....	5,420	5,746	6,071	6,545	6,416
	U.S. exports (million dollars) .....	425	529	663	843	971
	U.S. imports (million dollars) .....	1,933	2,122	2,304	2,666	2,797
	Apparent U.S. consumption (million dollars) .....	6,928	7,339	7,712	8,368	8,242
	Trade balance (million dollars) .....	-1,508	-1,593	-1,641	-1,823	-1,826
	Ratio of imports to apparent consumption (percent) .....	27.9	28.9	29.9	31.9	33.9
	Ratio of exports to shipments (percent) .....	7.8	9.2	10.9	12.9	15.1

See footnotes at end of table.

**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH065	Women's and girls' trousers:					
	Establishments (number) .....	3,000	3,260	3,270	3,170	3,175
	Employees (thousands) .....	123	110	110	113	110
	Capacity utilization (percent) .....	73	70	90	92	(1)
	U.S. shipments (million dollars) .....	3,377	3,664	3,790	4,265	4,529
	U.S. exports (million dollars) .....	130	141	215	312	325
	U.S. imports (million dollars) .....	2,484	2,692	2,737	3,342	3,354
	Apparent U.S. consumption (million dollars) .....	5,731	6,215	6,312	4,010	4,010
	Trade balance (million dollars) .....	-2,354	-2,551	-2,522	-3,030	-3,029
	Ratio of imports to apparent consumption (percent) .....	43.3	43.3	43.4	83.3	84
	Ratio of exports to shipments (percent) .....	3.8	3.8	5.7	7.3	7
CH066	Shirts and blouses:					
	Establishments (number) .....	2,095	2,085	2,002	2,135	2,130
	Employees (thousands) .....	145	135	125	130	124
	Capacity utilization (percent) .....	87	89	90	90	(1)
	U.S. shipments (million dollars) .....	9,000	8,777	8,842	9,611	9,845
	U.S. exports (million dollars) .....	295	398	455	664	854
	U.S. imports (million dollars) .....	4,520	5,057	7,410	9,173	10,042
	Apparent U.S. consumption (million dollars) .....	13,225	13,436	15,797	18,120	19,033
	Trade balance (million dollars) .....	-4,225	-4,659	-6,955	-8,509	-9,188
	Ratio of imports to apparent consumption (percent) .....	34.2	37.6	46.9	50.6	53
	- Ratio of exports to shipments (percent) .....	3.3	4.5	5.1	6.9	9
CH067	Sweaters:					
	Establishments (number) .....	415	394	356	330	325
	Employees (thousands) .....	23	22	21	22	21
	Capacity utilization (percent) .....	73	68	90	88	(1)
	U.S. shipments (million dollars) .....	1,019	753	737	768	781
	U.S. exports (million dollars) .....	12	16	27	27	32
	U.S. imports (million dollars) .....	4,245	4,089	1,917	2,149	1,961
	Apparent U.S. consumption (million dollars) .....	5,252	4,826	2,627	2,890	2,710
	Trade balance (million dollars) .....	-4,233	-4,073	-1,890	-2,122	-1,929
	Ratio of imports to apparent consumption (percent) .....	80.8	84.7	73.0	74.4	72
	Ratio of exports to shipments (percent) .....	1.2	2.1	3.7	3.5	4
CH068	Women's and girls' suits, skirts, and coats:					
	Establishments (number) .....	1,423	1,438	1,424	1,475	1,405
	Employees (thousands) .....	56	55	52	46	40
	Capacity utilization (percent) .....	88	89	93	92	(1)
	U.S. shipments (million dollars) .....	3,430	3,114	3,653	3,580	3,625
	U.S. exports (million dollars) .....	121	175	204	260	283
	U.S. imports (million dollars) .....	2,259	2,611	2,635	3,011	3,244
	Apparent U.S. consumption (million dollars) .....	5,568	5,550	6,084	6,331	6,586
	Trade balance (million dollars) .....	-2,138	-2,436	-2,431	-2,751	-2,961
	Ratio of imports to apparent consumption (percent) .....	40.6	47.0	43.3	47.6	49.3
	Ratio of exports to shipments (percent) .....	3.5	5.6	5.6	7.3	7.8

See footnotes at end of table.



**Table B-2-Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH069	Women's and girls' dresses:					
	Establishments (number) .....	2,801	2,592	2,514	2,410	2,350
	Employees (thousands) .....	99	93	87	80	70
	Capacity utilization (percent) .....	(1)	(1)	87	83	(1)
	U.S. shipments (million dollars) .....	4,384	4,734	4,530	4,226	4,062
	U.S. exports (million dollars) .....	42	50	65	98	105
	U.S. imports (million dollars) .....	855	946	938	1,011	1,082
	Apparent U.S. consumption (million dollars) .....	5,197	5,630	5,403	5,139	5,039
	Trade balance (million dollars) .....	-813	-896	-873	-913	-977
	Ratio of imports to apparent consumption (percent) .....	16.5	16.8	17.4	19.7	21.5
	Ratio of exports to shipments (percent) .....	1.0	1.1	1.4	2.3	2.6
CH070	Robes, nightwear, and underwear:					
	Establishments (number) .....	817	811	785	777	775
	Employees (thousands) .....	115	111	109	105	100
	Capacity utilization (percent) .....	96	91	93	94	(1)
	U.S. shipments (million dollars) .....	5,086	3,826	3,865	3,795	3,757
	U.S. exports (million dollars) .....	154	157	302	382	512
	U.S. imports (million dollars) .....	1,507	1,076	1,293	1,563	1,909
	Apparent U.S. consumption (million dollars) .....	6,439	4,745	4,856	4,976	5,154
	Trade balance (million dollars) .....	-1,353	-919	-991	-1,181	-1,397
	Ratio of imports to apparent consumption (percent) .....	23.4	22.7	26.6	31.4	37.0
	Ratio of exports to shipments (percent) .....	3.0	4.1	7.8	10.1	13.6
CH071	Hosiery:					
	Establishments (number) .....	412	419	420	420	457
	Employees (thousands) .....	73	71	69	70	66
	Capacity utilization (percent) .....	87	80	90	83	(1)
	U.S. shipments (million dollars) .....	3,570	3,848	3,862	3,997	4,235
	U.S. exports (million dollars) .....	59	73	98	135	206
	U.S. imports (million dollars) .....	148	186	314	178	231
	Apparent U.S. consumption (million dollars) .....	3,659	3,961	4,078	4,040	4,260
	Trade balance (million dollars) .....	-89	-113	-216	-43	-25
	Ratio of imports to apparent consumption (percent) .....	4.0	4.7	7.7	4.4	5.4
	Ratio of exports to shipments (percent) .....	1.7	1.9	2.5	3.4	4.9
CH072	Body-supporting garments:					
	Establishments (number) .....	124	113	111	110	110
	Employees (thousands) .....	14	12	11	12	12
	Capacity utilization (percent) .....	85	86	(1)	(1)	(1)
	U.S. shipments (million dollars) .....	1,188	1,154	1,368	1,547	1,581
	U.S. exports (million dollars) .....	176	182	231	278	316
	U.S. imports (million dollars) .....	338	366	444	557	639
	Apparent U.S. consumption (million dollars) .....	1,350	1,338	1,581	1,826	1,904
	Trade balance (million dollars) .....	-162	-184	-213	-279	-323
	Ratio of imports to apparent consumption (percent) .....	25.0	27.4	28.1	30.5	33.6
	Ratio of exports to shipments (percent) .....	14.8	15.8	16.9	18.0	20.0

See footnotes at end of table.

**Table B-2--Continued**  
**Energy and chemicals and textiles sector: Profile of U.S industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH073	Neckwear, handkerchiefs, and scarves <sup>2</sup> :					
	Establishments (number) .....	165	162	170	175	170
	Employees (thousands) .....	8	7	7	7	7
	Capacity utilization (percent) .....	95	90	(1)	(1)	(1)
	U.S. shipments (million dollars) .....	526	498	525	484	491
	U.S. exports (million dollars) .....	16	17	20	21	31
	U.S. imports (million dollars) .....	423	296	283	294	322
	Apparent U.S. consumption (million dollars) .....	933	777	788	757	782
	Trade balance (million dollars) .....	-407	-279	-263	-273	-291
	Ratio of imports to apparent consumption (percent)- .....	45.3	38.1	35.9	38.8	41.2
	Ratio of exports to shipments (percent) .....	3.0	3.4	3.8	4.3	6.3
CH074	Gloves, including gloves for sports:					
	Establishments (number) .....	220	215	210	195	190
	Employees (thousands) .....	12	12	11	11	11
	Capacity utilization (percent) .....	78	75	77	77	(1)
	U.S. shipments (million dollars) .....	865	833	801	795	793
	U.S. exports (million dollars) .....	182	165	165	166	157
	U.S. imports (million dollars) .....	890	875	912	1,124	1,349
	Apparent U.S. consumption (million dollars) .....	1,573	1,543	1,548	1,753	1,985
	Trade balance (million dollars) .....	-708	-710	-747	-958	-1,192
	Ratio of imports to apparent consumption (percent) .....	56.6	56.7	58.9	64.1	68.0
	Ratio of exports to shipments (percent) .....	21.0	19.8	20.6	20.9	19.8
CH075	Headwear:					
	Establishments (number) .....	316	312	310	315	320
	Employees (thousands) .....	15	16	16	19	19
	Capacity utilization (percent) .....	65	75	84	85	(1)
	U.S. shipments (million dollars) .....	745	758	823	860	903
	U.S. exports (million dollars) .....	43	64	89	103	109
	U.S. imports (million dollars) .....	341	429	495	687	778
	Apparent U.S. consumption (million dollars) .....	1,043	1,123	1,229	1,444	1,572
	Trade balance (million dollars) .....	-298	-365	-406	-584	-669
	Ratio of imports to apparent consumption (percent) .....	32.7	38.2	40.3	47.6	49.5
	Ratio of exports to shipments (percent) .....	5.8	8.4	10.8	12.0	12.1
CH076	Leather apparel and accessories:					
	Establishments (number) .....	492	490	470	430	425
	Employees (thousands) .....	13	13	12	12	12
	Capacity utilization (percent) .....	75	75	77	79	(1)
	U.S. shipments (million dollars) .....	455	471	506	515	515
	U.S. exports (million dollars) .....	63	75	96	99	97
	U.S. imports (million dollars) .....	1,310	1,354	1,226	1,411	1,418
	Apparent U.S. consumption (million dollars) .....	1,702	1,750	1,636	1,827	1,836
	Trade balance (million dollars) .....	-1,247	-1,279	-1,130	-1,312	-1,321
	Ratio of imports to apparent consumption (percent) .....	77.0	77.4	74.9	77.2	77.2
	Ratio of exports to shipments (percent) .....	13.8	15.9	-144.8	19.2	18.8

See footnotes at end of table.

**Table B-2—Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH077	Fur apparel and other fur articles:					
	Establishments (number) .....	341	287	236	170	175
	Employees (thousands) .....	2	2	2	1	1
	Capacity utilization (percent) .....	(1)	(1)	94	95	(1)
	U.S. shipments (million dollars) .....	402	379	257	210	220
	U.S. exports (million dollars) .....	67	54	61	67	55
	U.S. imports (million dollars) .....	370	249	172	140	173
	Apparent U.S. consumption (million dollars) .....	705	574	368	283	338
	Trade balance (million dollars) .....	-303	-195	-111	-73	-118
	Ratio of imports to apparent consumption (percent) .....	52.5	43.4	46.7	49.5	51.2
	Ratio of exports to shipments (percent) .....	16.7	14.2	23.7	31.9	25.0
CH078	Rubber, plastics, and coated-fabric apparel:					
	Establishments (number) .....	67	67	65	(1)	(1)
	Employees (thousands) .....	3	3	3	3	3
	Capacity utilization (percent) .....	65	65	63	(1)	(1)
	U.S. shipments (million dollars) .....	159	149	145	140	135
	U.S. exports (million dollars) .....	31	31	54	48	70
	U.S. imports (million dollars) .....	167	149	127	140	160
	Apparent U.S. consumption (million dollars) .....	295	267	218	232	225
	Trade balance (million dollars) .....	-136	-118	-73	-92	-90
	Ratio of imports to apparent consumption (percent) .....	56.6	55.8	58.3	60.3	71.1
	Ratio of exports to shipments (percent) .....	19.5	20.8	37.2	34.3	51.9
CH079	Nonwoven and related products:					
	Establishments (number) .....	77	78	80	82	85
	Employees (thousands) .....	9	9	9	9	9
	Capacity utilization (percent) .....	77	82	86	85	90
	U.S. shipments (million dollars) .....	3,213	3,341	3,377	3,400	3,550
	U.S. exports (million dollars) .....	250	367	378	407	447
	U.S. imports (million dollars) .....	181	306	360	436	435
	Apparent U.S. consumption (million dollars) .....	3,144	3,280	3,359	3,429	3,538
	Trade balance (million dollars) .....	69	61	18	-29	12
	Ratio of imports to apparent consumption (percent) .....	5.8	9.3	10.7	12.7	12.3
	Ratio of exports to shipments (percent) .....	7.8	11.0	11.2	12.0	12.6
CH080	Other wearing apparel:					
	Establishments (number) .....	(1)	(1)	(1)	1	(1)
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) .....	(1)	(1)	(1)	(1)	(1)
	U.S. exports (million dollars) .....	188	227	288	368	452
	U.S. imports (million dollars) .....	1,095	1,225	1,259	1,612	2,006
	Apparent U.S. consumption (million dollars) .....	(1)	(1)	(1)	(1)	(1)
	Trade balance (million dollars) .....	-907	-998	-971	-1,244	-1,554
	Ratio of imports to apparent consumption (percent) .....	(1)	(1)	(1)	(1)	(1)
	Ratio of exports to shipments (percent) .....	(1)	(1)	(1)	(1)	(1)

See footnotes at end of table.

**Table B-2--Continued**  
**Energy and chemicals and textiles sector: Profile of U.S. industry and market, by industry/ commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
CH081	Apparel fasteners:					
	Establishments (number) .....	120	110	110	104	96
	Employees (thousands) .....	7	7	6	6	5
	Capacity utilization (percent) .....	82	79	84	85	86
	U.S. shipments (million dollars) .....	450	461	468	475	480
	U.S. exports (million dollars) .....	44	51	59	75	81
	U.S. imports (million dollars) .....	79	90	109	120	122
	Apparent U.S. consumption (million dollars) .....	485	500	518	520	521
	Trade balance (million dollars) .....	-35	-39	-50	-45	-41
	Ratio of imports to apparent consumption (percent) .....	16.3	18.0	21.0	23.1	23.4
	Ratio of exports to shipments (percent) .....	9.8	11.1	12.6	15.8	16.9
CH082	Footwear and footwear parts:					
	Establishments (number) .....	700	700	700	700	690
	Employees (thousands) .....	89	84	79	77	75
	Capacity utilization (percent) .....	83	81	81	83	(1)
	U.S. shipments (million dollars) .....	4,314	4,422	4,291	4,610	5,070
	U.S. exports (million dollars) .....	369	479	542	603	604
	U.S. imports (million dollars) .....	8,381	9,538	9,542	10,141	11,105
	Apparent U.S. consumption (million dollars) .....	12,326	13,481	13,291	14,148	15,571
	Trade balance (million dollars) .....	-8,012	-9,059	-9,000	-9,538	-10,501
	Ratio of imports to apparent consumption (percent) .....	68.0	70.8	71.8	71.7	71.3
	Ratio of exports to shipments (percent) .....	8.6	10.8	12.6	13.1	11.9

<sup>1</sup> Not available.

<sup>2</sup> Includes neckties, mufflers, scarves, shawls, and veils.

**Table B-3**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
	Minerals and metals:					
MM001	Clays and nonmetallic minerals and products, not elsewhere specified or included:					
	Establishments (number) .....	315	323	323	320	320
	Employees (thousands) .....	14	14	14	14	14
	Capacity utilization (percent) .....	85	89	76	70	72
	U.S. shipments (million dollars) .....	2,500	2,600	2,600	2,400	2,450
	U.S. exports (million dollars) .....	634	701	748	847	855
	U.S. imports (million dollars) .....	76	122	87	97	125
	Apparent U.S. consumption (million dollars) .....	1,942	2,021	1,939	1,650	1,720
	Trade balance (million dollars) .....	558	579	661	750	730
	Ratio of imports to apparent consumption (percent) .....	3.9	6.0	4.5	5.9	7.3
	Ratio of exports to shipments (percent) .....	25.4	27.0	28.8	35.3	34.9
MM002	Certain miscellaneous mineral substances:					
	Establishments (number) .....	10	10	10	10	9
	Employees (thousands) .....	2	2	2	2	2
	Capacity utilization (percent) .....	87	85	80	84	82
	U.S. shipments (million dollars) .....	45	42	40	42	40
	U.S. exports (million dollars) .....	5	4	19	3	3
	U.S. imports (million dollars) .....	70	56	41	36	33
	Apparent U.S. consumption (million dollars) .....	110	94	62	75	70
	Trade balance (million dollars) .....	-65	-52	-22	-33	-30
	Ratio of imports to apparent consumption (percent) .....	63.6	59.6	66.1	48.0	47.1
	Ratio of exports to shipments (percent) .....	11.1	9.5	47.5	7.1	7.5
MM003	Iron ores and concentrates:					
	Establishments (number) .....	21	23	23	22	22
	Employees (thousands) .....	7	8	8	8	8
	Capacity utilization (percent) .....	80	75	70	73	73
	U.S. shipments (million dollars) .....	1,901	1,800	1,700	1,700	1,650
	U.S. exports (million dollars) .....	193	123	156	187	167
	U.S. imports (million dollars) .....	520	560	437	396	415
	Apparent U.S. consumption (million dollars) .....	2,228	2,237	1,981	1,909	1,898
	Trade balance (million dollars) .....	-327	-437	-281	-209	-248
	Ratio of imports to apparent consumption (percent) .....	23.3	25.0	22.1	20.7	21.9
	Ratio of exports to shipments (percent) .....	10.2	6.8	9.2	11.0	10.1
MM004	Copper ores and concentrates:					
	Establishments (number) .....	68	62	65	65	50
	Employees (thousands) .....	12	13	14	14	14
	Capacity utilization (percent) .....	84	84	85	91	91
	U.S. shipments (million dollars) .....	2,595	2,520	2,350	2,500	2,150
	U.S. exports (million dollars) .....	571	446	382	445	342
	U.S. imports (million dollars) .....	53	134	67	107	42
	Apparent U.S. consumption (million dollars) .....	2,077	2,208	2,035	2,162	1,850
	Trade balance (million dollars) .....	518	312	315	338	300
	Ratio of imports to apparent consumption (percent) .....	2.6	6.1	3.3	4.9	2.3
	Ratio of exports to shipments (percent) .....	22.0	17.7	16.3	17.8	15.9

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM005	Lead ores and residues:					
	Establishments (number) .....	15	15	15	15	15
	Employees (thousands) .....	2	2	2	2	2
	Capacity utilization (percent) .....	62	65	64	54	52
	U.S. shipments (million dollars) .....	365	500	350	300	275
	U.S. exports (million dollars) .....	30	62	38	32	14
	U.S. imports (million dollars) .....	4	4	3	2	0
	Apparent U.S. consumption (million dollars) .....	339	442	315	270	261
	Trade balance (million dollars) .....	26	58	35	30	14
	Ratio of imports to apparent consumption (percent) .....	1.2	0.9	1.0	0.7	0.0
	Ratio of exports to shipments (percent) .....	8.2	12.4	10.9	10.7	5.1
MM006	Zinc ores and residues:					
	Establishments (number) .....	25	26	26	26	26
	Employees (thousands) .....	2	3	2	2	2
	Capacity utilization (percent) .....	79	85	86	87	83
	U.S. shipments (million dollars) .....	500	845	600	675	500
	U.S. exports (million dollars) .....	75	269	232	250	137
	U.S. imports (million dollars) .....	32	24	28	46	18
	Apparent U.S. consumption (million dollars) .....	457	600	396	471	381
	Trade balance (million dollars) .....	43	245	204	204	119
	Ratio of imports to apparent consumption (percent) .....	7.0	4.0	7.1	9.8	4.7
	Ratio of exports to shipments (percent) .....	15.0	31.8	38.7	37.0	27.4
MM007	Certain ores, concentrates, ash, and residues:					
	Establishments (number) .....	73	73	47	46	41
	Employees (thousands) .....	4	4	3	2	2
	Capacity utilization (percent) .....	40	40	45	55	50
	U.S. shipments (million dollars) .....	870	720	490	430	390
	U.S. exports (million dollars) .....	550	361	292	280	191
	U.S. imports (million dollars) .....	630	495	473	475	476
	Apparent U.S. consumption (million dollars) .....	950	854	671	625	675
	Trade balance (million dollars) .....	-80	-134	-181	-195	-285
	Ratio of imports to apparent consumption (percent) .....	66.3	58.0	70.5	76.0	70.5
	Ratio of exports to shipments (percent) .....	63.2	50.1	59.6	65.1	49.0
MM008	Precious metal ores and concentrates:					
	Establishments (number) .....	460	510	500	500	500
	Employees (thousands) .....	18	18	18	17	17
	Capacity utilization (percent) .....	94	99	85	87	(1)
	U.S. shipments (million dollars) .....	2,890	3,105	2,895	3,070	3,200
	U.S. exports (million dollars) .....	2	13	4	5	3
	U.S. imports (million dollars) .....	4	30	11	4	20
	Apparent U.S. consumption (million dollars) .....	2,892	3,122	2,902	3,069	3,217
	Trade balance (million dollars) .....	2	-17	-7	1	-17
	Ratio of imports to apparent consumption (percent) .....	0.1	1.0	0.4	0.1	0.6
	Ratio of exports to shipments (percent) .....	0.1	0.4	0.1	0.2	0.1

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM009	Certain nonmetallic minerals and articles:					
	Establishments (number) .....	20,000	20,000	20,000	20,000	20,000
	Employees (thousands) .....	300	300	300	300	300
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)
	U.S. shipments (million dollars) .....	38,600	39,000	39,000	42,000	45,000
	U.S. exports (million dollars) .....	694	817	865	926	861
	U.S. imports (million dollars) .....	1,599	1,642	1,392	1,304	1,438
	Apparent U.S. consumption (million dollars) .....	39,505	39,825	39,527	42,378	45,577
	Trade balance (million dollars) .....	-905	-825	-527	-378	-577
	Ratio of imports to apparent consumption (percent) .....	4.0	4.1	3.5	3.1	3.2
	Ratio of exports to shipments (percent) .....	1.8	2.1	2.2	2.2	1.9
MM010	Industrial ceramics:					
	Establishments (number) .....	200	180	180	180	190
	Employees (thousands) .....	14	12	12	12	11
	Capacity utilization (percent) .....	76	74	73	73	73
	U.S. shipments (million dollars) .....	2,400	2,350	2,200	2,350	2,400
	U.S. exports (million dollars) .....	325	374	373	386	387
	U.S. imports (million dollars) .....	254	233	265	301	330
	Apparent U.S. consumption (million dollars) .....	2,329	2,209	2,092	2,265	2,343
	Trade balance (million dollars) .....	71	141	108	85	57
	Ratio of imports to apparent consumption (percent) .....	10.9	10.5	12.7	13.3	14.1
	Ratio of exports to shipments (percent) .....	13.5	15.9	17.0	16.4	16.1
MM011	Ceramic bricks and miscellaneous ceramic construction article					
	Establishments (number) .....	326	328	328	328	328
	Employees (thousands) .....	20	19	19	19	19
	Capacity utilization (percent) .....	77	74	71	71	75
	U.S. shipments (million dollars) .....	1,284	1,200	900	900	1,000
	U.S. exports (million dollars) .....	12	18	18	17	17
	U.S. imports (million dollars) .....	27	22	20	21	22
	Apparent U.S. consumption (million dollars) .....	1,299	1,204	902	904	1,005
	Trade balance (million dollars) .....	-15	-4	-2	-4	-5
	Ratio of imports to apparent consumption (percent) .....	2.1	1.8	2.2	2.3	2.2
	Ratio of exports to shipments (percent) .....	0.9	1.5	2.0	1.9	1.7
MM012	Ceramic floor and wall tiles:					
	Establishments (number) .....	118	150	150	110	110
	Employees (thousands) .....	10	10	10	10	10
	Capacity utilization (percent) .....	77	74	71	(1)	(1)
	U.S. shipments (million dollars) .....	698	687	639	640	661
	U.S. exports (million dollars) .....	18	21	21	19	23
	U.S. imports (million dollars) .....	431	421	365	419	472
	Apparent U.S. consumption (million dollars) .....	1,111	1,087	983	1,040	1,110
	Trade balance (million dollars) .....	-413	-400	-344	-400	-449
	Ratio of imports to apparent consumption (percent) .....	38.8	38.7	37.1	40.3	42.5
	Ratio of exports to shipments (percent) .....	2.6	3.1	3.3	3.0	3.5

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
MM013	Ceramic household articles:						
	Establishments (number) .....	205	200	200	200	200	
	Employees (thousands) .....	12	12	12	11	11	
	Capacity utilization (percent) .....	(1)	(1)	81	83	(1)	
	U.S. shipments (million dollars) .....	670	680	700	700	710	
	U.S. exports (million dollars) .....	64	71	87	103	110	
	U.S. imports (million dollars) .....	1,235	1,208	1,236	1,391	1,426	
	Apparent U.S. consumption (million dollars) .....	1,841	1,817	1,849	1,988	2,026	
	Trade balance (million dollars) .....	-1,171	-1,137	-1,149	-1,288	-1,316	
	Ratio of imports to apparent consumption (percent) .....	67.1	66.5	66.8	70.0	70.4	
	Ratio of exports to shipments (percent) .....	9.6	10.4	12.4	14.7	15.5	
	MM014	Flat glass and certain flat glass products:					
		Establishments (number) .....	1,200	1,300	1,300	1,200	1,200
Employees (thousands) .....		55	55	52	55	58	
Capacity utilization (percent) .....		85	84	93	94	(1)	
U.S. shipments (million dollars) .....		6,800	6,600	6,300	6,800	7,800	
U.S. exports (million dollars) .....		533	751	786	836	951	
U.S. imports (million dollars) .....		632	614	584	599	698	
Apparent U.S. consumption (million dollars) .....		6,899	6,463	6,098	6,563	7,547	
Trade balance (million dollars) .....		-99	137	202	237	253	
Ratio of imports to apparent consumption (percent) .....		9.2	9.5	9.6	9.1	9.2	
Ratio of exports to shipments (percent) .....		7.8	11.4	12.5	12.3	12.2	
MM015		Glass containers:					
		Establishments (number) .....	137	136	140	135	135
	Employees (thousands) .....	39	37	35	35	36	
	Capacity utilization (percent) .....	89	90	85	93	(1)	
	U.S. shipments (million dollars) .....	4,760	4,915	4,847	4,900	5,100	
	U.S. exports (million dollars) .....	48	100	122	155	133	
	U.S. imports (million dollars) .....	177	216	236	263	265	
	Apparent U.S. consumption (million dollars) .....	4,889	5,031	4,961	5,008	5,232	
	Trade balance (million dollars) .....	-129	-116	-114	-108	-132	
	Ratio of imports to apparent consumption (percent) .....	3.6	4.3	4.8	5.3	5.1	
	Ratio of exports to shipments (percent) .....	1.0	2.0	2.5	3.2	2.6	
	MM016	Household glassware:					
		Establishments (number) .....	237	237	237	237	237
Employees (thousands) .....		26	26	26	26	26	
Capacity utilization (percent) .....		(1)	(1)	(1)	(1)	(1)	
U.S. shipments (million dollars) .....		1,382	1,400	1,500	1,600	1,600	
U.S. exports (million dollars) .....		86	123	137	150	167	
U.S. imports (million dollars) .....		513	524	513	533	568	
Apparent U.S. consumption (million dollars) .....		1,809	1,801	1,876	1,983	2,001	
Trade balance (million dollars) .....		-427	-401	-376	-383	-401	
Ratio of imports to apparent consumption (percent) .....		28.4	29.1	27.3	26.9	28.4	
Ratio of exports to shipments (percent) .....		6.2	8.8	9.1	9.4	10.4	

See footnotes at end of table.



**Table B-3--Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
MM017	Certain glass and glass products:						
	Establishments (number) .....	320	340	390	370	370	
	Employees (thousands) .....	19	20	21	21	22	
	Capacity utilization (percent) .....	82	77	82	81	(1)	
	U.S. shipments (million dollars) .....	2,100	2,200	2,400	2,400	2,400	
	U.S. exports (million dollars) .....	293	342	361	369	387	
	U.S. imports (million dollars) .....	295	283	318	400	408	
	Apparent U.S. consumption (million dollars) .....	2,102	2,141	2,357	2,431	2,421	
	Trade balance (million dollars) .....	-2	59	43	-31	-21	
	Ratio of imports to apparent consumption (percent) .....	14.0	13.2	13.5	16.5	16.9	
	Ratio of exports to shipments (percent) .....	14.0	15.5	15.0	15.4	16.1	
	MM018	Fiber glass products:					
		Establishments (number) .....	259	259	259	259	259
Employees (thousands) .....		40	39	34	35	36	
Capacity utilization (percent) .....		62	59	87	91	(1)	
U.S. shipments (million dollars) .....		5,300	5,100	4,100	4,700	4,800	
U.S. exports (million dollars) .....		356	347	384	392	387	
U.S. imports (million dollars) .....		112	112	127	160	200	
Apparent U.S. consumption (million dollars) .....		5,056	4,865	3,843	4,468	4,613	
Trade balance (million dollars) .....		244	235	257	232	187	
Ratio of imports to apparent consumption (percent) .....		2.2	2.3	3.3	3.6	4.3	
Ratio of exports to shipments (percent) .....		6.7	6.8	9.4	8.3	8.1	
MM019		Natural and synthetic gemstones:					
		Establishments (number) .....	454	454	454	454	454
	Employees (thousands) .....	7	7	7	7	7	
	Capacity utilization (percent) .....	(1)	(1)	(1)	(1)	(1)	
	U.S. shipments (million dollars) .....	1,400	600	500	650	400	
	U.S. exports (million dollars) .....	1,235	436	324	476	231	
	U.S. imports (million dollars) .....	5,078	4,605	4,623	4,783	5,739	
	Apparent U.S. consumption (million dollars) .....	5,243	4,769	4,799	4,957	5,908	
	Trade balance (million dollars) .....	-3,843	-4,169	-4,299	-4,307	-5,508	
	Ratio of imports to apparent consumption (percent) .....	96.9	96.6	96.3	96.5	97.1	
	Ratio of exports to shipments (percent) .....	88.2	72.7	64.8	73.2	57.8	
	MM020	Precious metals and related articles:					
		Establishments (number) .....	93	89	89	87	87
Employees (thousands) .....		7	7	7	7	7	
Capacity utilization (percent) .....		80	85	(1)	(1)	(1)	
U.S. shipments (million dollars) .....		6,190	6,950	6,508	7,332	7,226	
U.S. exports (million dollars) .....		3,167	3,815	4,216	4,869	9,895	
U.S. imports (million dollars) .....		3,941	3,758	4,406	4,083	3,994	
Apparent U.S. consumption (million dollars) .....		6,964	6,893	6,698	6,546	1,325	
Trade balance (million dollars) .....		(774)	57	(190)	786	5,901	
Ratio of imports to apparent consumption (percent) .....		56.6	54.5	65.8	62.4	301.4	
Ratio of exports to shipments (percent) .....		51.2	54.9	64.8	66.4	136.9	

See footnotes at end of table.

**Table B-3--Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MMO21	Primary iron products:					
	Establishments (number) .....	18	17	17	17	17
	Employees (thousands) .....	24	24	23	22	22
	Capacity utilization (percent) .....	85	85	85	80	90
	U.S. shipments (million dollars) .....	9,150	9,045	8,475	8,800	9,000
	U.S. exports (million dollars) .....	9	.8	8	8	8
	U.S. imports (million dollars) .....	98	101	129	130	213
	Apparent U.S. consumption (million dollars) .....	9,239	9,138	8,596	8,922	9,205
	Trade balance (million dollars) .....	-89	-93	-121	-122	-205
	Ratio of imports to apparent consumption (percent) .....	1.1	1.1	1.5	1.5	2.3
	Ratio of exports to shipments (percent) .....	0.1	0.1	0.1	0.1	0.1
	MMO22	Ferroalloys:				
Establishments (number) .....		29	29	29	29	29
Employees (thousands) .....		4	4	3	3	3
Capacity utilization (percent) .....		90	75	73	64	72
U.S. shipments (million dollars) .....		942	871	794	740	785
U.S. exports (million dollars) .....		86	94	99	110	95
U.S. imports (million dollars) .....		1,050	908	835	807	760
Apparent U.S. consumption (million dollars) .....		1,906	1,685	1,530	1,437	1,450
Trade balance (million dollars) .....		-964	-814	-736	-697	-665
Ratio of imports to apparent consumption (percent) .....		55.1	53.9	54.6	56.2	52.4
Ratio of exports to shipments (percent) .....		9.1	10.8	12.5	14.9	12.1
MMO23		Iron and steel waste and scrap:				
	Establishments (number) .....	1,200	1,200	1,250	1,200	1,150
	Employees (thousands) .....	23	23	25	23	24
	Capacity utilization (percent) .....	75	75	78	81	86
	U.S. shipments (million dollars) .....	5,508	5,566	5,065	4,870	5,750
	U.S. exports (million dollars) .....	1,75	1,642	1,240	1,107	1,323
	U.S. imports (million dollars) .....	175	180	149	155	182
	Apparent U.S. consumption (million dollars) .....	3,926	4,104	3,974	3,918	4,609
	Trade balance (million dollars) .....	1,582	1,462	1,091	952	1,141
	Ratio of imports to apparent consumption (percent) .....	4.5	4.4	3.7	4.0	3.9
	Ratio of exports to shipments (percent) .....	31.9	29.5	24.5	22.7	23.0
	MMO24	Abrasives and ferrous powders:				
Establishments (number) .....		20	20	20	20	20
Employees (thousands) .....		1	1	1	1	1
Capacity utilization (percent) .....		64	76	79	80	78
U.S. shipments (million dollars) .....		385	387	350	365	325
U.S. exports (million dollars) .....		282	324	342	380	398
U.S. imports (million dollars) .....		432	504	462	495	545
Apparent U.S. consumption (million dollars) .....		535	567	470	480	472
Trade balance (million dollars) .....		-150	-180	-120	-115	-147
Ratio of imports to apparent consumption (percent) .....		80.7	88.9	98.3	103.1	115.5
Ratio of exports to shipments (percent) .....		73.2	83.7	97.7	104.1	122.5

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MMO25	Steel mill products, all grades:					
	Establishments (number) .....	900	880	860	850	850
	Employees (thousands) .....	208	203	193	177	168
	Capacity utilization (percent) .....	85	85	73	81	87
	U.S. shipments (million dollars) .....	52,900	51,000	46,000	49,000	56,000
	U.S. exports (million dollars) .....	2,809	2,794	3,688	3,046	2,811
	U.S. imports (million dollars) .....	8,958	8,398	7,886	7,932	8,670
	Apparent U.S. consumption (million dollars) .....	59,049	56,604	50,198	53,886	61,859
	Trade balance (million dollars) .....	-6,149	-5,604	-4,198	-4,886	-5,859
	Ratio of imports to apparent consumption (percent) .....	15.2	14.8	15.7	14.7	14.0
	Ratio of exports to shipments (percent) .....	5.3	5.5	8.0	6.2	5.0
	MMO26	Steel pipe and tube fittings, and certain cast products:				
Establishments (number) .....		600	600	500	500	500
Employees (thousands) .....		50	50	45	43	42
Capacity utilization (percent) .....		75	80	80	80	80
U.S. shipments (million dollars) .....		4,500	4,500	4,000	3,800	3,600
U.S. exports (million dollars) .....		324	413	477	525	484
U.S. imports (million dollars) .....		365	352	344	285	310
Apparent U.S. consumption (million dollars) .....		4,541	4,439	3,867	3,560	3,426
Trade balance (million dollars) .....		-41	61	133	240	174
Ratio of imports to apparent consumption (percent) .....		8.0	7.9	8.9	8.0	9.0
Ratio of exports to shipments (percent) .....		7.2	9.2	11.9	13.8	13.4
MMO27		Fabricated structurals:				
	Establishments (number) .....	2,420	2,365	2,360	2,242	2,130
	Employees (thousands) .....	85	84	70	65	62
	Capacity utilization (percent) .....	65	65	60	50	55
	U.S. shipments (million dollars) .....	8,434	8,070	8,500	7,650	7,650
	U.S. exports (million dollars) .....	58	84	110	99	117
	U.S. imports (million dollars) .....	79	72	47	45	85
	Apparent U.S. consumption (million dollars) .....	8,455	8,058	8,437	7,596	7,618
	Trade balance (million dollars) .....	-21	12	63	54	32
	Ratio of imports to apparent consumption (percent) .....	0.9	0.9	0.6	0.6	1.1
	Ratio of exports to shipments (percent) .....	0.7	1.0	1.3	1.3	1.5
	MMO28	Metal construction components:				
Establishments (number) .....		3,800	3,750	3,600	3,400	3,400
Employees (thousands) .....		155	153	150	145	145
Capacity utilization (percent) .....		75	75	74	77	78
U.S. shipments (million dollars) .....		10,600	10,300	9,900	9,700	9,950
U.S. exports (million dollars) .....		292	335	377	396	407
U.S. imports (million dollars) .....		182	150	139	124	138
Apparent U.S. consumption (million dollars) .....		10,490	10,115	9,662	9,428	9,681
Trade balance (million dollars) .....		110	185	238	272	269
Ratio of imports to apparent consumption (percent) .....		1.7	1.5	1.4	1.3	1.4
Ratio of exports to shipments (percent) .....		2.8	3.3	3.8	4.1	4.1

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MMO29	Metallic containers:					
	Establishments (number) <sup>2</sup> .....	590	590	565	540	520
	Employees (thousands) .....	70	70	66	60	58
	Capacity utilization (percent) <sup>2</sup> .....	70	75	85	88	90
	U.S. shipments (million dollars) <sup>2</sup> .....	16,548	17,326	17,184	17,080	17,851
	U.S. exports (million dollars) .....	308	401	511	647	635
	U.S. imports (million dollars) .....	269	257	244	271	282
	Apparent U.S. consumption (million dollars) <sup>2</sup> .....	16,509	17,182	16,917	16,704	17,498
	Trade balance (million dollars) .....	39	144	267	376	353
	Ratio of imports to apparent consumption (percent) <sup>2</sup> .....	1.6	1.5	1.4	1.6	1.6
	Ratio of exports to shipments (percent) <sup>2</sup> .....	1.9	2.3	3.0	3.8	3.6
MM030	Wire products of iron, steel, aluminum, copper, and nickel:					
	Establishments (number) .....	1,450	1,450	1,400	1,400	1,400
	Employees (thousands) .....	65	65	64	60	60
	Capacity utilization (percent) .....	80	80	75	80	85
	U.S. shipments (million dollars) .....	10,164	8,602	9,400	9,300	9,500
	U.S. exports (million dollars) .....	175	244	266	297	337
	U.S. imports (million dollars) .....	836	696	570	642	668
	Apparent U.S. consumption (million dollars) .....	10,825	9,054	9,704	9,645	9,831
	Trade balance (million dollars) .....	-661	-452	-304	-345	-331
	Ratio of imports to apparent consumption (percent) .....	7.7	7.7	5.9	6.7	6.8
	Ratio of exports to shipments (percent) .....	1.7	2.8	2.8	3.2	3.5
MM031	Chain:					
	Establishments (number) .....	33	33	33	33	33
	Employees (thousands) .....	7	7	7	7	7
	Capacity utilization (percent) .....	70	70	75	75	80
	U.S. shipments (million dollars) .....	635	625	690	683	785
	U.S. exports (million dollars) .....	326	312	343	311	326
	U.S. imports (million dollars) .....	427	476	478	498	556
	Apparent U.S. consumption (million dollars) .....	736	789	825	870	1,015
	Trade balance (million dollars) .....	-101	-164	135	-187	-230
	Ratio of imports to apparent consumption (percent) .....	58.0	60.3	57.9	57.2	54.8
	Ratio of exports to shipments (percent) .....	51.3	49.9	49.7	45.5	41.5
MM032	Industrial fasteners of base metal:					
	Establishments (number) .....	937	937	937	937	935
	Employees (thousands) .....	52	52	52	52	53
	Capacity utilization (percent) .....	70	75	75	75	75
	U.S. shipments (million dollars) .....	4,352	4,483	(1)	(1)	5,500
	U.S. exports (million dollars) .....	383	650	663	719	743
	U.S. imports (million dollars) .....	1,484	1,478	1,324	1,469	1,643
	Apparent U.S. consumption (million dollars) .....	5,453	5,311	(1)	(1)	6,400
	Trade balance (million dollars) .....	-1,101	-828	-661	-750	-900
	Ratio of imports to apparent consumption (percent) .....	27.2	27.8	(1)	(1)	25.7
	Ratio of exports to shipments (percent) .....	8.8	14.5	(1)	(1)	13.5

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM033	Cooking and kitchen ware:					
	Establishments (number) .....	18	18	18	18	18
	Employees (thousands) .....	4	4	4	4	4
	Capacity utilization (percent) .....	70	70	75	(1)	(1)
	U.S. shipments (million dollars) .....	679	728	807	817	884
	U.S. exports (million dollars) .....	138	170	218	209	216
	U.S. imports (million dollars) .....	735	725	751	822	881
	Apparent U.S. consumption (million dollars) .....	1,276	1,283	1,340	1,430	1,549
	Trade balance (million dollars) .....	-597	-555	-533	613	-665
	Ratio of imports to apparent consumption (percent) .....	57.6	56.5	56.0	57.5	56.9
Ratio of exports to shipments (percent) .....	20.3	23.4	27.0	25.6	24.4	
MM034	Metal and ceramic sanitary ware:					
	Establishments (numbe? .....	200	200	190	195	200
	Employees (thousands) .....	27	26	25	24	25
	Capacity utilization (percent) <sup>2</sup> .....	80	75	70	75	80
	U.S. shipments (million dollars) .....	1,402	1,395	1,325	<sup>2</sup> 1,328	1,364
	U.S. exports (million dollars) .....	292	125	118	135	165
	U.S. imports (million dollars) .....	180	173	156	182	204
	Apparent U.S. consumption (million dollars) .....	1,490	1,443	1,363	<sup>2</sup> 1,375	1,403
	Trade balance (million dollars) .....	-88	-48	-38	-47	-39
	Ratio of imports to apparent consumption (percent) .....	12.1	12.0	11.4	<sup>2</sup> 13.2	14.5
Ratio of exports to shipments (percent) .....	6.6	9.0	8.9	<sup>2</sup> 10.2	12.1	
MM035	Iron construction castings and other nonmalleable cast-irones:					
	Establishments (number) .....	29	29	27	27	27
	Employees (thousands) .....	2	2	2	2	2
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	145	143	142	142	145
	U.S. exports (million dollars) .....	50	31	31	27	29
	U.S. imports (million dollars) .....	65	58	51	48	57
	Apparent U.S. consumption (million dollars) .....	160	170	162	163	173
	Trade balance (million dollars) .....	-15	-27	-20	-21	28
	Ratio of imports to apparent consumption (percent) .....	40.6	34.1	31.5	29.4	32.9
Ratio of exports to shipments (percent) .....	34.5	21.7	21.8	19.0	20.0	
MM036	Copper and related articles:					
	Establishments (number) .....	1,085	840	840	840	840
	Employees (thousands) .....	42	41	39	39	38
	Capacity utilization (percent) .....	88	86	88	87	87
	U.S. shipments (million dollars) .....	13,200	12,300	10,500	11,100	9,900
	U.S. exports (million dollars) .....	1,539	1,833	1,843	1,528	1,562
	U.S. imports (million dollars) .....	2,327	1,966	1,822	1,908	2,068
	Apparent U.S. consumption (million dollars) .....	13,988	12,433	10,479	11,480	10,406
	Trade balance (million dollars) .....	-788	-133	21	-380	506
	Ratio of imports to apparent consumption (percent) .....	16.6	15.8	17.4	16.6	19.9
Ratio of exports to shipments (percent) .....	11.7	14.9	17.6	13.8	15.8	

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM037	Unwrought aluminum:					
	Establishments (number) .....	21	21	20	23'	23
	Employees (thousands) .....	21	20	20	20	20
	Capacity utilization (percent) .....	98	96	99	94	93
	U.S. shipments (million dollars) .....	8,480	7,200	5,400	5,200	4,500
	U.S. exports (million dollars) .....	2,044	1,898	1,842	1,154	. 771
	U.S. imports (million dollars) .....	2,561	2,252	2,021	2,120	2,774
	Apparent U.S. consumption (million dollars) .....	8,997	7,554	5,579	6,166	6,503
	Trade balance (million dollars) .....	-517	-354	-179	-966	2,003
	Ratio of imports to apparent consumption (percent) .....	28.5	29.8	36.2	34.4	42.7
	Ratio of exports to shipments (percent) .....	24.1	26.4	34.1	22.2	17.1
MM038	Aluminum mill products:					
	Establishments (number) .....	436	436	425	415	415
	Employees (thousands) .....	54	54	51	45	45
	Capacity utilization (percent) .....	(1)	75	70	78	82
	U.S. shipments (million dollars) .....	16,500	14,100	14,470	15,280	14,195
	U.S. exports (million dollars) .....	1,386	1,512	1,698	1,761	1,728
	U.S. imports (million dollars) .....	1,253	1,222	967	1,015	1,096
	Apparent U.S. consumption (million dollars) .....	16,367	13,810	13,739	14,534	13,563
	Trade balance (million dollars) .....	133	290	731	746	632
	Ratio of imports to apparent consumption (percent) .....	7.7	8.8	7.0	7.0	8.1
	Ratio of exports to shipments (percent) .....	8.4	10.7	11.7	11.5	12.2
MM039	Lead and related articles:					
	Establishments (number) .....	54	55	55	55	55
	Employees (thousands) .....	3	3	2	2	2
	Capacity utilization (percent) .....	65	67	70	62	59
	U.S. shipments (million dollars) .....	1,100	1,309	900	900	825
	U.S. exports (million dollars) .....	66	107	113	78	64
	U.S. imports (million dollars) .....	97	91	80	119	97
	Apparent U.S. consumption (million dollars) .....	1,131	1,293	867	941	858
	Trade balance (million dollars) .....	-31	16	33	-41	33
	Ratio of imports to apparent consumption (percent) .....	8.6	7.0	9.2	12.6	11.3
	Ratio of exports to shipments (percent) .....	6.0	8.2	12.6	8.7	7.8
MM040	Zinc and related articles:					
	Establishments (number) .....	37	40	40	40	40
	Employees (thousands) .....	2	2	2	2	2
	Capacity utilization (percent) .....	93	73	70	76	71
	U.S. shipments (million dollars) .....	860	770	575	685	500
	U.S. exports (million dollars) .....	118	118	91	75	58
	U.S. imports (million dollars) .....	1,214	1,034	663	832	746
	Apparent U.S. consumption (million dollars) .....	1,956	1,686	1,147	1,442	1,188
	Trade balance (million dollars) .....	-1,096	-916	-572	-757	-688
	Ratio of imports to apparent consumption (percent) .....	62.1	61.3	57.8	57.7	62.8
	Ratio of exports to shipments (percent) .....	13.7	15.3	15.8	10.9	11.6

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM041	Certain base metals and chemical elements:					
	Establishments (number) .....	200	200	190	190	190
	Employees (thousands) .....	15	15	14	14	14
	Capacity utilization (percent) .....	78	77	79	72	72
	U.S. shipments (million dollars) .....	3,000	2,900	2,500	2,300	2,000
	U.S. exports (million dollars) .....	1,021	1,057	1,005	905	808
	U.S. imports (million dollars) .....	2,446	1,925	1,865	1,636	1,472
	Apparent U.S. consumption (million dollars) .....	4,425	3,768	3,360	3,031	2,664
	Trade balance (million dollars) .....	-1,425-868	-860	-731	-664	
	Ratio of imports to apparent consumption (percent) .....	55.3	51.1	55.5	54.0	55.3
	Ratio of exports to shipments (percent) .....	34.0	36.4	40.2	39.3	40.4
MM042	Nonpowered handtools:					
	Establishments (number) .....	1,255	1,252	1,252	1,252	1,250
	Employees (thousands) .....	110	100	110	115	112
	Capacity utilization (percent) .....	75	75	75	75	75
	U.S. shipments (million dollars) .....	14,289	15,003	( <sup>1</sup> )	( <sup>1</sup> )	16,000
	U.S. exports (million dollars) .....	850	1,063	1,091	1,192	1,315
	U.S. imports (million dollars) .....	1,383	1,378	1,620	1,450	1,789
	Apparent U.S. consumption (million dollars) .....	14,822	15,318	( <sup>1</sup> )	( <sup>1</sup> )	16,474
	Trade balance (million dollars) .....	-533	-315	-529	-258	-474
	Ratio of imports to apparent consumption (percent) .....	9.3	9.0	(1)	(1)	10.9
	Ratio of exports to shipments (percent) .....	5.9	7.1	( <sup>1</sup> )	( <sup>1</sup> )	8.2
MM043	Cutlery other than tableware, certain sewing implements, and related products:					
	Establishments (number) .....	165	150	135	135	135
	Employees (thousands) .....	12	11	10	10	10
	Capacity utilization (percent) .....	85	85	85	85	85
	U.S. shipments (million dollars) .....	1,700	1,600	1,500	1,500	1,600
	U.S. exports (million dollars) .....	159	223	227	280	308
	U.S. imports (million dollars) .....	393	415	438	484	525
	Apparent U.S. consumption (million dollars) .....	1,934	1,792	1,711	1,704	1,817
	Trade balance (million dollars) .....	-234	-192	-211	-204	-217
	Ratio of imports to apparent consumption (percent) .....	20.3	23.2	25.6	28.4	28.9
	Ratio of exports to shipments (percent) .....	9.4	13.9	15.1	18.7	19.3
MM044	Table flatware and related products:					
	Establishments (number) .....	6	6	6	6	6
	Employees (thousands) .....	5	5	5	5	5
	Capacity utilization (percent) .....	90	90	80	80	85
	U.S. shipments (million dollars) .....	235	205	200	195	195
	U.S. exports (million dollars) .....	17	43	24	24	21
	U.S. imports (million dollars) .....	185	172	196	216	209
	Apparent U.S. consumption (million dollars) .....	403	334	372	387	383
	Trade balance (million dollars) .....	168	129	172	192	188
	Ratio of imports to apparent consumption (percent) .....	45.9	51.5	52.7	55.8	54.6
	Ratio of exports to shipments (percent) .....	7.2	21.0	12.0	12.3	10.8

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1989-93**

US1TC code	Commodity group	1989	1990	1991	1992	1993	
MM045	Certain builders' hardware:						
	Establishments (number) .....	795	790	790	<sup>2</sup> 790	785	
	Employees (thousands) .....	50	50	60	(1)	60	
	Capacity utilization (percent) .....	80	75	75	75	75	
	U.S. shipments (million dollars) .....	3,554	3,625	(1)	(1)	5,100	
	U.S. exports (million dollars) .....	336	442	458	495	553	
	U.S. imports (million dollars) .....	547	<b>844</b>	532	590	646	
	Apparent U.S. consumption (million dollars) .....	3,765	4,027	(1)	(1)	5,193	
	Trade balance (million dollars) .....	-211	-402	-74	-95	-93	
	Ratio of imports to apparent consumption (percent) .....	14.5	21.0	(1)	(1)	12.4	
	Ratio of exports to shipments (percent) .....	9.5	12.2	(1)	(1)	10.8	
	MM046	Miscellaneous products of base metal:					
		Establishments (number) .....	2,035	2,035	2,035	<sup>2</sup> 2035	2,035
Employees (thousands) .....		105	106	(1)	(1)	106	
Capacity utilization (percent) .....		70	70	70	70	70	
U.S. shipments (million dollars) .....		25,357	26,118	(1)	(1)	28,000	
U.S. exports (million dollars) .....		1,192	1,515	1,901	2,122	2,344	
U.S. imports (million dollars) .....		2,277	2,378	2,309	2,669	2,936	
Apparent U.S. consumption (million dollars) .....		26,442	26,981	(1)	(1)	28,592	
Trade balance (million dollars) .....		-1,085	-863	-408	-547	-592	
Ratio of imports to apparent consumption (percent) .....		8.6	8.8	(1)	(1)	10.3	
Ratio of exports to shipments (percent) .....		4.7	5.8	(1)	(1)	8.4	
MM047		Luggage, handbags, and flat goods:					
		Establishments (number) .....	735	720	700	695	685
	Employees (thousands) .....	25	24	23	22	21	
	Capacity utilization (percent) .....	80	80	80	75	70	
	U.S. shipments (million dollars) .....	1,852	1,896	1,836	1,810	1,760	
	U.S. exports (million dollars) .....	103	133	159	194	199	
	U.S. imports (million dollars) .....	2,078	2,171	2,281	2,437	2,584	
	Apparent U.S. consumption (million dollars) .....	3,827	3,934	3,958	4,053	4,145	
	Trade balance (million dollars) .....	-1,975	-2,038	-2,122	-2,243	2,385	
	Ratio of imports to apparent consumption (percent) .....	54.3	55.2	57.6	60.1	62.3	
	Ratio of exports to shipments (percent) .....	5.6	7.0	8.7	10.7	11.3	
	MM048	Certain other leather goods:					
		Establishments (number) .....	405	400	400	400	400
Employees (thousands) .....		8	9	9	9	9	
Capacity utilization (percent) .....		80	80	83	85	85	
U.S. shipments (million dollars) .....		467	494	477	475	480	
U.S. exports (million dollars) .....		48	44	63	74	79	
U.S. imports (million dollars) .....		138	148	140	158	168	
Apparent U.S. consumption (million dollars) .....		557	598	554	559	569	
Trade balance (million dollars) .....		-90	-104	-77	-84	-89	
Ratio of imports to apparent consumption (percent) .....		24.8	24.7	25.3	28.3	29.5	
Ratio of exports to shipments (percent) .....		10.3	8.9	13.2	15.6	16.5	

See footnotes at end of table.



**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM049	Musical instruments and accessories:					
	Firms (number) .....	475	475	450	460	465
	Employees (thousands) .....	12	12	11	12	12
	Capacity utilization (percent) .....	60	58	58	60	60
	U.S. shipments (million dollars) .....	745	815	823	840	880
	U.S. exports (million dollars) .....	250	293	303	341	354
	U.S. imports (million dollars) .....	750	727	713	824	861
	Apparent U.S. consumption (million dollars) .....	1,245	1,249	1,233	1,323	1,387
	Trade balance (million dollars) .....	500	434	410	483	507
	Ratio of imports to apparent consumption (percent) .....	60.2	58.2	57.8	62.3	62.1
	Ratio of exports to shipments (percent) .....	33.6	36.0	36.8	40.6	40.2
MM050	Umbrellas, whips, riding crops, and canes:					
	Establishments (number) .....	24	22	20	15	15
	Employees (number) .....	530	480	430	400	405
	Capacity utilization (percent) .....	78	78	78	78	78
	U.S. shipments (million dollars) .....	50	55	60	60	61
	U.S. exports (million dollars) .....	6	8	10	11	9
	U.S. imports (million dollars) .....	136	146	143	173	180
	Apparent U.S. consumption (million dollars) .....	180	193	193	222	232
	Trade balance (million dollars) .....	130	138	133	162	171
	Ratio of imports to apparent consumption (percent) .....	75.6	75.6	74.1	77.9	77.6
	Ratio of exports to shipments (percent) .....	12.0	14.5	16.7	18.3	14.8
MM051	Silverware and certain other articles of precious metal:					
	Establishments (number) .....	46	46	46	45	45
	Employees (thousands) .....	3	3	3	3	3
	Capacity utilization (percent) .....	71	72	73	75	78
	U.S. shipments (million dollars) .....	170	175	179	180	185
	U.S. exports (million dollars) .....	63	85	127	138	87
	U.S. imports (million dollars) .....	61	50	41	64	109
	Apparent U.S. consumption (million dollars) .....	168	140	93	106	207
	Trade balance (million dollars) .....	2	35	86	74	-22
	Ratio of imports to apparent consumption (percent) .....	36.3	35.7	44.1	60.4	52.7
	Ratio of exports to shipments (percent) .....	37.1	48.6	70.9	76.7	47.0
MM052	Precious jewelry and related articles:					
	Firms (number) .....	2,200	2,200	2,150	2,150	2,125
	Employees (thousands) .....	36	36	33	33	33
	Capacity utilization (percent) .....	55	55	55	55	60
	U.S. shipments (million dollars) .....	3,990	3,960	3,502	3,596	3,799
	U.S. exports (million dollars) .....	421	424	424	495	407
	U.S. imports (million dollars) .....	2,616	2,534	2,518	2,795	3,232
	Apparent U.S. consumption (million dollars) .....	6,185	6,070	5,596	5,896	6,624
	Trade balance (million dollars) .....	-2,195	-2,110	-2,094	-2,300	2,825
	Ratio of imports to apparent consumption (percent) .....	42.3	41.7	45.0	47.4	48.8
	Ratio of exports to shipments (percent) .....	10.6	10.7	12.1	13.8	10.7

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
MM053	Costume jewelry and related articles:						
	Firms (number) .....	940	930	910	910	900	
	Employees (thousands) .....	19	19	18	16	16	
	Capacity utilization (percent) .....	60	65	65	65	70	
	U.S. shipments (million dollars) .....	1,315	1,417	1,399	1,402	1,453	
	U.S. exports (million dollars) .....	89	110	123	114	120	
	U.S. imports (million dollars) .....	437	461	491	532	544	
	Apparent U.S. consumption (million dollars) .....	1,663	1,768	1,767	1,820	1,877	
	Trade balance (million dollars) .....	-348	-351	-368	-418	-424	
	Ratio of imports to apparent consumption (percent) .....	26.3	26.1	27.8	29.2	29.0	
	Ratio of exports to shipments (percent) .....	6.8	7.8	8.8	8.1	8.3	
	MM054	Bicycles and certain parts:					
		Establishments (number) .....	30	30	30	30	30
Employees (thousands) .....		4	5	6	7	7	
Capacity utilization (percent) .....		65	75	91	93	94	
U.S. shipments (million dollars) .....		750	985	1,245	1,335	1,395	
U.S. exports (million dollars) .....		46	114	174	175	197	
U.S. imports (million dollars) .....		681	750	745	734	841	
Apparent U.S. consumption (million dollars) .....		1,385	1,621	1,816	1,894	2,039	
Trade balance (million dollars) .....		-635	-636	-571	-559	-644	
Ratio of imports to apparent consumption (percent) .....		49.2	46.3	41.0	38.8	41.2	
Ratio of exports to shipments (percent) .....		6.1	11.6	14.0	13.1	14.1	
MM055		Furniture and selected furnishings:					
		Establishments (number) .....	15,000	15,000	14,500	14,500	14,500
	Employees (thousands) .....	550	545	505	500	505	
	Capacity utilization (percent) .....	76	70	70	71	71	
	U.S. shipments (million dollars) .....	46,000	47,000	45,000	47,700	50,000	
	U.S. exports (million dollars) .....	1,098	1,731	2,256	2,700	2,941	
	U.S. imports (million dollars) .....	4,962	5,050	4,981	5,555	6,298	
	Apparent U.S. consumption (million dollars) .....	49,864	50,319	47,725	50,555	53,357	
	Trade balance (million dollars) .....	-3,864	-3,319	-2,725	-2,855	-3,357	
	Ratio of imports to apparent consumption (percent) .....	10.0	10.0	10.4	11.0	11.8	
	Ratio of exports to shipments (percent) .....	2.4	3.7	5.0	5.7	5.9	
	MM056	Writing instruments and related articles:					
		Establishments (number) .....	265	270	270	265	260
Employees (thousands) .....		13	13	12	12	11	
Capacity utilization (percent) .....		88	73	78	78	75	
U.S. shipments (million dollars) .....		1,545	1,575	1,555	1,585	1,500	
U.S. exports (million dollars) .....		168	193	207	258	242	
U.S. imports (million dollars) .....		387	447	451	513	568	
Apparent U.S. consumption (million dollars) .....		1,764	1,829	1,799	1,840	1,826	
Trade balance (million dollars) .....		-219	-254	-244	-255	-326	
Ratio of imports to apparent consumption (percent) .....		21.9	24.4	25.1	27.9	31.1	
Ratio of exports to shipments (percent) .....		10.9	12.3	13.3	16.3	16.1	

See footnotes at end of table.

**Table B-3--Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM057	Lamps and lighting fittings:					
	Establishments (number) .....	1,650	1,620	1,570	1,550	1,570
	Employees (thousands) .....	65	63	61	61	63
	Capacity utilization (percent) .....	80	75	73	73	73
	U.S. shipments (million dollars) .....	8,200	8,100	7,800	7,950	8,500
	U.S. exports (million dollars) .....	246	315	373	449	472
	U.S. imports (million dollars) .....	1,243	1,311	1,295	1,499	1,712
	Apparent U.S. consumption (million dollars) .....	9,197	9,096	8,722	9,000	9,740
	Trade balance (million dollars) .....	-997	-996	-922	-1,050	-1,240
	Ratio of imports to apparent consumption (percent) .....	13.5	14.4	14.8	16.7	17.6
	Ratio of exports to shipments (percent) .....	3.0	3.9	4.8	5.6	5.6
MM058	Prefabricated buildings:					
	Establishments (number) .....	1,200	1,200	1,100	1,100	1,100
	Employees (thousands) .....	86	80	71	74	78
	Capacity utilization (percent) .....	75	72	70	70	75
	U.S. shipments (million dollars) .....	9,200	9,030	8,300	9,100	10,700
	U.S. exports (million dollars) .....	154	171	276	273	329
	U.S. imports (million dollars) .....	47	34	21	64	71
	Apparent U.S. consumption (million dollars) .....	9,093	8,893	8,045	8,891	10,442
	Trade balance (million dollars) .....	107	137	255	209	258
	Ratio of imports to apparent consumption (percent) .....	0.5	0.4	0.3	0.7	0.7
	Ratio of exports to shipments (percent) .....	1.7	1.9	3.3	3.0	3.1
MM059	Children's vehicles:					
	Establishments (number) .....	45	45	45	45	45
	Employees (thousands) .....	3	3	3	3	3
	Capacity utilization (percent) .....	80	80	79	77	77
	U.S. shipments (million dollars) .....	305	335	335	355	360
	U.S. exports (million dollars) .....	15	23	28	30	34
	U.S. imports (million dollars) .....	183	179	206	194	228
	Apparent U.S. consumption (million dollars) .....	473	491	513	519	554
	Trade balance (million dollars) .....	-168	-156	-178	-164	-194
	Ratio of imports to apparent consumption (percent) .....	38.7	36.5	40.2	37.4	41.2
	Ratio of exports to shipments (percent) .....	4.9	6.9	8.4	8.5	9.4
MM060	Dolls:					
	Establishments (number) .....	180	180	180	180	180
	Employees (thousands) .....	4	4	4	4	4
	Capacity utilization (percent) .....	70	70	70	70	70
	U.S. shipments (million dollars) .....	145	155	160	170	175
	U.S. exports (million dollars) .....	19	17	21	29	27
	U.S. imports (million dollars) .....	616	772	845	901	885
	Apparent U.S. consumption (million dollars) .....	742	910	984	1,042	1,033
	Trade balance (million dollars) .....	-597	-755	-824	-872	-858
	Ratio of imports to apparent consumption (percent) .....	83.0	84.8	85.9	86.5	85.7
	Ratio of exports to shipments (percent) .....	13.1	11.0	13.1	17.1	15.4

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM061	Toys and models:					
	Establishments (number) .....	340	320	315	315	315
	Employees (thousands) .....	16	13	12	12	12
	Capacity utilization (percent) .....	71	72	71	72	72
	U.S. shipments (million dollars) .....	1,500	1,475	1,485	1,525	1,556
	U.S. exports (million dollars) .....	294	382	387	427	468
	U.S. imports (million dollars) .....	2,694	2,716	2,880	3,597	3,666
	Apparent U.S. consumption (million dollars) .....	3,900	3,809	3,978	4,695	4,754
	Trade balance (million dollars) .....	-2,400	-2,334	-2,493	-3,170	-3,198
	Ratio of imports to apparent consumption (percent) .....	69.1	71.3	72.4	76.6	77.1
	Ratio of exports to shipments (percent) .....	19.6	25.9	26.1	28.0	30.1
MM062	Games and fairground amusements:					
	Establishments (number) .....	300	315	325	325	325
	Employees (thousands) .....	40	40	45	50	50
	Capacity utilization (percent) .....	75	75	80	80	80
	U.S. shipments (million dollars) .....	1,700	2,000	2,250	2,500	2,500
	U.S. exports (million dollars) .....	375	547	684	884	1,000
	U.S. imports (million dollars) .....	2,413	2,818	2,091	2,729	3,461
	Apparent U.S. consumption (million dollars) .....	3,738	4,271	3,657	4,345	4,961
	Trade balance (million dollars) .....	-2,038	-2,271	-1,407	-1,845	-2,461
	Ratio of imports to apparent consumption (percent) .....	64.6	66.0	57.2	62.8	69.8
	Ratio of exports to shipments (percent) .....	22.1	27.4	30.4	35.4	40.0
MM063	Sporting goods:					
	Establishments (number) .....	1,900	1,950	2,050	2,000	2,025
	Employees (thousands) .....	60	65	61	64	64
	Capacity utilization (percent) .....	75	75	80	80	80
	U.S. shipments (million dollars) .....	5,640	6,202	6,504	6,920	7,285
	U.S. exports (million dollars) .....	795	828	930	1,024	1,140
	U.S. imports (million dollars) .....	1,613	1,644	1,750	2,148	2,159
	Apparent U.S. consumption (million dollars) .....	6,458	7,018	7,324	8,044	8,304
	Trade balance (million dollars) .....	-818	-816	-820	-1,124	-1,019
	Ratio of imports to apparent consumption (percent) .....	25.0	23.4	23.9	26.7	26.0
	Ratio of exports to shipments (percent) .....	14.1	13.4	14.3	14.8	15.6
MM064	Smokers' articles:					
	Establishments (number) .....	18	17	15	15	15
	Employees (thousands) .....	1	1	1	1	1
	Capacity utilization (percent) .....	64	64	65	65	65
	U.S. shipments (million dollars) .....	162	164	166	165	168
	U.S. exports (million dollars) .....	48	59	77	73	74
	U.S. imports (million dollars) .....	105	130	132	148	137
	Apparent U.S. consumption (million dollars) .....	219	235	221	240	231
	Trade balance (million dollars) .....	-57	-71	-55	-75	-63
	Ratio of imports to apparent consumption (percent) .....	47.9	55.3	59.7	61.7	59.3
	Ratio of exports to shipments (percent) .....	29.6	36.0	46.4	44.2	44.0

See footnotes at end of table.

**Table B-3-Continued**  
**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MM065	Brooms, brushes, and hair grooming articles:					
	Establishments (number) .....	300	300	290	290	285
	Employees (thousands) .....	13	13	12	12	11
	Capacity utilization (percent) .....	60	60	62	64	65
	U.S. shipments (million dollars) .....	1,255	1,340	1,445	1,500	1,700
	U.S. exports (million dollars) .....	57	74	95	110	143
	U.S. imports (million dollars) .....	436	423	453	468	491
	Apparent U.S. consumption (million dollars) .....	1,634	1,689	1,803	1,858	2,048
	Trade balance (million dollars) .....	-379	-349	-358	-358	-348
	Ratio of imports to apparent consumption (percent) .....	26.7	25.0	<sup>1</sup> 25.1	25.2	24.0
	Ratio of exports to shipments (percent) .....	4.5	5.5	6.6	7.3	8.4
MM066	Miscellaneous articles:					
	Establishments (number) .....	2,300	2,300	2,100	2,100	2,100
	Employees (thousands) .....	37	38	37	37	37
	Capacity utilization (percent) .....	60	60	60	60	60
	U.S. shipments (million dollars) .....	21,000	24,800	22,600	22,700	24,100
	U.S. exports (million dollars) .....	1,836	2,493	1,503	1,352	1,250
	U.S. imports (million dollars) .....	3,310	3,522	3,347	3,718	4,449
	Apparent U.S. consumption (million dollars) .....	22,474	25,829	24,444	25,066	27,299
	Trade balance (million dollars) .....	-1,474	-1,029	-1,844	-2,366	3,199
	Ratio of imports to apparent consumption (percent) .....	14.7	13.6	13.7	14.8	16.3
	Ratio of exports to shipments (percent) .....	8.7	10.1	6.7	6.0	5.2

<sup>1</sup> Not available.

<sup>2</sup> Estimated.

**Table B-4  
Machinery and transportation sector: Profile of U.S industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT001	Aircraft engines and gas turbines:					
	Establishments (number) .....	26	26	26	26	26
	Employees (thousands) .....	157	156	155	130	120
	Capacity utilization (percent) .....	85	81	80	98	88
	U.S. shipments (million dollars) .....	15,429	16,012	16,000	18,000	22,000
	U.S. exports (million dollars) .....	7,447	7,872	8,346	8,293	8,266
	U.S. imports (million dollars) .....	4,124	5,085	5,385	6,185	5,735
	Apparent U.S. consumption (million dollars) .....	12,106	13,225	13,039	15,892	19,469
	Trade balance (million dollars) .....	3,323	2,787	2,961	2,108	2,531
	Ratio of imports to apparent consumption (percent) .....	34.1	38.4	41.3	38.9	29.5
Ratio of exports to shipments (percent) .....	48.3	49.2	52.2	46.1	37.6	
MT002	Internal combustion piston engines, other than for aircraft:					
	Establishments (number) .....	55	55	55	58	57
	Employees (thousands) .....	136	132	132	135	136
	Capacity utilization (percent) .....	72	71	69	75	76
	U.S. shipments (million dollars) .....	30,054	30,100	28,110	29,450	30,125
	U.S. exports (million dollars) .....	4,549	5,492	5,853	6,640	7,450
	U.S. imports (million dollars) .....	5,727	5,609	5,166	5,618	6,340
	Apparent U.S. consumption (million dollars) .....	31,232	30,217	27,423	28,428	29,015
	Trade balance (million dollars) .....	-1,178	-117	687	1,022	1,110
	Ratio of imports to apparent consumption (percent) .....	18.3	18.6	18.8	19.8	21.9
Ratio of exports to shipments (percent) .....	15.1	18.2	20.8	22.5	24.7	
MT003	Pumps for liquids:					
	Establishments (number) .....	608	602	580	568	585
	Employees (thousands) .....	62	58	53	51	53
	Capacity utilization (percent) .....	58	62	59	58	63
	U.S. shipments (million dollars) .....	6,598	6,928	6,720	6,586	6,784
	U.S. exports (million dollars) .....	1,375	1,542	1,766	1,857	2,043
	U.S. imports (million dollars) .....	1,173	1,155	1,142	1,294	1,477
	Apparent U.S. consumption (million dollars) .....	6,396	6,541	6,096	6,023	6,218
	Trade balance (million dollars) .....	202	387	624	563	566
	Ratio of imports to apparent consumption (percent) .....	18.3	17.7	18.7	21.5	23.8
Ratio of exports to shipments (percent) .....	20.8	22.3	26.3	28.2	30.1	
MT004	Air-conditioning equipment and parts:					
	Establishments (number) .....	1,190	1,179	1,110	1,077	1,109
	Employees (thousands) .....	164	158	145	140	143
	Capacity utilization (percent) .....	80	78	75	74	76
	U.S. shipments (million dollars) .....	22,698	22,195	21,405	20,763	21,386
	U.S. exports (million dollars) .....	2,544	3,049	3,218	3,533	3,739
	U.S. imports (million dollars) .....	3,085	2,892	2,668	2,824	3,055
	Apparent U.S. consumption (million dollars) .....	23,239	22,038	20,855	20,054	20,702
	Trade balance (million dollars) .....	541	157	550	709	684
	Ratio of imports to apparent consumption (percent) .....	13.3	13.1	12.8	14.1	14.8
Ratio of exports to shipments (percent) .....	11.2	13.7	15.0	17.0	17.5	

**Table B-4-Continued**  
**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT005	Certain industrial thermal processing equipment and certain furnaces:					
	Establishments (number) .....	315	305	300	294	302
	Employees (thousands) .....	34	33	31	28	31
	Capacity utilization (percent) .....	67	65	65	63	66
	U.S. shipments (million dollars) .....	3,375	3,390	3,220	3,156	3,314
	U.S. exports (million dollars) .....	1,117	1,267	1,331	1,440	1,532
	U.S. imports (million dollars) .....	682	759	784	813	794
	Apparent U.S. consumption (million dollars) .....	2,940	2,882	2,673	2,529	2,576
	Trade balance (million dollars) .....	435	508	547	627	738
	Ratio of imports to apparent consumption (percent) .....	23.2	26.3	29.3	32.1	30.8
	Ratio of exports to shipments (percent) .....	33.1	37.4	41.3	45.6	46.2
	MT006	Commercial machinery:				
Establishments (number) .....		564	564	560	530	510
Employees (thousands) .....		42	42	40	40	40
Capacity utilization (percent) .....		85	85	80	80	80
U.S. shipments (million dollars) .....		6,650	6,849	7,055	7,265	7,483
U.S. exports (million dollars) .....		1,241	1,561	1,491	1,734	1,870
U.S. imports (million dollars) .....		1,164	1,070	815	890	964
Apparent U.S. consumption (million dollars) .....		6,573	6,358	6,379	6,421	6,577
Trade balance (million dollars) .....		77	491	676	844	906
Ratio of imports to apparent consumption (percent) .....		17.7	16.8	12.8	13.9	14.7
Ratio of exports to shipments (percent) .....		18.7	22.8	21.1	23.9	25.0
MT007		Electrical household appliances and certain heating equipment				
	Establishments (number) .....	481	480	450	450	440
	Employees (thousands) .....	93	111	104	98	98
	Capacity utilization (percent) .....	85	85	80	83	83
	U.S. shipments (million dollars) .....	16,798	16,688	17,692	18,069	18,611
	U.S. exports (million dollars) .....	1,320	1,581	1,886	2,100	2,277
	U.S. imports (million dollars) .....	2,422	2,400	2,830	3,373	3,570
	Apparent U.S. consumption (million dollars) .....	17,900	17,507	18,636	19,342	19,904
	Trade balance (million dollars) .....	-1,102	-819	-944	-1,273	-1,293
	Ratio of imports to apparent consumption (percent) .....	13.5	13.7	15.2	17.4	17.9
	Ratio of exports to shipments (percent) .....	7.9	9.5	10.7	11.6	12.2
	MT008	Centrifuges and filtering and purifying equipment:				
Establishments (number) .....		255	265	265	278	278
Employees (thousands) .....		29	32	34	36	36
Capacity utilization (percent) .....		70	75	80	82	82
U.S. shipments (million dollars) .....		2,050	2,350	2,940	3,087	3,180
U.S. exports (million dollars) .....		1,097	1,464	1,705	1,703	1,728
U.S. imports (million dollars) .....		567	717	666	650	706
Apparent U.S. consumption (million dollars) .....		1,520	1,603	1,901	2,034	2,158
Trade balance (million dollars) .....		530	747	1,039	1,053	1,022
Ratio of imports to apparent consumption (percent) .....		37.3	44.7	35.0	32.0	32.7
Ratio of exports to shipments (percent) .....		53.5	62.3	58.0	55.2	54.3

**Table B-4--Continued**  
**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT009	Wrapping, packaging, and can sealing machinery:					
	Establishments (number) .....	350	340	330	335	335
	Employees (thousands) .....	24	24	24	24	23
	Capacity utilization (percent) .....	85	85	83	84	84
	U.S. shipments (million dollars) .....	2,472	2,516	2,400	2,447	2,936
	U.S. exports (million dollars) .....	486	579	611	606	672
	U.S. imports (million dollars) .....	597	621	643	699	719
	Apparent U.S. consumption (million dollars) .....	2,583	2,558	2,432	2,540	2,983
	Trade balance (million dollars) .....	-111	-42	-32	-93	-47
	Ratio of imports to apparent consumption (percent) .....	23.1	24.3	26.4	27.5	24.1
	Ratio of exports to shipments (percent) .....	19.7	23.0	25.5	24.8	22.9
	MT010	Scales and weighing machinery:				
Establishments (number) .....		105	108	102	97	97
Employees (thousands) .....		7	7	7	6	6
Capacity utilization (percent) .....		77	78	75	72	72
U.S. shipments (million dollars) .....		612	638	649	662	675
U.S. exports (million dollars) .....		83	91	102	105	108
U.S. imports (million dollars) .....		147	153	151	157	162
Apparent U.S. consumption (million dollars) .....		676	700	698	714	729
Trade balance (million dollars) .....		-64	-62	-49	-52	-54
Ratio of imports to apparent consumption (percent) .....		21.7	21.9	21.6	22.0	22.2
Ratio of exports to shipments (percent) .....		13.6	14.3	15.7	15.9	16.0
MT011		Forklift trucks and similar industrial vehicles:				
	Establishments (number) .....	250	255	255	255	255
	Employees (thousands) .....	14	13	11	13	12
	Capacity utilization (percent) .....	75	75	75	75	72
	U.S. shipments (million dollars) .....	1,850	1,800	1,600	1,650	1,550
	U.S. exports (million dollars) .....	511	551	627	570	566
	U.S. imports (million dollars) .....	982	817	614	712	721
	Apparent U.S. consumption (million dollars) .....	2,321	2,066	1,587	1,792	1,705
	Trade balance (million dollars) .....	-471	-266	13	-142	-155
	Ratio of imports to apparent consumption (percent) .....	42.3	39.5	38.7	39.7	42.3
	Ratio of exports to shipments (percent) .....	27.6	30.6	39.2	34.5	36.5
	MT012	Construction and mining equipment:				
Establishments (number) .....		1,600	1,600	1,550	1,600	1,600
Employees (thousands) .....		91	93	84	79	79
Capacity utilization (percent) .....		70	70	68	70	71
U.S. shipments (million dollars) .....		15,200	15,900	13,500	12,350	13,050
U.S. exports (million dollars) .....		4,855	5,674	6,814	6,773	6,651
U.S. imports (million dollars) .....		2,433	2,458	1,504	1,716	2,299
Apparent U.S. consumption (million dollars) .....		12,778	12,684	8,190	7,293	8,698
Trade balance (million dollars) .....		2,422	3,216	5,310	5,057	4,352
Ratio of imports to apparent consumption (percent) .....		19.0	19.4	18.4	23.5	26.4
Ratio of exports to shipments (percent) .....		31.9	35.7	50.5	54.8	51.0



**Table B-4-Continued**  
**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT013	Mineral processing machinery:					
	Establishments (number) .....	100	100	100	100	100
	Employees (thousands) .....	7	7	7	7	7
	Capacity utilization (percent) .....	57	57	57	57	57
	U.S. shipments (million dollars) .....	650	697	705	730	752
	U.S. exports (million dollars) .....	344	431	452	537	539
	U.S. imports (million dollars) .....	287	240	215	200	236
	Apparent U.S. consumption (million dollars) .....	593	506	468	393	449
	Trade balance (million dollars) .....	57	191	237	337	303
	Ratio of imports to apparent consumption (percent) .....	48.4	47.4	45.9	50.9	52.6
Ratio of exports to shipments (percent) .....	52.9	61.8	64.1	73.6	71.7	
MT014	Farm and garden machinery and equipment:					
	Establishments (number) .....	2,130	2,110	1,900	1,870	1,900
	Employees (thousands) .....	111	111	98	94	98
	Capacity utilization (percent) .....	63	62	57	60	75
	U.S. shipments (million dollars) .....	9,100	9,800	8,900	8,600	9,300
	U.S. exports (million dollars) .....	3,096	3,270	3,444	3,449	3,724
	U.S. imports (million dollars) .....	2,529	2,783	2,181	2,242	2,469
	Apparent U.S. consumption (million dollars) .....	8,533	9,313	7,637	7,393	8,045
	Trade balance (million dollars) .....	567	487	1,263	1,207	1,255
	Ratio of imports to apparent consumption (percent) .....	29.6	29.9	28.6	30.3	30.7
Ratio of exports to shipments (percent)	34.0	33.4	38.7	40.1	40.0	
MT015	Industrial food processing and related machinery:					
	Establishments (number) .....	512	512	510	505	500
	Employees (thousands) .....	19	19	18	18	18
	Capacity utilization (percent) .....	88	88	80	80	80
	U.S. shipments (million dollars) .....	1,614	1,698	1,721	1,770	1,823
	U.S. exports (million dollars) .....	452	480	537	595	609
	U.S. imports (million dollars) .....	340	405	395	445	411
	Apparent U.S. consumption (million dollars) .....	1,502	1,623	1,579	1,620	1,625
	Trade balance (million dollars) .....	112	75	142	150	198
	Ratio of imports to apparent consumption (percent) .....	22.6	25.0	25.0	27.5	25.3
Ratio of exports to shipments (percent) .....	28.0	28.3	31.2	33.6	33.4	
MT016	Pulp, paper, and paperboard machinery:					
	Establishments (number) .....	260	265	250	237	237
	Employees (thousands) .....	20	20	20	19	19
	Capacity utilization (percent) .....	78	80	78	75	75
	U.S. shipments (million dollars) .....	2,238	2,454	2,374	2,255	2,188
	U.S. exports (million dollars) .....	497	605	641	586	655
	U.S. imports (million dollars) .....	962	880	694	637	709
	Apparent U.S. consumption (million dollars) .....	2,703	2,729	2,427	2,306	2,242
	Trade balance (million dollars) .....	-465	-275	-53	-51	-54
	Ratio of imports to apparent consumption (percent) .....	35.6	32.2	28.6	27.6	31.6
Ratio of exports to shipments (percent) .....	22.2	24.7	27.0	26.0	29.9	

**Table B-4-Continued**  
**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT017	Printing, typesetting, and bookbinding machinery and printing plates:					
	Establishments (number) .....	1,810	1,790	1,775	1,739	1,745
	Employees (thousands) .....	60	60	60	58	59
	Capacity utilization (percent) .....	88	85	85	84	75
	U.S. shipments (million dollars) .....	6,193	6,091	5,095	4,993	• 5,045
	U.S. exports (million dollars) .....	906	1,139	1,133	1,120	1,125
	U.S. imports (million dollars) .....	1,245	1,192	1,178	1,242	1,366
	Apparent U.S. consumption (million dollars) .....	6,532	6,144	5,140	5,115	5,286
	Trade balance (million dollars) .....	-339	-53	-45	-122	-241
	Ratio of imports to apparent consumption (percent) .....	19.1	19.4	22.9	24.3	25.8
	Ratio of exports to shipments (percent) .....	14.6	18.7	22.2	22.4	22.3
MT018	Textile machinery and parts:					
	Establishments (number) .....	500	500	500	500	500
	Employees (thousands) .....	16	16	15	15	14
	Capacity utilization (percent) .....	58	58	58	58	58
	U.S. shipments (million dollars) .....	1,583	1,535	1,515	1,470	1,380
	U.S. exports (million dollars) .....	630	716	685	659	657
	U.S. imports (million dollars) .....	1,439	1,499	1,196	1,502	1,843
	Apparent U.S. consumption (million dollars) .....	2,392	2,318	2,026	2,313	2,566
	Trade balance (million dollars) .....	-809	-783	-511	-843	-1,186
	Ratio of imports to apparent consumption (percent) .....	60.2	64.7	59.0	64.9	71.8
	Ratio of exports to shipments (percent) .....	39.8	46.6	45.2	44.8	47.6
MT019	Metal rolling mills and parts thereof:					
	Establishments (number) .....	20	20	18	18	18
	Employees (thousands) .....	4	4	3	3	3
	Capacity utilization (percent) .....	70	68	60	60	70
	U.S. shipments (million dollars) .....	345	340	270	300	350
	U.S. exports (million dollars) .....	242	252	185	182	265
	U.S. imports (million dollars) .....	142	169	130	103	144
	Apparent U.S. consumption (million dollars) .....	245	257	215	221	229
	Trade balance (million dollars) .....	100	83	55	79	121
	Ratio of imports to apparent consumption (percent) .....	58.0	65.8	60.5	46.6	62.9
	Ratio of exports to shipments (percent) .....	70.1	74.1	68.5	60.7	75.7
MT020	Machine tools for cutting metal and parts; tool holders, etc.:					
	Establishments (number) .....	870	860	830	800	800
	Employees (thousands) .....	45	44	41	39	42
	Capacity utilization (percent) .....	72	71	63	70	80
	U.S. shipments (million dollars) .....	4,282	4,398	4,100	4,200	4,750
	U.S. exports (million dollars) .....	1,015	1,148	1,132	1,270	1,292
	U.S. imports (million dollars) .....	2,329	2,180	2,213	1,960	2,188
	Apparent U.S. consumption (million dollars) .....	5,596	5,430	5,181	4,890	5,646
	Trade balance (million dollars) .....	1,314	-1,032	-1,081	-690	-896
	Ratio of imports to apparent consumption (percent) .....	41.6	40.1	42.7	40.1	38.8
	Ratio of exports to shipments (percent) .....	23.7	26.1	27.6	30.2	27.2

**Table B-4-Continued**  
**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT021	Machine tools for metal forming and parts thereof:					
	Establishments (number) .....	375	370	360	350	350
	Employees (thousands) .....	19	19	17	16	17
	Capacity utilization (percent) .....	70	71	68	70	80
	U.S. shipments (million dollars) .....	2,438	2,944	2,300	2,500	2,800
	U.S. exports (million dollars) .....	662	664	656	779	737
	U.S. imports (million dollars) .....	668	642	590	552	644
	Apparent U.S. consumption (million dollars) .....	2,444	2,922	2,234	2,273	2,707
	Trade balance (million dollars) .....	-6	22	66	227	93
	Ratio of imports to apparent consumption (percent) .....	27.3	22.0	26.4	24.3	23.8
	Ratio of exports to shipments (percent) .....	27.2	22.6	28.5	31.2	26.3
MT022	Non-metal working machine tools and parts thereof:					
	Establishments (number) .....	345	345	345	330	330
	Employees (thousands) .....	14	13	12	11	13
	Capacity utilization (percent) .....	82	80	65	70	75
	U.S. shipments (million dollars) .....	1,461	1,535	1,200	1,300	1,500
	U.S. exports (million dollars) .....	396	378	377	474	665
	U.S. imports (million dollars) .....	703	679	540	633	681
	Apparent U.S. consumption (million dollars) .....	1,768	1,836	1,363	1,459	1,516
	Trade balance (million dollars) .....	-307	-301	-163	-159	-16
	Ratio of imports to apparent consumption (percent) .....	39.8	37.0	39.6	43.4	44.9
	Ratio of exports to shipments (percent) .....	27.1	24.6	31.4	36.5	44.3
MT023	Semiconductor equipment, robots, and other machinery:					
	Establishments (number) .....	5,900	5,800	5,700	5,586	5,580
	Employees (thousands) .....	300	280	265	260	260
	Capacity utilization (percent) .....	75	70	69	68	68
	U.S. shipments (million dollars) .....	28,900	29,050	27,600	27,048	28,219
	U.S. exports (million dollars) .....	5,522	5,706	6,550	6,787	7,574
	U.S. imports (million dollars) .....	5,413	5,159	5,341	5,242	6,131
	Apparent U.S. consumption (million dollars) .....	28,791	28,503	26,391	25,503	26,776
	Trade balance (million dollars) .....	109	547	1,209	1,545	1,443
	Ratio of imports to apparent consumption (percent) .....	18.8	18.1	20.2	20.6	22.9
	Ratio of exports to shipments (percent) .....	19.1	19.6	23.7	25.1	26.8
MT024	Taps, cocks, valves, and similar devices:					
	Establishments (number) .....	908	904	910	892	895
	Employees (thousands) .....	71	73	75	72	74
	Capacity utilization (percent) .....	66	70	73	70	72
	U.S. shipments (million dollars) .....	9,096	9,515	9,768	9,573	9,669
	U.S. exports (million dollars) .....	982	1,231	1,346	1,521	1,665
	U.S. imports (million dollars) .....	1,437	1,635	1,760	2,057	2,175
	Apparent U.S. consumption (million dollars) .....	9,551	9,919	10,182	10,109	10,179
	Trade balance (million dollars) .....	-455	-404	-414	-536	-510
	Ratio of imports to apparent consumption (percent) .....	15.0	16.5	17.3	20.3	21.4
	Ratio of exports to shipments (percent) ..	10.8	12.9	13.8	15.9	17.2

**Table B-4-Continued**  
**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT025	Ball and roller bearings:					
	Establishments (number) .....	143	143	140	140	143
	Employees (thousands) .....	39	39	37	35	33
	Capacity utilization (percent) .....	63	64	60	63	65
	U.S. shipments (million dollars) .....	4,325	4,300	4,000	4,400	4,650
	U.S. exports (million dollars) .....	509	733	720	713	719
	U.S. imports (million dollars) .....	986	963	903	990	1,114
	Apparent U.S. consumption (million dollars) .....	4,802	4,530	4,183	4,677	5,045
	Trade balance (million dollars) .....	-477	-230	-183	-27	-395
	Ratio of imports to apparent consumption (percent) .....	20.5	21.3	21.6	21.2	22.1
	Ratio of exports to shipments (percent) .....	11.8	17.0	18.0	16.2	15.5
MT026	Gear boxes and other speed changers; torque converters; etc.:					
	Establishments (number) .....	260	255	240	220	230
	Employees (thousands) .....	34	34	32	30	33
	Capacity utilization (percent) .....	85	80	75	75	80
	U.S. shipments (million dollars) .....	4,100	4,100	3,600	3,700	4,000
	U.S. exports (million dollars) .....	397	549	536	592	652
	U.S. imports (million dollars) .....	746	837	880	964	1,102
	Apparent U.S. consumption (million dollars) .....	4,449	4,388	3,944	4,072	4,450
	Trade balance (million dollars) .....	-349	-288	-344	-372	-450
	Ratio of imports to apparent consumption (percent) .....	16.8	19.1	22.3	23.7	24.8
	Ratio of exports to shipments (percent) .....	9.7	13.4	14.9	16.0	16.3
MT027	Boilers, turbines, and related machinery:					
	Establishments (number) .....	40	39	35	35	35
	Employees (thousands) .....	38	37	33	31	32
	Capacity utilization (percent) .....	56	58	50	60	65
	U.S. shipments (million dollars) .....	3,390	3,540	3,000	3,200	3,500
	U.S. exports (million dollars) .....	765	644	897	857	1,134
	U.S. imports (million dollars) .....	338	334	305	230	306
	Apparent U.S. consumption (million dollars) .....	2,963	3,230	2,408	2,573	2,672
	Trade balance (million dollars) .....	427	310	592	627	828
	Ratio of imports to apparent consumption (percent) .....	11.4	10.3	12.7	8.9	11.5
	Ratio of exports to shipments (percent) .....	22.6	18.2	29.9	26.8	32.4
MT028	Electric motors, generators, and related equipment:					
	Establishments (number) .....	310	305	301	295	300
	Employees (thousands) .....	90	90	88	86	87
	Capacity utilization (percent) .....	78	79	84	81	80
	U.S. shipments (million dollars) .....	8,600	8,950	9,250	9,050	9,410
	U.S. exports (million dollars) .....	1,743	1,883	2,327	2,742	2,925
	U.S. imports (million dollars) .....	2,144	2,268	2,368	2,658	2,974
	Apparent U.S. consumption (million dollars) .....	9,001	9,335	9,291	8,966	9,459
	Trade balance (million dollars) .....	-401	-385	-41	84	-49
	Ratio of imports to apparent consumption (percent) .....	23.8	24.3	25.5	29.6	31.4
	Ratio of exports to shipments (percent) .....	20.3	21.0	25.2	30.3	31.1

**Table B-4-Continued**

**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
MT029	Electrical transformers, static converters, and inductors:						
	Establishments (number) .....	300	295	290	285	285	
	Employees (thousands) .....	49	48	46	43	44	
	Capacity utilization (percent) .....	69	72	70	68	70	
	U.S. shipments (million dollars) .....	4,840	4,980	5,150	5,000	5,765	
	U.S. exports (million dollars) .....	862	1,058	1,118	1,206	1,421	
	U.S. imports (million dollars) .....	1,506	1,643	1,800	2,130	2,467	
	Apparent U.S. consumption (million dollars) .....	5,484	5,565	5,832	5,924	6,811	
	Trade balance (million dollars) .....	-644	-585	-682	-924	-1,046	
	Ratio of imports to apparent consumption (percent) .....	27.5	29.5	30.9	36.0	36.2	
	Ratio of exports to shipments (percent) .....	17.8	21.2	21.7	24.1	24.6	
	MT030	Primary cells and batteries and electric storage batteries:					
		Establishments (number) .....	250	251	251	255	255
Employees (thousands) .....		35	34	31	33	34	
Capacity utilization (percent) .....		82	82	82	83	83	
U.S. shipments (million dollars) .....		5,150	5,200	5,000	5,350	5,400	
U.S. exports (million dollars) .....		479	590	797	848	957	
U.S. imports (million dollars) .....		701	719	795	947	1,079	
Apparent U.S. consumption (million dollars) .....		5,372	5,329	4,998	5,449	5,522	
Trade balance (million dollars) .....		-222	-129	2	-99	122	
Ratio of imports to apparent consumption (percent) .....		13.0	13.5	15.9	17.4	19.5	
Ratio of exports to shipments (percent) .....		9.3	11.3	15.9	15.9	17.7	
MT031		Portable electric handtools:					
		Establishments (number) .....	30	29	29	29	29
	Employees (thousands) .....	8	8	8	8	8	
	Capacity utilization (percent) .....	68	71	76	82	83	
	U.S. shipments (million dollars) .....	1,160	1,200	1,300	1,375	1,450	
	U.S. exports (million dollars) .....	190	224	252	260	323	
	U.S. imports (million dollars) .....	393	356	332	381	370	
	Apparent U.S. consumption (million dollars) .....	1,363	1,332	1,380	1,496	1,497	
	Trade balance (million dollars) .....	-203	-132	-80	-121	-47	
	Ratio of imports to apparent consumption (percent) .....	28.8	26.7	24.1	25.5	24.7	
	Ratio of exports to shipments (percent) .....	16.4	18.7	19.4	18.9	22.3	
	MT032	Nonelectrically powered hand tools and parts thereof:					
		Establishments (number) .....	50	49	49	45	45
Employees (thousands) .....		11	12	10	11	12	
Capacity utilization (percent) .....		78	82	72	75	82	
U.S. shipments (million dollars) .....		1,314	1,390	1,290	1,330	1,560	
U.S. exports (million dollars) .....		499	556	348	381	378	
U.S. imports (million dollars) .....		571	540	420	470	550	
Apparent U.S. consumption (million dollars) .....		1,386	1,374	1,362	1,419	1,732	
Trade balance (million dollars) .....		-72	16	-72	-89	-172	
Ratio of imports to apparent consumption (percent) .....		41.2	39.3	30.8	33.1	31.8	
Ratio of exports to shipments (percent) .....		38.0	40.0	27.0	28.6	24.2	

**Table B-4-Continued**  
**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT033	Ignition, starting, lighting, and other electrical equipment:					
	Establishments (number) .....	526	510	510	520	521
	Employees (thousands) .....	68	66	66	69	68
	Capacity utilization (percent) .....	78	77	75	78	79
	U.S. shipments (million dollars) .....	9,055	9,091	8,900	9,500	9,525
	U.S. exports (million dollars) .....	639	891	975	1,122	1,432
	U.S. imports (million dollars) .....	1,389	1,284	1,191	1,296	1,495
	Apparent U.S. consumption (million dollars) .....	9,805	9,484	9,116	9,674	9,588
	Trade balance (million dollars) .....	-750	-393	-216	-174	-63
	Ratio of imports to apparent consumption (percent) .....	14.2	13.5	13.1	13.4	15.6
	Ratio of exports to shipments (percent) .....	7.1	9.8	11.0	11.8	15.0
MT034	Flashlights and other similar electric lights, light bulbs, etc.:					
	Establishments (number) .....	135	130	125	125	125
	Employees (thousands) .....	25	25	25	25	25
	Capacity utilization (percent) .....	73	72	83	82	81
	U.S. shipments (million dollars) .....	3,150	3,100	3,000	2,950	3,200
	U.S. exports (million dollars) .....	402	541	624	671	712
	U.S. imports (million dollars) .....	637	690	728	882	965
	Apparent U.S. consumption (million dollars) .....	3,385	3,249	3,104	3,161	3,453
	Trade balance (million dollars) .....	-235	-149	-104	-211	-253
	Ratio of imports to apparent consumption (percent) .....	18.8	21.2	23.5	27.9	27.9
	Ratio of exports to shipments (percent) .....	12.8	17.5	20.8	22.7	22.3
MT035	Electric and gas welding and soldering equipment:					
	Establishments (number) .....	184	184	184	186	178
	Employees (thousands) .....	19	19	21	22	18
	Capacity utilization (percent) .....	68	70	72	73	78
	U.S. shipments (million dollars) .....	2,521	2,571	2,648	2,674	2,410
	U.S. exports (million dollars) .....	317	385	389	406	405
	U.S. imports (million dollars) .....	410	297	435	345	502
	Apparent U.S. consumption (million dollars) .....	2,614	2,483	2,694	2,613	2,507
	Trade balance (million dollars) .....	-93	88	-46	61	-97
	Ratio of imports to apparent consumption (percent) .....	15.7	12.0	16.1	13.2	20.0
	Ratio of exports to shipments (percent) .....	12.6	15.0	14.7	15.2	16.8
MT036	Insulated electrical wire and cable, and conduit; etc.:					
	Establishments (number) .....	375	375	374	370	365
	Employees (thousands) .....	81	80	79	78	75
	Capacity utilization (percent) .....	78	79	78	75	81
	U.S. shipments (million dollars) .....	12,800	13,300	13,500	13,250	13,200
	U.S. exports (million dollars) .....	1,704	1,874	2,201	2,567	2,991
	U.S. imports (million dollars) .....	2,670	2,729	2,707	3,154	3,564
	Apparent U.S. consumption (million dollars) .....	13,766	14,155	14,006	13,837	13,773
	Trade balance (million dollars) .....	-966	-855	-506	-587	-573
	Ratio of imports to apparent consumption (percent) .....	19.4	19.3	19.3	22.8	25.9
	Ratio of exports to shipments (percent) .....	13.3	14.1	16.3	19.4	22.7

**Table B-4-Continued**  
**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
MT037	Rail locomotive and rolling stock:						
	Establishments (number) .....	123	120	117	110	115	
	Employees (thousands) .....	24	23	22	22	23	
	Capacity utilization (percent) .....	50	55	61	66	65	
	U.S. shipments (million dollars) .....	2,700	2,800	2,700	2,950	3,000	
	U.S. exports (million dollars) .....	433	518	546	580	574	
	U.S. imports (million dollars) .....	791	701	662	744	729	
	Apparent U.S. consumption (million dollars) .....	3,058	2,983	2,816	3,114	3,155	
	Trade balance (million dollars) .....	358	-183	-116	-164	-155	
	Ratio of imports to apparent consumption (percent) .....	25.9	23.5	23.5	23.9	23.1	
	Ratio of exports to shipments (percent) .....	16.0	18.5	20.2	19.7	19.1	
	MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing:					
		Establishments (number) .....	1,042	1,052	1,020	1,020	1,025
Employees (thousands) .....		350	329	316	314	328	
Capacity utilization (percent) .....		84	72	67	71	77	
U.S. shipments (million dollars) .....		144,418	140,000	128,500	139,800	161,500	
U.S. exports (million dollars) .....		12,863	13,244	15,385	17,679	18,555	
U.S. imports (million dollars) .....		58,708	60,281	58,832	60,376	68,607	
Apparent U.S. consumption (million dollars) .....		190,263	187,037	171,181	182,497	211,552	
Trade balance (million dollars) .....		-45,845	-47,037	-43,447	-42,697	-50,052	
Ratio of imports to apparent consumption (percent) .....		30.9	32.2	34.4	33.1	32.4	
Ratio of exports to shipments (percent) .....		8.9	9.5	12.0	12.6	11.5	
ME039		Certain motor vehicle parts:					
		Establishments (number) .....	5,785	5,765	5,750	5,825	5,910
	Employees (thousands) .....	441	423	407	437	404	
	Capacity utilization (percent) .....	79	81	77	79	81	
	U.S. shipments (million dollars) .....	66,551	65,114	59,674	64,519	69,628	
	U.S. exports (million dollars) .....	10,940	14,039	13,607	16,046	18,469	
	U.S. imports (million dollars) .....	12,783	12,618	11,490	13,304	14,646	
	Apparent U.S. consumption (million dollars) .....	68,394	63,693	57,557	61,777	65,805	
	Trade balance (million dollars) .....	-1,843	1,421	2,117	2,742	3,823	
	Ratio of imports to apparent consumption (percent) .....	18.7	19.8	20.0	21.5	22.3	
	Ratio of exports to shipments (percent) .....	16.4	21.6	22.8	24.9	26.5	
MT040	Motorcycles, mopeds, and parts:						
	Establishments (number) .....	58	58	58	58	58	
	Employees (thousands) .....	4	5	5	6	7	
	Capacity utilization (percent) .....	78	78	78	79	80	
	U.S. shipments (million dollars) .....	645	715	830	945	1,275	
	U.S. exports (million dollars) .....	199	306	441	497	506	
	U.S. imports (million dollars) .....	637	449	584	803	877	
	Apparent U.S. consumption (million dollars) .....	1,083	858	973	1,251	1,646	
	Trade balance (million dollars) .....	-438	-143	-143	-306	-371	
	Ratio of imports to apparent consumption (percent) .....	58.8	52.3	60.0	64.2	53.3	
	Ratio of exports to shipments (percent) .....	30.9	42.8	53.1	52.6	39.7	

**Table B-4-Continued**

**Machinery and transportation sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
MT041	Miscellaneous vehicles and transportation-related equipment					
	Establishments (number) .....	1,200	1,204	1,204	1,205	1,200
	Employees (thousands) .....	43	39	36	38	36
	Capacity utilization (percent) .....	56	58	59	60	60
	U.S. shipments (million dollars) .....	5,700	5,750	5,700	5,800	5,750
	U.S. exports (million dollars) .....	1,641	1,743	2,217	2,701	2,441
	U.S. imports (million dollars) .....	759	1,078	1,194	1,153	1,465
	Apparent U.S. consumption (million dollars) .....	4,818	5,085	4,677	4,252	4,774
	Trade balance (million dollars) .....	882	665	1,023	1,548	976
	Ratio of imports to apparent consumption (percent) .....	15.8	21.2	25.5	27.1	30.7
	Ratio of exports to shipments (percent) .....	28.8	30.3	38.9	46.6	42.5
MT042	Aircraft, spacecraft, and related equipment:					
	Establishments (number) .....	340	340	335	320	275
	Employees (thousands) .....	575	545	535	520	495
	Capacity utilization (percent) .....	74	83	79	98	87
	U.S. shipments (million dollars) .....	47,710	50,096	50,000	48,500	40,000
	U.S. exports (million dollars) .....	23,290	29,439	34,403	35,172	30,673
	U.S. imports (million dollars) .....	5,728	6,369	7,501	7,262	6,255
	Apparent U.S. consumption (million dollars) .....	30,148	27,026	23,098	20,590	15,582
	Trade balance (million dollars) .....	17,562	23,070	26,902	27,910	24,418
	Ratio of imports to apparent consumption (percent) .....	19.0	23.6	32.5	35.3	40.1
	Ratio of exports to shipments (percent) .....	48.8	58.8	68.8	72.5	76.7
MT043	Ships, tugs, pleasure boats, and similar vessels:					
	Establishments (number) .....	2,550	2,525	2,400	2,350	2,350
	Employees (thousands) .....	158	155	150	148	149
	Capacity utilization (percent) .....	57	65	73	65	60
	U.S. shipments (million dollars) .....	14,400	13,900	13,500	14,000	13,900
	U.S. exports (million dollars) .....	1,033	1,334	1,174	1,441	1,002
	U.S. imports (million dollars) .....	621	372	279	378	1,019
	Apparent U.S. consumption (million dollars) .....	13,988	12,938	12,605	12,937	13,917
	Trade balance (million dollars) .....	412	962	895	1,063	-17
	Ratio of imports to apparent consumption (percent) .....	4.4	2.9	2.2	2.9	7.3
	Ratio of exports to shipments (percent) .....	7.2	9.6	8.7	10.3	7.2
ME044	Motors and engines, except internal combustion, aircraft, or electric:					
	Establishments (number) .....	43	44	44	45	45
	Employees (thousands) .....	9	9	9	9	9
	Capacity utilization (percent) .....	83	84	84	84	84
	U.S. shipments (million dollars) .....	3,806	3,993	4,010	4,100	4,150
	U.S. exports (million dollars) .....	154	225	245	231	244
	U.S. imports (million dollars) .....	207	212	213	230	283
	Apparent U.S. consumption (million dollars) .....	3,859	3,980	3,978	4,099	4,189
	Trade balance (million dollars) .....	-53	-13	-32	1	-39
	Ratio of imports to apparent consumption (percent) .....	5.4	5.3	5.4	5.6	6.8
	Ratio of exports to shipments (percent) .....	4.0	5.6	6.1	5.6	5.9



**Table B-5**  
**Electronic technology sector: Profile of U.S. industry and market, by industry/commodity**  
**groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
ST001	Office machines:					
	Establishments (number) .....	504	357	356	351	350
	Employees (thousands) .....	135	131	128	127	124
	Capacity utilization (percent) .....	69	64	70	72	72
	U.S. shipments (million dollars) .....	9,265	9,070	8,955	8,810	8,700
	U.S. exports (million dollars) .....	1,762	1,721	1,953	2,003	1,770
	U.S. imports (million dollars) .....	4,269	3,944	3,960	4,578	5,052
	Apparent U.S. consumption (million dollars) .....	11,772	11,293	10,962	11,385	11,982
	Trade balance (million dollars) .....	(2,507)	(2,223)	(2,007)	(2,575)	(3,282)
	Ratio of imports to apparent consumption (percent) .....	36.3	34.9	36.1	40.2	42.2
	Ratio of exports to shipments (percent) .....	19-0	19-0	21.8	22.7	20.3
ST002	Telephone and telegraph apparatus:					
	Establishments (number) .....	642	642	630	625	630
	Employees (thousands) .....	97	92	92	90	89
	Capacity utilization (percent) .....	68	67	66	68	72
	U.S. shipments (million dollars) .....	17,658	16,949	15,940	16,259	16,422
	U.S. exports (million dollars) .....	2,334	2,963	3,234	4,170	5,199
	U.S. imports (million dollars) .....	4,813	4,818	4,852	5,606	6,143
	Apparent U.S. consumption (million dollars) .....	20,137	18,804	17,558	17,695	17,366
	Trade balance (million dollars) .....	(2,479)	(1,855)	(1,618)	(1,436)	(944)
	Ratio of imports to apparent consumption (percent) .....	23.9	25.6	27.6	31.7	35.4
	Ratio of exports to shipments (percent) .....	13.2	17.5	20.3	25.6	31.7
ST003	Microphones, loudspeakers, audio amplifiers and combinations thereof:					
	Establishments (number) .....	110	110	110	110	110
	Employees (thousands) .....	12	12	12	12	12
	Capacity utilization (percent) .....	71	72	73	74	75
	U.S. shipments (million dollars) .....	1,680	1,652	1,687	1,860	2,030
	U.S. exports (million dollars) .....	463	582	669	720	851
	U.S. imports (million dollars) .....	1,121	1,121	1,070	1,241	1,473
	Apparent U.S. consumption (million dollars) .....	2,338	2,191	2,088	2,381	2,652
	Trade balance (million dollars) .....	(658)	(539)	(401)	(521)	(622)
	Ratio of imports to apparent consumption (percent) .....	47.9	51.2	51.2	52.1	55.5
	Ratio of exports to shipments (percent) .....	27.6	35.2	39-7	38.7	41.9
ST004	Tape recorders, tape players, video cassette recorders, turntables, etc:					
	Establishments (number) .....	30	30	28	25	24
	Employees (thousands) .....	1	1	1	1	1
	Capacity utilization (percent) .....	70	72	74	75	75
	U.S. shipments (million dollars) .....	225	232	213	176	150
	U.S. exports (million dollars) .....	408	501	516	627	579
	U.S. imports (million dollars) .....	5,012	4,537	4,809	5,444	5,445
	Apparent U.S. consumption (million dollars) .....	4,829	4,268	4,506	4,993	5,016
	Trade balance (million dollars) .....	(4,604)	(4,036)	(4,293)	(4,817)	(4,866)
	Ratio of imports to apparent consumption (percent) .....	103.8	106.3	106.7	109.0	108.6
	Ratio of exports to shipments (percent) .....	181.3	215.9	242.3	356.3	386.0

See footnote at end of table.

**Table B-5-Continued**  
**Electronic technology sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
ST005	Unrecorded magnetic tapes, discs, and other media:					
	Establishments (number) .....	57	58	58	58	58
	Employees (thousands) .....	18	18	18	18	18
	Capacity utilization (percent) .....	78	77	78	79	78
	U.S. shipments (million dollars) .....	3,673	3,965	4,028	4,200	4,100
	U.S. exports (million dollars) .....	1,292	1,706	1,759	1,743	1,675
	U.S. imports (million dollars) .....	1,381	1,474	1,673	1,729	1,928
	Apparent U.S. consumption (million dollars) .....	3,762	3,733	3,942	4,186	4,353
	Trade balance (million dollars) .....	(89)	232	86	14	(253)
	Ratio of imports to apparent consumption (percent) .....	36.7	39.5	42.4	41.3	44.3
	Ratio of exports to shipments (percent) .....	35.2	43.0	43.7	41.5	40.9
ST006	Records, tapes, compact discs, computer software, etc.:					
	Establishments (number) .....	6,700	6,900	7,400	7,750	8,000
	Employees (thousands) .....	125	140	153	167	181
	Capacity utilization (percent) .....	90	90	90	90	90
	U.S. shipments (million dollars) .....	27,000	32,000	34,700	39,300	44,200
	U.S. exports (million dollars) .....	1,126	1,872	2,201	2,756	3,281
	U.S. imports (million dollars) .....	266	316	379	522	616
	Apparent U.S. consumption (million dollars) .....	26,140	30,444	32,878	37,066	41,535
	Trade balance (million dollars) .....	860	1,556	1,822	2,234	2,665
	Ratio of imports to apparent consumption (percent) .....	1.0	1.0	1.2	1.4	1.5
	Ratio of exports to shipments (percent) .....	4.2	5.9	6.3	7.0	7.4
ST007	Radio transmission and reception apparatus, and combinations thereof:					
	Establishments (number) .....	284	264	264	260	256
	Employees (thousands) .....	78	71	75	73	71
	Capacity utilization (percent) .....	87	87	87	87	87
	U.S. shipments (million dollars) .....	10,000	8,900	8,400	9,000	9,600
	U.S. exports (million dollars) .....	2,629	3,356	3,370	3,528	4,283
	U.S. imports (million dollars) .....	5,099	4,721	5,387	5,958	6,420
	Apparent U.S. consumption (million dollars) .....	12,470	10,265	10,417	11,430	11,737
	Trade balance (million dollars) .....	(2,470)	(1,365)	(2,017)	(2,430)	(2,137)
	Ratio of imports to apparent consumption (percent) .....	40.9	46.0	51.7	52.1	54.7
	Ratio of exports to shipments (percent) .....	26.3	37.7	40.1	39.2	44.6
ST008	Radio navigational aid, radar, and remote control apparatus:					
	Establishments (number) .....	115	115	115	110	105
	Employees (thousands) .....	125	135	135	125	116
	Capacity utilization (percent) .....	73	72	72	72	72
	U.S. shipments (million dollars) .....	14,000	15,300	14,900	14,500	14,100
	U.S. exports (million dollars) .....	1,193	1,218	1,244	1,111	1,249
	U.S. imports (million dollars) .....	460	448	496	446	408
	Apparent U.S. consumption (million dollars) .....	13,267	14,530	14,152	13,835	13,259
	Trade balance (million dollars) .....	733	770	748	665	841
	Ratio of imports to apparent consumption (percent) .....	3.5	3.1	3.5	3.2	3.1
	Ratio of exports to shipments (percent) .....	8.5	8.0	8.3	7.7	8.9

See footnote at end of table.

**Table B-5--Continued**  
**Electronic technology sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
ST009	Television receivers and video monitors and combinations, etc.:					
	Establishments (number) .....	34	34	32	30	28
	Employees (thousands) .....	23	22	21	21	21
	Capacity utilization (percent) .....	70	69	68	68	68
	U.S. shipments (million dollars) .....	3,900	4,000	4,000	4,100	4,200
	U.S. exports (million dollars) .....	926	1,025	1,075	1,224	1,340
	U.S. imports (million dollars) .....	3,405	3,174	3,103	3,532	3,707
	Apparent U.S. consumption (million dollars) .....	6,379	6,149	6,028	6,408	6,567
	Trade balance (million dollars) .....	(2,479)	(2,149)	(2,028)	(2,308)	(2,367)
	Ratio of imports to apparent consumption (percent) .....	53.4	51.6	51.5	55.1	56.4
	Ratio of exports to shipments (percent) .....	23.7	25.6	26.9	29.9	31.9
ST010	Television apparatus (except receivers and monitors), etc.:					
	Establishments (number) .....	130	130	130	125	120
	Employees (thousands) .....	10	11	11	9	8
	Capacity utilization (percent) .....	77	77	75	72	72
	U.S. shipments (million dollars) .....	1,400	1,280	1,250	1,200	1,200
	U.S. exports (million dollars) .....	156	206	236	229	198
	U.S. imports (million dollars) .....	2,428	2,569	2,755	2,236	2,536
	Apparent U.S. consumption (million dollars) .....	3,672	3,643	3,769	3,207	3,538
	Trade balance (million dollars) .....	(2,272)	(2,363)	(2,519)	(2,007)	(2,338)
	Ratio of imports to apparent consumption (percent) .....	66.1	70.5	73.1	69.7	71.7
	Ratio of exports to shipments (percent) .....	11.1	16.1	18.9	19.1	16.5
ST011	Electric sound and visual signaling apparatus:					
	Establishments (number) .....	232	230	221	218	210
	Employees (thousands) .....	15	14	14	14	14
	Capacity utilization (percent) .....	71	75	88	87	85
	U.S. shipments (million dollars) .....	1,950	1,830	1,740	1,675	1,585
	U.S. exports (million dollars) .....	271	331	418	483	560
	U.S. imports (million dollars) .....	916	872	921	1,073	1,261
	Apparent U.S. consumption (million dollars) .....	2,595	2,371	2,243	2,265	2,286
	Trade balance (million dollars) .....	(645)	(541)	(503)	(590)	(701)
	Ratio of imports to apparent consumption (percent) .....	35.3	36.8	41.1	47.4	55.2
	Ratio of exports to shipments (percent) .....	13.9	18.1	24.0	28.8	35.3
ST012	Electrical capacitors and resistors:					
	Establishments (number) .....	184	173	171	161	161
	Employees (thousands) .....	27	25	31	29	28
	Capacity utilization (percent) .....	70	72	78	75	80
	U.S. shipments (million dollars) .....	2,338	2,171	1,920	1,973	2,235
	U.S. exports (million dollars) .....	762	766	818	898	960
	U.S. imports (million dollars) .....	885	879	884	1,022	1,181
	Apparent U.S. consumption (million dollars) .....	2,461	2,284	1,986	2,097	2,456
	Trade balance (million dollars) .....	(123)	(113)	(66)	(124)	(221)
	Ratio of imports to apparent consumption (percent) .....	36.0	38.5	44.5	48.7	48.1
	Ratio of exports to shipments (percent) .....	32.6	35.3	42.6	45.5	43.0

See footnote at end of table.

**Table B-5-Continued**  
**Electronic technology sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits:					
	Establishments (number) .....	1,715	1,743	1,760	1,790	1,800
	Employees (thousands) .....	160	150	160	155	160
	Capacity utilization (percent) .....	82	80	79	73	80
	U.S. shipments (million dollars) .....	22,284	22,061	22,282	23,170	26,252
	U.S. exports (million dollars) .....	3,781	5,280	4,870	4,924	5,224
	U.S. imports (million dollars) .....	4,409	5,452	5,612	5,445	6,254
	Apparent U.S. consumption (million dollars) .....	22,912	22,233	23,024	23,691	27,282
	Trade balance (million dollars) .....	(628)	(172)	(742)	(521)	(1,030)
	Ratio of imports to apparent consumption (percent) .....	19.2	24.5	24.4	23.0	22.9
	Ratio of exports to shipments (percent) .....	17.0	23.9	21.9	21.3	19.9
ST014	Television picture tubes and other cathode ray tubes:					
	Establishments (number) .....	19	19	19	19	19
	Employees (thousands) .....	15	15	20	20	21
	Capacity utilization (percent) .....	80	80	82	87	87
	U.S. shipments (million dollars) .....	1,770	1,760	2,300	2,300	2,400
	U.S. exports (million dollars) .....	352	430	565	602	769
	U.S. imports (million dollars) .....	664	648	679	758	822
	Apparent U.S. consumption (million dollars) .....	2,082	1,978	2,414	2,456	2,453
	Trade balance (million dollars) .....	(312)	(218)	(114)	(156)	(53)
	Ratio of imports to apparent consumption (percent) .....	31.9	32.8	28.1	30.9	33.5
	Ratio of exports to shipments (percent) .....	19.9	24.4	24.6	26.2	32.0
ST015	Special purpose tubes:					
	Establishments (number) .....	40	40	40	40	40
	Employees (thousands) .....	7	6	6	6	5
	Capacity utilization (percent) .....	80	80	76	73	76
	U.S. shipments (million dollars) .....	1,126	1,097	1,073	948	1,074
	U.S. exports (million dollars) .....	185	211	194	169	159
	U.S. imports (million dollars) .....	154	133	137	170	168
	Apparent U.S. consumption (million dollars) .....	1,095	1,019	1,016	949	1,083
	Trade balance (million dollars) .....	31	78	57	(1)	(9)
	Ratio of imports to apparent consumption (percent) .....	14.1	13.1	13.5	17.9	15.5
	Ratio of exports to shipments (percent) .....	16.4	19.2	18.1	17.8	14.8
ST016	Diodes, transistors, integrated circuits and similar semiconductor solid state devices:					
	Establishments (number) .....	500	500	500	500	500
	Employees (thousands) .....	220	223	232	218	215
	Capacity utilization (percent) .....	80	76	77	76	84
	U.S. shipments (million dollars) .....	22,410	23,974	26,560	29,169	37,000
	U.S. exports (million dollars) .....	9,581	10,761	10,887	11,527	13,813
	U.S. imports (million dollars) .....	12,318	12,169	13,080	15,449	19,446
	Apparent U.S. consumption (million dollars) .....	25,147	25,382	28,753	33,091	42,633
	Trade balance (million dollars) .....	(2,737)	(1,408)	(2,193)	(3,922)	(5,633)
	Ratio of imports to apparent consumption (percent) .....	49.0	47.9	45.5	46.7	45.6
	Ratio of exports to shipments (percent) .....	42.8	44.9	41.0	39.5	37.3

See footnote at end of table.

**Table B-5-Continued**  
**Electronic technology sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
ST017	Electrical and electronic articles, apparatus, and parts not elsewhere provided for:					
	Establishments (number) .....	660	653	658	661	660
	Employees (thousands) .....	16	14	15	15	15
	Capacity utilization (percent) .....	75	65	70	70	70
	U.S. shipments (million dollars) .....	3,650	2,950	3,150	3,200	3,400
	U.S. exports (million dollars) .....	1,388	1,379	1,679	1,682	1,871
	U.S. imports (million dollars) .....	846	943	815	928	987
	Apparent U.S. consumption (million dollars) .....	3,108	2,514	2,286	2,446	2,516
	Trade balance (million dollars) .....	542	436	864	754	884
	Ratio of imports to apparent consumption (percent) .....	27.2	37.5	35.7	37.9	39.2
	Ratio of exports to shipments (percent) .....	38.0	46.7	53.3	52.6	55.0
ST018	Automatic data processing machines:					
	Establishments (number) .....	673	739	700	732	754
	Employees (thousands) .....	228	222	211	203	189
	Capacity utilization (percent) .....	77	75	73	78	85
	U.S. shipments (million dollars) .....	49,130	49,983	49,314	50,946	55,053
	U.S. exports (million dollars) .....	21,422	23,005	24,001	24,985	25,397
	U.S. imports (million dollars) .....	21,356	22,928	25,986	31,564	37,906
	Apparent U.S. consumption (million dollars) .....	49,064	49,906	51,299	57,525	67,562
	Trade balance (million dollars) .....	66	77	(1,985)	(6,579)	(12,509)
	Ratio of imports to apparent consumption (percent) .....	43.5	45.9	50.7	54.9	56.1
	Ratio of exports to shipments (percent) .....	43.6	46.0	48.7	49-0	46.1
ST019	Photographic supplies:					
	Establishments (number) .....	115	115	115	112	112
	Employees (thousands) .....	36	35	34	35	34
	Capacity utilization (percent) .....	82	77	88	88	85
	U.S. shipments (million dollars) .....	8,795	9,500	9,400	9,200	9,500
	U.S. exports (million dollars) .....	1,499	1,719	1,791	1,669	1,636
	U.S. imports (million dollars) .....	1,330	1,409	1,486	1,610	1,702
	Apparent U.S. consumption (million dollars) .....	8,626	9,190	9,095	9,141	9,566
	Trade balance (million dollars) .....	169-0	310.0	305.0	59-0	(66.0)
	Ratio of imports to apparent consumption (percent) .....	15.4	15.3	16.3	17.6	17.8
	Ratio of exports to shipments (percent) .....	17.0	18.1	19-1	18.1	17.2
ST020	Exposed photographic plates, film, and paper:					
	Establishments (number) .....	200	200	200	200	200
	Employees (thousands) .....	230	240	230	230	230
	Capacity utilization (percent) .....	82	77	88	88	85
	U.S. shipments (million dollars) .....	4,200	5,350	5,000	5,100	5,500
	U.S. exports (million dollars) .....	85	110	102	102	100
	U.S. imports (million dollars) .....	91	88	81	124	156
	Apparent U.S. consumption (million dollars) .....	4,206	5,328	4,979	5,122	5,556
	Trade balance (million dollars) .....	(6)	22	21	(22)	(56)
	Ratio of imports to apparent consumption (percent) .....	2.2	1.7	1.6	2.4	2.8
	Ratio of exports to shipments (percent) .....	2.0	2.1	2.0	2.0	1.8

See footnote at end of table.

**Table B-5-Continued**  
**Electronic technology sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
ST021	Optical fibers, optical fiber bundles and cables:					
	Establishments (number) .....	50	50	52	55	56
	Employees (thousands) .....	5	6	6	7	7
	Capacity utilization (percent) .....	85	87	88	90	90
	U.S. shipments (million dollars) .....	943	1,184	1,196	1,316	-1,444
	U.S. exports (million dollars) .....	143	172	247	293	325
	U.S. imports (million dollars) .....	40	62	57	85	90
	Apparent U.S. consumption (million dollars) .....	840	1,074	1,006	1,108	1,209
	Trade balance (million dollars) .....	103	110	190	208	235
	Ratio of imports to apparent consumption (percent) .....	4.8	5.8	5.7	7.7	7.4
	Ratio of exports to shipments (percent) .....	15.2	14.5	20.7	22.3	22.5
ST022	Optical goods, including ophthalmic goods:					
	Establishments (number) .....	900	900	905	900	902
	Employees (thousands) .....	58	59	60	58	58
	Capacity utilization (percent) .....	82	77	88	88	78
	U.S. shipments (million dollars) .....	4,000	4,200	4,450	4,350	4,250
	U.S. exports (million dollars) .....	933	985	1,071	1,194	1,150
	U.S. imports (million dollars) .....	1,811	1,872	1,920	2,098	2,181
	Apparent U.S. consumption (million dollars) .....	4,878	5,087	5,299	5,254	5,281
	Trade balance (million dollars) .....	(878)	(887)	(849)	(904)	(1,031)
	Ratio of imports to apparent consumption (percent) .....	37.1	36.8	36.2	39-9	41.3
	Ratio of exports to shipments (percent) .....	23.3	23.5	24.1	27.4	27.1
ST023	Photographic cameras and equipment:					
	Establishments (number) .....	650	640	635	635	635
	Employees (thousands) .....	13	13	13	12	12
	Capacity utilization (percent) .....	82	77	88	88	85
	U.S. shipments (million dollars) .....	1,620	1,595	1,580	1,550	1,530
	U.S. exports (million dollars) .....	759	764	808	936	940
	U.S. imports (million dollars) .....	1,686	1,560	1,728	1,703	1,968
	Apparent U.S. consumption (million dollars) .....	2,547	2,391	2,500	2,317	2,558
	Trade balance (million dollars) .....	(927)	(796)	(920)	(767)	(1,028)
	Ratio of imports to apparent consumption (percent) .....	66.2	65.2	69.1	73.5	76.9
	Ratio of exports to shipments (percent) .....	46.9	47.9	51.1	60.4	61.4
ST024	Medical goods:					
	Establishments (number) .....	2,295	2,300	2,305	2,315	2,320
	Employees (thousands) .....	163	163	165	170	175
	Capacity utilization (percent) .....	81	82	83	84	85
	U.S. shipments (million dollars) .....	17,500	19,200	20,500	22,200	24,000
	U.S. exports (million dollars) .....	4,493	5,317	6,206	6,940	7,360
	U.S. imports (million dollars) .....	2,799	3,292	3,762	3,997	4,381
	Apparent U.S. consumption (million dollars) .....	15,806	17,175	18,056	19,257	21,021
	Trade balance (million dollars) .....	1,694	2,025	2,444	2,943	2,979
	Ratio of imports to apparent consumption (percent) .....	17.7	19-2	20.8	20.8	20.8
	Ratio of exports to shipments (percent) .....	25.7	27.7	30.3	31.3	30.7

See footnote at end of table.

**Table B-5-Continued**  
**Electronic technology sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993	
ST025	Surveying and navigational instruments:						
	Establishments (number) .....	358	355	349	366	360	
	Employees (thousands) .....	59	55	50	47	45	
	Capacity utilization (percent) .....	70	71	71	66	65	
	U.S. shipments (million dollars) .....	6,966	7,213	7,546	6,937	6,700	
	U.S. exports (million dollars) .....	1,411	1,519	1,734	1,709	1,556	
	U.S. imports (million dollars) .....	432	479	499	562	477	
	Apparent U.S. consumption (million dollars) .....	5,987	6,173	6,311	5,790	5,621	
	Trade balance (million dollars) .....	979	1,040	1,235	1,147	1,079	
	Ratio of imports to apparent consumption (percent) .....	7.2	7.8	7.9	9-7	8.5	
	Ratio of exports to shipments (percent) .....	20.3	21.1	23.0	24.6	23.2	
	ST026	Watches:					
		Establishments (number) .....	20	20	20	20	20
Employees (thousands) .....		3	3	3	3	3	
Capacity utilization (percent) .....		59	59	59	60	61	
U.S. shipments (million dollars) .....		184	205	220	210	230	
U.S. exports (million dollars) .....		96	120	126	117	138	
U.S. imports (million dollars) .....		1,757	2,074	1,855	1,869	2,048	
Apparent U.S. consumption (million dollars) .....		1,845	2,159	1,949	1,962	2,140	
Trade balance (million dollars) .....		(1,661)	(1,954)	(1,729)	(1,752)	(1,910)	
Ratio of imports to apparent consumption (percent) .....		95.2	96.1	95.2	95.3	95.7	
Ratio of exports to shipments (percent) .....		52.2	58.5	57.3	55.7	60.0	
ST027		Clocks and timing devices:					
		Establishments (number) .....	50	50	50	49	49
	Employees (thousands) .....	6	6	5	5	5	
	Capacity utilization (percent) .....	65	65	64	67	68	
	U.S. shipments (million dollars) .....	455	545	535	520	535	
	U.S. exports (million dollars) .....	69	89	100	90	97	
	U.S. imports (million dollars) .....	298	345	317	350	400	
	Apparent U.S. consumption (million dollars) .....	684	801	752	780	838	
	Trade balance (million dollars) .....	(229)	(256)	(217)	(260)	(303)	
	Ratio of imports to apparent consumption (percent) .....	43.6	43.1	42.2	44.9	47.7	
Ratio of exports to shipments (percent) .....	15.2	16.3	18.7	17.3	18.1		
ST028	Arms and ammunition:						
	Establishments (number) .....	400	390	375	375	380	
	Employees (thousands) .....	250	225	200	200	205	
	Capacity utilization (percent) .....	75	72	74	76	77	
	U.S. shipments (million dollars) .....	15,000	14,000	14,000	15,000	15,000	
	U.S. exports (million dollars) .....	1,859	2,336	2,311	2,534	2,372	
	U.S. imports (million dollars) .....	486	463	515	563	682	
	Apparent U.S. consumption (million dollars) .....	13,627	12,127	12,204	13,029	13,310	
	Trade balance (million dollars) .....	1,373	1,873	1,796	1,971	1,690	
	Ratio of imports to apparent consumption (percent) .....	3.6	3.8	4.2	4.3	5.1	
	Ratio of exports to shipments (percent) .....	12.4	16.7	16.5	16.9	15.8	

See footnote at end of table.

**Table B-5--Continued**  
**Electronic technology sector: Profile of U.S. industry and market, by industry/commodity groups, 1989-93**

USITC code	Commodity group	1989	1990	1991	1992	1993
ST029	Balances of a sensitivity of 5 cg or better:					
	Establishments (number) .....	11	13	12	10	10
	Employees (thousands) .....	(1)	(1)	(1)	(1)	(1)
	Capacity utilization (percent) .....	60	60	58	65	60
	U.S. shipments (million dollars) .....	25	30	28	33	30
	U.S. exports (million dollars) .....	9	11	14	16	18
	U.S. imports (million dollars) .....	34	28	31	41	38
	Apparent U.S. consumption (million dollars) .....	50	47	45	58	50
	Trade balance (million dollars) .....	(25)	(17)	(17)	(25)	(20)
	Ratio of imports to apparent consumption (percent) .....	68.0	59.6	68.9	70.7	76.0
	Ratio of exports to shipments (percent) .....	36.0	36.7	50.0	48.5	60.0
ST030	Drawing and mathematical calculating or measuring instruments:					
	Establishments (number) .....	190	185	180	175	175
	Employees (thousands) .....	8	9	7	6	6
	Capacity utilization (percent) .....	81	74	66	67	65
	U.S. shipments (million dollars) .....	603	701	527	542	545
	U.S. exports (million dollars) .....	169	136	138	166	162
	U.S. imports (million dollars) .....	196	183	196	231	235
	Apparent U.S. consumption (million dollars) .....	630	748	585	607	618
	Trade balance (million dollars) .....	(27)	(47)	(58)	(65)	(73)
	Ratio of imports to apparent consumption (percent) .....	31.1	24.5	33.5	38.1	38.0
	Ratio of exports to shipments (percent) .....	28.0	19-4	26.2	30.6	29.7
ST031	Measuring, testing, controlling, and analyzing instruments:					
	Establishments (number) .....	3,240	3,235	3,220	3,215	3,215
	Employees (thousands) .....	240	239	229	220	222
	Capacity utilization (percent) .....	75	72	70	71	72
	U.S. shipments (million dollars) .....	22,345	23,000	23,500	23,700	24,400
	U.S. exports (million dollars) .....	6,386	7,098	7,756	8,185	9,026
	U.S. imports (million dollars) .....	3,174	3,369	3,620	4,014	4,553
	Apparent U.S. consumption (million dollars) .....	19,133	19,271	19,364	19,529	19,927
	Trade balance (million dollars) .....	3,212	3,729	4,136	4,171	4,473
	Ratio of imports to apparent consumption (percent) .....	16.6	17.5	18.7	20.6	22.8
	Ratio of exports to shipments (percent) .....	28.6	30.9	33.0	34.5	37.0

<sup>1</sup> Not available.



## Other Recent USITC Publications

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*Potential Impact on the U.S. Economy and Industries of the GAIT Uruguay Round Agreements: Volume 1 and Volume 2* (Inv. 332-353, USITC Publication 2790 (Vol. 1) and 2791 (Vol. 2), June 1994). Reviews and analyzes studies of the economy-wide effects of the General Agreement on Tariffs and Trade Uruguay Round Agreements and analyzes the impact of both tariff and nontariff provisions of the Uruguay Round Agreements on the agricultural, industrial, and service sectors of the U.S. economy.

*Semiannual Steel Monitoring Report: U.S. Industry Conditions* (Inv. 332-327, USITC Publication 2759, April 1994). **MUST BE PURCHASED FROM GPO.** Based on a survey of steel producers and processors, examines current conditions in the U.S. steel industry, including developments in steel capacity, production, capital expenditures, environmental expenditures, spending on research and development, employment, and financial performance. (To order from GPO, cite *Steel Semiannual Monitoring Report* and send your check for \$7.00 (\$8.75 foreign) or provide your VISA or MasterCard number and expiration date to Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15220-7954 (FAX to 202-512-2233).)

*Production Sharing: U. & Imports Under Harmonized Tariff Schedule Provisions 9802.00.60 and 9802.00.80, 1989-1992* (Inv. 332-237, USITC Publication 2729, February 1994). Updated each year, assesses by industry sector the products and countries that make use of the production sharing provisions of the Harmonized Tariff Schedule of the United States, which provide reduced tariff treatment for eligible goods that are processed in foreign locations but contain U.S.-made components. This report also examines the implications of the North American Free-Trade Agreement for the maquiladora industry in Mexico and phased-in access to the Mexican market for maquila production.

*Synthetic Organic Chemicals, U.S. Production and Sales, 1992* (Inv. 332-135, USITC Publication 2720, February 1994). Contains 1992 data about synthetic organic chemicals, the raw materials for many consumer and industrial products. The report is one of the few publicly available reports containing such comprehensive information. It covers about 6,000 individual chemicals and chemical products and includes a list of manufacturers of each item for which production and/or sales was reported. The report presents data aggregated in the format of the *Harmonized Tariff Schedule of the United States* on an 8-digit basis.

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