

# Shifts in U.S. Merchandise Trade in 1998

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**U.S. International Trade Commission**



Washington, DC 20436

# U.S. International Trade Commission

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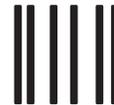
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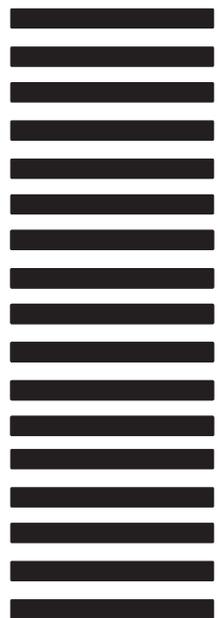
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# U.S. International Trade Commission

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## Shifts in U.S. Merchandise Trade in 1998



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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 (USITC or the 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. The current report format was developed by the USITC in response to Congressional interest in establishing a systematic means of examining and reporting on the significance of major trade shifts, by product and with leading U.S. trading partners, in the services sector and in all agricultural and manufacturing industries.

On December 20, 1994, the Commission on its own motion expanded the scope of this study to include selected service industries. Under the expanded scope, the Commission publishes two separate reports annually: *Shifts in U.S. Merchandise Trade* and *Recent Trends in U.S. Services Trade*. A separate report covering services trade was instituted in order to provide more comprehensive coverage of U.S. trade performance and overall economic competitiveness.

A significant amount of the work contained in this recurring report is basic research required to maintain a proficient level of trade expertise that the Commission has found essential in its statutory investigations and in apprising its varied customer base of global industry trends and competition issues. The information compiled in this report, such as import, export, trade balance, and industry profile data (domestic consumption, production, employment, and import penetration) for nearly 300 major industry/commodity groups, is not replicated elsewhere in the U.S. Government.

The current report briefly summarizes and analyzes the major trade shifts that occurred in 1998 in terms of both industries/commodities and of the leading U.S. trade partners. It also discusses certain other noteworthy trade developments, provides summary trade statistics, and profiles basic statistics of industry/commodity groups.

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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## Glossary of Frequently Used Abbreviations

AD	antidumping
AGOA	Africa Growth and Opportunity Act
ASEAN	Association of Southeast Asian Nations
ATC	WTO Agreement on Textiles and Clothing
BEA	Bureau of Economic Analysis
BIS	Bank for International Settlements
BOP	balance of payments
C\$	Canadian dollars
CBERA	Caribbean Basin Economic Recovery Act
CD	compact disc
CEA	Council of Economic Advisors
CET	Common External Tariff
CFTA	United States-Canada Free Trade Agreement
CIS	Commonwealth of Independent States
CITA	Committee for the Implementation of Textile Agreements
CVD	countervailing duty
DOC	U.S. Department of Commerce
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DRAM	dynamic random access memory
ECU	European currency unit
EMS	European Monetary System
EMU	European Economic and Monetary Union
EU or EU-15	European Union
FAS	Foreign Agriculture Service
FDI	foreign direct investment
FED. REG.	Federal Register
F.O.B.	free on board
FY	Fiscal Year
GAL	guaranteed access level
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GPO	Government Printing Office
H.R.	U.S. House of Representatives
HS	Harmonized Schedule
HTS	U.S. Harmonized Tariff Schedule
ICAO	International Civil Aviation Organization
IMF	International Monetary Fund
ITC	U.S. International Trade Commission
ITA	International Trade Administration
JAA	European Joint Aviation Authority
JETRO	Japan External Trade Organization
LCA	large civil aircraft

## **Glossary of Frequently Used Abbreviations--*Continued***

MERCOSUR . . . . .	Mercado Comun del Sur (Southern Cone Common Market)
MFA . . . . .	Multifiber Arrangement
MMT . . . . .	million metric tons
MOU . . . . .	memorandum of understanding
NAFTA . . . . .	North American Free Trade Agreement
NICs . . . . .	newly industrialized countries
OE . . . . .	original equipment
OPEC . . . . .	Organization of Petroleum Exporting Countries
PC . . . . .	personal computer
PCU . . . . .	plant capacity use
PCEs . . . . .	personal consumption expenditures
PGMs . . . . .	platinum-group metals
RFG . . . . .	reformulated gasoline
S. . . . .	U.S. Senate
SDR . . . . .	IMF Special Drawing Right
SIC . . . . .	Standard Industrial Classification
SME . . . . .	small and medium-size enterprises
SSA . . . . .	Sub-Saharan Africa
TMB . . . . .	Textiles Monitoring Body
TPL . . . . .	tariff preference level
UK . . . . .	United Kingdom
UN . . . . .	United Nations
U.S.C. . . . .	U.S. Code
USDA . . . . .	U.S. Department of Agriculture
USDOC . . . . .	U.S. Department of Commerce
USDOJ . . . . .	U.S. Department of the Interior
USGS . . . . .	U.S. Geological Survey
USITC . . . . .	U.S. International Trade Commission
USTR . . . . .	Office of the U.S. Trade Representative
WTO . . . . .	World Trade Organization

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# CHAPTER 1

## Introduction

The international trade analysts of the U.S. International Trade Commission's (USITC or the Commission) Office of Industries routinely monitor trade developments in all agricultural and manufacturing industries, and in the services sector. Trade monitoring at the industry/commodity sector and subsector levels (referred to as industry/commodity groups in this report) is a facet of the research and analysis undertaken by the Office of Industries as part of its responsibility to provide advice and technical information on industry and trade issues. Trade monitoring enables the USITC to better anticipate and address the issues of concern in its various roles under U.S. trade statutes.<sup>1</sup>

This annual report analyzes significant merchandise trade shifts on an aggregate basis, on a bilateral basis, and at the industry/commodity-group level.<sup>2</sup> This series is part of the Commission's recurring reports that facilitate the development of core competencies and expertise, and enable the Commission to provide objective and in-depth analysis to the Congress, the public, and other Federal agencies, related to emerging and complex international trade and economic issues.

For trade-monitoring purposes, U.S. Harmonized Tariff Schedule (HTS) headings/subheadings, and the corresponding Schedule B export categories, are assigned to industry/commodity groups by the USITC. These groups are aggregated into sectors. Appendix A shows the industry/commodity sectors, the industry/commodity groups in the sector, and HTS coverage by chapter, for each sector.

U.S. trade shifts in services are the subject of a separate USITC annual report.<sup>3</sup> Thus, throughout this report, unless otherwise specified, references to trade balances represent U.S. merchandise trade only. However, in assessing the U.S. merchandise trade deficit in 1998, it is important to note that the United States recorded a trade surplus in services of \$78.9 billion,<sup>4</sup> which, when added to the \$272.9 billion merchandise trade deficit, reduced the combined trade deficit to \$194.0 billion.

Chapter 1 of the report is the general introduction. Chapter 2 summarizes U.S. merchandise trade for 1998, in comparison with such trade for 1997. Coverage of the individual merchandise sectors include data showing U.S. import, export, and trade balance shifts by industry/commodity groups and sectors<sup>5</sup> and

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<sup>1</sup> Major roles include determining whether U.S. industries are materially injured or threatened with material injury 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.

<sup>2</sup> This report analyzes changes in U.S. merchandise trade on a value basis. A principal reason is that aggregate trade data by quantity are generally not available. Consequently, it is possible (if prices change significantly) for the value of trade to change considerably, but the quantity of trade to remain the same. Where possible, this report also provides trade data on a quantity basis.

<sup>3</sup> See USITC, *Recent Trends in U.S. Services Trade*, investigation No. 332-345, USITC publication 3198, May 1999.

<sup>4</sup> Official statistics of the U.S. Department of Commerce (USDOC), revised estimate for Jan.-Dec., reported in USDOC, Bureau of Economic Statistics, *Survey of Current Business*, Table F.1., U.S. International Transactions in Goods and Services, Apr. 1999, p. D-51.

<sup>5</sup> See ch. 3 of the 1993 annual report for long-range assessments of common factors affecting trends in selected industry/commodity sectors. USITC, *U.S. Trade Shifts in Selected Industries: 1993 Annual Report*, investigation No. 332-345, USITC publication 2805, Sept. 1994.

shifts in trade with U.S. trading partners. In addition, the report also discusses the significance of international trade in the gross domestic product of the United States compared with its major trading partners.

#### **TRADE DATA NOTE**

All import and export figures presented in this report are official statistics of the U.S. Department of Commerce (Commerce), unless specified otherwise. These figures may be substantially different from the figures presented by other government agencies and private institutions that cite Commerce as the source for trade data. Possible reasons for these discrepancies are:

- Figures in this report include merchandise trade only; other reported figures may include services.
- Figures are not seasonally adjusted; the values of other reported figures may be so adjusted.
- Figures are not adjusted on a balance of payments (BOP) basis; the values of other reported figures may be so adjusted in line with the concepts and definitions used to prepare national and international accounts.
- Imports are on an imports-for-consumption/customs value basis; other reported import figures may be on a general imports/customs value basis.
- Exports are on a domestic export/f.a.s. basis; other reported export figures may be on a total export/f.a.s. basis, which include re-exports of foreign merchandise.
- Imports and exports may not include all errata because certain errors may not be corrected by Commerce in time to be included in this report.
- Figures in this report may be adjusted for errors that are not of sufficient magnitude to be changed in Commerce data.
- There are no adjustments for carryover (imports and exports received late or not processed for any reason and then subsequently included in the following month's figures are reassigned to the month of entry/exportation), and trade is reported as originally released by Commerce. Other reported figures may adjust import/export trade for carryover.
- The industry/commodity groups contained in this report are developed by the USITC and may differ from those used by other sources.

Chapter 3 analyzes noteworthy economic and trade developments in 1998 involving specific countries or country groups. For this year's report, analysis considers the financial crises affecting East/Southeast Asia, Russia, and Brazil, and the implications for U.S. trade. Analysis of shifts in U.S. bilateral trade chiefly considers the top five U.S. trade partners--Canada, China, the European Union, Japan, and Mexico. Summary tables detail the important shifts in U.S. bilateral trade and highlight leading changes in industry/commodity groups for each of the five major trading partners.

Chapter 4 analyzes factors affecting trends in selected industries/commodities that have been subject to specific monitoring requirements, recent bilateral agreements, or trade-remedy action. This chapter also describes the new 5-year (sunset) review process for outstanding antidumping (AD) and countervailing duty (CVD) orders.

Chapters 5 through 14 address specific industry/commodity sectors, with each chapter providing a general sector overview and identifying significant shifts in merchandise trade within the sector.<sup>6</sup> In most cases, these chapters identify significant shifts in specific industry/commodity groups, and in this year's report, the review has been focused on the trade flows (exports, imports, or trade balance) exhibiting a shift of over \$850 million. Finally, a statistical summary table of industry/commodity groups, showing absolute and percentage changes in a year-to-year comparison (1997-98), concludes each sector analysis chapter.

The report has six appendixes. Appendix A lists the specific industry/commodity sectors and groups that the Commission monitors. Appendix B provides official and estimated data (1994-98) for domestic consumption, production, employment, trade, and import penetration for the nearly 300 industry/commodity groups covered in this report. USITC international trade analysts have estimated certain components of these data, based on primary and secondary Government and industry sources. The estimated data are subject to change either from future secondary sources, or from the detailed surveys the USITC often conducts in the course of statutory investigations or other work. Appendix C ranks the industry/commodity groups exhibiting the most significant growth and decline in U.S. exports, imports, and trade balances for 1997 and 1998. Appendix D lists the political entities included in the country groups shown in this report. Appendix E lists the current status of existing AD and CVD orders in the sunset review process. Finally, appendix F discusses the effect of exchange rate shifts on trade flows; summarizes the major changes in exchange rates that occurred during 1994-98; and highlights exchange rate arrangements, recent exchange rate crises, and possible impacts on the value of the dollar from the inauguration of the euro.

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<sup>6</sup> The textiles and apparel, and footwear, sectors are presented in separate sections of ch. 9.

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## CHAPTER 2

# U.S. Merchandise Trade Performance

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Highlights of U.S. merchandise trade performance in 1998 come first in this chapter, along with a survey of wider macroeconomic conditions. Then this chapter gives analyses of key trade shifts in industry/commodity groups and sectors, and among bilateral and multilateral trade partners. Material in this chapter is compiled from more detailed analyses presented in subsequent chapters, including important bilateral trade and multilateral economic developments (chapter 3), and product-specific developments in the industry/commodity sectors (chapters 4-14) affecting U.S. merchandise trade.

During 1997-98, U.S. total merchandise trade (exports plus imports) grew by \$36.7 billion (2 percent) to over \$1.5 trillion, representing 77 percent of total U.S. combined trade (merchandise plus services)<sup>1</sup> and 18 percent of U.S. gross domestic product (GDP). However, the U.S. merchandise trade deficit widened by \$53.7 billion (25 percent) to \$272.9 billion in 1998, up from the \$219.2 billion deficit recorded the previous year (table 2-1). This increase in the merchandise trade deficit resulted from changes both in exports, which declined by \$8.5 billion (1 percent) to \$634.7 billion, and in imports, which increased by \$45.2 billion (5 percent) to \$907.6 billion.

Various internal and external macroeconomic conditions influenced U.S. merchandise trade performance in 1998.<sup>2</sup> Continued strength of the U.S. economy encouraged both consumer and business confidence and spending, which, in turn, spurred U.S. demand for both domestic and imported goods; likewise, sustained spending by consumers and businesses was further encouraged by the continued rise in real disposable personal incomes and corporate returns, relatively low interest rates, and ready access to credit. In addition, continued appreciation of the U.S. dollar against the currencies of its major trading partners tended to lessen the competitiveness of U.S. merchandise in both domestic and foreign markets.<sup>3</sup> Macroeconomic influences that would tend to narrow a trade deficit, including the shift from a U.S. Government budget deficit in mid-late 1997 to a surplus in 1998, had less influence on trade flows and the merchandise trade balance in 1998. External economic factors such as differing growth rates among

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<sup>1</sup> Total U.S. combined trade grew by \$45.2 billion (2 percent) during 1997-98 to \$2.0 trillion.

<sup>2</sup> Information on the macroeconomic background for U.S. merchandise trade performance in 1998 was principally derived from Council of Economic Advisors, *Economic Report of the President*, together with the *Annual Report of the Council of Economic Advisers*, "The Year in Review," Feb. 1999, pp. 45-54; and U.S. Department of Commerce, *Survey of Current Business*, "The Year 1998," Apr. 1999, pp. 26-46.

<sup>3</sup> See app. F for a more detailed discussion about how exchange rate shifts and other macroeconomic factors affect trade flows.

Table 2-1

**U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by industry/commodity sectors, 1997 and 1998<sup>1</sup>**

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
U.S. exports of domestic merchandise:				
Agricultural products	65,295	59,383	-5,912	-9.1
Forest products	25,964	23,901	-2,063	-7.9
Chemicals and related products	78,279	78,105	-174	-0.2
Energy-related products	15,165	12,346	-2,819	-18.6
Textiles and apparel	18,609	18,533	-76	-0.4
Footwear	802	720	-82	-10.2
Minerals and metals	43,103	41,061	-2,042	-4.7
Machinery	70,863	67,168	-3,695	-5.2
Transportation equipment	134,949	147,337	12,388	9.2
Electronic products	155,955	151,678	-4,277	-2.7
Miscellaneous manufactures	15,658	15,452	-206	-1.3
Special provisions	18,580	19,021	441	2.4
Total	643,222	634,705	-8,517	-1.3
U.S. imports for consumption:				
Agricultural products	45,839	47,326	1,487	3.2
Forest products	30,456	31,998	1,542	5.1
Chemicals and related products	66,065	70,717	4,652	7.0
Energy-related products	74,017	56,254	-17,763	-24.0
Textiles and apparel	60,794	67,089	6,295	10.4
Footwear	13,951	13,879	-72	-0.5
Minerals and metals	73,209	81,058	7,849	10.7
Machinery	69,884	75,014	5,131	7.3
Transportation equipment	155,836	173,712	17,876	11.5
Electronic products	194,546	201,067	6,520	3.4
Miscellaneous manufactures	48,954	54,620	5,666	11.6
Special provisions	28,874	34,913	6,039	20.9
Total	862,426	907,647	45,221	5.2
U.S. merchandise trade balance:				
Agricultural products	19,455	12,056	-7,399	-38.0
Forest products	-4,492	-8,097	-3,605	-80.2
Chemicals and related products	12,214	7,388	-4,826	-39.5
Energy-related products	-58,852	-43,908	14,944	25.4
Textiles and apparel	-42,186	-48,556	-6,370	-15.1
Footwear	-13,149	-13,159	-10	-0.1
Minerals and metals	-30,106	-39,997	-9,890	-32.9
Machinery	979	-7,847	-8,826	( <sup>2</sup> )
Transportation equipment	-20,887	-26,375	-5,488	-26.3
Electronic products	-38,591	-49,389	-10,798	-28.0
Miscellaneous manufactures	-33,296	-39,168	-5,872	-17.6
Special provisions	-10,294	-15,892	-5,598	-54.4
Total	-219,204	-272,942	-53,738	-24.5

<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> Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

global economies, structural impediments to trade in key foreign markets, and low prices for certain widely traded commodities and products, likely had a greater direct influence on trade shifts in particular industry/commodity sectors, as well as on U.S. bilateral trade flows with particular partners. Effects of the mid-1997 to early-1998 Asian financial crisis and continuing Japanese recession were especially apparent in 1998, as firms in these nations experienced weakened domestic demand and sought markets outside of the region for their output.<sup>4</sup>

## **U.S. TRADE BY INDUSTRY/COMMODITY GROUPS AND SECTORS**

### **U.S. Trade Balance**

The wider U.S. merchandise trade deficit during 1997-98 primarily reflected significant shifts in key industry/commodity groups shown in tables C-1 through C-6 in appendix C. Substantial growth occurred in the value of imports (table C-3) of automobiles, trucks, buses, and bodies and chassis of the foregoing (motor vehicles, MT038<sup>5</sup>), and to a lesser extent, medicinal chemicals (pharmaceuticals, CH026); aircraft, spacecraft, and related equipment (aircraft, MT042); and steel mill products (MM025). Likewise, decreased exports (table C-2) of automatic data processing machines (computer hardware, ST018), oilseeds (AG032), motor vehicles (MT038), and petroleum products (CH005) contributed to growth of the trade deficit. In contrast, further expansion of the trade deficit was dampened somewhat by sharp declines in the value of imports (table C-4) of crude petroleum (CH004), and to a lesser extent, petroleum products (CH005) and diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (semiconductors, ST016). Increased exports (table C-1) of aircraft (MT042), and to a lesser extent, pharmaceuticals (CH026), and aircraft engines and gas turbines (aircraft engines, MT001) also moderated growth of the deficit during this period.

Overall, the predominant industry/commodity groups contributing to the 1998 deficit continued to be motor vehicles (MT038, table C-6), computer hardware (ST018, table C-6), and crude petroleum (CH004, table C-5). Trade deficits in these three groups together accounted for \$135.5 billion, almost exactly the same combined deficit registered in 1997 (tables C-5 and C-6). These three groups accounted for one-half of the U.S. merchandise trade deficit in 1998, a significant decrease from 1997 when they accounted for 63 percent of the merchandise trade deficit. Aircraft (MT042) again recorded the largest surplus, at \$37.5 billion (table C-5). These four groups were not only a large component of the 1998 U.S. trade position, but also exhibited significant shifts in exports, imports, or both, during 1997-98.

All major industry/commodity sectors, with the exceptions of agricultural products and chemicals and related products, continued to register trade deficits in 1998 (table 2-1).<sup>6</sup> However, the trade surplus in agricultural products shrank by \$7.4 billion (38 percent) to \$12.1 billion, and the surplus in chemicals and related products shrank by \$4.8 billion (40 percent) to \$7.4 billion. The machinery sector experienced an \$8.8 billion trade shift from a surplus of \$979 million in 1997 to a deficit of \$7.8 billion in 1998. This shift was largely due to effects of the Asian financial crisis, as the significant decline in exports to that region, \$4.9 billion (24 percent), combined with an \$815 million (3-percent) growth in imports.

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<sup>4</sup> See ch. 3 for a discussion about the financial conditions of the affected countries of East and Southeast Asia during the years 1997-98.

<sup>5</sup> Codes such as MT038 are used by the USITC to identify industry/commodity groups of U.S. Harmonized Tariff Schedule (HTS) headings/subheadings and their corresponding export categories for trade-monitoring purposes. See app. A for a listing and title of each of these groups.

<sup>6</sup> Discussion of U.S. merchandise trade by industry/commodity sectors excludes products covered by special provisions of the HTS in chs. 98-99.

Furthermore, with the exception of energy-related products, all major product sectors experienced erosions of their trade balances in 1998. The deficit in energy-related products was reduced by \$14.9 billion (25 percent) to \$43.9 billion, largely due to the drop in the value of crude petroleum imports. The largest erosion of a sectoral trade balance during 1997-98 occurred in electronic products, in which the deficit widened by \$10.8 billion (28 percent) to \$49.4 billion, following a narrowing of the deficit in the previous year. The other sector exhibiting significant widening of its deficit was minerals and metals, which grew by \$9.9 billion (33 percent) to \$40.0 billion in 1998.

### U.S. Imports

U.S. merchandise imports rose in 1998 for every industry/commodity sector, with the exceptions of energy-related products and footwear (table 2-1). Imports of energy-related products declined by \$17.8 billion (24 percent) to \$56.3 billion. However, the impact of this sector's decline on U.S. merchandise imports was concomitant with increased imports of transportation equipment, the leading growth sector in 1998, which were up by \$17.9 billion (11 percent) to \$173.7 billion. A substantial portion of the \$45.2 billion net increase in merchandise imports was accounted for by higher imports in five other sectors (in descending order of shifts):

<u>Import sector</u>	<u>Change, 1998 from 1997</u>		<u>1998 import level</u>
	<u>(billion dollars)</u>	<u>(percentage)</u>	<u>(billion dollars)</u>
Minerals and metals . . . . .	7.8	11	81.1
Electronic products . . . . .	6.5	3	201.1
Textiles and apparel . . . . .	6.3	10	67.1
Miscellaneous manufactures . . . . .	5.7	12	54.6
Chemicals and related products . . . . .	4.7	7	70.7

Together, these five sectors accounted for \$31.0 billion (69 percent) of the net increase in merchandise imports. U.S. imports of products in these sectors plus transportation products accounted for \$648.3 billion (71 percent) of merchandise imports in 1998. Reasons for these shifts are highlighted below:

Energy-related products--The substantial drop in imports was primarily attributable to the decreased value of crude petroleum, despite a slight increase in terms of volume. Crude oil prices continued to fall during 1998 by an average of \$6 per barrel as a result of continued global output but reduced demand in Asia.

Transportation equipment<sup>7</sup>--The substantial rise in imports was led by motor vehicles, aircraft, aircraft engines, and internal combustion piston engines. Import growth for motor vehicles and internal combustion piston engines, primarily from North American Free Trade Agreement (NAFTA) partners and Japan, reflected continued strong domestic demand for passenger vehicles, sustained popularity of certain Japanese models, increased integration of North American motor vehicle industries, and continued weak demand in Japan and the Asia-Pacific region for Japanese-produced passenger vehicles. Increased imports of aircraft were a result of the domestic airline industry striving to modernize its air fleet and meet robust demand for regional jet service. A record year for U.S. shipments of large civil aircraft contributed to increased imports of aircraft engines.

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<sup>7</sup> Transportation equipment was the second-largest import sector in 1998, accounting for 19 percent of all U.S. merchandise imports.

Minerals and metals--U.S. import growth in 1998 was led by significantly higher imports of steel mill products and primary iron products; producers, largely from Japan and Korea, focused on markets outside of Asia due to the Japanese recession and the Asian financial crisis, and to take advantage of the relative strength of the U.S. dollar. Increased imports of precious metals and related articles, and natural and synthetic gemstones, reflected the lack of sufficient production in the United States to meet domestic demand, coupled with increased real disposable personal income and sustained consumer confidence that fueled strong jewelry demand, investment demand for gold, and automotive catalyst demand for platinum-group metals.

Electronic products<sup>8</sup>--The most significant import shifts occurred in two industry/commodity groups whose import values together accounted for 53 percent of sector imports--semiconductors and computer hardware. Semiconductor imports declined, largely reflecting the continuing price declines of major products such as dynamic random access memories (DRAMs) brought about by excess production capacity and inventories. Computer hardware imports increased, reflecting continued strong U.S. demand, spurred by intense domestic competition and declining unit prices. U.S. import patterns for computer hardware have also shifted somewhat from established East Asian producers, as production has shifted towards lower cost Southeast Asian countries and China.

Textiles and apparel--Increased U.S. imports reflected ongoing growth in imports from countries with preferential market access (NAFTA partners and Caribbean Basin Economic Recovery Act (CBERA) beneficiaries), a second consecutive year of import growth from Asia, and a pickup in consumer spending on apparel, coupled with a fourth consecutive year of declining domestic apparel production. Apparel accounted for 80 percent of sector imports in 1998, and imports supplied just over one-half of the U.S. apparel market. Growth of imports in this sector is likely to continue as U.S. quotas are gradually phased out by the beginning of 2005 under the Uruguay Round Agreement on Textiles and Clothing, which went into effect as part of the World Trade Organization agreements.

Miscellaneous manufactures--The largest shift among U.S. imports was in furniture and selected furnishings. Producers in China and other East Asian countries either ship fully assembled furniture to the United States or establish U.S.-based assembly operations in order to reduce transportation costs. In response, U.S. manufacturers also are beginning to assemble components made in Asia, as well as import finished articles, to supplement their U.S.-made lines.

Chemicals and related products--The main product category fueling increased U.S. imports was pharmaceuticals. The following factors all contributed to an increase in both global trade and U.S. imports of pharmaceuticals in 1998: the elimination of duties on most pharmaceuticals under the Uruguay Round Agreement, and the substantial intracompany trade throughout the industry, continued outsourcing of production of bulk active ingredients and chemical intermediates, and the introduction of several new and innovative medicines.

## **U.S. Exports**

U.S. merchandise exports declined in 1998 for all industry/commodity sectors, except transportation equipment (table 2-1). Exports of transportation equipment recorded an increase of \$12.4 billion (9 percent) to \$147.3 billion. A substantial portion of the \$8.5 billion decrease in merchandise exports was due to significant export declines in six other sectors (in descending order of shifts):

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<sup>8</sup> Electronic products were the largest import sector in 1998, accounting for 22 percent of all U.S. merchandise imports.

<u>Export sector</u>	<u>Change, 1998 from 1997</u>		<u>1998 export level</u> <u>(billion dollars)</u>
	<u>(billion dollars)</u>	<u>(percentage)</u>	
Agricultural products . . . . .	-5.9	-9	59.4
Electronic products . . . . .	-4.3	-3	151.7
Machinery . . . . .	-3.7	-5	67.2
Energy-related products . . . . .	-2.8	-19	12.3
Forest products . . . . .	-2.1	-8	23.9
Minerals and metals . . . . .	-2.0	-5	41.1

Together, these six sectors recorded export declines totaling \$20.8 billion. Exports of products in these sectors plus transportation equipment accounted for \$502.9 billion (79 percent) of merchandise exports in 1998. Reasons for these shifts are highlighted below:

Transportation equipment<sup>9</sup>--The substantial export increase was primarily attributable to robust global demand for aircraft and aircraft parts as foreign airlines sought U.S.-made aircraft to replace aging fleets, meet noise and pollution regulations, and provide for increased passenger demand for air-transport service.

Agricultural products--Over three-fifths of the 1998 U.S. export decline was accounted for by cereals (mainly wheat and corn) and oilseeds (mainly soybeans). Record or near-record harvests worldwide, significantly increased inventories, cutbacks of purchases by key importing nations with subsequent downturns in grain and soybean prices from the high levels of the previous year, and heightened competition from third-country suppliers, all contributed to the decline in U.S. exports of these commodities. However, on a tonnage basis, export volumes of cereals were essentially flat. In contrast, oilseed exports dropped in terms of both volume and value during 1997-98.

Electronic products<sup>10</sup>--Significant export downturns occurred in two key sector products--computer hardware, and radio transmission and reception apparatus (radio apparatus). Reduced exports of computer hardware to major markets in Canada, the United Kingdom, and Japan, reflected continued global price competition and economic downturns, especially in Japan. The decline in exports of radio apparatus resulted from low Asian demand and establishment of domestic production facilities in Brazil.

Machinery--Over one-half of the decline in U.S. exports of machinery was accounted for by miscellaneous machinery and nonmetalworking machine tools. Substantial decreases were also recorded for exports of centrifuges, and filtering and purifying equipment; certain industrial thermal-processing equipment; boilers, turbines, and related machinery; and farm and garden machinery and equipment. However, the sector export decline was lessened by export increases for high-technology machinery, encompassing semiconductor manufacturing equipment and industrial robots.

Energy-related products--The United States is only a minor exporter of energy-related products. The export decline was led by petroleum products, consisting mostly of petroleum coke for petrochemicals production and distillate fuel oils for heating and bunker fuels.

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<sup>9</sup> Transportation equipment was the second-largest export sector in 1998, accounting for 23 percent of all U.S. merchandise exports.

<sup>10</sup> Electronic products were the largest export sector in 1998, accounting for 24 percent of all U.S. merchandise exports.

Forest products--Reduced U.S. exports, especially of wood and wood products, and most categories of pulp, paper, and paper products, reflected the economic downturn in Asia and declining price competitiveness due, in part, to the strength of the dollar. Reduced exports of sector products to Japan, one of the top markets for U.S. wood and wood products, reflected the depressed residential housing construction sector.

Minerals and metals--U.S. exports declined with significant developments in markets for key products in 1998. Iron and steel waste and scrap exports fell with the sharp decline in scrap prices and weakened demand in principal markets, as steelmakers in these nations experienced production slowdowns or declines. Exports of copper ores and concentrates, and of copper metal and related articles, fell primarily due to weaker copper prices (as much as 40 percent from the peak levels of June 1997), weak demand in East Asia, and diversion of a major domestic producer's mine production from export markets to its newly opened U.S. smelter.

## **U.S. BILATERAL/MULTILATERAL TRADE**

### **Significant Bilateral/Multilateral Shifts**

Growth of the U.S. merchandise trade deficit during 1997-98 also reflected significant shifts with certain key trade partners. Table 2-2 shows U.S. bilateral merchandise trade with its 10 largest partners (ranked by total trade) and U.S. multilateral merchandise trade with selected country groups<sup>11</sup> during 1997-98. The U.S. trade deficit widened by at least \$1.0 billion with each of its five major partners--Canada, China, the European Union (EU), Japan, and Mexico.<sup>12</sup> Reasons for widening of U.S. trade deficits with these partners are highlighted below:

Canada--As the second-largest U.S. trade partner, after the EU in 1998, total U.S.-Canada trade reached \$312.5 billion. However, the U.S. deficit with Canada widened by \$3.8 billion (12 percent) to \$36.9 billion, as imports grew by \$6.8 billion, more than double the export growth of \$3.0 billion. Although U.S.-Canada trade was moderated by reduced Canadian private-sector spending and lower prices for Canada's primary-commodity exports, it was enhanced by increased bilateral trade in transportation equipment, reflecting strong North American sector demand in, and extensive integration within, the motor vehicle, railway equipment, and aircraft industries.

China--The deficit with China, with whom the United States recorded its second-largest bilateral trade deficit, widened by \$7.4 billion (15 percent) during 1997-98 to \$56.9 billion, as import growth of \$8.8 billion continued to significantly outpace export growth of \$1.4 billion. U.S.-China trade continued to be most prominent in manufactures. Certain consumer electronic products, miscellaneous manufactures, and footwear led U.S. import growth, reflecting the strong U.S. economy and lower demand for Chinese manufactures in other Asian countries. Increased U.S. exports were led by aircraft and computer hardware. Factors enhancing growth in U.S. exports, particularly of capital goods, were

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<sup>11</sup> See app. D for a list of countries/political entities included in selected country groupings of table 2-2.

<sup>12</sup> In recent years, these consistently appeared as the top five U.S. partners in terms of total trade. The 15 member countries of the EU are considered together as a single U.S. trade partner, for no individual EU country was consistently ranked among the top five U.S. trade partners from year to year. Further analyses of the underlying factors and the leading products responsible for trade shifts for each of these five major partners are provided in ch. 3. That chapter also examines three regions undergoing economic developments with important implications for U.S. trade flows.

Table 2-2

All merchandise sectors: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Canada	134,794	137,768	2,974	2.2
Japan	62,091	54,846	-7,246	-11.7
Mexico	68,393	75,369	6,976	10.2
China	12,533	13,908	1,375	11.0
Germany	23,136	25,026	1,890	8.2
United Kingdom	33,987	36,714	2,727	8.0
Taiwan	18,883	16,923	-1,960	-10.4
France	15,122	16,676	1,555	10.3
Korea	24,287	15,979	-8,309	-34.2
Singapore	15,697	14,218	-1,479	-9.4
All Other	234,298	227,277	-7,021	-3.0
Total	643,222	634,705	-8,517	-1.3
<b>Selected country groups:</b>				
EU-15	131,751	140,217	8,466	6.4
OPEC	24,826	24,212	-614	-2.5
Latin America	128,815	135,852	7,038	5.5
CBERA	17,808	19,200	1,392	7.8
Asian Pacific Rim	190,428	163,675	-26,754	-14.0
ASEAN	45,244	36,968	-8,276	-18.3
Central and Eastern Europe	3,043	2,787	-256	-8.4
<b>U.S. imports for consumption:</b>				
Canada	167,881	174,685	6,804	4.1
Japan	120,480	121,313	833	0.7
Mexico	85,005	93,017	8,013	9.4
China	61,996	70,815	8,819	14.2
Germany	42,793	49,796	7,003	16.4
United Kingdom	32,412	34,617	2,206	6.8
Taiwan	32,474	32,985	510	1.6
France	20,126	23,371	3,246	16.1
Korea	22,939	23,701	762	3.3
Singapore	19,982	18,216	-1,766	-8.8
All Other	256,339	265,130	8,791	3.4
Total	862,426	907,647	45,221	5.2
<b>Selected country groups:</b>				
EU-15	155,890	174,881	18,991	12.2
OPEC	42,197	34,336	-7,861	-18.6
Latin America	137,260	142,351	5,091	3.7
CBERA	16,572	17,124	552	3.3
Asian Pacific Rim	325,618	340,064	14,446	4.4
ASEAN	70,567	72,832	2,264	3.2
Central and Eastern Europe	3,649	4,368	719	19.7
<b>U.S. merchandise trade balance:</b>				
Canada	-33,087	-36,918	-3,830	-11.6
Japan	-58,389	-66,467	-8,079	-13.8
Mexico	-16,612	-17,648	-1,036	-6.2
China	-49,462	-56,907	-7,444	-15.0
Germany	-19,657	-24,770	-5,113	-26.0
United Kingdom	1,575	2,097	522	33.1
Taiwan	-13,591	-16,061	-2,470	-18.2
France	-5,004	-6,695	-1,691	-33.8
Korea	1,348	-7,722	-9,071	( <sup>2</sup> )
Singapore	-4,284	-3,997	287	6.7
All Other	-22,041	-37,853	-15,813	-71.7
Total	-219,204	-272,942	-53,738	-24.5
<b>Selected country groups:</b>				
EU-15	-24,139	-34,664	-10,525	-43.6
OPEC	-17,372	-10,124	7,248	41.7
Latin America	-8,445	-6,499	1,946	23.0
CBERA	1,235	2,076	840	68.0
Asian Pacific Rim	-135,189	-176,389	-41,200	-30.5
ASEAN	-25,323	-35,864	-10,541	-41.6
Central and Eastern Europe	-606	-1,580	-975	-160.9

<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.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

China's economic growth and its introduction of fiscal and monetary stimulus packages in early 1998. However, significant barriers still impede the entry of foreign products into Chinese markets.

The European Union--The U.S. trade deficit with the EU countries widened during 1997-98 by \$10.5 billion (44 percent) to \$34.7 billion, primarily reflecting increased bilateral trade flows driven by strong demand in both the United States and the EU as both economies and major markets continued to expand. The overall rise in U.S. imports from the EU countries by \$19.0 billion (12 percent) to \$174.9 billion was enhanced by depreciation of major European currencies against the U.S. dollar. Germany was the leading source of U.S. imports from the EU, followed by the United Kingdom. Growth in import demand was principally concentrated in motor vehicles, especially German passenger vehicles; aircraft and aircraft engines, due to growing EU sales into the U.S. market; and pharmaceuticals, reflecting the tendency of U.S. pharmaceutical firms to outsource chemical raw materials from certain EU countries. U.S. exports grew by \$8.5 billion (6 percent) to \$140.2 billion, led by the United Kingdom, followed by Germany. Leading export sectors included aircraft and aircraft engines, as airlines added to their fleets and replaced aging aircraft to meet increased demand for air-transport services; and pharmaceuticals, as U.S. pharmaceutical companies benefitted from higher average drug prices, newly approved products, and increasing demand by aging Western European populations.

Japan--The trade deficit with Japan, the largest among all U.S. trade partners, continued to deteriorate, rising by \$8.1 billion (14 percent) to \$66.5 billion, reflecting the prolonged recession in Japan, the world's second-largest economy. U.S. exports to Japan were down sharply by \$7.2 billion (12 percent) to \$54.8 billion, despite a 23-percent increase in exports of aircraft to fill previously placed orders. Low commodity prices, reduced Japanese livestock production, and increased competition with third-country suppliers contributed to decreased exports of corn; whereas motor vehicle exports declined due to weaker Japanese consumer demand and discounted prices of domestically produced Japanese automobiles. However, the most pronounced drop in bilateral trade was in computer hardware, reflecting decreased unit prices. Imports rose slightly by \$833 million (less than 1 percent) to \$121.3 billion, led by certain steel mill products, reflecting strong U.S. domestic demand combined with weaker conditions in the Japanese domestic and its other major overseas markets; motor vehicles, due to strong U.S. consumer demand; and construction equipment, as Japanese manufacturers focused on the growing U.S. construction market.

Mexico--Five years after the implementation of the NAFTA, total U.S. trade with Mexico continued to expand, as total U.S.-Mexico trade reached \$168.4 billion in 1998, although the U.S. deficit with Mexico grew by \$1.0 billion (6 percent) to \$17.6 billion. U.S. imports from Mexico rose by \$8.0 billion (9 percent) to \$93.0 billion, led by finished motor vehicles and electronic equipment. This increase largely reflects continued U.S., European, and Asian investments in assembly operations in Mexico, the shift of some production for the North American market from Asia to Mexico, and increased import demand driven by expansion of the U.S. economy. U.S. exports to Mexico increased by \$7.0 billion (10 percent) to a record \$75.4 billion, despite slower economic growth in Mexico after 2 successive years of rapid economic expansion (partly due to lower world prices for crude petroleum, Mexico's major export). Exports were led by intermediate and finished transportation and electronics sector goods, production machinery, and cereals, primarily reflecting reduction or elimination of Mexican tariffs under NAFTA, combined with continued growth of the maquiladora industry, and a drought in the central and northern parts of the country.

In addition, among other top 10 partners, the United States experienced notable deterioration of its trade position with Korea and Taiwan, but a slightly improved position with Singapore (table 2-2). Shifts in U.S. trade positions with these and major trade partners were also reflected in shifts in its positions with regional groups of countries (table 2-2). Reasons for shifts in the U.S. trade balances with country groups, that exceeded \$1.0 billion, are highlighted below:

OPEC--Crude petroleum price declines drove down the U.S. trade deficit with the Organization of Petroleum Exporting Countries (OPEC) by \$7.2 billion (42 percent) to \$10.1 billion in 1998. An export decline of \$614 million was overshadowed by the \$7.9 billion decline in imports.

Latin America--Despite widening of the deficit with Mexico and deterioration of the surplus with Brazil, the U.S. trade deficit with Latin America (including Mexico) continued to narrow by \$1.9 billion (23 percent) to \$6.5 billion in 1998. Exports to and imports from the region were up by \$7.1 billion and \$5.1 billion, respectively. The trade surplus with Brazil deteriorated by \$1.2 billion (21 percent) to \$4.3 billion, as Brazil adopted an austerity program and various other measures to address its fiscal and monetary problems. However, the trade deficit with Venezuela improved by \$3.6 billion (58 percent) to \$2.6 billion, primarily due to reduced prices for petroleum products and crude petroleum, Venezuela's main export products to the United States.

Asian Pacific Rim--Expansion of U.S. trade deficits with major partners China and Japan also contributed to a \$41.2 billion (30-percent) rise in the deficit with the Asian Pacific Rim countries, which reached \$176.4 billion in 1998. Trade with Korea represented the largest decline in the U.S. bilateral trade position with any single top 10 partner in 1998, as the trade balance shifted from a \$1.3 billion surplus in the previous year to a \$7.7 billion deficit. The financial crisis in Korea reduced demand for U.S. exports, especially aircraft, electronic products, and machinery.

ASEAN--Although the U.S. trade position with Singapore improved, its deficit with all countries of the Association of South East Asian Nations (ASEAN) increased by \$10.5 billion (42 percent) to \$35.9 billion. The financial crises in certain ASEAN countries, as with the crisis in Korea, also reduced demand for U.S. exports of aircraft, electronic products, and machinery. U.S. import increases from these countries were led by apparel and shellfish.

### **Significance of International Trade in the Gross Domestic Product**

To provide perspective about the significance of international trade in the U.S. economy, trade values are compared with macroeconomic measures. For the United States and its five major trade partners, the relative sizes of their economies, U.S. bilateral trade flows, and the ratios of U.S. bilateral trade balances to U.S. GDP are compared in table 2-3. The U.S. merchandise trade deficit with all worldwide trade partners combined, amounted to 3.2 percent of the nominal U.S. GDP in 1998, significantly higher than the ratio of 2.7 percent in 1997. In 1998, the U.S. merchandise trade deficit with its five major trade partners amounted to 2.5 percent of nominal U.S. GDP. Over the period 1994-98, U.S. merchandise trade flows became a larger component of the U.S. economy, with the exception of exports as a share of GDP during 1998 (table 2-4). Merchandise imports grew by \$249.7 billion (38 percent) during 1994-98 to \$907.6 billion and exports increased by 32 percent (\$152.8 billion) to \$634.7 billion, whereas nominal U.S. GDP rose 23 percent (\$1.6 trillion) to \$8.5 trillion over the same period.

However, comparing U.S. global merchandise imports and exports as shares of GDP with similar ratios for its major trade partners (table 2-5, with Germany in place of the EU, due to data availability) indicates that, during 1994-98, global merchandise trade accounted for a smaller portion of GDP for the United States and Japan (the two largest economies in the world), than for China, Canada, Mexico, or Germany. Whereas the ratio of merchandise imports to GDP was slightly higher for the United States than for Japan in 1998 (11 percent compared with 7 percent), it was roughly one-third of the comparable ratio for Canada (33 percent) and Mexico (30 percent) and one-half the ratio for Germany (22 percent).

**Table 2-3**  
**U.S. bilateral merchandise trade balances with major partners, in dollars and as a ratio to nominal U.S. gross domestic product (GDP), 1998**

Partner	Nominal GDP	U.S. imports	U.S. exports	U.S. merchandise trade balance	Ratio of the merchandise trade balance to U.S. GDP
	<i>Billion dollars</i>	<i>Million dollars</i>			<i>Percentage</i>
European Union . . . . .	8,336	174,881	140,217	-34,664	-0.41
Japan . . . . .	3,785	121,313	54,846	-66,467	-0.78
China . . . . .	965	70,815	13,908	-56,907	-0.67
Canada . . . . .	601	174,685	137,768	-36,918	-0.43
Mexico . . . . .	415	93,017	75,369	-17,648	-0.21
United States . . . . .	8,511	907,647	634,705	-272,942	-3.21

Note.--Calculations based on unrounded data.

Source: U.S. trade data compiled from official statistics of the U.S. Department of Commerce (USDOC). GDP data for the United States are from USDOC, Bureau of Economic Analysis, *Survey of Current Business*, "Table 1.1, Gross Domestic Product," Apr. 1999, p. D-2. Estimated GDP data for Canada, Japan, Mexico, EU, and China are from U.S. Department of State, *Country Reports on Economic Policy and Trade Practices*, 1998, found at Internet address [http://www.state.gov/www/issues/economic/trade\\_reports/](http://www.state.gov/www/issues/economic/trade_reports/), retrieved Apr. 22 and 26, 1999.

**Table 2-4**  
**Components of U.S. gross domestic product (GDP) and trade as a share of GDP, 1994-98**

Component	1994	1995	1996	1997	1998
Personal consumption expenditures	----- <i>Value (billion current dollars)</i> -----				
<i>Goods</i> . . . . .	2,007.0	2,084.3	2,169.2	2,273.6	2,387.1
<i>Services</i> . . . . .	2,709.1	2,873.4	3,038.4	3,220.1	3,420.8
Gross private domestic investment . . . . .	1,007.9	1,038.2	1,116.5	1,256.0	1,367.1
Exports . . . . .	721.2	818.4	870.9	920.3	912.9
<i>Goods</i> . . . . .	481.9	546.5	582.1	643.2	634.7
<i>Services</i> . . . . .	239.3	271.9	288.8	277.1	278.2
Imports (-) . . . . .	-812.1	-904.5	-965.7	-1,032.8	-1,085.4
<i>Goods (-)</i> . . . . .	-657.9	-740.0	-790.5	-862.4	-907.6
<i>Services (-)</i> . . . . .	-154.2	-164.5	-175.2	-170.4	-177.8
Government consumption expenditures and gross investment . . . . .	1,313.0	1,355.5	1,406.7	1,454.6	1,487.1
<b>Gross Domestic Product</b> . . . . .	<b>6,947.0</b>	<b>7,265.4</b>	<b>7,636.0</b>	<b>8,110.9</b>	<b>8,511.0</b>
	----- <i>Percentage</i> -----				
Exports as a share of GDP	10.4	11.3	11.4	11.3	10.7
<i>Goods</i> . . . . .	6.9	7.5	7.6	7.9	7.5
<i>Services</i> . . . . .	3.4	3.7	3.8	3.4	3.3
Imports (-) as a share of GDP . . . . .	-11.7	-12.4	-12.6	-12.7	-12.8
<i>Goods (-)</i> . . . . .	-9.5	-10.2	-10.4	-10.6	-10.7
<i>Services (-)</i> . . . . .	-2.2	-2.3	-2.3	-2.1	-2.1

Note.--Calculations based on unrounded data.

Source: Merchandise trade data are compiled from official statistics of the U.S. Department of Commerce (USDOC). All other data (balance-of-payments basis) are from USDOC, Bureau of Economic Analysis, *Survey of Current Business*, "Table 1.1, Gross Domestic Product," Apr. 1999, p. D-2.

In terms of exports as a share of GDP, the United States (8 percent) lagged significantly behind Canada (35 percent), Germany (26 percent), and Mexico (28 percent). These U.S. trade partners benefitted from

sustained growth in the U.S. economy that provided a strong market for their exports in recent years. Cumulative percentage-point growth in the share of each country's global merchandise import and export trade to its nominal GDP during 1994-98 (table 2-5) indicates that, with exception of China,<sup>13</sup> the economies of leading trade partners are becoming increasingly more reliant on international merchandise trade than is that of the United States.

**Table 2-5**  
**Merchandise trade as a share of gross domestic product (GDP) for the United States and major trading partners, 1994-98**

(Percentage)

Country	1994	1995	1996	1997	1998	Percentage-point Increase 1994-98
Merchandise imports as a share of GDP:						
United States . . . . .	9.5	10.2	10.4	10.6	10.7	1.2
Japan . . . . .	5.9	6.5	7.6	8.1	7.4	1.5
China . . . . .	21.1	18.8	17.0	15.8	14.8	-6.4
Canada . . . . .	27.2	29.8	29.0	32.4	33.3	6.1
Mexico . . . . .	18.4	25.3	26.7	27.5	30.1	11.7
Germany . . . . .	18.8	19.2	19.6	21.3	22.0	3.2
Merchandise exports as a share of GDP:						
United States . . . . .	6.9	7.5	7.6	7.9	7.5	0.5
Japan . . . . .	8.5	8.6	8.9	10.0	10.1	1.6
China . . . . .	22.0	21.2	18.5	20.2	19.7	-2.4
Canada . . . . .	29.2	34.1	34.1	35.2	35.3	6.1
Mexico . . . . .	14.1	27.8	28.7	27.7	28.3	14.2
Germany . . . . .	20.9	21.7	22.4	24.5	25.8	4.9

Note.--Calculations based on unrounded data.

Source: U.S. trade data compiled from official statistics of the U.S. Department of Commerce (USDOC). GDP data for the United States are from USDOC, Bureau of Economic Analysis, *Survey of Current Business*, "Table 1.1, Gross Domestic Product," Apr. 1999, p. D-2. Estimated trade and GDP data for Japan, China, Canada, Mexico, and Germany are from U.S. Department of State, *Country Reports on Economic Policy and Trade Practices*, 1998, found at Internet address [http://www.state.gov/www/issues/economic/trade\\_reports/](http://www.state.gov/www/issues/economic/trade_reports/), retrieved Apr. 22 and 26, 1999.

<sup>13</sup> The observed percentage-point decline in China's merchandise trade as a share of its GDP during 1994-98 reflects the relatively high growth of its developing economy that outpaced the growth of its merchandise trade flows.

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# CHAPTER 3

## Significant Global Trade Developments and Shifts with Leading Partners

This chapter examines certain noteworthy economic and trade developments during 1998 among several U.S. trade partners. Trade patterns throughout the world have been affected by financial crises in various countries. The focus of the following section will be on certain countries in Asia, Eastern Europe, and Latin America, and the implications for U.S. trade. U.S. trade flows with these countries are presented in terms of the significant industry/commodity groups or U.S. Harmonized Trade Schedule (HTS) headings, whichever provides the best explanation of the trade shifts.

### GLOBAL FINANCIAL CRISES AND TRADE DEVELOPMENTS

#### East/Southeast Asia

Last year's *Shifts in U.S. Merchandise Trade in 1997* reported on the economic performance and U.S. bilateral trade of five countries affected by the Asian financial crisis during 1997-98--Indonesia, Korea, Malaysia, the Philippines, and Thailand (East/Southeast Asia)--which are updated in this report. Sharply lower rates of economic growth, weakened exchange rates against the U.S. dollar, and increased unemployment in East/Southeast Asia significantly reduced demand for U.S. products and contributed to a doubling of the U.S. trade deficit with these countries during 1997-98. The trade deficit rose by \$19.2 billion (99 percent) to \$38.7 billion (table 3-1). This deficit accounted for 14 percent of the U.S. global trade deficit in 1998. Declines in real gross domestic product (GDP) in each of these East/Southeast Asia countries in 1998, ranging from 0.5 percent in the Philippines to 13.7 percent in Indonesia, contrast sharply with the growth that each country (except Thailand) had experienced in 1997. The annual rate of change in real GDP is shown in the following tabulation:<sup>1</sup>

<u>Country</u>	<b>Annual rate of change in real GDP (percentage)</b>	
	<u>1997</u>	<u>1998</u>
Indonesia	4.6	-13.7
Korea	5.5	-5.5
Malaysia	7.7	-6.8
Philippines	5.2	-0.5
Thailand	-0.4	-8.0

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<sup>1</sup> International Monetary Fund (IMF), *World Economic Outlook, October 1998* (Washington, DC: IMF, Apr. 1999), pp. 10 and 17.

**Table 3-1**  
**East/Southeast Asia: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, 1997 and 1998<sup>1</sup>**

Item	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
-----Million dollars-----				
U.S. exports of domestic merchandise:				
Indonesia . . . . .	4,430	2,225	-2,205	-50
Korea . . . . .	24,287	15,979	-8,309	-34
Malaysia . . . . .	10,331	8,526	-1,805	-18
Philippines . . . . .	7,137	6,537	-600	-8
Thailand . . . . .	7,160	5,029	-2,131	-30
Total . . . . .	53,345	38,296	-15,049	-28
U.S. imports for consumption:				
Indonesia . . . . .	9,055	9,262	207	2
Korea . . . . .	22,939	23,701	762	3
Malaysia . . . . .	17,888	18,817	928	5
Philippines . . . . .	10,419	11,875	1,456	14
Thailand . . . . .	12,546	13,366	821	6
Total . . . . .	72,847	77,021	4,174	6
U.S. merchandise trade balance:				
Indonesia . . . . .	-4,625	-7,037	-2,412	-52
Korea . . . . .	1,348	-7,722	-9,071	( <sup>2</sup> )
Malaysia . . . . .	-7,558	-10,290	-2,733	-36
Philippines . . . . .	-3,282	-5,337	-2,056	-63
Thailand . . . . .	-5,386	-8,337	-2,952	-55
Total . . . . .	-19,502	-38,725	-19,223	-99

<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.--Calculations based on unrounded data.

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

## U.S. imports

U.S. imports from East/Southeast Asia during 1997-98, increased by \$4.2 billion (6 percent) to \$77.0 billion (table 3-1), led by imports of automatic data processing machines (computer hardware) which rose by \$2.4 billion (18 percent) to \$15.4 billion (table 3-2). Malaysia and the Philippines accounted for most of the increase in computer hardware imports, while those from Korea were down sharply (table 3-3). More than one-third of the increase in U.S. imports of all merchandise from East/Southeast Asia was from the Philippines, up by \$1.5 billion (14 percent) to \$11.9 billion (table 3-1). U.S. imports from Korea, Malaysia, and Thailand each accounted for roughly one-fifth of the increase. Imports from Indonesia increased by only \$207 million (2 percent) to \$9.3 billion because, according to the Indonesian Government, foreign buyers were concerned about disruptions to supplies following social disturbances and political change.<sup>2</sup>

**Table 3-2**

<sup>2</sup> IMF, *Indonesia--Second Supplementary Memorandum of Economic and Financial Policies*, June 24, 1998, found at Internet address <http://www.imf.org/external/np/loi/062498.htm>, retrieved Apr. 29, 1999.

**Leading changes in U.S. imports from, and U.S. exports to, Indonesia, Korea, Malaysia, the Philippines, and Thailand, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<b>U.S. IMPORTS</b>				
<i>Million dollars</i>				
<b>Increases:</b>				
Automatic data processing machines (ST018) . . . . .	12,971	15,369	2,398	18
Steel mill products, all grades (MM025) . . . . .	718	1,403	686	96
Shirts and blouses (CH064) . . . . .	2,222	2,475	252	11
Shellfish (AG009) . . . . .	1,254	1,474	219	17
<b>Decreases:</b>				
Electronic products:				
Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (ST016) . . . . .	15,740	14,622	-1,118	-7
Tape recorders, tape players, VCRs, turntables, and CD players (ST004) . . . . .	2,413	2,165	-248	-10
Footwear and footwear parts (CH079) . . . . .	1,808	1,355	-453	-25
Natural rubber (CH047) . . . . .	1,155	914	-241	-21
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	1,901	1,694	-207	-11
<b>All other</b> . . . . .	32,666	35,552	2,885	9
<b>TOTAL U.S. IMPORTS</b> . . . . .	<b>72,847</b>	<b>77,021</b>	<b>4,174</b>	<b>6</b>
<b>U.S. EXPORTS</b>				
<b>Increases:</b>				
Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (ST016) . . . . .	10,840	11,226	386	4
Arms and ammunition (MM067) . . . . .	92	253	161	175
<b>Decreases:</b>				
Aircraft, spacecraft, and related equipment (MT042) . . . .	5,326	3,979	-1,348	-25
Electronic products:				
Automatic data processing machines (ST018) . . . . .	2,670	1,695	-974	-36
Radio transmission and reception apparatus (ST007) . .	906	306	-601	-66
Telephone and telegraph apparatus (ST002) . . . . .	966	395	-571	-59
Measuring, testing, controlling, and analyzing instruments (ST030) . . . . .	1,358	859	-499	-37
Unrecorded magnetic tapes, discs, and other media (ST005) . . . . .	706	407	-299	-42
Machinery:				
Semiconductor manufacturing equipment and robotics (MT023) . . . . .	1,441	1,113	-328	-23
Miscellaneous machinery (MT045) . . . . .	645	340	-305	-47
Other:				
Miscellaneous organic chemicals (CH012) . . . . .	738	373	-364	-49
Iron and steel waste and scrap (MM023) . . . . .	562	223	-340	-60
Hides, skins, and leather (AG044) . . . . .	741	424	-317	-43
Oilseeds (AG032) . . . . .	932	615	-317	-34
<b>All other</b> . . . . .	25,422	16,089	-9,332	-37
<b>TOTAL U.S. EXPORTS</b> . . . . .	<b>53,345</b>	<b>38,296</b>	<b>-15,049</b>	<b>-28</b>

Note.--Calculations based on unrounded data.

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

**Table 3-3**  
**Countries accounting for most of the leading changes by value in sector/commodity groups for U.S. imports from, and U.S. exports to, Indonesia, Korea, Malaysia, the Philippines, and Thailand, 1997-98**

Sector/commodity	Country/countries accounting for most of change during 1997-98
<b>U.S. IMPORTS</b>	
<b>Increases:</b>	
Automatic data processing machines (ST018) . . . . .	Malaysia and the Philippines <sup>1</sup>
Steel mill products, all grades (MM025) . . . . .	Korea and Indonesia
Shirts and blouses (CH064) . . . . .	Korea and the Philippines
Shellfish (AG009) . . . . .	Thailand
<b>Decreases:</b>	
Electronic products:	
Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (ST016) . . . . .	Malaysia and Korea <sup>2</sup>
Tape recorders, tape players, VCRs, turntables, and CD players (ST004) . . . . .	Thailand and Malaysia
Footwear and footwear parts (CH079) . . . . .	Indonesia
Natural rubber (CH047) . . . . .	Indonesia
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	Korea
<b>U.S. EXPORTS</b>	
<b>Increases:</b>	
Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (ST016) . . . . .	Korea and the Philippines
Arms and ammunition (MM067) . . . . .	Korea
<b>Decreases:</b>	
Aircraft, spacecraft, and related equipment (MT042) . . . . .	Korea and Thailand
Electronic products:	
Automatic data processing machines (ST018) . . . . .	Korea and Malaysia
Radio transmission and reception apparatus (ST007) . . . . .	Korea, the Philippines, and Indonesia
Telephone and telegraph apparatus (ST002) . . . . .	Indonesia and Korea
Measuring, testing, controlling, and analyzing instruments (ST030) . . . . .	Korea
Unrecorded magnetic tapes, discs, and other media (ST005) . . . . .	Thailand
Machinery:	
Semiconductor manufacturing equipment and robotics (MT023) . . . . .	Korea
Miscellaneous machinery (MT045) . . . . .	Korea and Malaysia
Other:	
Miscellaneous organic chemicals (CH012) . . . . .	Korea
Iron and steel waste and scrap (MM023) . . . . .	Korea
Hides, skins, and leather (AG044) . . . . .	Korea
Oilseeds (AG032) . . . . .	Indonesia and Malaysia

<sup>1</sup> Korea had a large decrease.

<sup>2</sup> The Philippines had a large increase.

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

Steel mill products (mostly from Korea and Indonesia), shirts and blouses (Korea and the Philippines), and shellfish (Thailand) were among other product groups that recorded large import increases. Steel mill products increased at the fastest rate, up by \$686 million (96 percent) to \$1.4 billion. In contrast, decreases in U.S. imports occurred in diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (semiconductors), mostly from Malaysia and Korea;<sup>3</sup> tape recorders, tape players, video cassette recorders, turntables, and compact disc (CD) players (audio and video equipment) from Thailand and Malaysia; footwear and footwear parts from Indonesia; natural rubber, also from Indonesia; and automobiles, trucks, buses, and bodies and chassis of the foregoing (motor vehicles) from Korea.

### **U.S. exports**

The sharp drop in U.S. exports to East/Southeast Asia during 1997-98, down by \$15.0 billion (28 percent) to \$38.3 billion, accounted for most of the trade deficit increase with these countries (table 3-1). Korea accounted for slightly more than one-half of the decrease in U.S. exports (\$8.3 billion); the largest percentage drop in U.S. exports (50 percent) was to Indonesia. Because the real GDP of the Philippines decreased much less than the significant declines in the other four countries, the Philippines was the only partner among these countries for which the increase in U.S. imports was greater than the decline in U.S. exports.

Consistent with the slowdown in domestic demand and industrial production in East/Southeast Asia, aircraft, spacecraft, and related equipment (aircraft), certain electronic products, and certain machinery<sup>4</sup> were among the leading products of which U.S. exports decreased significantly in 1998 (table 3-2). Korea was almost always the country accounting for most of the drop in U.S. exports of those products that experienced the largest declines in exports to these countries (table 3-3). The only products for which U.S. exports to these countries increased notably in 1998 were semiconductors (mostly to Korea and the Philippines) and arms and ammunition (to Korea). U.S.-made semiconductors are used extensively in the assembly of computers in Korea, while the assembly of semiconductors from U.S.-made parts is a growing industry in the Philippines.

### **Agreements with the International Monetary Fund**

Indonesia, Korea, the Philippines, and Thailand entered into financial assistance agreements with the International Monetary Fund (IMF) during 1998 and early 1999 that contained many economic reform provisions affecting international trade. Specific provisions are listed for Indonesia (table 3-4), Korea (table 3-5), the Philippines (table 3-6), and Thailand (table 3-7).

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<sup>3</sup> U.S. imports of semiconductors from the Philippines increased as a result of co-production operations between the Philippines and the United States, whereby devices fabricated in the United States are shipped to the Philippines for final assembly and testing and then returned to the U.S. market.

<sup>4</sup> See chs. 11-13 for further assessments of the effects of the regional financial crisis on exports of these products to East/Southeast Asia.

Rather than submit to IMF conditions in exchange for financial and other assistance, Malaysia banned trading of Malaysian stocks outside the country on August 31, 1998; imposed currency and stock market controls on September 1, 1998; and fixed the exchange rate at 3.80 ringgit to the U.S. dollar on September 2, 1998.<sup>5</sup>

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<sup>5</sup> These actions were implemented by a variety of measures, according to various sources. The Government of Malaysia required parties seeking to convert the ringgit into foreign exchange to first gain approval from the central bank. Local Malaysian banks were not allowed to provide ringgits to foreign banks. All ringgits in circulation outside Malaysia had to be repatriated by the end of the month, after which they would have no value outside Malaysia. All Malaysian exports and imports had to be settled in foreign currencies. Limits were placed on how much money Malaysians could take out of the country. Nonresidents could not cross Malaysia's border with more than 1,000 ringgits. Foreigners who sold portfolio investment shares held less than a year would be barred from exporting the proceeds for a year. This ban was replaced by a graduated exit tax in February 1999 to attract foreign investment. Malaysia took these measures to insulate its economy from foreign currency and stock speculators after the value of the ringgit had fallen almost 40 percent against the U.S. dollar since mid-1997. The Government hoped it would be able to lower interest rates and take measures to stimulate the economy without having to worry about keeping interest rates high to defend the value of the ringgit. Sandra Sugawara, "Malaysia Moves to Shield Itself From Speculators," *Washington Post*, Sept. 2, 1998, p. A28; "Malaysia Imposes Controls on Trading in Its Currency," *New York Times*, reporting Bloomberg News, Sept. 2, 1998, p. C2; Steve H. Hanke, "The World Moves Backward," *Forbes*, Oct. 5, 1998, p. 56; "Market Intervention: Fashionable," *Economist*, Sept. 5, 1998, p. 67; and "Malaysia: The Road Less Traveled (sic)," *Economist*, May 1, 1999, p. 73.

**Table 3-4**  
**Economic reform provisions: Commitments made by Indonesia to the International Monetary Fund (IMF), 1998-99**

**Tariff reductions:**

- Items with tariffs between 15 percent and 25 percent had a reduction of 5 percentage points in early 1998.
- Tariffs on nonfood agricultural products, chemical products, steel, and metal products were reduced by 5 percentage points in early 1998.
- Nonfood agricultural product tariffs are to be reduced by a maximum of 10 percentage points by 2003.
- Tariffs on chemicals, steel, metal, and fishery products are to be reduced to between 5 percent and 10 percent by 2003.

**Exchange-rate policy:**

- A commitment was made to a free, market-determined foreign-exchange system without surrender or repatriation requirements or capital controls. The IMF is providing technical assistance to improve the foreign exchange transactions monitoring system to improve transparency and to assess the short-term exposure of the corporate and banking sectors.
- Firms obtained exchange rate risk guarantees from the Indonesian Debt Restructuring Agency until June 1999.

**Trade financing and export credit guarantees to revive the economy:**

- An agreement was reached with the Steering Committee of Indonesia's foreign creditor banks in Frankfurt, Germany, in June 1998 to help maintain credit to facilitate international trade.
- The Japan Export-Import Bank and the World Bank assisted in alleviating problems with access to trade and working capital financing faced by importers and exporters. The Bank of Indonesia established a temporary export credit guarantee program in July 1998 because of the great difficulty exporters were having obtaining letter of credit financing for both imports needed for production and for subsequent exports caused by the banking crisis. The program was open to exporters holding export letters of credit and was financed out of the Government budget, with the outstanding guarantees not to exceed \$500 million.

**Foreign-investment liberalization:**

- A list published on July 2, 1998, reduced the number of activities closed to foreign investors.
- Restrictions on foreign direct investment (FDI) in retail trade were eliminated in early 1998.
- Restrictions on FDI in wholesale trade were to be lifted.
- New environmental guidelines clarified foreign and domestic investment in palm oil plantations.
- Streamlined legal and administrative procedures and approval requirements for FDI were being developed.

**Privatization of public enterprises:**

- A Masterplan was published in Nov. 1998 to divest nearly 150 state enterprises (once totaling 164).
- Firms scheduled for privatization are to be subjected to international accounting standards prior to sale.
- A commitment was made to follow international standards in contract design and bidding procedures and to maintain complete transparency during the privatization process.
- Indonesia allowed majority foreign equity ownership except where strategic or national security interests are involved. "Strategic foreign investors" may gain management control even where foreign ownership is limited to 49 percent.
- Shares were sold in two state companies in 1998, a cement producer and a food processing firm.
- At least two additional state enterprises were to be divested by Mar. 31, 1999.
- Plans have been made to sell majority shares in a Jakarta container terminal concession company; minority shares in the Jakarta airport concession company and the largest palm plantation company; and further shares in mining and domestic and international telecommunication companies.
- Privatization during 1999-2001 would focus on companies in the hotel, trading, construction, mining, civil engineering, and fertilizer sectors.
- Bank of Indonesia credits were being reduced and phased out to public-sector agencies and enterprises. These firms will undergo restructuring prior to sale, including phased elimination of preferential access to all bank credit.
- The national airline will be restructured for later privatization.
- The President signed a new forestry regulation on Jan. 27, 1999, reforming the auction of forestry concessions and transfer of concessions by sale.

**Table 3-4--Continued.**  
**Economic reform provisions: Commitments made by Indonesia to the International Monetary Fund**

**(IMF), 1998-99**

**Elimination of subsidies:**

- Import subsidies on sugar, wheat, wheat flour, corn, soybeans, soybean meal, and fish meal were ended.
- Fertilizer and aviation fuel subsidies were eliminated.
- Elimination of untargeted subsidies received high priority in the 1999-2000 budget.

**Price policies:**

- A temporary ban was imposed, effective from July 26, 1998, on exports of rice, wheat, wheat flour, soybeans, sugar, kerosene, and fish meal, all subsidized commodities for which international prices were much higher than domestic prices. The ban was to be replaced by export taxes, which were to be phased down as price differentials between domestic and world prices were reduced.
- A long-term commitment was made to minimize the differentials between certain administered prices and world market prices, including food, fuel, and electricity, by establishing a regular-adjustment mechanism.
- Excise taxes on alcohol and tobacco were raised, and a second increase to reflect exchange rate and price developments was under review.
- A forest resource rent tax was introduced in 1998 to ensure efficient use.
- Additional resource rent taxes were to be phased in and reviewed and adjusted regularly to reflect world prices on logs, sawn timber, rattan, and minerals to promote more efficient economic use.

**Export and rent taxes:**

- Export taxes imposed by provincial and local governments were prohibited in early 1998.
- Export taxes on logs, sawn timber, rattan, and minerals were to be reduced in 4 steps to a maximum of 10 percent by Dec. 31, 2000.
- Export taxes on logs and sawn timber were reduced to 20 percent.
- A commitment was made to remove the ban on palm oil exports and to replace it with an export tax of 40 percent (raised to a maximum of 60 percent in July 1998) to be reviewed regularly for possible reduction to 10 percent by mid-Dec. 1999.
- Palm oil export taxes between 35 percent and 60 percent decreased to between 15 percent and 40 percent.
- Other remaining export taxes and levies were to be replaced by rent taxes, as appropriate.

**All other nontariff barriers to trade:**

- A commitment was made to eliminate all other export restrictions.
- The IMF is providing technical assistance to improve import processing procedures.
- Action was taken to eliminate the state monopoly and allow free competition in (1) importation of wheat, wheat flour, soybeans, and garlic; (2) sale or distribution of flour; and (3) importation and marketing of sugar.
- Cigarette manufacturers may now purchase supplies from any source.
- The import target for rice during fiscal year 1998-99 increased from 2.85 million tons to 3.1 million tons.
- Other rice policy initiatives included eliminating the exchange rate subsidy on imports, implementing a public procurement floor price aimed at making domestic prices equal world prices, allowing unhindered, private-sector imports, introducing a subsidized rice scheme to support 7.5 million very poor families, expanding the general subsidized rice scheme, and increasing monthly allocations to 20 kilograms per family.
- Local content regulations on dairy products were abolished in early 1998.
- Import restrictions on all new and used ships were abolished in early 1998.
- The power sector will be restructured to improve efficiency, and a legal and regulatory framework will be established to create a competitive electricity market.
- Parliament passed a law prohibiting monopoly practices and unhealthy competition, including price fixing cartels and agreements among companies to divide product ranges and marketing territories.
- A commitment has been made to phase out remaining quantitative import restrictions and nontariff barriers.

Source: Indonesian letters of intent and memoranda of economic and financial policies to the IMF, dated Apr. 10, 1998, June 24, 1998, July 29, 1998, Sept. 11, 1998, Oct. 19, 1998, Nov. 13, 1998, and Mar. 16, 1999, found at Internet address <http://www.imf.org/external/np/loi/mempub.htm>, retrieved Apr. 20, 1999.

**Table 3-5**  
**Economic reform provisions: Commitments made by Korea to the International Monetary Fund (IMF), 1998-99**

**Exchange-rate policy:**

- The Bank of Korea (BOK) sought foreign-market currency stability and intervened for fluctuation smoothing.
- Strengthened compliance with existing guidelines required commercial banks to limit foreign-exchange maturity mismatches. Banks had to have certain percentages of similar maturity assets to cover short- and long-term foreign borrowing. Similar guidelines were phased in for merchant banks.
- The Government took steps to require commercial and merchant banks to publicly disclose foreign-currency liquidity and to introduce internal monitoring systems. It also required these banks to limit their repayment exposure when borrowing foreign exchange and would closely monitor it.
- A law was enacted in Sept. 1998 to accelerate liberalization of foreign-exchange transactions.

**Trade financing to revive the economy:**

- The Government of Korea, with \$1.0 billion from the World Bank, was to provide up to \$3.3 billion of trade financing on commercial terms for one year to viable small- and medium-sized enterprises (SMEs) and to larger enterprises not affiliated with the top five chaebols, during a credit crunch, including that needed for the purchase of import inputs for exported articles.
- Repayment by SMEs was deferred for one year on \$1.0 billion of commercial bank's long-term foreign currency loans financed by the BOK.

**Foreign-investment liberalization:**

- Corporate restructuring policies, including those for the top-five chaebols, were worked out in consultation with the World Bank and supported by a Bank loan, aimed at encouraging foreign direct investment.
- The aggregate ceiling on foreign investment in Korean equities was to be eliminated.
- Foreign equity investment in firms not listed on the stock exchange was to be allowed.
- Allowable foreign equity ownership of Korean telephone service providers was to be increased from 33 percent to 49 percent; of publishing of newspapers up to 33 percent; and of periodicals up to 50 percent.
- Legislation was to be submitted to abolish restrictions on foreign ownership of land and real estate.
- Legislation was to be submitted to liberalize the rules on foreign takeovers of nonstrategic corporations.

**Privatization of public enterprises:**

- The Government announced the privatization by the end of 1998, or soon thereafter, of 5 state-owned enterprises and their 21 subsidiaries, and gradual privatization of 10 other state-owned enterprises by 2003. Namhae Chemical Corp. (the largest fertilizer producer in Korea), National Textbook Co., and Korea Technology Banking Corp., had been sold by Mar. 1999.

**Nontariff barriers to trade:**

- Foreign banks and brokerage houses were allowed to establish subsidiaries on Mar. 31, 1998.
- The August Supplementary Budget reduced by 30 percent the special consumption tax rates on consumer durables and automobiles, effective July 10, 1998, and it increased excise taxes on gasoline and diesel fuel.
- The Import Diversification Program was to be phased out by June 1999.
- Foreigners were to be permitted to engage in deep-sea foreign freight transport, securities dealings, insurance, leasing, and other property-related businesses.

Source: Korean letters of intent and memoranda of economic and financial policies to the IMF, dated May 2, 1998, July 24, 1998, Nov. 13, 1998, and Mar. 10, 1999, found at Internet address <http://www.imf.org/external/np/loi/mempub.htm>, retrieved Apr. 20, 1999.

**Table 3-6**  
**Economic reform provisions: Commitments made by the Philippines to the International Monetary Fund (IMF), 1998-99**

**Tariff policy:**

- The average nominal tariff rate was lowered to 10.7 percent in 1998, and was to be lowered to 9.5 percent in 1999 and 9.1 percent in 2000.
- The maximum tariff rate, which applies to some agricultural products, was to be reduced from 80 percent in 1998 to 65 percent in 1999.
- Certain tariff exemptions were adopted for agricultural and fisheries enterprises.
- Duty-free shopping facilities were sharply curtailed to reduce tax losses and improve customs administration.
- Legislation had been submitted, as of Jan. 20, 1999, to tighten new granting of duty-free importation of capital goods for nonexport industries.
- Tariff protection on corn may gradually be reduced.
- The Government plans to review the administration of Customs to increase tax revenues.

**Exchange-rate policy:**

- The Government pledged to continue floating exchange rates introduced during the 1997 financial crisis. Intervention in foreign exchange markets will be limited to what is necessary to meet IMF targets for net international foreign exchange reserves, to minor "smoothing" operations, and to maintain orderly markets during volatile periods. The volatility band established by the Bankers' Association of the Philippines was to be eliminated by the end of 1998.
- Steps were planned with assistance from the World Bank to limit the future buildup by corporations of excessive short-term debt and foreign currency exposure.

**Foreign-investment liberalization:**

- Efforts were being made to simplify and liberalize foreign investment registration requirements.
- Legislation was being considered to allow 100-percent foreign ownership of banks in financial difficulties, but those banks would be required to increase Philippine ownership participation to 30 percent over 10 years.
- Legislation was being drafted to liberalize foreign direct investment (FDI) in the retail sector.
- Allowable foreign equity participation in investment houses was increased from 49 percent to 60 percent.

**Privatization of public enterprises:**

- The Government committed itself to further privatization of government-owned enterprises.

**Nontariff barriers to trade:**

- The oil sector was deregulated during 1998, with prices allowed to find market rates. The price increases for such socially sensitive products as liquefied petroleum gas, kerosene, and regular gasoline were phased in by means of Government subsidies.
- The Government tightened the tax-exemption approval process of on imports of capital equipment, including consigned equipment.
- It increased the transparency of quota allocations under Minimum Access Volume arrangements.
- The Government made a commitment to the WTO to review by 2004 the restriction on rice imports. Because of a food safety-net program for the poor, private-sector imports of rice were to be allowed in 1999.
- The Government plans to convert the quantitative restriction on rice imports to an over-quota tariff rate.
- The excise tax on passenger motor vehicles was broadened.

Source: Philippine letters of intent and memoranda of economic and financial policies to the IMF, dated Mar. 11, 1998, and Jan. 20, 1999, found at Internet address <http://www.imf.org/external/np/loi/mempub.htm>, retrieved Apr. 20, 1999.

**Table 3-7**

**Economic reform provisions: Commitments made by Thailand to the International Monetary Fund (IMF), 1998-99**

**Exchange-rate policy:**

- The two-tier foreign exchange market was effectively abolished, with clear priority given to quickly stabilizing the exchange rate and maintaining stability, particularly in monetary policy.
- Capital controls on foreign exchange were abolished in Feb. 1998.

**Refinancing, incentives, and/or tax policies to exporters, small businesses, and agricultural producers to revive the economy:**

- Owing to lack of credit availability, steps were taken to ensure adequate availability for the priority nonbank corporate sector, especially the export sector, and for the purchase of imported inputs needed to produce export articles. Trade financing of \$1.6 billion was to be provided by the Japan Export-Import Bank and Asian Development Bank. The Bank of Thailand provided increased refinancing (up to 60 percent) of commercial bank loans to exporters at "concessional" interest rates.
- To enable four "specialized" banks to lend at market rates to exporters and other borrowers, they were to be recapitalized with proceeds from an international-market sovereign-bond issue.
- Some subsidized credit to agricultural producers and small businesses was prolonged using existing facilities.
- Among other measures taken to revive the economy, the Government expedited tax refunds due to exporters and corporations and temporarily postponed the payment of corporate income taxes.

**Foreign-investment liberalization:**

- The Government of Thailand prepared to amend the Alien Business Law to make it a "new and more liberal Foreign Investment Law" to attract foreign investment and international expertise. The principle of freedom of business activities by foreigners would be established except in cases restricted under two existing lists.
- The Condominiums Act was amended to liberalize foreign ownership of property. Similar liberalization of the Land Code was pending in Parliament. Of particular importance to business and commercial activity, selected real estate property would be leasable for 50 years under a new Lease Act rather than the current 30 years, and would be renewable for another 50 years.
- Such sectors as brokerage services, wholesale and retail trade, construction, nonsilk textile, garment, footwear, hotel, beverage production, and auction business would be subject to further liberalization.
- Initiatives were taken to attract foreign capital to the financial and nonfinancial sectors. Foreign investment in recapitalization of banks was reportedly "welcome without restrictions."

**Privatization of public enterprises:**

- Restructured state banks would eventually be privatized. Radhanasin Bank was to be sold in May 1999.
- The Government approved a Master Plan for State Enterprise Reform in Sept. 1998 and adopted targets for privatization of public enterprises. Steps were taken to begin to establish a legal (a new Corporatization Law was pending in Apr. 1999) and regulatory framework to implement the plan. In the near-term, top-priority sectors included transportation (privatization of Thai Airways International was planned for mid-1999), energy (including oil), water utilities, and telecommunications. The railways and ports would be medium-term targets because of expected efficiency gains.
- Utilities were to be privatized to generate funds to assist distressed workers and to reduce the public debt.
- The Cabinet passed a resolution to sell or liquidate the Textile Organization, Battery Organization, Preserved Food Organization, and Cold Storage Organization.
- A study is underway to outline strategic options for the Tobacco Monopoly.
- The Government began a study of the water sector to prepare for increased private sector participation.

Source: Thai letters of intent and memoranda of economic and financial policies to the IMF, dated Feb. 24, 1998, May 26, 1998, Aug. 25, 1998, Dec. 1, 1998, and Mar. 23, 1999, found at Internet address <http://www.imf.org/external/np/loi/mempub.htm>, retrieved Apr. 20, 1999.

## Russia

In 1997, Russia, the largest single economy within the Commonwealth of Independent States (CIS),<sup>6</sup> experienced economic growth for the first time in 8 years. However, this economic growth started to deteriorate in early 1998, as the Asian financial crisis and lower world energy prices precipitated a financial crisis in Russia. In response, the Russian Government devalued the ruble and imposed a moratorium on private-sector foreign currency obligations in 1998. The financial crisis contributed to economic difficulties in Russia and the entire CIS, particularly in those countries with the most extensive financial and trading ties with Russia.

The CIS region is a relatively small trading partner for the United States, accounting for less than 1 percent of both U.S. imports and exports in 1998. However, the United States is an important and growing market for CIS products. U.S. imports from the region increased \$1.7 billion (34 percent) to \$6.7 billion during 1997-98, mostly as a result of increased imports from Russia reflecting Russia's need for hard currency and strong demand for more competitively priced inputs by U.S. consuming industries (table 3-8). Further, Russia is an important U.S. and world supplier of certain products such as platinum-group metals, for which there are few other suppliers.<sup>7</sup> Mineral and metal commodities (steel, platinum, aluminum, titanium, nickel, and diamonds) accounted for 62 percent of U.S. imports from Russia in 1998, and platinum specifically accounted for over 42 percent of the increase in imports during 1997-98 (table 3-9).<sup>8</sup>

**Table 3-8**

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<sup>6</sup> CIS members include Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The goals of this loose confederation are mutual efforts toward political stability as well as the promotion of social and economic development for the region as a whole.

<sup>7</sup> Uncertainty about Russian supply of palladium caused the world price of this metal to increase from \$198 per troy ounce to \$417 per troy ounce during 1998. The price subsequently fell to under \$300 per troy ounce after Russian shipments resumed. See, U.S. Department of the Interior, U.S. Geological Survey, "Platinum-Group Metals," *Mineral Commodity Summaries 1999*, found at Internet address <http://minerals.usgs.gov/minerals/pubs/commodity/platinum>, retrieved June 17, 1999, p. 2.

<sup>8</sup> Steel products, a major export revenue earner for Russia, face quantitative U.S. restrictions due to steel plate suspension agreements between the U.S. Department of Commerce (USDOC) and Russia and Ukraine. See, USDOC, *Fact Sheet: Steel Plate Suspension Agreements* found at Internet address [http://www.ita.doc.gov/media/\\_steelf.htm](http://www.ita.doc.gov/media/_steelf.htm), retrieved May 6, 1999. On February 22, 1999, the U.S. Department of Commerce and Ministry of Trade of the Russian Federation initialed two other suspension agreements concerning the export of steel products into the United States from Russia. See USDOC, *Fact Sheet: Agreement Suspending the Antidumping Investigation on Imports of Hot-Rolled Steel Products from the Russian Federation* found at Internet address <http://www.ita.doc.gov/media/agrus222.htm>, retrieved May 6, 1999; and USDOC, *Fact Sheet: Comprehensive Agreement on Steel Imports from the Russian Federation* found at Internet address <http://www.ita.doc.gov/media/cmrus222.htm>, retrieved May 6, 1999.

**Commonwealth of Independent States: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, 1997 and 1998<sup>1</sup>**

Item	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Armenia	62	51	-11	-17.1
Azerbaijan	62	122	60	97.6
Belarus	39	29	-10	-26.0
Georgia	139	135	-4	-2.7
Kazakhstan	256	101	-155	-60.5
Kyrgystan	28	21	-8	-27.5
Moldova	20	20	1	4.0
Russia	3,205	3,543	338	10.5
Tajikistan	19	12	-6	-34.7
Turkmenistan	118	28	-90	-76.3
Ukraine	397	360	-37	-9.3
Uzbekistan	234	147	-87	-37.1
<b>Total</b>	<b>4,578</b>	<b>4,569</b>	<b>-9</b>	<b>-0.2</b>
<b>U.S. imports for consumption:</b>				
Armenia	6	17	11	182.0
Azerbaijan	6	5	-1	-13.1
Belarus	66	105	39	59.5
Georgia	9	14	5	50.1
Kazakhstan	116	168	52	44.8
Kyrgystan	2	( <sup>2</sup> )	-2	-88.4
Moldova	51	112	60	116.9
Russia	4,291	5,675	1,385	32.3
Tajikistan	9	33	24	281.7
Turkmenistan	2	3	1	30.1
Ukraine	413	529	116	28.1
Uzbekistan	39	33	-6	-16.3
<b>Total</b>	<b>5,010</b>	<b>6,693</b>	<b>1,683</b>	<b>33.6</b>
<b>U.S. merchandise trade balance:</b>				
Armenia	56	35	-21	-38.0
Azerbaijan	56	117	61	108.8
Belarus	-27	-76	-49	-184.9
Georgia	129	121	-8	-6.5
Kazakhstan	140	-67	-207	( <sup>3</sup> )
Kyrgystan	26	20	-6	-21.8
Moldova	-32	-91	-59	-187.0
Russia	-1,086	-2,133	-1,047	-96.4
Tajikistan	10	-20	-31	( <sup>3</sup> )
Turkmenistan	116	25	-90	-78.2
Ukraine	-16	-169	-153	-960.4
Uzbekistan	194	114	-80	-41.3
<b>Total</b>	<b>-432</b>	<b>-2,124</b>	<b>-1,691</b>	<b>-391.2</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>Less than \$500,000.

<sup>3</sup>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

**Table 3-9**  
**Leading U.S. imports from, and U.S. exports to, Russia, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<b>U.S. IMPORTS</b>				
	<i>Million dollars</i>			
Iron and steel (HTS 7201, 7207, 7208, and 7209) . . . . .	876	1,233	357	41
Platinum (HTS 7110) . . . . .	486	1,079	593	122
Aluminum (HTS 7601) . . . . .	675	903	228	34
Radioactive chemical mixtures (HTS 2844) . . . . .	150	441	290	193
Fish, fresh and processed (HTS 0306 and 0304) . . . . .	199	224	25	13
Petroleum and bituminous mineral oils (HTS 2710) . . . . .	80	182	102	127
Titanium and titanium articles (HTS 8108) . . . . .	166	121	-46	-28
Nickel, unwrought (HTS 7502) . . . . .	178	115	-63	-35
Plywood and laminated wood (HTS 4412) . . . . .	42	61	18	43
Diamonds, whether or not worked (HTS 7102) . . . . .	45	60	15	34
Alcohol beverages (HTS 2208) . . . . .	58	55	-2	-4
<b>All other</b> . . . . .	<b>1,334</b>	<b>1,202</b>	<b>-133</b>	<b>-10</b>
<b>TOTAL U.S. IMPORTS</b> . . . . .	<b>4,291</b>	<b>5,675</b>	<b>1,385</b>	<b>32</b>
<b>U.S. EXPORTS</b>				
Aircraft, spacecraft, and spacecraft launch vehicles (HTS 8802) . . . . .	7	1,036	1,029	( <sup>1</sup> )
Meats, other than fish (HTS 0203, 0206, 0207, 1601, and 1602) . . . . .	981	696	-285	-29
Earthmoving equipment and associated parts (HTS 8431 and 8429) . . . . .	180	183	3	2
Cigars and similar tobacco products (HTS 2402) . . . . .	233	163	-70	-30
Passenger and freight vehicles (HTS 8703 and 8704) . . . . .	87	62	-24	-28
Computers and related peripherals (HTS 8471) . . . . .	79	53	-25	-32
Medical instruments and appliances (HTS 9018) . . . . .	60	47	-12	-21
Wired telecommunications equipment (HTS 8517) . . . . .	50	45	-5	-11
Medicines (HTS 3004) . . . . .	8	38	30	371
Artificial corundum (HTS 2818) . . . . .	21	34	13	61
Farm equipment and machinery (HTS 8433) . . . . .	4	33	29	792
Vegetables, processed (HTS 2005) . . . . .	6	30	24	399
Office paper products (HTS 4907) . . . . .	( <sup>2</sup> )	27	26	( <sup>1</sup> )
Petroleum and bituminous mineral oils (HTS 2710) . . . . .	28	27	-1	-4
<b>All other</b> . . . . .	<b>1,460</b>	<b>1,067</b>	<b>-393</b>	<b>-27</b>
<b>TOTAL U.S. EXPORTS</b> . . . . .	<b>3,205</b>	<b>3,543</b>	<b>338</b>	<b>11</b>

<sup>1</sup> Percentage change more than 1,000 points.

<sup>2</sup> Less than \$500,000.

Note.--Calculations based on unrounded data.

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

Depressed CIS demand contributed to a decrease in U.S. exports to the region. These exports dropped by about \$9 million (less than 1 percent) to \$4.6 billion during 1997-98. Exports to Russia actually increased by \$338 million (11 percent) to \$3.5 billion; however, these exports would also have declined were it not for an anomalous \$1 billion shipment of aircraft, spacecraft, and spacecraft launch vehicles in 1998 (table 3-9). Although reflecting mostly export downturns in 1998, the traditional leading U.S. products shipped to Russia remained meat (other than fish), earthmoving equipment, and cigars and similar tobacco products which together accounted for \$1.0 billion (29 percent) of U.S. exports to Russia in 1998, a decrease from \$1.4 billion (43 percent) the previous year.

## The financial crisis and response

Russia has struggled with its transition from a centrally planned to a market-based economy during the 1990s. This conversion included the transfer of large state-owned enterprises to the private sector. However, signs of success had begun to appear in recent years. By 1997, Russia's private sector generated about 70 percent of the country's GDP,<sup>9</sup> the ruble was convertible, and its exchange value was relatively stable. The annual rate of inflation had been significantly reduced, from 48 percent in 1996 to 15 percent in 1997, and the economy grew for the first time by an estimated 0.9 percent after 8 years of decreasing GDP (table 3-10).

**Table 3-10**  
**Real GDP and consumer prices for CIS countries, 1996-98**  
*(Annual percentage change)*

CIS Countries	Real GDP			Consumer Prices		
	1996	1997	1998	1996	1997	1998
Armenia	5.8	3.1	5.5	19	14	10
Azerbaijan	1.3	5.8	7.0	20	4	5
Belarus	2.8	10.4	7.0	53	64	53
Georgia	10.5	11.0	10.0	39	7	6
Kazakhstan	0.5	2.0	1.5	39	17	10
Kyrgyz Republic	7.1	6.5	6.0	30	26	12
Moldova	-7.8	1.3	3.0	24	12	8
Russia	-5.0	0.9	-6.0	48	15	48
Tajikistan	-4.4	1.7	3.4	418	88	64
Turkmenistan	-7.7	-25.9	20.0	992	84	18
Ukraine	-10.0	-3.2	-0.1	80	16	14
Uzbekistan	1.6	2.4	2.0	64	50	40

Source: International Monetary Fund (IMF), *World Economic Outlook*, October 1998 (Washington, DC: IMF, Apr. 1999), p. 32.

However, Russia's exports fell both in quantity and in value principally for two reasons: (1) economic and financial difficulties in Asia, a primary destination; and (2) the decline in world energy prices, which affected a key source of export earnings (oil and gas together accounted for nearly half of Russia's export revenue in 1997).<sup>10</sup> Russia's fragile economic stabilization program began to fail. Russia's export earnings declined by 26 percent for the first 9 months of 1998 compared with the same period of 1997.<sup>11</sup> Such developments raised concerns anew about Russia's ability to service its international and domestic debt requirements, particularly short term debt.<sup>12</sup> The Russian Central Bank

<sup>9</sup> U.S. Department of State, "Russia," *1998 Country Reports on Economic Policy and Trade Practices*, found at Internet address [http://www.state.gov/www/issues/ed...ade\\_reports/europe98/russia98.html](http://www.state.gov/www/issues/ed...ade_reports/europe98/russia98.html), retrieved May 28, 1999, p. 3.

<sup>10</sup> U.S. Department of State, "Russia," *Country Commercial Guides: FY 1999*, July 1998 found at Internet address [http://www.state.gov/about\\_sta...m\\_guides/1999/europe/russia99.html](http://www.state.gov/about_sta...m_guides/1999/europe/russia99.html), retrieved April 6, 1999, p. 1.

<sup>11</sup> U.S. Department of State telegram No. 026123, "Russia Discusses Trade Policy at OECD," prepared by U.S. Embassy, Paris, Dec. 1, 1998.

<sup>12</sup> IMF, *World Economic Outlook*, October 1998, p. 54.

intervened to support the ruble and raised interest rates,<sup>13</sup> but these measures did not halt capital flight or alleviate concerns of foreign investors. The ruble became increasingly less convertible. Gross foreign currency reserves fell from \$24.9 billion in June 1997 to \$14.6 billion in May 1998<sup>14</sup> and the ruble was devalued from 6.1 rubles per dollar<sup>15</sup> to 20 rubles per dollar over the year.<sup>16</sup>

Domestic political uncertainties and lack of consensus over the structural reforms needed to create an effective market economy contributed to economic problems.<sup>17</sup> Discussion regarding reforms included such topics as better laws regarding competition and bankruptcy, protection of shareholder rights, and additional privatization of state-controlled industries, but were inconclusive. In June 1998, a newly appointed government announced an ambitious reform package, but the Duma (the lower house of the Russian legislature) rejected certain key measures. In an effort to hold public confidence, the government announced a series of emergency measures on August 17, 1998, including devaluation of the foreign exchange rate, a 90-day moratorium on many private-sector foreign currency obligations, changes to the banking sector, strengthening controls on capital flows, and other measures.<sup>18</sup> Other negative effects of the financial crisis reportedly included reduced domestic purchasing power, reduced availability of trade finance, and payment/clearance problems, which together made it more difficult to import crucial subsistence items.<sup>19</sup>

By the end of 1998, further measures were taken by the Russian Government to address the country's economic problems. Many of these measures created or maintained import barriers, but were implemented to raise revenue for the Government and correct balance of payments problems:<sup>20</sup>

- Raised tariffs and imposed excise taxes and value-added taxes on imports. However, certain measures were rescinded for food products when shortages occurred.<sup>21</sup>
- Imposed licensing fees and tightened distribution of alcoholic beverages.<sup>22</sup>
- Maintained protectionist measures to support domestic automobile and aircraft manufacturing industries.<sup>23</sup>

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<sup>13</sup> Interest rates rose from the benchmark rate of 28 percent in December 1997 to 150 percent in May 1998. See, U.S. Department of State, "Russia," *1998 Country Reports on Economic Policy and Trade Practices*, p. 2.

<sup>14</sup> Ibid.

<sup>15</sup> Exchange rate of 6.1 rubles per dollar is an average for the first half of 1998. See IMF, *World Economic Outlook, October 1998*, p. 54.

<sup>16</sup> U.S. Department of State, "Russia," *1998 Country Reports on Economic Policy and Trade Practices*, p. 2.

<sup>17</sup> United Nations, "*Economic Survey of Europe, 1998*," vol. 2, prepared by the Secretariat of the Economic Commission for Europe, Geneva, July 1998, p. 23.

<sup>18</sup> IMF, *World Economic Outlook, October 1998*, p. 53.

<sup>19</sup> U.S. Department of State, "Russia," *1998 Country Reports on Economic Policy and Trade Practices*, p. 4.

<sup>20</sup> Ibid.

<sup>21</sup> Office of the U.S. Trade Representative (USTR), "Russia," *1999 National Trade Estimate Report on Foreign Trade Barriers*, p. 365.

<sup>22</sup> Ibid., p. 366.

<sup>23</sup> Effective January 14, 1998, the Russian Government passed the "Russian Federal Law on State Regulation of the Development of Aviation." However, U.S. industry sources believe that this law will have a negative affect by stifling much needed foreign capital and expertise because it sets a 25-percent cap on the share of foreign capital in aviation enterprises and requires that board members and senior management staff be Russian citizens. Ibid. Because the law does not apply to investment arrangements finalized before Jan. 14, 1998, two important U.S. investment projects in Russia's aircraft industry are not affected: Pratt & Whitney's investment in Perm Motors,

(continued...)

- Adopted an import licensing regime<sup>24</sup> and enacted new codes for antidumping (AD) and countervailing duty (CVD) orders to conform with WTO standards.<sup>25</sup>

### **The effect of Russia's financial crisis on other CIS markets**

The effects of Russia's financial crisis have been felt most strongly in Ukraine (the second-largest economy in the CIS), which has close financial and trade ties with Russia. The IMF projected a decline in real GDP by 0.1 percent for Ukraine for 1998, as well as a 14-percent increase in consumer prices for that year (table 3-10). Ukraine had similar structural and fiscal problems as Russia, including poor revenue collection, inadequate controls on government expenditures, and delayed implementation of structural reforms. These problems have not engendered investor confidence. In May 1998, increases of Russia's official interest rates led to higher rates in Ukraine. However, Ukraine's foreign exchange rate weakened despite increased interest rates and significant levels of government intervention in the foreign-exchange market. In September, the Government of Ukraine announced, as a part of an agreement with the IMF, a policy package that included a devaluation of the foreign exchange rate, implementation of tighter fiscal policies, and an arrangement to swap part of its short-term domestic debt for longer maturities. However, according to the IMF, Ukrainian short-term debt and equity market conditions remained unsettled as the currency experienced further downward pressure and investors waited for assurances that the September 4 policy initiatives would be fully implemented.<sup>26</sup>

CIS countries that have had stronger trade ties and financial markets more integrated with Russia experienced downward pressures on their exchange rates, upward pressure on domestic interest rates, and a decrease in exports to Russia as a result of the latter's financial crisis. For example, Moldova, a major producer of agricultural products, traditionally shipped one-half of its exports to Russia.<sup>27</sup> By September 1998, Moldova's exports dropped by 50 percent, as compared with July of that year.<sup>28</sup> Consequently, Moldova's agricultural industry has not been able to meet salary payments for several months.<sup>29</sup> The more significant and immediate fallout from Russia's financial crisis are social problems, such as unemployment, salary and pension arrears, shortages of energy supplies, and reduced access to medical and other social services. Other CIS countries identified by the European Union Commission as being seriously affected by Russia's financial crisis are Armenia, Belarus, Georgia, Kyrgyzstan, Tajikistan, and Ukraine. These social problems are considered likely to worsen already widespread poverty levels and could lead to political instability in these countries.<sup>30</sup>

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<sup>23</sup> (...continued)

and General Electric's investment in Rybinsk Motors. See USITC, *The Changing Structure of the Global Large Civil Aircraft Industry and Market: Implications for the Competitiveness of the U.S. Industry*, USITC publication 3143, Nov. 1998, p. 4-10.

<sup>24</sup> USTR, "Russia," p. 366.

<sup>25</sup> U.S. Department of State, "Russia," *1998 Country Reports on Economic Policy and Trade Practices*, p. 5.

<sup>26</sup> IMF, *World Economic Outlook, October 1998*, pp. 56-57.

<sup>27</sup> U.S. Department of State telegram No. 000448, "EU Aid for NIS Affected by Russian Crisis," prepared by USEU Brussels, Jan. 22, 1999.

<sup>28</sup> U.S. Department of State telegram No 003045, "Moldovan Economic Trends, October 1998," prepared by U.S. Embassy, Chistinau, Dec. 8, 1998.

<sup>29</sup> U.S. Department of State, "EU Aid for NIS Affected by Russian Crisis."

<sup>30</sup> Ibid.

## Outlook

Most of the structural problems in the CIS economies remain in 1999, indicating an ongoing need for the governments of these countries to develop and implement the necessary economic and structural reforms.<sup>31</sup> Immediate measures for consideration include tax reform with improved collection systems, bank restructuring that incorporates transparency for outside scrutiny, improved protection of shareholder rights, and a case-by-case industry privatization program.<sup>32</sup> Through economic and financial stabilization, the CIS countries can rebuild investment and economic confidence that would bring a greater willingness to conduct business with and in these countries.

However, such reform prospects are not considered to be promising in the near term,<sup>33</sup> particularly for Russia and for those countries that have close financial ties with Russia. In April 1999, the IMF reportedly agreed in principle to lend Russia another \$4.5 billion; however no funds have been transferred as yet.<sup>34</sup> To date, Russia is estimated to owe \$100 billion of debt from the Soviet era and another \$50 billion (including \$19 billion to the IMF) of new debt; depreciation of the ruble makes repayment even more difficult.<sup>35</sup> Any real economic effect of additional IMF loans in the near term is under question by some sources familiar with the internal workings of the Russian Government. They report that little progress is likely to be made toward hard economic decisions before parliamentary elections this December and presidential elections in the summer of 2000.<sup>36</sup>

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<sup>31</sup> U.S. Department of State, "Russia," *1998 Country Reports on Economic Policy and Trade Practices*, p. 3.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> "Global Finance - Tensions Under the Table," *Economist*, May 1, 1999, p. 72.

<sup>35</sup> Andrew Balls, "Survey - Russia: Reforms on Hold Until After the Election: THE ECONOMY," *Financial Times*, Apr. 30, 1999, found at Internet address <http://www.globalarchive.ft.com/search/FTJSPController.htm>, retrieved May 5, 1999.

<sup>36</sup> Ibid.

## Brazil

Brazilian officials began 1998 cautiously optimistic that the economy would be able to withstand the spread of the so-called “Asian flu” (and later the Russian financial crisis). Several shifts in domestic policy were implemented throughout 1998, in reaction to both long-term domestic issues and to current international financial pressures. Such shifts reverberated throughout the Mercosur economies, as the economic situation in Brazil had an impact on the economic conditions of the other member states, with subsequent effects on U.S. trade flows with each member of Mercosur. By the end of the year, the weaknesses of the Brazilian economy became apparent and the Government was finally forced to devalue Brazil’s currency, the real, in January 1999.

Mercosur is a customs union whose founding members are Argentina, Brazil, Paraguay, and Uruguay. Chile and Bolivia are associate members.<sup>37</sup> The charter members of Mercosur took various steps to emulate the Chilean economic reforms, which included unilateral tariff reductions, privatization of publicly owned industries and services, and openness to foreign investment. Mercosur’s implementation of a regional customs union on January 1, 1995, provided a large market for its members, thereby providing an incentive for regional development and allowing firms in the region to realize economies of scale. In the past several years, the charter members experienced significant economic growth. Trade expanded with both members and nonmembers.<sup>38</sup>

Brazil accounted for 72 percent of U.S. trade with Mercosur. The U.S. trade surplus with Brazil declined by \$1.2 billion (21 percent) to \$4.3 billion in 1998 (table 3-11), as Brazil attempted to slow imports from all sources. Although the United States enjoys a trade surplus with all four full Mercosur members, Brazil is the most significant U.S. trade partner within the bloc; thus any policy initiatives of the Government of Brazil may affect U.S. trade relations with all four countries. For example, any devaluation of the real causes Brazilian exports to be cheaper within Mercosur markets where they already have preferential tariff treatment and may displace U.S. products which compete in these markets. Total U.S. merchandise trade (exports plus imports) with Mercosur declined by \$204 million (less than 1 percent) during 1997-98 to \$33.7 billion (2 percent of total U.S. global trade).

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<sup>37</sup> Chile and Bolivia participate in a free-trade agreement with Mercosur, but are not subject to the Common External Tariff. Chile maintains an 11-percent tariff on virtually all imports originating in countries with which Chile does not have a free-trade agreement.

<sup>38</sup> For more information, see USITC, *Market Developments in Mercosur Countries Affecting Leading U.S. Exporters*, Staff Issue Paper, USITC publication 3117, July 1998.

**Table 3-11****Mercosur: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, 1997 and 1998<sup>1</sup>**

Item	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	<i>Million dollars</i>			
U.S. exports of domestic merchandise:				
Argentina .....	5,553	5,608	56	1.0
Brazil .....	15,001	14,293	-708	-4.7
Paraguay .....	856	760	-96	-11.2
Uruguay .....	514	551	38	7.3
Total .....	21,923	21,212	-711	-3.2
U.S. imports for consumption:				
Argentina .....	2,195	2,240	45	2.0
Brazil .....	9,510	9,953	443	4.7
Paraguay .....	40	33	-7	-16.9
Uruguay .....	229	254	25	11.1
Total .....	11,974	12,481	506	4.2
U.S. merchandise trade balance:				
Argentina .....	3,357	3,368	11	0.3
Brazil .....	5,491	4,340	-1,151	-21.0
Paraguay .....	815	726	-89	-10.9
Uruguay .....	285	297	12	4.3
Total .....	9,949	8,731	-1,217	-12.2

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

Note.--Calculations based on unrounded data.

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

**Measures taken by Brazil in 1998**

Although Brazil has long acknowledged the need for domestic fiscal reform in areas such as taxes, pension system, and civil service, it was not until the events of late 1998 that the Brazilian Government was forced to address these issues. The year began amidst the Asian financial crisis that caused international investors to flee emerging markets worldwide. However, Brazil, and the rest of Latin America, seemed well positioned to cope with the crisis, having already weathered the Mexican peso devaluation of 1994-95. At that time, Brazil adopted a pegged exchange rate, under which the real was devalued by 7.5 percent a year against the U.S. dollar.<sup>39</sup> Unfortunately, this gradual approach to reform still left the real overvalued by the beginning of 1998, and failed to address the consequences of loose fiscal policy combined with tight money supply, which resulted in a large public-sector debt and current account deficit.<sup>40</sup>

The Brazilian Government's initial response to the Asian financial crisis was to nearly double interest rates in October 1997, and to adopt a fiscal austerity program aimed at saving \$18.0 billion in 1998. Financial markets responded favorably to these preliminary measures, and reserves returned to pre-crisis levels. However, by August 1998, Russia defaulted on its loans. This put tremendous pressure on the Brazilian currency, reportedly forcing the Government to raise interest rates to stem capital outflows, which were once again causing a loss of foreign exchange reserves needed to service Brazil's merchandise trade deficit. As the real was widely believed to be overvalued, Brazilian exports were relatively more

<sup>39</sup> The Real Plan was introduced in 1994 to provide stability after years of economic stagnation and hyperinflation. Initially, its value was equal to 1 U.S. dollar.<sup>40</sup> "Survey Brazil: The Devaluing of a Presidency," *Economist*, Mar. 27, 1999, pp. 4-5.

expensive while imports were lower priced. Brazil's trade deficit increased from \$5.6 billion in 1996 to \$8.4 billion in 1997, then somewhat improved to a deficit of \$6.4 billion in 1998.<sup>41</sup>

Trade liberalization throughout the 1990s has produced significant changes in Brazil's trade profile. Imports increased in response to lower tariffs and generally freer markets and are now diversified by industrial, agricultural, and consumer goods.<sup>42</sup> The Mercosur common external tariff (CET) went into effect on January 1, 1995, and rates currently range from 0 to 23 percent. However, each country maintains a list of products exempt from the CET.<sup>43</sup> Furthermore, tariffs between Brazil and Argentina were eliminated, except for autos and sugar, on January 1, 1999. Paraguay and Uruguay are to follow in 2000.

Despite trade liberalization efforts of the past several years, the Government of Brazil initiated several new measures to control the flow of imports, beginning in late 1997 and continuing into early 1999. Effective in 1998, Mercosur members increased the CET from 20 percent to 23 percent for most products. The increase is scheduled to expire in 2000. The Government's *Comunicado 37* changed the licensing requirements for over 400 products. These products, previously eligible for automatic import licenses, now require additional processing time and approval by the appropriate government agency prior to shipment. Such products include metal products, textiles, and machinery.<sup>44</sup> Further changes to the import licensing regime were made in September 1998, whereby all imports are required to be filed with Brazil's automated import license system, after which the Government of Brazil will determine whether a product is eligible for a license and which type of license.<sup>45</sup>

Brazil introduced a customs valuation system in March 1998 to identify instances of inaccurate and low invoicing. Imports are often undervalued and mislabeled to avoid high tariffs, taxes, or other restrictions. The new customs valuation code lists a band of prices for each item. Inaccurate- and low-invoiced products enter Brazil by ship through the ports of Rio de Janeiro and Santos, as well as across land from Paraguay. Further attempts to slow the flow of imports include health and safety restrictions, quality certification stamps,<sup>46</sup> and government or industry initiation of AD and CVD actions.

The growth in Brazil's fiscal deficit was due to a combination of a deficit in the pension system, pre-electoral spending on public works by the Federal and State Governments,<sup>47</sup> and higher interest rates on public debt. Although the Government of Brazil recognized the need for reform, and even tried to implement some measures in 1997, the urgency of the crisis brought the matter to the forefront. In

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<sup>41</sup> U.S. Department of State, *Country Reports on Economic Policy and Trade Practices*, Jan. 31, 1999, found at Internet address <http://www.state.gov/www/issues/economic/trade-reports/wha98/brazil98.html>, retrieved May 4, 1999.

<sup>42</sup> USDOC, ITA, "Brazil: Economic Trends and Outlook," *Country Commercial Guides*, found at Internet address <http://www.stat-usa.gov:80/ccg.nsf...1c6a9852566ff0075f64e?OpenDocument>, retrieved Feb. 1, 1999.

<sup>43</sup> The CET currently covers approximately 85 percent of 9,500 tariff items; most of the remaining 15 percent will be covered by 2001, and all will be covered by 2006. Products included on Brazil's national list of exceptions include shoes, automobiles, and consumer electronics.

<sup>44</sup> U.S. Department of State telegram No. 00657, "Brazil's Efforts to 'Control' Imports," prepared by U.S. Embassy, Brasilia, Feb. 18, 1998.

<sup>45</sup> U.S. Department of State telegram No. 03604, "Brazil Rules Out Tariff Hikes But Will Tighten Import Restrictions," prepared by U.S. Embassy, Brasilia, Sept. 22, 1998.

<sup>46</sup> Products included on the list are agricultural products (including seeds and fertilizers), beverages and foods, pharmaceutical and veterinary products, medical equipment, toys, tires, and cosmetics. See "Brazil's Import Bureaucrats: More Controls, Stamps, Licenses . . .," *World Trade*, Feb. 1999 found at Internet address <http://www.proquest.umi.com>, retrieved Apr. 7, 1999.

<sup>47</sup> 1998 was an election year for Brazil.

September 1998, President Cardoso called for the deficit to be trimmed by 3 percent of GDP in 1 year, rather than 3 years. However, the elections postponed any significant action by the administration until the end of the year, when the reforms were rejected by the Brazilian Congress.<sup>48</sup>

The IMF loan package of November 1998 acknowledged both the internal and external pressures on Brazil's economy. The package was designed to work with fiscal reforms already proposed by the Government that called for \$80.0 billion in spending cuts and tax increases over 3 years. The IMF, together with the World Bank, the Inter-American Development Bank, the U.S. Government, and 19 other countries pledged financial support totaling \$41.5 billion. At the time, the package was intended to reassure international financial markets and curb the capital outflows that had plagued Brazil since the Russian default in September. However, the package reportedly was not enough to prevent the January 1999 devaluation, at which time the IMF encouraged a free float rather than a controlled devaluation.<sup>49</sup> The IMF has detailed the fiscal accomplishments of the Government of Brazil, in light of Brazil's current crisis, including measures concerning pension contributions from active and retired civil servants, an increase in the financial transaction tax, and the approval of the 1999 budget.<sup>50</sup>

These events highlight the difficulties faced by the Government of Brazil and contributed significantly to the currency devaluation, coupled with the announcement by the new governor of the State of Minas Gerais that he was imposing a moratorium on debt payments owed to the Federal Government.<sup>51</sup> The announcement created concern that other Brazilian states would follow Minas Gerais, and further exacerbated the debt problems faced by Brazil. The devaluation put additional pressure on Brazil to reform its fiscal policies, as most of the fiscal deficit is reportedly interest payments on public sector debt.<sup>52</sup> In order to satisfy the IMF and international investors, President Cardoso's reform package, previously rejected in December, has since been agreed to by Brazil's Congress.<sup>53</sup>

### **The Mercosur partners**

Brazil dominates the Mercosur region in terms of economic activity (68 percent of bloc GDP in 1998) and trade volume (table 3-12). Consequently, Brazilian economic policies influence the pace of Mercosur's overall trade liberalization program. As internal tariffs and other trade barriers have declined, the importance of Brazil as both an export market and source of imports for the other members has grown. Brazil's decision to float the real in January 1999 put pressure on Mercosur's institutional and legal framework. Facing the prospect of a major shift in intra-Mercosur trade flows, Argentina pushed for measures to protect its firms from an anticipated surge of imports from Brazil.<sup>54</sup> Argentina, Paraguay, and Uruguay all face diminished demand from Brazil, their primary export market.

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<sup>48</sup> "The Americas: Can Cardoso Use Financial Chaos to Reform Brazil?" *Economist*, Sept. 26, 1998, found at Internet address <http://proquest.umi.com>, retrieved Apr. 7, 1999.

<sup>49</sup> David E. Sanger, "U.S. and IMF Warn Brazil on Propping Up Its Currency," *New York Times*, Jan. 15, 1999, found at Internet address <http://search.nytimes.com>, retrieved Feb. 4, 1999.

<sup>50</sup> IMF, "Brazil Memorandum of Economic Policies," Mar. 8, 1999, found at <http://imf.org/external/np/loi/1999/030899.htm>, retrieved Apr. 21, 1999.

<sup>51</sup> Itamar Franco, Governor of the State of Minas Gerais, was President of Brazil when Fernando Henrique Cardoso was the Finance Minister. Mr. Cardoso's Real Plan is widely credited for bringing economic stability to Brazil. Mr. Cardoso was elected President of Brazil in 1994 and won reelection in October 1998.

<sup>52</sup> "International Economy: Latin America," *Barclays Economic Review*, First Quarter 1999, found at Internet address <http://proquest.umi.com>, retrieved Apr. 7, 1999.

<sup>53</sup> Anthony Faiola, "Brazilian House Adopts Reform Bill," *Washington Post*, Jan. 21, 1999, p. A19.

<sup>54</sup> U.S. Department of State telegram No. 01071, "Argentina Economic Trends, March 1999," prepared by U.S. Embassy, Buenos Aires, Mar. 5, 1999.

**Table 3-12**  
**Key economic indicators: Argentina, Brazil, Paraguay, and Uruguay, 1998**

	Argentina	Brazil	Paraguay	Uruguay
Nominal GDP (billions of U.S. dollars) . . . . .	339.0	775.0	9.6	20.7
Real GDP growth (percent) . . . . .	5.0	0.7	-0.5	3.0
Labor force (millions) . . . . .	14.3	77.1	( <sup>1</sup> )	1.4
Total exports (billions of U.S. dollars) . . . . .	26.5	51.1	3.4	2.9
Total imports (billions of U.S. dollars) . . . . .	32.5	57.6	3.7	3.9
Trade balance (billions of U.S. dollars) . . . . .	-6.0	-6.4	-0.3	-1.0

<sup>1</sup> Not available.

Note.—Calculations based on unrounded numbers.

Source: U.S. Department of State, *Country Reports on Economic Policy and Trade Practices*, Jan. 31, 1999.

### *Argentina*

Although exports account for only 8 percent of Argentina's GDP, approximately 30 percent of those exports are destined for Brazil. The slowing Brazilian economy during 1998 significantly affected various sectors of the Argentine economy. For example, Ford, Renault, and Fiat announced production cutbacks in Argentina due to a fall in exports to Brazil and a small drop in Argentine domestic demand.<sup>55</sup> Because Mercosur offers many advantages to both U.S. and foreign firms seeking to do business in Latin America, foreign investors, including car manufacturers and food processors, access Mercosur markets through operations in Argentina.<sup>56</sup> Additionally, Argentine officials expressed concern that the devaluation of the real would result in a significant increase of imports from Brazil.

The Government of Argentina responded to the January devaluation of the real with a cut in employers' welfare contributions and lower tariffs on imported capital goods. The Government also reportedly considered the possibility of adopting the U.S. dollar as the Argentine currency.<sup>57</sup> However, the Government of Argentina, recognizing the important political and economic benefits of regional integration, was reportedly determined to avoid taking actions that would threaten Mercosur's institutional integrity.<sup>58</sup>

### *Paraguay*

The decline of informal cross-border trade with Brazil, coupled with rising inflation, contributed to the devaluation of Paraguay's currency, the guarani, which fell by 35 percent in 1998, against the U.S. dollar.<sup>59</sup> Paraguayan importers use deficiencies in local customs and tariff enforcement to import goods such as unlicensed copies of CDs, video games, software, cellular telephone batteries, and designer items,

<sup>55</sup> U.S. Department of State telegram No. 04852, "Argentina: Market Volatility Continues in September," prepared by U.S. Embassy, Buenos Aires, Sept. 18, 1998.

<sup>56</sup> Ibid.

<sup>57</sup> "The Americas: Cool Menem," *Economist*, Jan. 30, 1999, found at Internet address <http://proquest.umi.com>, retrieved Apr. 7, 1999.

<sup>58</sup> U.S. Department of State telegram No. 01071, "Argentina Economic Trends, March 1999," prepared by U.S. Embassy, Buenos Aires, Mar. 5, 1999.

<sup>59</sup> U.S. Department of State, "Paraguay," *Country Reports on Economic Policy and Trade Practices*, Jan. 31, 1999, found at Internet address <http://www.state.gov/www/issues/economic/trade-reports/wha98.html>, retrieved May 4, 1999.

among others, into Paraguay for transshipment to Brazil and Argentina.<sup>60</sup> Brazil is a significant re-export market for many products entering Paraguay. This trade provides an important contribution to the Paraguayan economy, and is also a substantial source of revenue from import duties and taxes. In 1995, Brazil opened up trade in certain consumer goods such as consumer electronics, clothing, perfume, and liquor, to combat informal re-export trade, contributing to the onset of a recession in Paraguay in 1996.<sup>61</sup> Paraguay increased tariff rates in 1995, to comply with the Mercosur tariff regime. This reportedly has served to decrease profit margins of the transshipment of some legitimate products.

Paraguay continued to run a budget deficit in 1998. The Government was unable to address economic issues because of political constraints such as the 1998 elections.<sup>62</sup> With growing political and economic uncertainty, demand for U.S. dollars increased. However, as Paraguay's re-export trade with Brazil declined, so did Paraguay's source of dollars. Increased retention of dollars as a hedge against the country's uncertain political situation further hindered dollar circulation. All these factors contributed to the devaluation of the guarani.

### ***Uruguay***

The most likely impact of the Brazilian devaluation on Uruguay will be a reduction in growth due to decreased exports to both Brazil and Argentina,<sup>63</sup> which had accounted for almost one-half of Uruguay's total exports in 1998. Argentina, Brazil, and Paraguay provided 43 percent of Uruguay's imports in 1998. The devaluation of the real is expected to expand Uruguay's trade deficit with its Mercosur partners in 1999 after Uruguay had reportedly decreased its Mercosur trade deficit in 1998 by \$143 million (55 percent) to \$117 million.<sup>64</sup>

According to the U.S. Department of State, Uruguay seems unlikely to devalue its currency, the peso, as a result of Brazil's actions.<sup>65</sup> Access to international capital markets may be diminished and interests rates may rise, but the current Government of Uruguay reportedly remains committed to continuing the economic reforms of the past two administrations. Reduced social security taxes on employers, an increase in tax rebates for exports, and a reduction in insurance and port fees are among the responses proposed by some nongovernmental organizations in Uruguay to offset the effects of the devaluation of the real.<sup>66</sup>

### **Outlook for U.S. trade flows**

The United States has enjoyed a trade surplus with Brazil and the other Mercosur members for several years, but that may change in 1999. The devaluation of the real, together with decreased demand in Brazilian markets, may shift the trade balance. U.S. products are now more expensive for Brazilian consumers, while Brazil's exports are cheaper. This devaluation also has the potential to displace U.S.

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<sup>60</sup> Ibid.

<sup>61</sup> U.S. Department of State telegram No. 00790, "While All Eyes Are On Politics, the Economy Sinks Further," prepared by U.S. Embassy, Asuncion, Apr. 8, 1998.

<sup>62</sup> Ibid.

<sup>63</sup> U.S. Department of State telegram No. 00104, "Uruguay's Reaction to Brazilian Devaluation," prepared by U.S. Embassy, Montevideo, Jan. 14, 1999.

<sup>64</sup> "Uruguay Reduces Trade Deficit with Mercosur," Mar. 18, 1999, found at Internet address <http://today.newscast.com>, retrieved Mar. 25, 1999.

<sup>65</sup> U.S. Department of State telegram No. 00104, "Uruguay's Reaction to Brazilian Devaluation," prepared by U.S. Embassy, Montevideo, Jan. 14, 1999.

<sup>66</sup> Ibid.

goods in other Mercosur markets. Fiscal reforms in Brazil will necessitate belt tightening in the form of increased taxes and changes to the social security system. As Brazil and the other Mercosur members adjust domestic policies and government spending to regain investor confidence, demand for such key U.S. exports as aircraft, aircraft engines, motor-vehicle parts, and computers may decline. As domestic consumption in Mercosur markets falls, production may be reduced, leading to a decline in U.S. exports of manufacturing equipment and components used in the final assembly of products for regional distribution.

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## SIGNIFICANT SHIFTS WITH LEADING PARTNERS

The following summarizes key shifts in U.S. merchandise trade with its top five trade partners in terms of U.S. total trade (exports plus imports). For each partner, U.S. trade flows are discussed for the relevant industry/commodity groups.

### Canada

- Significantly slower growth in Canadian demand for U.S. exports resulted in a \$3.8 billion (12-percent) increase of the U.S. trade deficit with Canada during 1997-98, to \$36.9 billion. According to Statistics Canada, exports accounted for close to 40 percent of Canadian GDP.<sup>67</sup> Primary commodities represented a 10-percent share of Canadian output in 1998<sup>68</sup> and accounted for about 30 to 35 percent of Canada's merchandise exports.<sup>69</sup>
- Canada's real GDP expanded by nearly 4 percent in 1997 and less than 3 percent in 1998.<sup>70</sup> Canadian private sector spending sharply declined in response to sluggish world economic growth and falling commodity prices.<sup>71</sup> Consumer spending in Canada dropped in response to a modest 0.4-percent increase in personal income.<sup>72</sup> Consumer spending was also weakened by the General Motors strike, and labor disputes in the construction industry and education sector in Ontario. Disposable income fell slightly because the growth in transfers to government outpaced growth of personal income.<sup>73</sup> Canadian farm income plunged due to lower commodity prices.

### U.S. imports

- U.S. imports from Canada rose by \$6.8 billion (4 percent) during 1997-98 to \$174.7 billion. Highlights of the leading increases and decreases in these U.S. imports are identified in table 3-13.
- The most significant increase in U.S. imports was transportation equipment, which was led in turn primarily by motor vehicles and aircraft. As a result of strong demand in the North American market, the Canadian auto industry produced at record levels for a number of years, with automakers adding shifts and announcing production capacity expansions in 1998.<sup>74</sup> U.S. imports of aircraft from Canada were primarily commuter jets and aircraft parts, including engines. Bombardier of Canada is a world leader in the production of commuter jets. In addition, U.S.-based Boeing has three production facilities in Canada that manufacture airplane wings and components.

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<sup>67</sup> Statistics Canada, *Canadian Economic Observer*, Table 1: Gross Domestic Product, by Income and Expenditure, July 1998, p. 3.

<sup>68</sup> The Scotia Bank, *Global Economic Outlook*, (Nova Scotia, Canada, Jan. 1999) p. 6, found at Internet address <http://www.scotiabank.ca/eccomm.htm>, retrieved Mar. 1999.

<sup>69</sup> Gordon Thiessen, "Global Uncertainties and the Canadian Economy," *The Bank of Canada Review*, Autumn 1998, p. 69.

<sup>70</sup> The Scotia Bank, *Global Economic Outlook*, p.13.

<sup>71</sup> Asia, including Japan, absorbs between 30 and 35 percent of the world output of certain key primary materials according to Gordon Thiessen, Governor of the Bank of Canada, "Global Uncertainties and the Canadian Economy," p. 69.

<sup>72</sup> Canada, Department of Finance, *Economy in Brief*, 1999, p. 2.

<sup>73</sup> *Ibid.*, p. 3.

<sup>74</sup> Jeff Green, "Rolling Steady: Canada Faces Slowdown at Home, Hope Abroad," *Ward's Auto World*, Dec. 1998, p. 73.

- The strength of the housing market and continued growth in commercial activity in the United States were responsible for the rise in U.S. imports of furniture and selected furnishings (furniture) from Canada.<sup>75</sup>
- U.S. imports of energy-related products decreased led by sharply lower values of crude petroleum imports from Canada, although the quantity actually increased. Imports of refined petroleum products fell somewhat as a result of lower heating fuel prices and a relatively mild winter in the Northeast. Imports of natural gas and components also declined during 1998, because the wellhead price of natural gas dropped in response to the mild winter.
- Given depressed prices for lumber, the value of U.S. imports from Canada fell, although the quantity imported actually rose.<sup>76</sup>

### **U.S. exports**

- U.S. exports to Canada rose by \$3.0 billion (2 percent) during 1997-98 to \$137.8 billion. Highlights of the leading increases and decreases in these U.S. exports are identified in table 3-13.
- U.S. exports of all transportation equipment rose to account for over one-third of the increase of all U.S. exports to Canada. Strong North American demand for automobiles during 1998 resulted in an increase in U.S. exports of internal combustion piston engines, other than for aircraft, to motor vehicle assembly operations in Canada. A sizeable share of these exports to Canada typically return to the United States in the form of fully assembled cars and trucks. Although exports of engines and other motor-vehicle parts to Canada rose in 1998, exports of completely assembled motor vehicles to Canada decreased. Sales of passenger cars and light trucks produced outside North America increased their share of the Canadian market at the expense of those produced within the North American Free Trade Agreement (NAFTA) region.
- U.S.-Canada trade in rail locomotives and rolling stock rose significantly during 1997-98 in response to strong North American demand, with exports to Canada rising to \$1.0 billion. Intra-company transfers play an important role in this trade. General Motor's Electro-Motive Division manufactures parts in Illinois and performs final assembly of locomotives in Ontario, many of which are exported to the United States. In addition, Bombardier of Canada manufactures railroad cars and equipment at three sites in Canada and three in the United States, with the assembled rolling stock incorporating numerous parts and subassemblies from each country.

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<sup>75</sup> For more information see "Furniture and Selected Furnishings" in ch. 14.

<sup>76</sup> For more information see "Forest Products" in ch. 6.

**Table 3-13**  
**Leading changes in U.S. imports from and U.S. exports to Canada, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<b>U.S. IMPORTS</b>				
<i>Million dollars</i>				
<b>Increases:</b>				
Transportation equipment:				
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	35,884	37,671	1,787	5
Aircraft, spacecraft and related equipment (MT042) . . . . .	2,738	3,473	735	27
Internal combustion piston engines, other than for aircraft (MT002) . . . . .	2,755	3,303	548	20
Rail locomotive and rolling stock (MT037) . . . . .	890	1,380	491	55
Certain motor-vehicle parts (MT039) . . . . .	7,335	7,576	241	3
Aircraft engines and gas turbines (MT001) . . . . .	1,159	1,396	237	20
Forest products:				
Structural panel products (AG049) . . . . .	1,264	1,794	532	42
Printing and writing papers (AG058) . . . . .	2,398	2,661	263	11
Electronic products:				
Radio transmission and reception apparatus, and combinations thereof (ST007) . . . . .	771	995	224	29
Other:				
Furniture and selected furnishings (MM054) . . . . .	3,458	4,026	568	16
<b>Decreases:</b>				
Energy-related products:				
Crude petroleum (CH004) . . . . .	7,424	5,560	-1,863	-25
Natural gas and components (CH006) . . . . .	6,711	6,004	-707	-11
Petroleum products (CH005) . . . . .	2,650	1,968	-682	-26
Forest products:				
Lumber (AG047) . . . . .	6,769	6,121	-647	-10
Wood pulp and wastepaper (AG054) . . . . .	2,232	2,000	-232	-10
<b>All other</b> . . . . .	83,443	88,755	5,312	6
<b>TOTAL U.S. IMPORTS</b> . . . . .	167,881	174,685	6,804	4
<b>U.S. EXPORTS</b>				
<b>Increases:</b>				
Transportation equipment:				
Internal combustion piston engines, other than for aircraft (MT002) . . . . .	5,616	6,703	1,087	19
Rail locomotive and rolling stock (MT037) . . . . .	711	1,010	299	42
Aircraft, spacecraft, and related equipment (MT042) . . . . .	1,432	1,667	235	16
Other:				
Electric motors, generators, and related machinery (MT028) . . . . .	692	954	262	38
Medicinal chemicals (CH026) . . . . .	1,368	1,598	230	17
Furniture and selected furnishings (MM054) . . . . .	1,680	1,874	194	12
<b>Decreases</b>				
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	14,213	13,379	-835	-6
Copper and related articles (MM036) . . . . .	755	577	-179	-24
Steel mill products, all grades (MM025) . . . . .	2,383	2,226	-156	-7
<b>All other</b> . . . . .	105,944	107,780	1,836	2
<b>TOTAL U.S. EXPORTS</b> . . . . .	134,794	137,768	2,974	2

Note.--Calculations based on unrounded data.

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

## China

- The U.S. trade deficit with China grew by \$7.4 billion (15 percent) during 1997-98 to \$56.9 billion, as the growth of U.S. imports from China outpaced that of U.S. exports to China. Total U.S. trade with China increased by \$10.2 billion (14 percent) to \$84.7 billion in 1998 and accounted for 5 percent of total U.S. merchandise trade with all trade partners. The United States supplied an estimated 10 percent of China's worldwide imports and was the market for an estimated 38 percent of China's worldwide exports in 1998.<sup>77</sup> U.S.-China bilateral trade continued to be strongest in the manufacturing sector.
- Although China's economy grew by 7.8 percent in 1998, based upon preliminary Chinese data, problems still exist in its economy, such as excessive production capacity in most industries, economic inefficiency of state-owned enterprises, sluggish domestic market sales, and social pressure to sustain employment.<sup>78</sup> During 1997-98, actual (rather than contracted for) foreign direct investment (FDI) in China rose by \$350 million (1 percent) to \$45.5 billion, while actual U.S. FDI in China rose by \$670 million (21 percent) to \$3.9 billion.<sup>79</sup>
- In recent months U.S. and Chinese officials have been actively engaged in discussions regarding China's entry into the WTO. Although China reportedly is attempting reforms to its trade policies, the U.S. Department of State indicates that significant barriers still remain that impede entry of U.S. products into the Chinese market.<sup>80</sup> Chinese officials assert that China is committed to expanding trading rights and attracting foreign investment to further develop its economy.<sup>81</sup>

### U.S. imports

- U.S. imports from China increased by \$8.8 billion (14 percent) during 1997-98 to \$70.8 billion. Highlights of the leading increases and decreases in these U.S. imports are identified in table 3-14.
- Electronic products (particularly computer hardware, radio transmission and reception apparatus, and audio and video equipment), toys and models, footwear and footwear parts, and furniture accounted for nearly half of the increase in U.S. imports from China. The strong U.S. economy and lower demand in other Asian countries contributed to this growth in U.S. imports from China.

### U.S. exports

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<sup>77</sup> U.S. Department of State, "People's Republic of China," *Country Reports on Economic Policy and Trade Practices*, Jan. 31, 1999, found at Internet address <http://www.state.gov/www/issues/economic/trade-reports/wha98.html>, retrieved Apr. 22, 1999.

<sup>78</sup> State Statistics Bureau, People's Republic of China, "Statistical Commique of the People's Republic of China on the 1998 National Economic and Social Development," undated, found at Internet address <http://www.cei.gov.cn/sicnet/siccew/esta.annua/8aad00.htm>, retrieved June 15, 1999.

<sup>79</sup> Compiled by the United States-China Business Council from official statistics of China's Ministry of Foreign Trade and Economic Cooperation, found at Internet address <http://www.uschina.org/press/investmarch99.html>, retrieved June 15, 1999.

<sup>80</sup> U.S. Department of State telegram No. 184849, "1998 Trade Act Report for People's Republic of China," prepared by U.S. Embassy, Beijing, Dec. 1998.

<sup>81</sup> "Current Situation and Tasks of China's Foreign Trade and Economic Cooperation," *China News*, Mar. 1999, found at Internet address <http://www.chinanews.org>, retrieved Mar. 16, 1999.

- U.S. exports to China increased by \$1.4 billion (11 percent) during 1997-98 to \$13.9 billion. Highlights of the leading increases and decreases in these U.S. exports are identified in table 3-14.
- Export growth was led by aircraft and computer hardware. Factors promoting U.S. exports, particularly of capital goods, include China's steady economic growth and the introduction of a fiscal and monetary stimulus package in early 1998. These measures were intended to increase domestic demand, step-up the restructuring process of state-owned enterprises, and revitalize Chinese exports, such as apparel, that had slowed as a result of the Asian financial crisis.<sup>82</sup>
- Exports of cotton, not carded or combed, to China declined as a result of reforms of the cotton sector initiated in late 1997 to reduce government expenditures on unprocessed cotton.<sup>83</sup> Measures included limiting imports and encouraging consumption of domestic cotton. Imports displaced Chinese cotton because the international prices for cotton were substantially lower than Chinese domestic prices.<sup>84</sup>

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<sup>82</sup> U.S. Department of State, "1998 Trade Act Report for People's Republic of China."

<sup>83</sup> U.S. Department of Agriculture, Foreign Agricultural Service, *China: Cotton Sector Reforms, 1997-98*, CH8062, Dec. 10, 1998, found at Internet address <http://www.fas.usda.gov>, retrieved Mar. 4, 1999.

<sup>84</sup> Ibid.

**Table 3-14**  
**Leading changes in U.S. imports from and U.S. exports to China, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<b>U.S. IMPORTS</b>				
<i>Million dollars</i>				
<b>Increases:</b>				
Automatic data processing machines (ST018) . . .	4,307	5,564	1,257	29
Toys and models (MM060) . . . . .	5,364	6,113	749	14
Footwear and footwear parts (CH079) . . . . .	7,354	8,016	661	9
Furniture and selected furnishings (MM054) . . . . .	1,546	2,185	639	41
Radio transmission and reception apparatus, and combination, thereof (ST007) . . . . .	2,036	2,487	451	22
Tape recorders, tape players, video cassette recorders, turntables, and compact disc players (ST004) . . . . .	920	1,324	404	44
Miscellaneous articles (MM065) . . . . .	1,713	2,051	339	20
Lamps and lighting fittings (MM056) . . . . .	1,447	1,761	314	22
<b>Decreases:</b>				
Men's and boys' coats and jackets (CH061) . . . . .	466	374	-92	-20
Shirts and blouses (CH064) . . . . .	1,720	1,646	-73	-4
Women's and girls' trousers (CH066) . . . . .	851	788	-63	-7
Broadwoven fabrics (CH050) . . . . .	376	317	-59	-16
Crude petroleum (CH004) . . . . .	109	60	-49	-45
<b>All other</b> . . . . .	<b>33,787</b>	<b>38,219</b>	<b>4,432</b>	<b>13</b>
<b>TOTAL U.S. IMPORTS</b> . . . . .	<b>61,996</b>	<b>70,815</b>	<b>8,819</b>	<b>14</b>
<b>U.S. EXPORTS</b>				
<b>Increases:</b>				
Aircraft, spacecraft, and other related equipment (MT042) . . . . .	2,032	3,392	1,360	67
Automatic data processing machines (ST018) . . .	312	824	513	165
Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (ST016) . . . . .	233	443	210	90
Animal or vegetable fats and oils (AG033) . . . . .	168	319	151	90
<b>Decreases:</b>				
Cotton, not carded or combed (AG064) . . . . .	572	118	-454	-79
Certain motor-vehicle parts (MT039) . . . . .	239	63	-176	-74
Oilseeds (AG032) . . . . .	419	279	-139	-33
<b>All other</b> . . . . .	<b>8,558</b>	<b>8,469</b>	<b>-90</b>	<b>-1</b>
<b>TOTAL U.S. EXPORTS</b> . . . . .	<b>12,533</b>	<b>13,908</b>	<b>1,375</b>	<b>11</b>

Note.--Calculations based on unrounded data.

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

## European Union

- A rise in U.S. imports during 1997-98, stimulated by sustained U.S. economic growth, was the principal factor responsible for the \$10.5 billion (44 percent) growth to \$34.7 billion in the U.S. trade deficit with the 15 nations of the European Union (EU). This followed a previous \$2.4 billion (11-percent) rise in the trade deficit to \$24.1 billion in 1997.
- Economic growth for the EU was 2.7 percent in 1997 and 2.9 percent in 1998, with GDP expanding by more than 3 percent for more than one-half of the member countries.<sup>85</sup> Merchandise exports represented a major factor in the revival of EU economies in those 2 years. Investment and private consumption in the EU increased by an estimated 4.7 percent and 2.6 percent, respectively, in 1998.<sup>86</sup>

### U.S. imports

- U.S. imports from EU nations rose by \$19.0 billion (12 percent) during 1997-98 to \$174.9 billion. Highlights of the leading increases and decreases in these U.S. imports are identified in table 3-15.
- Germany was the leading EU supplier of U.S. imports in 1998, accounting for 28 percent of imports from the EU, followed by the United Kingdom, with 20 percent.
- EU export growth was driven by strong increases in demand for EU goods as a result of a buoyant U.S. economy and a depreciation of major European currencies against the U.S. dollar during this period.<sup>87</sup>
- The transportation sector accounted for 36 percent of the increase of U.S. imports from EU nations in 1998, led by motor vehicles, aircraft, and aircraft engines and gas turbines (aircraft engines). The significant rise in imports of motor vehicles reflected large increases in imports from Germany as U.S. sales of new German passenger cars increased by between 5 and 58 percent in 1998.<sup>88</sup> Imports of aircraft grew as a result of increased sales by Airbus Industrie into the U.S. market.<sup>89</sup>
- U.S. imports of medicinal chemicals (pharmaceuticals) rose due to the increasing tendency of U.S. pharmaceutical firms to outsource chemical raw materials from Ireland, Germany, and the United Kingdom due to the large number of prominent multinational pharmaceutical companies and the highly trained workforce in these nations.<sup>90</sup>

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<sup>85</sup> "European Economy," *European Commission*, Supplement A, Oct. 1998.

<sup>86</sup> *Ibid.*

<sup>87</sup> Nigel Pain, Florence Hubert, Dirk te Velde, Dawn Holland, Veronique Genre, "The World Economy: Section III, Prospects for Europe," *National Institute Economic Review*, London, Oct. 1998, found at Internet address <http://proquest.umi.com/pqdweb?TS=...4&Sid=2&Idx=4&Deli>, retrieved Mar. 25, 1999.

<sup>88</sup> Economist Intelligence Unit, "The Short-Term Outlook for the Light-Vehicle Markets of the US: Downturn Threatens," ch. 3 in *Motor Business International*, Jan. 1999, p. 43.

<sup>89</sup> For more information see "Aircraft, Spacecraft, and Related Equipment" and "Aircraft Engines, Other Gas Turbines, and Parts Thereof" in ch. 12.

<sup>90</sup> Sean Milmo, "Europe in Contract Mode," *Chemical Market Reporter*, Jan. 18, 1999, p. FR11.

## U.S. exports

- U.S. exports to EU nations grew by \$8.5 billion (6 percent) during 1997-98 to \$140.2 billion. Highlights of the leading increases and decreases in these U.S. exports are identified in table 3-15.
- The leading EU export market for U.S. manufacturers was the United Kingdom, accounting for 26 percent of exports to the EU nations, followed by Germany, with 18 percent.
- Leading export sectors in 1998 included aircraft<sup>91</sup> and aircraft engines. U.S. exports of aircraft and aircraft engines continued the pattern of significant growth that began in 1996 as airlines added to their airline fleet, following increased demand for air-transport services by the general public, and continued to replace aging aircraft.
- Increased exports of pharmaceuticals to the EU reflected the combination of higher average drug prices, U.S. exporting companies benefitting from the release of a large number of newly approved products, and rising pharmaceutical demand by aging Western European populations.
- In contrast, U.S. exports of oilseeds declined as worldwide overproduction and record world stocks of oilseeds in 1997-98 led to a 15-percent decline in price and the displacement of U.S. exports to Europe by exports from Brazil, Argentina, and China.

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<sup>91</sup> The United States continues to express concern over the possibility that European aircraft certification standards are being applied in such a manner as to impede delivery of U.S. aircraft to Europe. In particular, processes and procedures currently employed by the European Joint Aviation Authorities (JAA) appear to be cumbersome and arbitrary, effectively restricting U.S. sales to Europe. The United States also expresses concern that since the inception of the European Airbus consortium in 1967, the partner governments (France, Germany, Spain, and the United Kingdom) have provided massive support to their national company partners to aid the development, production, and marketing of large civil aircraft. In 1998, the Government of the United Kingdom approved a long-term loan of up to \$212 million toward the design and development of the wing for the Airbus A340-500/600 aircraft, while the French parliament has budgeted \$115 million in funds for the same program. USTR, "European Union," *1999 National Trade Estimate Report*, pp. 116 and 121.

**Table 3-15**  
**Leading changes in U.S. imports from and U.S. exports to European Union, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<b>U.S. IMPORTS</b>				
<i>Million dollars</i>				
<b>Increases:</b>				
Transportation equipment:				
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	14,698	18,201	3,503	24
Aircraft, spacecraft, and related equipment (MT042) . . . . .	4,383	6,141	1,757	40
Aircraft engines and gas turbines (MT001) . . . . .	5,937	7,585	1,648	28
Certain motor-vehicle parts (MT039) . . . . .	2,149	2,391	242	11
Other:				
Medicinal chemicals (CH026) . . . . .	9,682	13,149	3,467	36
Construction and mining equipment (MT012) . . . . .	2,372	2,804	432	18
Medical goods (ST024) . . . . .	2,337	2,754	416	18
Furniture and selected furnishings (MM054) . . . . .	1,522	1,832	310	20
Miscellaneous organic chemicals (CH012) . . . . .	2,137	2,406	269	13
<b>Decreases:</b>				
Petroleum products (CH005) . . . . .	2,818	2,343	-475	-17
Crude petroleum (CH004) . . . . .	959	581	-377	-39
Zinc and related articles (MM040) . . . . .	219	57	-162	-74
<b>All other</b> . . . . .	106,677	114,637	7,960	7
<b>TOTAL U.S. IMPORTS</b> . . . . .	<b>155,890</b>	<b>174,881</b>	<b>18,991</b>	<b>12</b>
<b>U.S. EXPORTS</b>				
<b>Increases:</b>				
Transportation equipment:				
Aircraft, spacecraft, and related equipment (MT042) . . . . .	11,729	15,388	3,659	31
Aircraft engines and gas turbines (MT001) . . . . .	5,015	6,343	1,329	27
Ships, tugs, pleasure boats, and similar vessels (MT043) . . . . .	273	646	373	137
Electronic products:				
Telephone and telegraph apparatus (ST002) . . . . .	1,809	2,332	523	29
Measuring, testing, controlling, and analyzing instruments (ST030) . . . . .	3,381	3,711	330	10
Machinery:				
Semiconductor manufacturing equipment and robotics (MT023) . . . . .	1,314	1,957	643	49
Other:				
Medicinal chemicals (CH026) . . . . .	5,286	6,311	1,025	19
Precious metals and related articles (MM020) . . . . .	2,390	3,261	871	36
Medical goods (ST024) . . . . .	4,938	5,252	314	6
<b>Decreases:</b>				
Oilseeds (AG032) . . . . .	2,401	1,706	-695	-29
Automatic data processing machines (ST018) . . . . .	14,683	14,184	-499	-3
Animal feeds (AG013) . . . . .	1,450	1,111	-339	-23
<b>All other</b> . . . . .	<b>77,083</b>	<b>78,016</b>	<b>933</b>	<b>1</b>
<b>TOTAL U.S. EXPORTS</b> . . . . .	<b>131,751</b>	<b>140,217</b>	<b>8,466</b>	<b>6</b>

Note.--Calculations based on unrounded data.

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

## Japan

- The U.S. trade deficit with Japan rose by \$8.1 billion (14 percent) during 1997-98 to \$66.5 billion, the highest level since 1987,<sup>92</sup> as U.S. exports fell sharply but U.S. imports were virtually unchanged from the year before. The Japan External Trade Organization (JETRO) attributed the recent widening of Japan's trade surplus more to lower global prices for imported raw materials, rather than expanded Japanese exports prompted by a weaker yen.<sup>93</sup>
- Japan's economy (the world's second-largest) is suffering through its worst recession since postwar reconstruction. Factors behind the fall in Japan's GDP include decreased investment spending (down 14 percent over first 3 quarters of 1998<sup>94</sup>), collapse of asset prices with the bursting of its "bubble economy" of the late 1980s,<sup>95</sup> and adverse effects from the Asian financial crisis. Japan's GDP is expected to contract by 3 percent for full-year 1998<sup>96</sup> due to reduced consumer demand, increased unemployment,<sup>97</sup> corporate bankruptcies,<sup>98</sup> and a banking system afflicted by bad loans and tight credit.<sup>99</sup>

### U.S. imports

- U.S. imports from Japan grew by \$833 million (less than 1 percent) during 1997-98 to \$121.3 billion. Highlights of the leading increases and decreases in these U.S. imports are identified in table 3-16.
- The loss of important export markets in Southeast Asia coupled with weak domestic demand led Japanese producers to seek out healthier markets abroad, resulting in increased U.S. imports of certain products from Japan.

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<sup>92</sup> "Business This Week - Trade," *Economist*, Jan. 30, 1999, p. 5.

<sup>93</sup> JETRO, "Weaker Yen Hasn't Led to More Japanese Exports," press release, June 30, 1998, found at Internet address [http://jetro.go.jp/JETROINFO/PRESS/98\\_06\\_30.html](http://jetro.go.jp/JETROINFO/PRESS/98_06_30.html), retrieved Feb. 25, 1999.

<sup>94</sup> "International Economy: Japan," *Barclays Economic Review*, First Quarter 1999, found at Internet address <http://proquest.umi.com>, retrieved Mar. 17, 1999.

<sup>95</sup> IMF, "Japan's Economic Crisis and Policy Options," *World Economic And Financial Surveys, World Economic Outlook, Financial Turbulence and the World Economy* (Washington, DC: IMF, 1998), Oct. 1998, p. 107.

<sup>96</sup> Peter Landers, "Economic Survey - Money Times," *Far Eastern Economic Review*, Mar. 11, 1999, found at Internet address [http://www.feer.com/Restricted/99mar\\_11/japan.html](http://www.feer.com/Restricted/99mar_11/japan.html), retrieved on Mar. 3, 1999.

<sup>97</sup> Annual average unemployment was slightly above 4 percent in 1998, an increase of less than 1 percent from a year ago. "Unemployment Down in Dec. as More Workers Give Up Job Search," *Nihon Keizai Shimbun*, Jan. 29, 1999, found at Internet address <http://nni.nikkei.co.jp/AC/FEAT/rec/rec00777.html>, retrieved Mar. 3, 1999.

<sup>98</sup> Corporate bankruptcies increased by nearly 17 percent to 19,171 for 1998, which is the second-highest figure of the postwar period. According to Teikoku Databank Ltd., a private credit research institution, total liabilities of bankrupt Japanese corporations with individual debts exceeding 10 million yen fell just short of 14.4 trillion yen in 1998, an increase of 2.6 percent from 1997 and the highest level since World War II. "Corporate Bankruptcy Liabilities Hit Postwar Record," *Nihon Keizai Shimbun*, Jan. 20, 1999, found at Internet address <http://nni.nikkei.co.jp/AC/FEAT/rec/rec00747.html>, retrieved Mar. 3, 1999.

<sup>99</sup> Michael Richardson, "As Demand Shrivels Up, Deflation is Asia's Worry," *Herald Tribune*, Mar. 11, 1999, found at Internet address <http://www.iht.com/IHT/TODAY/THU/FPAGE/shrinke.html>, retrieved Mar. 16, 1999.

- Increased imports of steel mill products, particularly hot-rolled carbon steel sheets,<sup>100</sup> reflected poor demand in Asia that led Japanese producers to seek alternatives in the stronger U.S. market.
- Construction and mining equipment imports grew in 1998, led largely by excavators and backhoes as Japanese manufacturers focused on the strong U.S. market for these and other construction and mining machines.<sup>101</sup>
- The largest absolute decline in U.S. imports from Japan was of semiconductors, followed by computer hardware. Contributing to these declines was excess worldwide inventories and production capacity, decreasing unit prices, and decreased consumer demand in Asia.<sup>102</sup>

## U.S. exports

- U.S. exports to Japan fell by \$7.2 billion (12 percent) during 1997-98 to \$54.8 billion. Highlights of leading increases and decreases in these U.S. exports are identified in table 3-16.
- However, several industry/commodity groups experienced growth, with the single-largest increase occurring in aircraft. These exports filled previous orders placed several years in advance due to the lengthy time for production and delivery of aircraft.
- U.S. exports to Japan of television receivers, video monitors, and combinations including television receivers (television receivers) also increased, with printed circuit boards for the manufacture of televisions and computer monitors accounting for most of the increase.
- The leading products for which exports to Japan declined during 1998 continued to be those with the greatest declines in 1997. The most pronounced drop was in computer hardware, due to Japan's lagging economy.
- Cereals exports (primarily corn) fell due to low global commodity prices, reduced Japanese domestic livestock production, and increased competition from foreign grain suppliers.<sup>103</sup>
- Exports of motor vehicles declined from weakness of the Japanese economy and Japanese automobile dealerships offering domestically produced automobiles at discounted prices.<sup>104</sup>

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<sup>100</sup> Several U.S. steel producers and two unions filed an AD trade complaint against imports of certain hot-rolled, flat-rolled carbon steel products from Japan in late September 1998. On June 11, 1999, the USITC found that the U.S. industry producing such products was materially injured by these imports. For more information, see "Steel Mill Products," in ch. 10.

<sup>101</sup> For more information see "Construction and Mining Equipment" in ch. 12.

<sup>102</sup> For more information see "Automatic Data Processing Machines" in ch. 13.

<sup>103</sup> USDA, FAS, "Japan Grain and Feed Annual," prepared by U.S. Embassy, Tokyo, message reference No. JA9013, Feb. 8, 1999, p. 16.

<sup>104</sup> "Battered in '98, Auto Importers in Japan Face Tough '99," *Ward's Automotive International*, Mar. 1999, p. 4.

**Table 3-16**  
**Leading changes in U.S. imports from and U.S. exports to Japan, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<b>U.S. IMPORTS</b>				
<i>Million dollars</i>				
<b>Increases:</b>				
Steel mill products, all grades (MM025) . . . . .	1,605	2,914	1,309	82
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	27,906	28,864	958	3
Construction and mining equipment (MT012) . . . . .	1,192	1,660	469	39
Internal combustion piston engines, other than for aircraft (MT002). . . . .	2,892	3,275	383	13
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus (ST010) . . . . .	2,142	2,485	343	16
Medicinal chemicals (CH026). . . . .	1,239	1,497	257	21
Telephone and telegraph apparatus (ST002) . . . . .	1,480	1,736	256	17
Machine tools for cutting metal and parts; tool holders, work holders; dividing heads and other special attachments for machine tools (MT020). . . . .	2,007	2,206	198	9
<b>Decreases:</b>				
Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (ST016) . . . . .	7,831	6,163	-1,668	-21
Automated data processing machines (ST018) . . . . .	14,738	13,083	-1,656	-11
Office machines (ST001). . . . .	3,156	2,686	-470	-15
<b>All other</b> . . . . .	54,292	54,744	452	1
<b>Total U.S. Imports</b> . . . . .	120,480	121,313	833	( <sup>1</sup> )
<b>U.S. EXPORTS</b>				
<b>Increases:</b>				
Aircraft, spacecraft, and related equipment (MT042). . . . .	4,175	5,138	963	23
Television receivers, video monitors, and combinations including television receivers (ST009) . . . . .	43	399	355	819
Arms and ammunition (MM067) . . . . .	252	319	66	26
Wine and other fermented beverages (AG039) . . . . .	39	92	53	136
Cigarettes (AG043) . . . . .	1,549	1,595	46	3
<b>Decreases:</b>				
Automatic data processing machines (ST018) . . . . .	4,941	3,786	-1,155	-23
Cereals (AG030) . . . . .	2,886	2,243	-643	-22
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	1,559	1,118	-440	-28
Logs and rough wood products (AG046). . . . .	1,601	1,181	-420	-26
<b>All other</b> . . . . .	45,046	38,975	-6,071	-13
<b>Total U.S. Exports</b> . . . . .	62,091	54,846	-7,246	-12

<sup>1</sup> Total was less than 1 percent.

Note.--Calculations based on unrounded data.

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

## Mexico

- The U.S. trade deficit with Mexico widened by \$1.0 billion (6 percent) during 1997-98, to \$17.6 billion. Total U.S. merchandise trade with Mexico increased by \$15.0 billion (10 percent) during this same period, to \$168.4 billion.
- Increased U.S. imports in 1998 were driven by a 6-percent expansion in U.S. GDP in the last quarter of the year,<sup>105</sup> and resulted in record imports from Mexico. Sharply lower world prices for crude petroleum, Mexico's major export, impeded Mexico's 1998 economic growth (4.6 percent), after 2 successive years of rapid economic expansion. This in turn, limited the rise in U.S. exports to Mexico in the latter part of 1998.

### U.S. imports

- U.S. imports from Mexico registered an \$8.0 billion (9-percent) increase during 1997-98 to \$93.0 billion. Highlights of the leading increases and decreases in these U.S. imports are identified in table 3-17.
- The significant increase in U.S. imports was led by motor vehicles, reflecting the high degree to which General Motors, Ford, and DaimlerChrysler have integrated their manufacturing operations in North America, particularly for automobiles and light trucks. Mexico's motor vehicle exports to the United States consisted largely of small and medium-sized cars and light trucks, as well as auto parts.<sup>106</sup>
- U.S. imports of electronic products also increased substantially, in part, reflecting a continued shift of labor-intensive electronic assembly operations to facilities operating under Mexico's Maquiladora Program. These maquiladoras are now supplying the U.S. market with products, many of which were previously imported from Asia.<sup>107</sup> Growth in imports of television equipment<sup>108</sup> continues to be led by Korean-, Taiwan-, and Japanese-owned firms with major manufacturing investment in Baja California Norte and Sonora.<sup>109</sup> U.S.-based computer hardware companies have shifted assembly of products for the North American market from Asia to subsidiaries or contract assemblers in Guadalajara, while maintaining assembly in Southeast Asia to supply markets in that region.<sup>110</sup>

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<sup>105</sup> USDOC, Bureau of Economic Analysis, *Survey of Current Business*, Sep.-Dec. 1998, p. 1.

<sup>106</sup> "Mexico's Automotive Industry: A Remarkable Performance," *NAFTA Works*, Embassy of Mexico, Washington, D.C., Jan. 1999, pp. 2-3, found at Internet address <http://www.embassyofmexico.org>.

<sup>107</sup> For examples of Asian companies that are shifting production for the U.S. market from Asia to Mexico, see Elliot Blain Smith, "Asia Crisis Squeezes Mexican Factories," *USA Today*, Mar. 10, 1998, found at Internet address <http://www.usatoday.com/money/bcovtue.htm>, retrieved Mar. 10, 1998.

<sup>108</sup> Television equipment includes television receivers and television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus.

<sup>109</sup> "NAFTA and California," *Twin Plant News*, Feb. 1998, pp. 38-41.

<sup>110</sup> Elizabeth Malkin and Geri Smith, "Mexican Makeover: NAFTA Creates the World's Newest Industrial Power," *Business Week*, Dec. 21, 1998, p. 51.

## U.S. exports

- U.S. exports to Mexico reached record levels, rising by \$7.0 billion (10 percent) during 1997-98 to \$75.4 billion. Highlights of the leading increases and decreases in these U.S. exports are identified in table 3-17.
- The elimination and reduction of Mexican tariffs under NAFTA on U.S. goods entering Mexico,<sup>111</sup> combined with continued growth in the maquiladora industry are the principal reasons for an increase in U.S. exports in 1998.<sup>112</sup> The implementation of NAFTA also had the effect of increasing specialization and boosting regional intra-industry trade in a variety of industry sectors. A large share of U.S. exports consisted of intermediate goods that are primarily intended for Mexico's maquiladora industry, while other equipment and vehicles are destined for Mexican domestic manufacturing and commercial sectors.
- In the electronic products sector, growth of U.S. television picture tube and other cathode-ray tube exports to Mexico reflects NAFTA rules-of-origin requirements for television receivers that have encouraged many European and Asian companies with television assembly plants in Mexico to procure picture tubes produced by related companies in the United States or U.S. affiliates of other television manufacturers. Upgrading of television transmission and telephone equipment by Telefonos de Mexico (Telmex), the dominant service provider in Mexico, drove the increase in U.S. exports of telephone and telegraph apparatus.<sup>113</sup>
- Semiconductor manufacturing equipment and robotics experienced sharp growth in U.S. exports to Mexico during 1997-98. Much of the robotics equipment was used to increase automation in production operations in Mexico, particularly in the motor vehicle assembly sector.
- Increased business travel in Mexico helped boost U.S. exports of aircraft and aircraft engines. Continued growth in the number of middle and upper income consumers in Mexico contributed to an expansion in U.S. exports of motor vehicles.
- Finally, a pervasive drought in central and northern Mexico in spring and summer 1998 was largely responsible for a 46-percent increase in U.S. exports of cereals (primarily corn, but also wheat and sorghum) to Mexico that year.

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<sup>111</sup> Mexican tariffs on goods of U.S. origin averaged 2 percent in 1998. USTR, "Mexico" *1999 National Trade Estimate Report*, p. 303.

<sup>112</sup> "Maquila Scoreboard," *Twin Plant News*, Mar. 1999, p. 57.

<sup>113</sup> Kindya, *Dossier: Latin American Telecom Service Markets: Mexican Telecom Market*, 1998, p. 3.

**Table 3-17**  
**Leading changes in U.S. imports from and U.S. exports to Mexico, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<b>U.S. IMPORTS</b>				
<i>Million dollars</i>				
<b>Increases:</b>				
Transportation equipment:				
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	12,270	13,225	955	8
Internal combustion piston engines, other than for aircraft (MT002) . . . . .	1,911	2,272	361	19
Electronic products:				
Automatic data processing machines (ST018) . . .	4,655	5,448	793	17
Television receivers, video monitors, and combination, including television receivers (ST009) . . . . .	3,315	4,078	763	23
Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus (ST010) . . . . .	722	1,258	536	74
Measuring, testing, controlling, and analyzing instruments (ST030) . . . . .	1,562	1,965	402	26
Other:				
Furniture and selected furnishings (MM054) . . . . .	1,919	2,323	404	21
Shirts and blouses (CH064) . . . . .	1,417	1,794	377	27
Men's and boys' trousers (CH062) . . . . .	1,176	1,507	331	28
Women's and girls' trousers (CH063) . . . . .	1,019	1,344	325	32
<b>Decreases:</b>				
Crude petroleum (CH004) . . . . .	6,565	3,819	-2,746	-42
Coffee and tea (AG028) . . . . .	667	513	-154	-23
Natural gas and components (CH006) . . . . .	354	276	-77	-22
<b>All other</b> . . . . .	<b>47,453</b>	<b>15,197</b>	<b>5,742</b>	<b>12</b>
<b>TOTAL U.S. IMPORTS</b> . . . . .	<b>85,005</b>	<b>93,017</b>	<b>8,013</b>	<b>9</b>
<b>U.S. EXPORTS</b>				
<b>Increases:</b>				
Electronic products:				
Television picture tubes, and other cathode-ray tubes (ST014) . . . . .	1,334	1,811	477	36
Telephone and telegraph apparatus (ST002) . . . . .	818	1,265	447	55
Transportation equipment:				
Automobiles, trucks, buses, and bodies and chassis of the foregoing (MT038) . . . . .	1,938	2,259	322	17
Aircraft, spacecraft and related equipment (MT042) . . . . .	214	489	275	129
Aircraft engines and gas turbines (MT001) . . . . .	278	429	151	54
Construction and mining equipment (MT012) . . . . .	404	525	121	30
Other:				
Cereals (AG030) . . . . .	880	1,285	405	46
Semiconductor manufacturing equipment and robotics (MT023) . . . . .	399	727	328	82
Furniture and selected furnishings (MM054) . . . . .	755	987	232	31
<b>Decreases:</b>				
Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices (ST016) . . . . .	2,660	2,429	-231	9
Certain motor-vehicle parts (MT039) . . . . .	5,074	4,903	-171	3
<b>All other</b> . . . . .	<b>53,639</b>	<b>58,260</b>	<b>4,621</b>	<b>9</b>
<b>TOTAL U.S. EXPORTS</b> . . . . .	<b>68,393</b>	<b>75,369</b>	<b>6,976</b>	<b>10</b>

Note.--Calculations based on unrounded data.

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

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## CHAPTER 4

# Factors Affecting Trends in Selected Industries/Commodities

This chapter focuses on products that have been either the subject of recent trade negotiations or agreements, or the subject of investigations into allegations of unfair trade. These analyses highlight trade shifts or other developments in these product areas. They give updates for certain products discussed in last year's report--flat glass and automobiles and automobile parts, that are subject to special bilateral market access agreements for imports negotiated by the United States with Japan; and the textile and apparel sector, parts of which have been affected by the phase-out of import quotas as a result of U.S. obligations under the Uruguay Round of Agreements. Other products addressed in this chapter have been subject to antidumping or countervailing orders in the U.S. market--portland cement and uncooked pasta. Because existing orders are subject to 5-year (sunset) review, as of July 1998, this review process is highlighted.

### FLAT GLASS

The U. S.-Japan agreement<sup>1</sup> on access to the Japanese market for imports of flat glass<sup>2</sup> finished its fourth year in 1998. The agreement, which continues until the end of 1999, seeks to increase market access through a variety of means such as increased adoption of nondiscriminatory technical and performance standards in the construction industry, and expanded promotion of the use of safety and insulating glass. One of the goals of the agreement is to increase U.S. sales of foreign flat glass in Japan, although the agreement specifies no numerical targets.

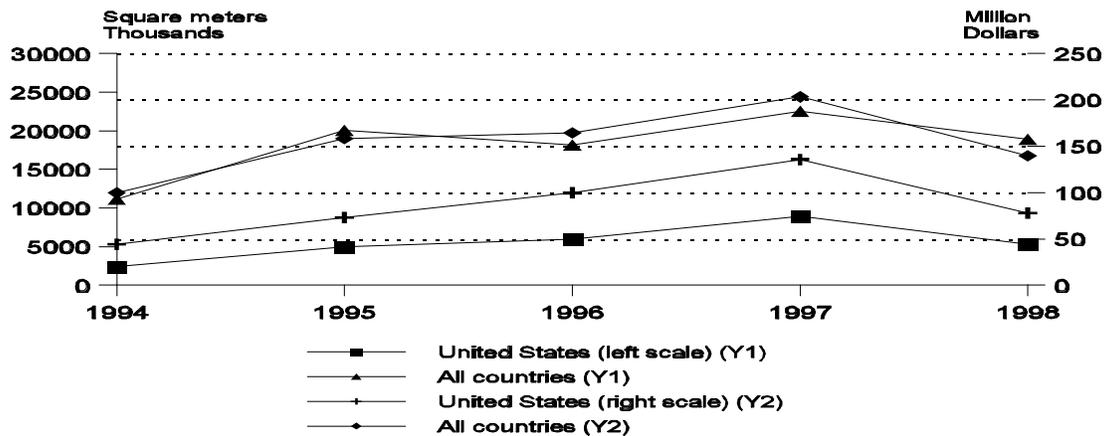
The quantity of Japanese imports of flat glass from all countries increased by 79 percent in 1995, the first year of the agreement, but slowed to an increase of 13 percent from 1995-97 (figure 4-1). Japanese imports from the United States grew steadily during the 1994-97 period, nearly tripling in volume to almost 9 million square meters valued at \$136 million.

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<sup>1</sup> Office of the U.S. Trade Representative (USTR), "Measures by the Government of Japan and the Government of the United States of America Regarding Flat Glass," facsimile of agreement, received Feb. 2, 1995.

<sup>2</sup> Flat glass is largely unworked; it may be surface ground or polished and have an absorbent, reflecting or non-reflecting coating, but it has not been tempered, laminated, bent, edge-worked, engraved, drilled, enameled, or otherwise worked. Safety glass (tempered or laminated) and insulating glass are also covered under the U.S.-Japan agreement on flat glass.

**Figure 4-1**  
**Japanese imports of flat glass, by quantity and value, from the United States and all countries, 1994-98**



Source: Compiled from official statistics of the Ministry of Trade and Industry, Japan.

However, the importation trends reversed in mid-1997 as Japanese demand for imported glass began weakening in the second half of 1997 and continued to decline in 1998, in part because of the Asian financial crisis, the weak Japanese economy, and an increase in the Japanese consumption tax from 3 to 5 percent.<sup>3</sup> Imports from the United States declined more sharply than imports from other sources in 1998, as the U.S. dollar appreciated against the Japanese yen, and imports from the United States lost market share to imports of flat glass from China. Between 1997 and 1998, the quantity and value of Japanese imports of flat glass from the United States declined by 41 and 43 percent, respectively, to 5.3 million square meters valued at \$78 million. Japanese imports from all countries decreased in quantity and value by 16 and 31 percent, respectively, to 19 million square meters valued at \$140 million.

During the third annual review of the agreement concluded in Washington, DC, May 27-28, 1998, the United States expressed concern that progress had stalled during the past year.<sup>4</sup> The United States expressed support for implementation of new Japanese residential energy standards (possibly stimulating demand for insulated glass)<sup>5</sup> and a follow-up survey of the Japanese flat glass industry.<sup>6</sup> However, the United States noted that performance improvements (e.g., delivery time, unpacking time, settlement terms, quality, aftersales service, and sales promotion) by foreign firms during 1997 have not resulted in increased market share and emphasized that foreign firms still have a small share of the total value of the Japanese market.<sup>7</sup> Imports from Japanese affiliates represent over one-half of the imports

<sup>3</sup> U.S. Department of State telegram No. 000861, "Embassy Update of National Trade Estimate," prepared by U.S. Embassy, Tokyo, Feb. 4, 1998, retrieved from NewsEdge/Web, June 4, 1998; and U.S. Department of State telegram No. 0073 "Glass: Update on Developments in Hokkaido," prepared by U.S. Consul, Sapporo, May 21, 1998, retrieved from NewsEdge/Web, June 4, 1998.

<sup>4</sup> U.S. Department of Commerce (USDOC) telegram No. 02809, "Third Annual Review of the Agreement," prepared by USDOC, Washington, June 19, 1998, retrieved from Newsedge/NewsEDG July 16, 1998.

<sup>5</sup> These standards were expected to be implemented by March 1999, but have not yet been announced.

<sup>6</sup> USDOC telegram, "Third Annual Review of the Agreement."

<sup>7</sup> Foreign firms have shown improvement in almost every performance category in Japanese customer surveys. Ibid.

from North America and two-thirds of Japanese distributors indicated that they do not plan to use foreign glass in the future.<sup>8</sup>

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## **AUTOMOBILES AND AUTOMOBILE PARTS<sup>9</sup>**

The auto and auto parts industry was designated a priority sector in the 1993 U.S.-Japan Framework Agreement, leading to extensive discussions between the two countries on efforts to liberalize access to the Japanese auto market for U.S. auto and auto parts manufacturers. The United States and Japan concluded their negotiations on June 28, 1995, with the signing of the U.S.-Japan Agreement on Autos and Auto Parts (the agreement). As part of the agreement, the Government of Japan made commitments in three important areas: improving market access for foreign motor vehicles; eliminating regulations that limit U.S. auto parts sales in Japan; and enhancing sales opportunities for U.S. original equipment (OE) parts producers to Japanese automakers in the United States and Japan.<sup>10</sup> The 10-member Compliance Group,<sup>11</sup> which evaluates agreement achievements, publishes its findings every 6 months in a report to the President.<sup>12</sup>

The June 1998 status report to the President highlighted U.S. concerns about Japan's recession and its effect on the automotive sector, particularly foreign automakers, as consumer spending and investment have declined and the yen weakened further. The report noted a 35-percent decline in sales of North American-produced Big Three (General Motors, Ford, and Chrysler) motor vehicles in Japan<sup>13</sup> and a 7-percent decline in U.S. exports of auto parts to Japan during 1997-98.<sup>14</sup> Since the year-end 1998 reporting period, new import vehicle registrations of U.S. passenger cars and trucks in Japan recorded an increase of 8 percent from the January-April 1998 level of 21,384 units to 23,149 units in January-April 1999.<sup>15</sup> Registrations for U.S. trucks fell by 54 percent, whereas registrations of U.S. passenger cars rose by 21 percent compared to the previous year.<sup>16</sup>

Japanese and U.S. officials met for the annual review of the Agreement in October 1998. U.S. officials proposed 11 measures to achieve further progress in market opening and deregulation in Japan, including those to streamline new vehicle registration, improve import promotion programs, and ensure the adoption of transparent and non-discriminatory fuel economy regulations. Other proposals addressed the

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<sup>8</sup> Ibid.

<sup>9</sup> For more information, see USDOC and USTR, *Report to President William Jefferson Clinton of the Interagency Enforcement Team Regarding the U.S.-Japan Agreement on Autos and Auto Parts*, Apr. 12, 1996, and Oct. 21, 1996.

<sup>10</sup> The agreement includes 15 quantitative and qualitative criteria specific to motor vehicles, OE parts, and aftermarket parts, as well as two general qualitative criteria, all of which are designed to measure progress in reaching joint objectives in these sectors.

<sup>11</sup> The Compliance Group was established on Sept. 6, 1995 by the USTR and USDOC.

<sup>12</sup> The most recent analysis was submitted on June 3, 1999.

<sup>13</sup> Measured by the number of import vehicle registrations in Japan, by make and model, as compiled by the Japan Automobile Manufacturers Association from data sources of the Japan Automobile Dealers Association and the Japan Automobile Importers Association.

<sup>14</sup> Although not a measurement criteria specified in the agreement, U.S. imports of auto parts from Japan remained relatively unchanged at \$12 billion during 1997-98.

<sup>15</sup> Compiled from tables entitled "New Import Vehicle Registrations," *Japan Automotive News*, various issues, Mar.-June 1999.

<sup>16</sup> Reverse imports from U.S.-based Honda operations more than tripled during the period to 7,709 passenger cars, whereas exports from all other U.S.-based automakers declined by 10 percent to 13,759 passenger vehicles.

automotive parts aftermarket, such as removing brakes and other parts from the “critical parts list”<sup>17</sup> and eliminating unnecessary requirements of the Japanese inspection and repair system.<sup>18</sup>

Follow-up meetings to the annual review were held in February 1999. Issues raised by the U.S. Government included the need for renewal of “voluntary plans of action” developed by Japanese automakers in 1995,<sup>19</sup> deregulation of vehicle inspection and registration, and the status of a proposed auto parts recall system.<sup>20</sup> During these talks, the Japanese Government indicated that it is working to streamline new vehicle registration and is open to discussion on ways to reduce the burdens of the vehicle inspection system, will consult with the U.S. Government on fuel economy standards if the effects are believed to be trade distorting, will defer the auto parts recall system, and will review the mechanics certification system<sup>21</sup> periodically as dictated by market conditions and requests of interested parties.<sup>22</sup> Although Toyota has indicated that it will release production, sales, and import information related to the “voluntary plan of action,” other Japanese automakers are not expected to provide such data once the reporting period concludes.<sup>23</sup>

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## **TEXTILES AND APPAREL**

Multilateral and bilateral agreements have historically influenced U.S. trade in textiles and apparel (sector goods). In the past, these agreements tended to limit trade between the United States and its trading partners. By contrast, the 1995 World Trade Organization (WTO) Agreement on Textiles and Clothing was designed to generate increased opportunities for sector trade by gradually eliminating quotas and requiring WTO members to provide improved access to their domestic markets. In addition, the bilateral textile agreements reached with China (a non-WTO country) in 1997, while extending quotas on its sector exports to the United States, also, for the first time, committed China to open its markets to U.S.-produced sector goods. These agreements and other trade developments in the textiles and apparel sector in 1998 are highlighted in the following discussion.

### **WTO Agreement on Textiles and Clothing**

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<sup>17</sup> No automotive parts were removed from the list by the Japanese Government during the reporting period covered by the June 1999 report. For more information on the “critical parts list,” see Deborah McNay, “Automobiles and Automobile Parts,” *Shifts in U.S. Merchandise Trade in 1996*, USITC publication 3051, July 1997, pp. 4-6 to 4-8.

<sup>18</sup> U.S. Department of State telegram No. 045318, “U.S. Automotive Talks in Tokyo, February 25, 1998” (sic), prepared by U.S. Department of State, Washington, DC, Mar. 1999.

<sup>19</sup> After the 1995 negotiations that concluded with the Agreement, Japanese automakers announced voluntary business plans that outlined overseas production targets and goals for sales of non-Japanese vehicles and purchases of foreign-made auto parts. The results of these plans have been reported biannually. Toshio Aritake, “Toyota Announces Plans to Release Auto Data as Part of 1995 Agreement,” *BNA International Trade Daily*, Mar. 4, 1999; and Toshio Aritake, “U.S., Japan to Hold Follow-Up Talks to 1995 Automobile, Parts Agreement,” *BNA International Trade Daily*, Feb. 24, 1999.

<sup>20</sup> The auto parts recall system would apply to both OE and aftermarket automotive parts and would add another certification process. The U.S. Government claimed that this system would create problems for suppliers because parts are not traceable to individual users and U.S. suppliers exporting to Japan would be required to perform any recalls on their own, possibly creating significant compliance burdens. U.S. Department of State telegram No. 000462, “Autos: Meeting with MITI on Auto Inspection System,” prepared by U.S. Embassy, Tokyo, Jan. 1998.

<sup>21</sup> For more information on the certified mechanics system, see McNay, “Automobiles and Automobile Parts.”

<sup>22</sup> U.S. Department of State, “U.S. Automotive Talks in Tokyo, February 25, 1998” (sic).

<sup>23</sup> Aritake, “Toyota Announces Plans to Release Auto Data as Part of 1995 Agreement.”

The Agreement on Textiles and Clothing (ATC) entered into force as part of the WTO agreements in 1995 and replaced the Multifiber Arrangement (MFA), which had governed most world trade in textiles and apparel during 1974-94.<sup>24</sup> The MFA, negotiated under auspices of the General Agreement on Tariffs and Trade (GATT), permitted the use of quotas without requiring compensation. The ATC provides for the elimination of the quotas and the complete “integration” of textiles and apparel into the GATT regime (i.e., subject to GATT disciplines and the same rules as trade in other sectors) over a 10-year transition period ending on January 1, 2005. All WTO countries are subject to ATC disciplines, and only WTO countries are eligible for ATC benefits. The WTO countries with MFA quotas are the United States, the EU, Canada, and Norway.

The ATC provides for the gradual elimination of quotas through two mechanisms: (1) product integration, including quota removal, and (2) acceleration of growth rates for quotas still in effect during the transition period.<sup>25</sup> The ATC required WTO countries to integrate at least 16 percent of their sector trade into the GATT regime on January 1, 1995, and another 17 percent on January 1, 1998 (based on their respective 1990 import volumes). The countries are to integrate at least another 18 percent of the trade on January 1, 2002 and the remainder on January 1, 2005. As sector goods are integrated into the GATT regime, they become subject to normal GATT rules.

The acceleration of quota growth rates under the ATC is likely to affect U.S. import levels sooner than product integration, because most import-sensitive sector goods will remain under quota throughout the transition period.<sup>26</sup> The ATC required importing countries to increase existing quota growth rates for major supplying countries by 16 percent on January 1, 1995, and by another 25 percent on January 1, 1998; the quota growth rates are to be increased by another 27 percent in 2002.<sup>27</sup> For small suppliers (i.e., countries accounting for 1.2 percent or less of an importing country’s total quotas in 1991), quota growth rates were advanced by one stage--that is, they were increased by 25 percent in 1995 and by 27 percent in 1998.<sup>28</sup>

The Textiles Monitoring Body (TMB), which supervises the implementation of the ATC provisions, reported that almost all the articles integrated by the importing developed countries in the first

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<sup>24</sup> The MFA provided a general framework and guiding principles for negotiation of bilateral agreements between textile importing and exporting countries for the purpose of setting quotas and quota growth rates, or for unilateral action by an importing country if an agreement could not be reached. The MFA was established to deal with problems of market disruption in sector trade in developed countries, while permitting developing countries to share in expanded export opportunities.

<sup>25</sup> Integration means that any existing quotas on integrated products under MFA rules automatically become void and no new quotas may be imposed upon such products unless there has been a determination of serious injury under GATT article XIX, the safeguards provision. U.S. House of Representatives, Committee on Ways and Means, *Overview and Compilation of U.S. Trade Statutes*, 105th Cong., 1st sess. (Washington, DC: U.S. Government Printing Office (GPO), June 25, 1997), WMCP 105-4, p. 120.

<sup>26</sup> The Statement of Administrative Action accompanying the U.S. Uruguay Round Agreements implementing legislation states that the Committee for the Implementation of Textile Agreements (CITA), in drawing up the lists of products, was to defer the integration of the most sensitive goods until the end of the 10-year period. See U.S. House of Representatives, “Statement of Administrative Action,” *The Uruguay Round Trade Agreements, Texts of Agreements Implementing Bill, Supporting Statements, Message from the President of the United States*, Sept. 27, 1994, House Doc. 103-316, vol. 1, p. 115.

<sup>27</sup> The acceleration of quota growth rates is based on the growth rates specified in the bilateral MFA agreements in place on Dec. 31, 1994. The base rates by which quotas could grow annually vary by country and article, but usually ranged from less than 1 percent to 6 percent; some countries had base rates of 7 percent. Assuming a base growth rate of 6 percent for a major supplier, the quota would be increased by 6.96 percent a year in stage one (1995-97), 8.7 percent in stage two (1998-2001), and 11.05 percent in stage three (2002-04).

<sup>28</sup> Small suppliers subject to U.S. quotas are Bahrain, Bulgaria, Colombia, Costa Rica, Czech Republic, Dominican Republic, Egypt, El Salvador, Fiji, Guatemala, Hungary, Jamaica, Kenya, Kuwait, Macau, Mauritius, Poland, Qatar, Romania, Slovak Republic, United Arab Emirates, and Uruguay.

stage were not subject to quotas.<sup>29</sup> The TMB noted that the articles integrated in both the first and second stages were concentrated in relatively lower value-added products, such as yarns and fabrics, rather than apparel and other made-up textile products. Taking the first and second stages together, the TMB stated that lower value-added goods accounted for 76 percent of the import volume integrated by the European Union (EU), 65 percent for the United States, 60 percent for Norway, and 47 percent for Canada.

The ATC also allows WTO countries during the 10-year transition period to establish quotas on uncontrolled imports of sector goods that have yet to be integrated into the GATT regime by applying a “transitional safeguard” when such imports cause or threaten serious damage to a domestic industry. These quotas may remain in place for up to 3 years or until the item is integrated into the GATT regime.

### **U.S. Quota Actions in 1998**

The United States currently has quotas on textiles and apparel from 47 countries or customs regions, 37 of which are WTO members whose exports of such goods are subject to the terms of the ATC. In 1998, the 37 WTO members supplied 56 percent of the total value of U.S. sector imports. Another 12 percent of the imports came from Mexico, a WTO member for which U.S. quotas are being phased out under the North American Free Trade Agreement. The nine non-WTO countries subject to U.S. quotas, led by China and Taiwan, supplied 16 percent of sector imports in 1998. Sector imports from non-WTO countries are subject to quotas imposed by the President under section 204 of the Agricultural Act of 1956, which provides the President with the basic statutory authority to enter into agreements with foreign governments to limit their sector exports to the United States, and to issue regulations to carry out such agreements.<sup>30</sup>

In 1998, the Committee for the Implementation of Textile Agreements (CITA), an interagency group that administers the U.S. trade agreements program for textiles and apparel, initiated three requests for consultations (“calls”) with foreign supplying countries for the purpose of setting new quotas.<sup>31</sup> These calls involved one ATC safeguard action on yarn from Pakistan (a WTO country) and two calls under section 204 of the Agricultural Act of 1956 on apparel from Cambodia (a non-WTO country). The call with respect to Pakistan, initiated in December 1998, resulted in the establishment of a quota on imports of Pakistani combed cotton yarn (category 301) of 5,262,665 kilograms for the 12-month period beginning on March 17, 1999.<sup>32</sup> According to CITA, U.S. imports of the Pakistani yarn had risen significantly and the U.S. industry had experienced declining production and shipments, downward pricing pressures, a substantial increase in inventories, deteriorating financial performance, two mill closures, and employment losses.<sup>33</sup> In April 1999, the TMB recommended that the quota introduced by the United States on imports of combed cotton yarn from Pakistan should be rescinded.<sup>34</sup>

The two calls with respect to Cambodia, initiated in October 1998, resulted in the establishment of quotas on its cotton knit shirts and blouses (categories 338/339) of 1,745,634 dozen and cotton sweaters (category 345) of 53,001 dozen for the 12-month period beginning on October 28, 1998. According to

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<sup>29</sup> Information in this paragraph is from the WTO, *Comprehensive Report of the Textiles Monitoring Body to the Council for Trade in Goods on the Implementation of the Agreement on Textiles and Clothing During the First Stage of the Integration Process*, document G/L/179 (97-3288), July 31, 1997, paras. 15 and 70, found at Internet address <http://www.wto.org/wto/ddf>, retrieved Jan. 28, 1998.

<sup>30</sup> 7 U.S.C. 1854.

<sup>31</sup> The three calls in 1998 were down from the four calls issued in 1997. In 1995, the first year of the ATC, the United States initiated 28 calls, 15 of which were rescinded.

<sup>32</sup> CITA, “Establishment of an Import Limit for Certain Cotton Textile Products Produced or Manufactured in Pakistan,” 64 *Fed. Reg.* 12290 (Mar. 12, 1999). CITA had initiated a call on the combed cotton yarn from Pakistan in 1997, but allowed the call to expire without further action.

<sup>33</sup> CITA, “Request for Public Comments on Bilateral Textile Consultations with the Government of Pakistan,” 63 *Fed. Reg.* 72288 (Dec. 31, 1998).

<sup>34</sup> WTO, TMB, “Fifty-Fourth Meeting of the TMB,” G/TMB/18, Apr. 29, 1999 (99-1738), found at Internet address [http://www.wto.org/ddf/cgi\\_bin/searchp](http://www.wto.org/ddf/cgi_bin/searchp), retrieved June 1, 1999.

CITA, U.S. imports of these goods from Cambodia had increased significantly and the U.S. industry had experienced declines in production and market shares for these goods.<sup>35</sup> The only other U.S. quota in place with Cambodia (on cotton gloves of 1,250,841 dozen pairs set in 1997) was extended by CITA at the same level for 1 more year beginning on October 29, 1998.<sup>36</sup>

On January 20, 1999, the United States and Cambodia signed a new, 3-year bilateral textile agreement establishing 12 quotas for selected apparel articles from Cambodia, including larger quotas for the previously restricted articles.<sup>37</sup> Under the agreement, Cambodia also agreed to measures to increase cooperation and information sharing to prevent illegal textile transshipments, and to increase market access opportunities for U.S. exporters. Under the market access provisions, Cambodia agreed to bind tariffs at applied rates and to reduce them over the term of the agreement, while ensuring that nontariff barriers are not applied in the sector. In addition, and for the first time in a U.S. bilateral textile agreement, the United States obtained a commitment from Cambodia to improve labor conditions in the sector. If the United States determines that Cambodia's labor conditions comply with international labor standards by December 1 of each agreement year, U.S. quotas could be increased by 14 percent for the following agreement year, in addition to the annual quota growth rate of 6 percent.<sup>38</sup>

### U.S.-China Textile Agreements

The United States and China agreed on a series of agreements contained in a Memorandum of Understanding (MOU) dated February 1, 1997, governing trade in sector goods.<sup>39</sup> One agreement extended U.S. quotas on Chinese nonsilk goods for 4 years through the year 2000. This agreement reduced quotas for products in which China had repeatedly violated quotas by transshipping through third countries, strengthened enforcement terms against illegal transshipments, and, similar to the 1994 agreement, allowed the United States to "triple charge" quotas for repeated violations of the agreement.<sup>40</sup> A second agreement involved a visa arrangement<sup>41</sup> and a third agreement extended U.S. quotas on Chinese silk goods for an additional year to December 31, 1997, when they were allowed to expire.<sup>42</sup> A fourth

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<sup>35</sup> CITA, "Request for Public Comments on Bilateral Textile Consultations with the Government of Cambodia," 63 *Fed. Reg.* 59548 (Nov. 4, 1998); and "Establishment of Import Limits for Certain Cotton Textile Products Produced or Manufactured in Cambodia," 63 *Fed. Reg.* 71620 (Dec. 29, 1998).

<sup>36</sup> CITA, "Establishment of an Import Limit for Certain Cotton and Man-Made Fiber Textile Products Produced or Manufactured in Cambodia," 63 *Fed. Reg.* 57666 (Oct. 28, 1998).

<sup>37</sup> Information on the agreement is from CITA, "Establishment of Import Restraint Limits for Certain Cotton, Wool and Man-Made Fiber Textile Products Produced or Manufactured in Cambodia," 64 *Fed. Reg.* 6050 (Feb. 8, 1999); and USTR, "U.S. and Cambodia Reach Bilateral Textile Agreement," press release 99-07, Jan. 21, 1999.

<sup>38</sup> In such a case, the quota growth rate would increase by 20 percent. USTR official, telephone conversation with USITC staff, Feb. 16, 1999.

<sup>39</sup> On Jan. 22, 1999, China's Ministry of Foreign Trade and Economic Cooperation notified the U.S. Embassy in Beijing that it was ready to exchange diplomatic notes to formalize the agreements contained in the MOU. The initial diplomatic note submitted by the U.S. Embassy on Mar. 11, 1997, had not been reciprocated by the Chinese, pending the reduction of certain Chinese tariffs, which was announced on Jan. 1, 1999. See, U.S. Department of State telegram No. 000799, "China Ready to Exchange Notes on Textile Agreement," prepared by U.S. Embassy, Beijing, Jan. 26, 1999.

<sup>40</sup> In May 1998, CITA announced that triple charges would be assessed against certain of China's quotas for illegal transshipments. For further information, see CITA, "New Transshipment Charges for Certain Cotton and Man-Made Fiber Textile Products Produced or Manufactured in the People's Republic of China," 63 *Fed. Reg.* 25202 (May 7, 1998).

<sup>41</sup> The United States requires visas for sector goods from China and many other countries. Issued by the quota regulatory authority of the country in which the goods originate, a visa is a stamp on a paper document that certifies the origin of the goods, specifies the product type and quantity, and authorizes the shipment. The U.S. Customs Service, which is implementing electronic visas with several countries, uses the information to charge imports against quotas and to help eliminate unlawful transshipments.

<sup>42</sup> The United States agreed to China's request to eliminate visa requirements for silk goods effective as of January 1, 1999. See CITA, "Elimination of Export Visas and Electronic Visa Information System (ELVIS)

agreement involved market access, whereby the United States for the first time “obtained significant market opening commitments from China for export of U.S.-manufactured apparel and textile products.”<sup>43</sup>

Under the terms of the MOU, the United States agreed that should China become a member of the WTO, it would immediately receive the same benefits on the same schedule accorded other WTO textile-exporting countries under the ATC, including the phaseout of quotas discussed earlier.<sup>44</sup> However, under the terms of the MOU, the United States could apply selective safeguards on imports of sector goods from China for 4 years beyond the termination of all other textile quotas for WTO countries on January 1, 2005.

### **NAFTA and Wool Apparel Tariff Preference Levels for Canada**

The North American Free Trade Agreement (NAFTA) entered into force in 1994, and provides for the elimination of duties on “originating” goods traded among the United States, Canada, and Mexico.<sup>45</sup> As of January 1, 1998, U.S. imports of all originating sector goods from Canada can enter free of duty. The United States did not and does not apply quotas to sector imports from Canada. For Mexico, U.S. tariffs for most originating textiles and apparel were phased out as of January 1, 1999; the remainder will be phased out in 2003. The United States eliminated quotas for textiles and apparel originating from Mexico upon implementation of NAFTA, and will phase out quotas for “nonoriginating” goods (i.e., goods that do not meet NAFTA origin rules) by January 1, 2004.

As a general rule, NAFTA tariff preferences do not apply to nonoriginating goods, which are subject to “normal trade relations” or general tariffs (formerly known as “most-favored-nation” tariff rates). However, NAFTA contains an exception to this rule that permits limited amounts of non-originating goods imported from another NAFTA member to qualify for tariff preferences up to specified annual quantity levels known as tariff preference levels (TPLs). The TPL that the United States allows for Canada’s wool apparel has been of concern to the U.S. industry because of the concentration of Canadian shipments in men’s (and boys’) wool suits and their rapid growth since implementation of the United States-Canada Free Trade Agreement (CFTA) in 1989.<sup>46</sup> The suits accounted for 62 percent of the imports under the wool apparel TPL in 1998, when Canada filled 93 percent of the TPL. Although total imports of men’s wool suits from Canada in 1998 fell by 7 percent from 1997, to 1.3 million suits valued at \$149 million, they were up by almost sixfold since 1989. Most of these Canadian suits were non-originating goods (e.g., suits made of wool fabric from Asia or Europe) and, thus, were entered under the TPL so as to benefit from the NAFTA tariff preferences (duty-free as of January 1, 1998).

Legislation introduced in the U.S. Congress in September 1997 would have provided relief for the U.S. industry from increased imports of wool tailored clothing from Canada (H.R. 2432). However, the legislation did not come up for a vote before adjournment of the 105th Congress in October 1998. Legislation also introduced but not voted on in the 105th Congress would have reduced or eliminated U.S. tariffs on fine wool fabrics for use in the production of tailored clothing (H.R. 4358 and S. 2339). U.S. tariffs on such fabrics (31.7 percent *ad valorem* in 1998) are more than double the Canadian tariffs. The legislation was intended to improve the competitive position of U.S. tailored clothing producers relative to

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Requirements for Silk Apparel Products Produced or Manufactured in the People’s Republic of China,” 63 *Fed. Reg.* 65753 (Nov. 30, 1998).

<sup>43</sup> U.S. Department of State telegram No. 040894, “Textiles/China: Exchange of Notes,” Washington, DC, Mar. 5, 1997.

<sup>44</sup> “Agreement Between the United States of America and The People’s Republic of China Concerning Trade In Textile and Apparel Products,” para. 21, Feb. 1, 1997.

<sup>45</sup> NAFTA tariff preferences apply to goods that “originate” in the United States, Canada, and Mexico—that is, the goods must meet the NAFTA rules of origin to be eligible for the tariff preferences. For most sector goods, the NAFTA origin rule is a “yarn forward” rule, whereby the goods must be made in a NAFTA country from the yarn-formation stage forward to receive the tariff preferences. For certain sector goods, a fiber or fabric forward rule applies.

<sup>46</sup> In 1994, the CFTA was suspended and its duty phaseout schedules were incorporated into NAFTA.

producers in Mexico and Canada.<sup>47</sup> The legislation was again introduced in the 106th Congress on January 19, 1999 (S. 218).

### NAFTA Parity for CBERA Countries

Competition between Caribbean Basin Economic Recovery Act (CBERA) beneficiary countries and Mexico, which mainly compete with one another for apparel assembly work from U.S. firms, has changed since NAFTA's implementation in 1994. Under NAFTA, U.S. imports of textiles and apparel from Mexico that are assembled from fabrics wholly formed and cut in the United States enter free of duty and quota under U.S. Harmonized Tariff Schedule (HTS) heading 9802.00.90.<sup>48</sup> By contrast, CBERA sector goods assembled from U.S.-formed and -cut fabrics enter under preferential quotas known as guaranteed access levels (GALs) but are still subject to duty on the value added offshore.<sup>49</sup> The competitive balance between Mexico and the CBERA countries was also influenced by the 50-percent devaluation of the Mexican peso during December 1994-January 1995, which effectively reduced dollar prices of Mexican goods in the U.S. market. In 1998, the Mexican peso lost more than one-fifth of its value against the U.S. dollar.<sup>50</sup> Since, in general, the currencies of the major CBERA suppliers have appreciated since 1994,<sup>51</sup> some CBERA industry sources claim that the peso devaluation exacerbated their price disadvantage.<sup>52</sup> Trade and investment reportedly have been diverted from CBERA countries to Mexico.<sup>53</sup> To address this situation, legislation was again introduced in the U.S. Congress in 1998 (S. 2400) to provide NAFTA-equivalent treatment for qualifying sector goods and other articles exempted from duty-free entry under the CBERA.<sup>54</sup> However, the bill did not come up for a vote before adjournment of the 105th Congress.

Legislation was introduced in the 106th Congress on February 4, 1999, (S. 371) and March 4, 1999, (H.R. 984) to provide CBERA countries with NAFTA-like benefits and economic assistance to aid in recovering from the devastation from Hurricanes Mitch and Georges in fall 1998. On March 4, 1999, the Clinton administration submitted legislation entitled "The United States-Caribbean Basin Trade

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<sup>47</sup> "North American Textile Council Opposes Tariff Cuts on Wool Fabrics," *Inside Trade*, Sept. 18, 1998, found at Internet address [http://www.insidetrade.com/sec-cti/as\\_web.exe?SEC\\_current+B+trade983722](http://www.insidetrade.com/sec-cti/as_web.exe?SEC_current+B+trade983722), retrieved Sept. 18, 1998.

<sup>48</sup> The NAFTA origin rules for sector imports from Mexico under HTS subheading 9802.00.90 stipulate that all fabric components, including interlinings, must be of fabric wholly formed and cut in the United States. Due to a loss of domestic supply of certain interlinings for use in suits and suit-type coats, the United States in Sept. 1998 extended temporary duty-free entry for such garments from Mexico containing certain foreign interlining fabrics, provided that the fabrics have been cut in the United States and the garments otherwise meet the criteria of HTS subheading 9802.00.90. See, Office of the President, Proclamation 7125 of Sept. 18, 1998, "To Modify Certain Provisions of the Special Textile and Apparel Regime Implemented under the North American Free Trade Agreement," 63 *Fed. Reg.* 50737 (Sept. 22, 1998).

<sup>49</sup> For every \$10 in f.o.b. value, a typical CBERA garment entered under HTS chapter 98 contains \$6.40 in duty-free U.S. parts and \$3.60 in dutiable, foreign value-added. Applying the 1998 trade-weighted average duty on apparel of 15.8 percent to the foreign value-added yields an average duty of \$0.57, or an *ad valorem* equivalent of 5.7 percent.

<sup>50</sup> The quarterly average exchange rate for the Mexican peso to the U.S. dollar was 10.017 pesos per dollar in fourth quarter 1998, compared to 8.077 pesos per dollar in fourth quarter 1997. Compiled from official statistics of the International Monetary Fund.

<sup>51</sup> Based on comparing the indexes of the real effective exchange rate for imports from Mexico with those of the major CBERA suppliers, the Dominican Republic, Guatemala, and Honduras. See, United Nations (UN) Economic Commission for Latin America and the Caribbean, *Preliminary Overview of the Economy of Latin America and the Caribbean* (New York: UN, 1997), p. 53.

<sup>52</sup> Mercedes Cortazar, "Honduras Continues to Lead Central America," *Apparel Industry International*, found at Internet address <http://www.aiimag.com/aiieng/archives/1198/nstor2.html>, retrieved Mar. 24, 1999.

<sup>53</sup> Textile trade consultant, telephone conversation with USITC staff, Jan. 22, 1999.

<sup>54</sup> In November 1997, the U.S. House of Representatives voted down a bill that would have granted NAFTA parity to CBERA sector goods (H.R. 2644, the United States-Caribbean Trade Partnership Act).

Enhancement Act,” which would authorize enhanced temporary trade benefits for CBERA countries. The Administration proposal was introduced as H.R. 1834 on May 18, 1999. On that same day, the House Ways and Means Trade Subcommittee approved H.R. 984 by a voice vote.

### **Increased U.S. Market Access for Textiles and Apparel from Sub-Saharan Africa**

Legislation introduced in the 105th Congress--H.R. 1432, the African Growth and Opportunity Act (AGOA)--among other actions, would have increased U.S. market access for sector goods from 48 eligible countries of Sub-Saharan Africa (SSA). These countries accounted for less than 1 percent of U.S. sector imports in 1998. The AGOA would have eliminated U.S. quotas on sector imports from SSA countries (Mauritius and Kenya are the only SSA countries currently subject to such quotas) and authorized the President to grant duty-free treatment under the Generalized System of Preferences (GSP) to these products from SSA countries. The House of Representatives passed H.R. 1432 in March 1998, but the companion bill in the Senate, S. 778, did not come up for a vote before adjournment of the 105th Congress.

The African Growth and Opportunity Act was introduced in the 106th Congress on February 2, 1999 (H.R. 434) and March 18, 1999 (S. 666).<sup>55</sup> Alternative legislation relating to Africa, the HOPE for Africa Act (H.R. 772), was introduced on February 23, 1999. On July 16, 1999, the House of Representatives passed H.R. 434 by a vote of 234 to 163.<sup>56</sup> No further actions was taken on either S. 666 or H.R. 772, as of August 2, 1999.

### **Developments in the Rules of Origin for Textiles and Apparel**

The U.S. Customs Service implemented new rules of origin for textiles and apparel on July 1, 1996, as required by section 334 of the Uruguay Round Agreements Act. The rules affect country-of-origin determinations for U.S. imports of such goods that are subject to manufacturing and processing operations in, or contain components from, more than one country. U.S. industry sought the rules change on the basis that foreign suppliers were dividing their production operations among various countries as a means of avoiding U.S. import quotas.<sup>57</sup>

As part of an agreement reached with the European Union (EU) in response to an EU complaint against the new U.S. origin rule, the Clinton administration in 1998 submitted legislation to restore the pre-existing rules of origin for certain dyed and printed nonwool fabrics and silk accessories (mainly scarves).<sup>58</sup> Under the section 334 rules, the country of origin for these fabrics and scarves is the country in which the base fabric is formed, even if the fabric undergoes dyeing, printing, and other finishing operations in another country. The U.S. rules in effect before July 1996 permitted the processes of dyeing and printing to confer origin, when accompanied by two or more finishing operations.

The May 1997 agreement with the EU followed the filing by the EU of a request with the WTO for consultations with the United States. The EU asserted that the section 334 rules adversely affected its exports of certain silk accessories and dyed and printed non-wool fabrics to the U.S. market. The EU stated that as a result of the U.S. rules change, its exports of these articles had lost their quota-free access to the U.S. market and EU exporters had to comply with U.S. quota or visa requirements applicable to the country of origin of the base fabric. In addition, the silk accessories had to be marked as a product of the country in which the base fabric was formed (mainly China), rather than as a product of the EU country in

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<sup>55</sup> These two bills include the elimination of existing quotas on textile and apparel exports from Kenya and Mauritius.

<sup>56</sup> “Bill Summary and Status for the 106th Congress--H.R. 434,” found at Internet address <http://thomas.loc.gov/cgi-bin/bdqu.../>, retrieved Aug. 2, 1999.

<sup>57</sup> U.S. House of Representatives, Committee on Ways and Means, *Overview and Compilation of U.S. Trade Statutes*, 105th Cong., 1st sess. (Washington, DC: GPO, June 25, 1997), WMCP 105-4, p. 121.

<sup>58</sup> S. 2394 (To Amend Section 334 of the Uruguay Round Agreements Act to Clarify the Rules of Origin with Respect to Certain Textile Products) and H.R. 4526 (A Bill Which Would Change Customs Rules-of-Origin for Certain Textile Products) were introduced on July 30 and September 9, 1998, respectively.

which the fabric was printed, dyed, and otherwise finished (e.g., Italy), as was the usual case under the previous rules. According to a trade source, European exporters of silk scarves and other fashionable textile goods “suffered as their products lost the cachet of a “Made in France” or “Made in Italy” label.”<sup>59</sup> The United States and the EU reached agreement in July 1997 to postpone formal WTO dispute settlement proceedings and accept an interim solution. If the WTO rules-of-origin harmonization process was not completed by July 20, 1998, the United States agreed that within 1 month it would introduce legislation to restore the rules of origin for certain textile articles that existed before July 1, 1996.<sup>60</sup> The WTO subsequently extended the deadline for the rules-of-origin harmonization process to November 1999.

Legislation to amend the U.S. rules of origin for certain textile products was introduced in the U.S. Congress on July 30, 1998, (S. 2394) and September 9, 1998 (H.R. 4526). No action was taken on the legislation before adjournment of the 105th Congress in October 1998. The EU claimed that the legislation was too narrow in scope because it did not include all the commitments that it had understood would be covered by the U.S.-EU settlement in 1997.<sup>61</sup> For example, the EU stated that the legislation did not include finished textile articles that are made from the dyed or printed fabrics, such as bed sheets.<sup>62</sup> On November 25, 1998, the EU renewed its complaint with the WTO over the U.S. origin rules.<sup>63</sup> On January 14 and 15, 1999, U.S. and EU trade officials held informal talks in Geneva; however, no agreement was reached during the consultations. On June 7, 1999, the 106th Congress approved H.R. 435 (a bill to make miscellaneous and technical changes to various trade laws, and for other purposes), which exempts woven fabrics and scarves of silk from the country-of-origin marking rules under section 304 of the Tariff Act of 1930. On June 25, 1999, the President signed this legislation.<sup>64</sup>

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## **GRAY PORTLAND CEMENT AND CEMENT CLINKER<sup>65</sup>**

During 1989-91, domestic producers filed four separate antidumping (AD)/countervailing duty (CVD) petitions with the U.S. Department of Commerce (Commerce or USDOC) and the USITC alleging that gray portland cement and cement clinker<sup>66</sup> from certain named countries was being sold in the United

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<sup>59</sup> Paula L. Green, “Trade Bill Fashions Relief for Importers of Scarves,” *Journal of Commerce*, Feb. 8, 1999.

<sup>60</sup> The WTO Agreement on Rules of Origin calls for the multilateral harmonization of rules of origin used for nonpreferential trade regimes so as to provide more certainty in the conduct of world trade. To this end, the agreement called for a 3-year work program that was scheduled to be completed by July 20, 1998; however, the WTO extended the deadline until Nov. 1999.

<sup>61</sup> Hugo Paemen, Ambassador, European Commission, “EU Letter on Rules of Origin,” Oct. 2, 1998, found at Internet address [http://www.insidetrade.com/sec-cgi/as\\_web.ec?SEC\\_current+B+trade984022](http://www.insidetrade.com/sec-cgi/as_web.ec?SEC_current+B+trade984022), retrieved Oct. 9, 1998.

<sup>62</sup> For bed sheets finished in one country from fabric made in another country, the current U.S. rules stipulate that the country of origin is the country in which the fabric is formed, rather than the country in which the fabric is cut to size, hemmed, and otherwise sewn, as was the usual case under the previous rules.

<sup>63</sup> USTR official, telephone conversation with USITC staff, Dec. 9, 1998.

<sup>64</sup> See sec. 2423 of the Miscellaneous Trade and Technical Correction Act of 1999, “Marking of Certain Silk Products and Containers” (Public Law 106-36, June 25, 1999).

<sup>65</sup> AD and CVD orders on gray portland cement and cement clinker are scheduled for sunset review starting in Aug. 1999.

<sup>66</sup> As described in a 1990 USITC report on an AD investigation, gray portland cement is a hydraulic (will set or harden under water) industrial binding agent used predominantly in the production of concrete. Cement clinker is the intermediary product resulting from the sintering stage of the cement production process, and is quite different in appearance and properties from the finished cement; it has no other use than for the production of cement. Cement clinker is ground into finished cement using about 5 percent gypsum and other material to retard water absorption and allow for easier handling; this finish grinding step and materials added are very important in

States at less than fair value (dumped) and/or subsidized and that a U.S. industry was materially injured or threatened with material injury by reason of such dumped and/or subsidized imports.<sup>67</sup> The countries named in the respective petitions were Mexico (filed April 1989), Japan (filed May 1990), and Venezuela (filed May 1991).<sup>68</sup> Commerce and the USITC made final affirmative determinations in the AD investigations involving two of the countries, Mexico (July 1990) and Japan (March 1991), and Commerce accordingly issued AD orders and assessed AD duties. The final dumping margins were:

<u>Country</u>	<u>Producer</u>	<u>USDOC final margins</u>
Mexico	CEMEX, S.A.	58.38
	Apasco, S.A. de C.V.	53.26
	Cementos Hidalgo, S.C.L.	3.69
	All others	58.05
Japan	Onoda Cement Co., Ltd.	47.79
	Nihon Cement Co., Ltd.	84.70
	All others	65.22

Following preliminary dumping and CVD determinations by Commerce, the Government of Venezuela entered into suspension agreements with Commerce effective February 1992 and March 1992, respectively.<sup>69</sup> Venezuelan cement producers/exporters agreed that they would not sell product in the United States for a price less than its foreign market valued as determined by Commerce,<sup>70</sup> and the Government of Venezuela agreed to offset or completely eliminate all benefits provided to the Venezuelan

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determining the specifications and type of gray portland cement. If protected from moisture, cement clinker can be stored and transported to other locations (markets) for finish grinding. Gray portland cement and cement clinker are provided in HTS subheadings 2523.10.00 and 2523.29.00, respectively. For purposes of this review, the term does not include white, non-staining hydraulic portland cement, provided for in subheading 2523.21.00 of the HTS (previously in 511.1100 of the former Tariff Schedule of the United States Annotated). Portland, masonry, pozzolanic, and natural (Roman) are the four major categories of hydraulic cements, of which portland is the only product subject to the aforementioned investigations and topic of this review. Although white portland cement was not covered in the four subject investigations, data for this review include both white and gray portland cements because publicly available production data combines the two products and there is not sufficient information to extrapolate one type of cement from the other; only three U.S. facilities are reported to produce white cement for which production is subject to business confidential treatment. However, as noted in a 1990 USITC report on an AD investigation, industry sources indicated that gray portland dominated production, and imports would indicate the same relative to market demand. USITC, *Gray Portland Cement and Cement Clinker from Mexico*, investigation No. 731-TA-451 (Final), USITC publication 2305, Aug. 1990, pp. A-5 to A-6.

<sup>67</sup> For further information, see USITC, *Gray Portland Cement and Cement Clinker from Mexico*; USITC, *Gray Portland Cement and Cement Clinker from Venezuela*, investigations Nos. 303-TA-21 (Preliminary) and 731-TA-519 (Preliminary), USITC publication 2400, July 1991; USITC, *Gray Portland Cement and Cement Clinker from Japan*, investigation No. 731-TA-461 (Final), USITC publication 2376, Apr. 1991; and USITC, *Gray Portland Cement and Cement Clinker from Japan; Views on Remand in Investigation No. 731-TA-461 (Final)*, USITC publication 2657, June 1993.

<sup>68</sup> In each of the three investigations, the USITC found the appropriate domestic industry to be a regional industry. For the investigation involving imports from Mexico, the industry was found to include the Southern tier of the United States, defined as the following states in their entirety: Florida, Alabama, Mississippi, Louisiana, Texas, New Mexico, Arizona, and California. For the investigation involving imports from Japan, the industry was found to include Southern California, defined as San Luis Obispo, Kern, Inyo, Mono, Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange, Riverside, San Diego, and Imperial counties. For the investigation involving imports from Venezuela, the industry was found to include Florida, in its entirety. Ibid.

<sup>69</sup> Both agreements are still in effect.

<sup>70</sup> USDOC, *Suspension Agreement: Gray Portland Cement and Clinker from Venezuela*, found at <http://infoserv2.ita.doc.gov/tcc/i...88e2585256568005049f5?Open Document>, retrieved May 7, 1999.

cement industry which Commerce found to constitute bounties or grants on exports of product to the United States.<sup>71</sup>

Portland cement is the most important of the major categories of hydraulic cement, accounting for an estimated 96 percent of domestic production in 1997 and almost all imports.<sup>72</sup> Portland cement is used predominantly in the production of concrete, which is consumed almost entirely by the construction industry. Hence, demand for this product is closely tied to fluctuations in the economic activity of the construction industry.<sup>73</sup>

U.S. consumption of this product during the past 7 years reflects growth in the construction market,<sup>74</sup> generating record-level cement consumption, exceeding just over 100 million metric tons (MMT) in 1998.<sup>75</sup> Growth in demand was supplied by increases in both domestic output and imports, but strong import growth has resulted in decreasing market share for domestic producers in the past 6 years (table 4-1). The number of import sources also has increased in recent years. When the first AD petition was filed in 1989, cement imports entered the United States primarily from Mexico, Canada, Japan, Greece, and Spain, which accounted for about 84 percent of imports. By 1998, producers from Canada, China, Greece, Spain, Venezuela, Colombia, Mexico, Turkey, and Sweden were the primary sources of U.S. imports, accounting for 83 percent of imports.

The U.S. market shares for Mexico and Japan 1 year prior to the filing of petitions were 5 percent and 3 percent, respectively. Immediately following these investigations, their U.S. market shares dropped to 1 percent and less than 1 percent, respectively, where they have remained through 1998 (table 4-1). In contrast to the U.S. import trends exhibited by Mexican and Japanese products, U.S. imports from Venezuela have followed similar upward trends as non-subject imports and are larger than 1 year before the petition was filed in 1991.<sup>76</sup> As indicated in table 4-1, imports from Venezuela reached a peak of 1.3 MMT in 1990 and dropped to 55,000 metric tons after the suspension agreement was signed in 1992. Since that year, however, imports from Venezuela have increased by 1.7 MMT to nearly 1.8 MMT in 1998. The changes in import volumes were reflected in each group's market share; the subject countries' share dropped from 8 percent of U.S. consumption before the investigations to 3 percent in 1998, while market share for nonsubject countries rose from 11 percent to 19 percent.

The number of foreign- or U.S.-owned cement companies and associated plants operating in the United States decreased from 1 state agency and 49 companies (131 plants) in 1988 to 1 state agency and 41 companies (116 plants) in 1998. Despite this decline, U.S. production grew by an estimated 15.5 MMT (23 percent) between 1988 and 1998. This growth in production was supported by an increase in domestic capacity as a number of companies throughout the United States reported capital investment projects to upgrade operations and expand production capacities at existing plants in the years following the investigations.<sup>77</sup> Capacity increased from an estimated 66.5 MMT in 1988 to 78.9 MMT in 1997 (latest

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<sup>71</sup> USDOC, "Gray Portland Cement and Clinker From Venezuela Suspension of Investigation," *57 Fed. Reg.* 9242 (Mar. 17, 1992).

<sup>72</sup> Hendrik G. vanOss, "Cement," *Minerals Yearbook, 1997*, U.S. Department of the Interior (USDOI), U.S. Geological Survey (USGS), found at Internet address <http://www.minerals.usgs.gov/minerals/pubs/commodity/cement/>, retrieved July 1, 1999.

<sup>73</sup> Portland Cement Association, "The Cement Industry, Economic Overview," found at Internet address <http://www.portcement.org/cemind.htm>, retrieved July 1, 1999.

<sup>74</sup> USDOC, *Construction Review, Quarterly Industry Report, Winter 1995*, p. 1; and USDOC, "Construction," *U.S. Industry and Trade Outlook, 1999* (New York: McGraw-Hill, 1999), p. 6-1.

<sup>75</sup> Hendrik G. vanOss, "Cement," *Mineral Commodity Summaries, 1999*, USDOI, USGS, found at Internet address <http://minerals.usgs.gov/minerals/pubs/commodity/cement>, p. 1, retrieved June 23, 1999.

<sup>76</sup> The suspension agreement with Venezuela required no tariffs levied against cement imported from Venezuela as were levied against cement imported from Mexico and Japan.

<sup>77</sup> "1993 International Cement Review," *Rock Products*, Apr. 1993, pp. 46-47; "1995 Cement Projects," *Rock Products*, May 1995, pp. 37-38; and "1998 World Cement Projects Report," *Rock Products*, Mar. 1998, pp. 42-44.

year available).<sup>78</sup> In addition, Florida Rock Industries is scheduled to bring its new cement plant on line in the second quarter of 1999. With a production capacity of about 2,000 metric tons per day, the facility will be the first completely new plant built in the United States in the last 10 years.<sup>79</sup>

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<sup>78</sup> USDOI, U.S. Bureau of Mines, "Cement," *Minerals Yearbook 1989*, p. 219; and USDOI, USGS, "Cement." *Mineral Industry Surveys, 1997 Annual Review*, p. 16.

<sup>79</sup> "1998 World Cement Projects Report," *Rock Products Cement Edition*, Mar. 1998, p. 42.

**Table 4-1**  
**U.S. market statistics:<sup>1</sup> Portland cement, 1988-98**

Item	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
	----- <i>Thousand metric tons</i> -----										
Domestic Production .....	66,471	67,036	67,042	63,003	68,220	70,845	74,335	73,303	75,797	78,948	82,000
Imports:											
Mexico .....	4,469	3,481	1,808	900	776	738	580	784	1,178	885	1,131
Japan.....	1,595	2,112	1,906	300	277	42	14	0	0	( <sup>2</sup> )	20
Venezuela .....	569	644	1,343	808	55	268	802	1,428	1,517	1,994	1,779
Total Subject countries .....	6,633	6,237	5,057	2,008	1,108	1,048	1,396	2,212	2,695	2,876	2,930
All other .....	8,920	6,544	6,289	5,504	4,699	5,596	9,419	11,153	11,020	14,147	20,194
Total .....	15,553	12,781	11,346	7,512	5,807	6,644	10,815	13,365	13,715	17,026	23,124
Domestic exports .....	91	159	403	514	619	534	495	578	674	666	613
Apparent Consumption.....	81,933	79,658	77,985	70,001	73,408	76,955	84,655	86,090	88,838	95,308	104,511
	----- <i>Percentage of consumption</i> -----										
Domestic production .....	81	84	86	90	93	92	88	85	85	83	78
Imports:											
Mexico .....	5	4	2	1	1	1	1	1	1	1	1
Japan .....	2	3	2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	0	0	( <sup>3</sup> )	( <sup>3</sup> )
Venezuela .....	1	1	2	1	( <sup>3</sup> )	( <sup>3</sup> )	1	2	2	2	2
Total Subject countries .....	8	8	6	3	2	1	2	3	3	3	3
All other .....	11	8	8	8	6	7	11	13	12	15	19
Total .....	19	16	15	11	8	9	13	16	15	18	22
Number of production workers .....	19,500	18,600	18,100	18,000	17,700	17,900	17,900	17,800	17,900	17,900	17,800

<sup>1</sup> Data covers the overall domestic market, rather than regional markets subject to AD investigations, due to data availability. However, this discussion provides a survey of market trends on a national level, both before and after the investigations.

<sup>2</sup> Less than 500 metric tons.

<sup>3</sup> Less than 0.5 percent.

Note.--Calculations based on unrounded data.

Source: Compiled from Hendrik G. vanOss, *Annual Cement Summaries*, U.S. Geological Survey, 1995, 1996, 1997, and 1998, p. 1; USITC, *Gray Portland Cement and Cement Clinker from Mexico*, Investigation No. 731-TA-451 (Final), USITC publication 2305, Aug. 1990; USITC, *Gray Portland Cement and Cement Clinker from Venezuela*, Investigations Nos. 303-TA-21 (Preliminary) and 731-TA-519 (Preliminary), USITC publication 2400, July 1991; USITC, *Gray Portland Cement and Cement Clinker from Japan*, Investigation No. 731-TA-461 (Final), USITC publication 2376, Apr. 1991; USITC, *Gray Portland Cement and Cement Clinker from Japan; Views on Remand in Investigation No. 731-TA-461 (Final)*, USITC publication 2657, June 1993; and from official statistics of the U.S. Department of Commerce.

## UNCOOKED PASTA<sup>80</sup>

During 1992-95, U.S. imports of uncooked pasta<sup>81</sup> from Italy and Turkey grew at a rapid pace (table 4-2). Imports from Italy expanded by 80 percent (\$59 million) to \$132 million in 1995, while imports from Turkey rose by 91 percent (\$6 million) to \$13 million. In May 1995, AD and CVD petitions were filed with the USDOC and the USITC alleging that uncooked pasta from companies in Italy and Turkey was being sold in the United States at less than fair market value (dumped) and/or subsidized, and that a U.S. industry was materially injured or threatened with material injury by reason of such dumped and/or subsidized imports.

Both the USITC and Commerce made affirmative determinations in 1996,<sup>82</sup> and AD and countervailing duties were assessed on imports from a number of Italian and Turkish pasta manufacturers. USDOC's final AD margins and countervailing duty rates for these pasta producers are set forth in table 4-2. CVD rates for Turkish pasta ranged from 3.87 percent to 15.82 percent, whereas AD duty margins ranged from 56.87 percent to 63.29 percent. The margins and rates for imports from Italy, on the other hand, varied widely by company and, in most cases, were significantly lower than those applicable to imports from Turkey. CVD rates for Italian pasta ranged between 0 percent and 11.23 percent, with AD duties between 0.67 percent and 46.67 percent.

**Table 4-2**  
**Certain pasta: U.S. Department of Commerce's final countervailing duty rates and less than fair value margins for imports from Italy and Turkey**

Country	Final countervailing duty rate	Final less-than-fair-value margins	
		Weighted-average margin	Bonding/deposit
	-- Ad Valorem Percentage --	Percentage	
Italy	0 - 11.23	0.67 - 46.67	0 - 46.67
Turkey	3.87 - 15.82	56.87 - 63.29	44.26 - 63.29

Source: USITC, *Certain Pasta from Italy and Turkey*, Investigation Nos. 701-TA-365-366 (Final) and 731-TA-734-735 (Final), pp. 1-5 and 1-7.

### Pasta Imports from Subject Countries

Following the issuance of the AD and CVD orders, U.S. imports of Turkish pasta fell from \$2.2 million in 1996 to \$671,000 in 1997 and to \$299,000 in 1998 (table 4-3). Imports from Italy, though, increased by \$12 million (9 percent) during 1996-97 to \$147 million. Between January 1997 and August 1997, the value of the Italian lira fell by almost 18 percent in real terms against the U.S. dollar, relative to July 1996.<sup>83</sup> For the remainder of 1997, the lira was, in real terms, 12 percent to 17 percent lower than its

<sup>80</sup> AD and CVD orders on uncooked pasta are scheduled for sunset review starting in June 2001.

<sup>81</sup> This report examines trends in uncooked, non-egg, dried pasta, which is classified under HTS subheading 1902.19.20, and is hereafter referred to as "uncooked pasta."

<sup>82</sup> USITC, *Certain Pasta from Italy and Turkey*, Investigations Nos. 701-TA-365-366 and 731-TA-734-735 (Preliminary), USITC publication 2905 (July 1995); and USITC, *Certain Pasta from Italy and Turkey*, Investigations Nos. 701-TA-365-366 and 731-TA-734-735 (Final) USITC publication 2977 (July 1996). As noted in the USITC investigations (Final), p. 3, the pasta in question is such that it is packed in containers of 5 pounds or less and excludes "refrigerated, frozen, or canned pastas."

<sup>83</sup> International Monetary Fund, *International Financial Statistics*, various issues.

July 1996 value.<sup>84</sup> According to an industry official, given that the average AD margin was roughly 11 percent, the depreciation in the lira mitigated some (or all) of the cost disadvantage which resulted from the AD duties imposed on many Italian pasta companies.<sup>85</sup> Also, Barilla, a major Italian pasta manufacturer, began importing pasta in bulk and had it packaged in the United States. Bulk pasta (in packages greater than 5 pounds) was not covered in the scope of the original investigation. Commerce began an investigation in December 1997 to determine whether orders were being circumvented.<sup>86</sup>

**Table 4-3**  
**U.S. pasta imports from Italy and Turkey, 1992-98**

(1,000 dollars)

Item	1992	1993	1994	1995	1996	1997	1998
Italy . . . . .	73,692	79,043	114,297	132,451	135,739	147,318	143,163
Turkey . . . . .	7,002	9,997	14,268	13,374	2,171	671	299
Others . . . . .	48,107	51,971	55,078	57,830	67,832	74,967	96,043
Total	128,802	141,011	183,643	203,656	205,743	222,957	239,504

Note.--Calculations based on unrounded data.

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

In April 1998, a preliminary affirmative determination was made in Commerce's investigation into Barilla's possible circumvention of the AD duties; the final affirmative determination, made in October 1998, required Barilla to pay retroactive AD duties on bulk pasta imported after December 1997.<sup>87</sup> Also, Barilla has built a large pasta plant in Ames, Iowa, that began operations in September 1998.<sup>88</sup> With this expansion, Barilla joined a growing number of domestic pasta producers that increased production capacity in 1998, despite relatively slow demand growth (1 percent in 1997) in the U.S. pasta market.<sup>89</sup> In addition, in August 1998, Commerce published its preliminary results from an administrative review on the AD and CVD duties. While Commerce lowered the AD duties for a number of Italian companies as a result of that review, Arrighi, Barilla, and Pagani were assessed "adverse facts available" duties of 71.49 percent, owing to their failure to reply to the questionnaires requested by the USDOC.<sup>90</sup>

### Pasta Imports from Nonsubject Countries

<sup>84</sup> Ibid.

<sup>85</sup> C.M. Skinner, former chief executive officer of pasta operations at Hershey Foods Corp., in Jay Sjerven, "Smooth Transition at Hershey," *Milling and Baking News*, Dec. 2, 1997, p. 35.

<sup>86</sup> "Barilla Circumventing Anti-dumping Regulation, Trade Group Claims," *Milling and Baking News*, Jan. 6, 1998, pp. 1 and 10.

<sup>87</sup> 63 *Fed. Reg.* 54672-54676. Bulk pasta that is accompanied by a certificate stating that it will not be repackaged upon arrival to the United States is excluded from this ruling.

<sup>88</sup> "Barilla to Sidestep Pasta Tariffs with First U.S. Plant and Mill," *Milling & Baking News*, Aug. 26, 1997, p. 1.

<sup>89</sup> Doug Krumrei, "Increasing Pasta Production: Despite a Relatively Flat Retail Market for Pasta, U.S. Pasta Producers Continue to Increase Their Production Capacity," *Milling & Baking News*, Oct. 27, 1998, p. 27; and "Retail Pasta Sales Decrease As Producers Increase Capacity," *Food Industry Report*, Dec. 7, 1998, p. 5.

<sup>90</sup> The final rates were published in 64 *Fed. Reg.* 6615-6631. According to the USDOC, the 71.49 percent rate also applies to the bulk pasta from Barilla affected by the circumvention ruling.

While the quantity of imported Italian pasta dropped by 3 percent during 1997-98, U.S. imports of uncooked pasta from all sources rose by \$17 million (7 percent) to \$240 million, due to a surge in uncooked pasta imports from Canada (table 4-4). Pasta imports from Canada more than doubled, rising from \$15 million in 1997 to \$38 million in 1998. This was a consequence of increased cross-border trade from a Quebec-based pasta plant owned by an U.S. company, Borden, which in 1997 terminated production in half of its pasta facilities in the United States and allocated production to its remaining North American plants.<sup>91</sup> Data obtained from Industry Canada show that pasta originated from Quebec increased from C\$14 million (\$10 million) in 1997 to C\$55 million (\$37 million) in 1998, an increase of 292 percent.<sup>92</sup> By contrast, there was more moderate growth in exports from the rest of Canada, which rose 14 percent from C\$19 million (\$14 million) in 1997 to C\$22 million (\$15 million) in 1998.<sup>93</sup>

**Table 4-4**  
**U.S. pasta imports from leading trade partners, 1995-98**

	1995	1996	1997	1998	Change 1997-98
	Million dollars				(Percentage)
Italy .....	132,451	135,739	147,318	143,163	-2.8
Canada .....	10,412	11,739	15,453	37,521	142.8
Mexico .....	4,258	8,798	13,699	13,629	-0.5
China .....	11,737	13,127	10,720	11,560	7.8
Japan .....	8,442	7,023	6,989	7,116	1.8
Thailand .....	5,143	6,133	6,225	5,374	-13.7
Taiwan .....	4,173	5,293	5,254	5,121	-2.5
Chile .....	2,808	4,302	4,713	3,864	-18.0
Greece .....	1,037	1,237	2,063	2,415	17.1
Korea .....	2,228	2,980	2,847	2,358	-17.2
Others .....	20,968	9,370	7,677	7,385	-3.8
Total .....	203,656	205,743	222,957	239,504	7.4

Note.—Calculations based on unrounded data.

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

Moderate growth in imports from other countries has occurred since the investigation and imposition of duties on uncooked pasta from Italy and Turkey. After imports from Mexico grew rapidly by 106 percent in 1996 and 56 percent in 1997, imports from Mexico stabilized in 1998. Some factors that allegedly contributed to the rise in pasta imports from Mexico include the devaluation of the peso in 1994

<sup>91</sup> Industry Canada, Food Bureau, official, telephone conversation with USITC staff, Mar. 11, 1999; “Borden to Sell Some Brands, Close Five Pasta Plants,” *Milling & Baking News*, Apr. 1, 1997, p.1; and “Borden Foods to Close Arizona Pasta Plant, Bay State Studies Options on Adjacent Mill,” *Milling & Baking News*, Sept. 29, 1998, p. 9.

<sup>92</sup> Note that the Canadian data is provided only at the six-digit HS level, so it also includes pasta with sauce preparations (HS 1902.19.40) in addition to uncooked pasta as specified in this report. The absolute increase in imports from Canada between 1997 and 1998 of products in HS 1902.19.40 was C\$5 million; by contrast, for HS 1902.19.20, the increase over the same period was C\$22 million, implying that the majority of the pasta imported from Quebec falls under the “uncooked pasta” category defined previously.

<sup>93</sup> Data from Industry Canada also show a substantial increase in uncooked pasta (HS 1902.19) exports from Alberta between 1997 and 1998. In addition to their plant in Montreal, Borden manages one in Leithbridge, Alberta as well. While the volume of trade is much smaller, trends in trade are much more pronounced than in Quebec. In 1997, only C\$42,000 was exported to the United States from Alberta. By 1998, this increased to C\$2 million, an increase of 40 percent. Prior to 1997, Alberta did not export pasta to the United States.

and a growth in pasta plants in Mexico aimed at serving the U.S. market.<sup>94</sup> Pasta imports from Greece have been on an upward trend over the past 5 years, supported in the last 2 years by marketing efforts started by the Greek Government in 1997 to promote Greek pasta in the United States.<sup>95</sup> In 1998, imports from Greece, though small at \$2 million, were 17 percent higher than they were in 1997. But with the exception of Mexico, Greece, and Canada, the imposition of AD and CVD penalties on Italy and Turkey has not led to major increases in uncooked pasta imports from other sources. Imports from other sources have been growing slowly or declining since 1996; most of the major increases in pasta imports occurred prior to the original investigation in 1995. For instance, while imports of pasta products from China grew from \$7 million in 1992 to \$13 million in 1996, and declined in the past 2 years from the 1996 peak. Moreover, these imports were mostly Asian noodle varieties rather than conventional pasta.

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### **5-YEAR (SUNSET) REVIEWS OF ANTIDUMPING AND COUNTERVAILING DUTY ORDERS**

The Uruguay Round Agreements Act, approved in late 1994, amended the AD and CVD laws in several respects. One of the most significant changes is the new provision requiring Commerce and the USITC to conduct independent reviews (sunset reviews), no later than 5 years after an AD or CVD order is issued, to determine whether revoking the order would be likely to lead to continuation or recurrence of dumping or subsidies (Commerce) and of material injury (USITC) within a reasonably foreseeable time.<sup>96</sup> This new requirement will result in reviews of all outstanding AD and CVD orders in existence as of January 1, 1995, over a 3-year “transition period” that began in July 1998 and ends in June 2001.<sup>97</sup> Five-year reviews of all AD and CVD orders that have been issued since January 1, 1995, must be initiated by Commerce by no later than 30 days prior to their 5-year anniversary. Major deadlines in the sunset review process are highlighted in table 4-5. Appendix E displays the status of sunset reviews that have been instituted through July 1999.<sup>98</sup> Regardless of when a decision is made to revoke the orders in

any of the transition cases, the AD or countervailing duties for these items will continue to be collected on covered products entered into commerce until midnight, December 31, 1999.

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<sup>94</sup> “Even with Uncertainties, Outlook Good for Latin Grain-Based Food,” *Milling & Baking News*, Apr. 29, 1997, p. 50; and “Miller Milling in Joint Venture to Build Durum Mill in Mexico,” *Milling & Baking News*, Dec. 10, 1996, p. 11.

<sup>95</sup> U.S. Department of Agriculture, Foreign Agriculture Service, “Greece,” *The Competition in 1997: U.S. and Competitor Expenditures on Export Promotion and Export Subsidies for Agricultural, Forestry, and Fishery Products*, June 30, 1998.

<sup>96</sup> Section 751(c)(1) of the Act (19 U.S.C. § 1675 (c)(1)).

<sup>97</sup> A complete schedule for these “transition” reviews (321 in total) was published in the *Federal Register* on May 29, 1998, and can be found at Internet address <http://205.197.120.60/oinv/sunset.nsf>, as well as, at Commerce's Internet address [http://www.ita.doc.gov/import\\_admin/records/sunset](http://www.ita.doc.gov/import_admin/records/sunset).

<sup>98</sup> For additional information on sunset review cases, see USITC, “5-Year Sunset Review” at Internet address <http://205.197.120.60/oinv/sunset.nsf>. And USDOC, “Sunset Reviews,” at Internet address [http://www.ita.doc.gov/import\\_admin/records/sunset/ss-home.htm](http://www.ita.doc.gov/import_admin/records/sunset/ss-home.htm).

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**Table 4-5**  
**Simplified process of 5-year (sunset) review cases**

U.S. Department of Commerce (Commerce or DOC)	Day	U.S. International Trade Commission (Commission or ITC)
Initiates Investigation	<b>0</b>	Initiates Investigation
Deadline for domestic industry response to notice of initiation	<b>15</b>	
Notify Commission regarding domestic response	<b>20</b>	
	<b>50</b>	Submission of requested information for inclusion in review
No domestic response - final determination - revoking order or termination of suspended investigation	<b>90</b>	
	<b>95</b>	Determination on adequacy of response from interested parties
Inadequate foreign response - expedited review - final determination	<b>120</b>	
	<b>150</b>	Inadequate response - expedited review - final determination - Normal: both can be extended 90 days
Normal case - full review - final determination on margins	<b>240</b>	
Extraordinary complicated case - full review - final determination on margins	<b>330</b>	
	<b>360</b>	Normal case - full review - final determination on injury
	<b>450</b>	Extraordinary complicated case - full review - final determination on injury

Source: Compiled by USITC staff.

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# CHAPTER 5

## Agricultural Products

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The U.S. trade surplus in agricultural products deteriorated by \$7.4 billion (38 percent) during the years 1997-98, to \$12.1 billion (table 5-1), the lowest surplus in a decade. The agricultural products sector typically maintains the largest U.S. trade surplus among major industry commodity sectors. U.S. total sector trade (exports plus imports) dropped by \$4.4 billion (4 percent) to \$106.7 billion in 1998. The 9-percent decline in the value of U.S. agricultural products exports, combined with a 3-percent increase in the value of U.S. imports, led to the erosion of the 1998 trade surplus.

U.S. exports of agricultural products declined by \$5.9 billion (9 percent) to \$59.4 billion in 1998 (table 5-2), following a \$3.8 billion drop in 1997. About three-fourths of the 1998 export decline was accounted for by oilseeds, cereals (mainly wheat and corn), and feed (oilseed meals). Increased foreign production and heightened competition from other exporters, coupled with lower grain and soybean prices (mainly because of plentiful U.S. and global supplies) curtailed U.S. exports.

There were significant losses in U.S. exports of hides and skins, ready-to-eat food (edible preparations), frozen fish, and poultry in 1998. U.S. exports of hides and skins, and leather dropped by about \$400 million (16 percent) as whole cattlehide sales fell on a volume and value basis. Weak demand in the two leading foreign markets for cattlehides, Taiwan and Korea, was an important factor eroding U.S. exports. Exports of high-valued, ready-to-eat foods, such as pasta, soup, baked goods, and cookies, dropped by \$352 million (9 percent) in 1998, similarly buffeted by weaker foreign markets.

U.S. imports of agricultural products rose by \$1.5 billion (3 percent) to \$47.3 billion in 1998 (table 5-3). The import growth occurred mainly for fresh, chilled, or frozen vegetables, edible preparations, cocoa and chocolate, beer, beef, and dairy products. Imports of fresh, chilled, or frozen vegetables rose by \$456 million (25 percent) to \$2.3 billion in 1998, propelled by 50 percent more volume from Canada and Mexico of potatoes, vine-ripened and hydroponic tomatoes, carrots, and peppers.<sup>1</sup> The \$279 million (13-percent) rise in imports of edible preparations to \$2.4 billion in 1998 reflected more Canadian pasta and baked goods being sold in the U.S. market.<sup>2</sup> Similarly, three categories of U.S. imports of luxury foods--cocoa, chocolate and confectionery, and premium-priced beer (mostly from the European Union (EU)); and beef (mostly from Canada)--rose by 9 percent or more, reflecting burgeoning U.S. consumer demand in 1998.

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<sup>1</sup> U.S. Department of Agriculture (USDA), *Outlook for U.S. Agricultural Exports*, Aug. 28, 1998, p. 13.

<sup>2</sup> See "Uncooked Pasta" in ch. 4 for more information.

Table 5-1

**Agricultural products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>**

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	7,222	7,455	234	3.2
Japan .....	13,401	11,718	-1,682	-12.6
Mexico .....	5,354	6,359	1,005	18.8
Netherlands .....	2,039	1,688	-351	-17.2
Korea .....	3,221	2,391	-830	-25.8
China .....	1,745	1,440	-306	-17.5
Italy .....	829	776	-54	-6.5
United Kingdom .....	1,350	1,293	-57	-4.2
France .....	629	570	-58	-9.3
Thailand .....	583	447	-136	-23.4
All Other .....	28,922	25,245	-3,677	-12.7
Total .....	65,295	59,383	-5,912	-9.1
<b>Selected country groups:</b>				
EU-15 .....	10,496	9,514	-982	-9.4
OPEC .....	2,954	2,521	-433	-14.7
Latin America .....	10,789	11,777	987	9.2
CBERA .....	2,606	2,693	87	3.3
Asian Pacific Rim .....	26,913	22,031	-4,882	-18.1
ASEAN .....	3,189	2,256	-933	-29.3
Central and Eastern Europe .....	352	377	25	7.1
<b>U.S. imports for consumption:</b>				
Canada .....	9,345	9,784	439	4.7
Japan .....	458	445	-13	-2.8
Mexico .....	4,825	5,396	571	11.8
Netherlands .....	1,267	1,365	98	7.8
Korea .....	189	160	-29	-15.5
China .....	1,009	1,061	53	5.2
Italy .....	1,648	1,683	35	2.1
United Kingdom .....	1,062	1,134	72	6.8
France .....	1,682	1,845	163	9.7
Thailand .....	1,767	1,922	155	8.8
All Other .....	22,589	22,532	-57	-0.3
Total .....	45,839	47,326	1,487	3.2
<b>Selected country groups:</b>				
EU-15 .....	8,643	9,206	563	6.5
OPEC .....	1,330	1,291	-39	-3.0
Latin America .....	15,650	15,481	-169	-1.1
CBERA .....	3,739	3,503	-236	-6.3
Asian Pacific Rim .....	8,371	8,925	554	6.6
ASEAN .....	4,206	4,417	211	5.0
Central and Eastern Europe .....	228	260	31	13.7
<b>U.S. merchandise trade balance:</b>				
Canada .....	-2,123	-2,329	-205	-9.7
Japan .....	12,943	11,273	-1,670	-12.9
Mexico .....	530	964	434	81.9
Netherlands .....	772	323	-449	-58.2
Korea .....	3,032	2,231	-801	-26.4
China .....	737	378	-358	-48.6
Italy .....	-818	-907	-89	-10.9
United Kingdom .....	288	159	-129	-44.7
France .....	-1,053	-1,274	-221	-21.0
Thailand .....	-1,184	-1,475	-291	-24.6
All Other .....	6,333	2,712	-3,620	-57.2
Total .....	19,455	12,056	-7,399	-38.0
<b>Selected country groups:</b>				
EU-15 .....	1,854	308	-1,545	-83.4
OPEC .....	1,624	1,231	-394	-24.2
Latin America .....	-4,861	-3,705	1,156	23.8
CBERA .....	-1,133	-810	323	28.5
Asian Pacific Rim .....	18,542	13,106	-5,436	-29.3
ASEAN .....	-1,017	-2,161	-1,144	-112.4
Central and Eastern Europe .....	123	117	-6	-5.1

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

Note.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

**Table 5-2**  
**Leading decreases in U.S. exports of agricultural products, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	<i>Million dollars</i>			
Oilseeds (AG032) . . . . .	7,700	5,166	-2,535	-33
Cereals (AG030) . . . . .	11,106	9,991	-1,115	-10
Animal feeds (AG013) . . . . .	4,837	4,317	-520	-11
Hides, skins, and leather (AG044) . . . . .	2,310	1,934	-376	-16
Edible preparations (AG034) . . . . .	4,029	3,677	-352	-9
All other . . . . .	35,313	34,298	-1,015	-3
<b>Total</b> . . . . .	<b>65,295</b>	<b>59,383</b>	<b>-5,912</b>	<b>-9</b>

Note.--Calculations based on unrounded data.

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

**Table 5-3**  
**Leading changes in U.S. imports of agricultural products, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>Increases:</b>				
Fresh, chilled, or frozen vegetables (AG018) . . . . .	1,857	2,313	456	25
Edible preparations (AG034) . . . . .	2,139	2,418	279	13
Cocoa, chocolate, confectionery (AG035) . . . . .	1,910	2,183	273	14
Malt beverages (beer) (AG038) . . . . .	1,480	1,699	219	15
Cattle and beef (AG002) . . . . .	2,534	2,752	219	9
Dairy produce (AG010) . . . . .	1,109	1,325	215	19
<b>Decreases:</b>				
Coffee and tea (AG028) . . . . .	4,071	3,656	-414	-10
Unmanufactured tobacco (AG041) . . . . .	1,089	771	-318	-29
Sugar and other sweeteners (AG012) . . . . .	1,321	1,068	-253	-19
Cereals (AG030) . . . . .	984	773	-211	-22
<b>All other</b> . . . . .	<b>27,345</b>	<b>28,367</b>	<b>1,022</b>	<b>4</b>
<b>Total</b> . . . . .	<b>45,839</b>	<b>47,326</b>	<b>1,487</b>	<b>3</b>

Note.--Calculations based on unrounded data.

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

A number of agricultural product imports, mainly bulk commodities, such as coffee, unmanufactured tobacco, and sugar, declined in 1998. U.S. imports of coffee and tea declined by \$414 million (10 percent) to \$3.7 billion, with a 42-percent drop in U.S. unroasted coffee prices.<sup>3</sup> Similarly, lower domestic output of cigarettes (in which foreign and domestic tobacco is blended) led to a 29-percent decline (\$318 million) in imports of unmanufactured tobacco to \$771 million in 1998. Reduced U.S. tariff-rate quotas held down sugar imports, which declined by \$253 million (19 percent) to \$1.1 billion.<sup>4</sup> Trade

<sup>3</sup> The New York spot price for coffee beans dropped from \$2.07 per pound in 1997 to about \$1.25 per pound in 1998.

<sup>4</sup> The amount of sugar permitted under the U.S. tariff rate quota declined from 2.1 million metric tons (MMT) for the quota year 1996/97 to 1.6 MMT for 1997/98 (year beginning Oct. 1).

statistics for all commodity/industry groups in the agricultural products sector are presented in table 5-5 at the end of the chapter.

## U.S. BILATERAL TRADE

The principal U.S. trading partners for imports and exports of agricultural products in 1998 were Canada, Japan, Mexico, Korea, the Netherlands, and China (table 5-4). Compared with 1997, the only shift in the ranking of U.S. agricultural products trading partners was that by China, which replaced Taiwan as the sixth-leading partner.

**Table 5-4**  
**Agricultural products: Leading U.S. import and export products, by major partner, 1998**

Partner	Leading imports	Leading exports
Canada . . . . .	Live cattle Fresh or chilled beef Fresh, chilled, or frozen fish Bread, pastry, cakes	Animal feed (and oilseed meal) Miscellaneous food preparations Bread, pastry, cakes Fruit juice
Japan . . . . .	Shell fish Frozen fish	Cigarettes, cigars Corn Soybeans Fresh or chilled beef Wheat
Mexico . . . . .	Fresh or chilled tomatoes Beer Fresh or chilled vegetables Coffee Live cattle	Soybeans Cotton Corn Grain sorghum Beef
Korea . . . . . <sup>(1)</sup>		Corn Soybeans Hides and skins Cotton Wheat
Netherlands . . . .	Beer Live bulbs Cut flowers Cocoa powder Fresh tomatoes	Soybeans Corn gluten meal and feed Unmanufactured tobacco Edible nuts
China . . . . .	Frozen fish Feathers and down Shellfish	Soybean oil Soybeans Soybean meal Cotton Hides and skins

<sup>1</sup>Not a significant import supplier.

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

The largest 1998 absolute decline in the trade position of U.S. agricultural products among the top 10 suppliers occurred with Japan. The U.S. agricultural trade surplus with Japan declined by \$1.6 billion (13 percent) to \$11.3 billion in 1998 (table 5-1), following a similar drop (\$1.5 billion) in the surplus the previous year. U.S. exports to Japan of cereals fell by \$643 million (22 percent) to \$2.2 billion in 1998, and U.S. exports of oilseeds, by \$274 million (24 percent). The fall in the U.S. trade surplus with Japan in

1998 reflected a U.S. loss in market share for cereals to other foreign suppliers, and much lower oilseed (soybean) prices.

The U.S. trade surplus in agricultural products with the EU fell significantly in 1998 by \$1.5 billion (83 percent) to \$308 million (table 5-1). This is a major turnabout from the U.S. trade surplus with the EU of \$2.8 billion as recently as 1996. In 1998, the nearly \$700 million (29 percent) drop in U.S. oilseed exports to the EU accounted for nearly three-quarters of the sector export decline of \$982 million (9 percent). Meanwhile, U.S. imports from the EU rose by \$563 million (7 percent) as U.S. consumers turned to European high-valued consumer food products, such as beer, cheese, and prepared foods.

Another large decline in the U.S. sector trade position was with Korea, as the U.S. trade surplus fell by \$801 million (26 percent) to \$2.2 billion in 1998 (table 5-1). This followed a decrease of greater magnitude (\$970 million) in the surplus during the previous year. The drop in U.S. exports was broad-based with most commodity categories falling. This decline was largely caused by the market retrenchment in Korea, exacerbated by a weaker won in relation to dollar (raising effective prices for U.S. goods), and inroads of third-country suppliers of cereals and feed grains in the Korean market.

The U.S. sector trade surplus with Mexico rose by \$434 million (82 percent) to \$964 million in 1998 (table 5-1). This was the best U.S. trade improvement achieved for any leading U.S. market country in 1998. Mexico's economic recovery and drought-reduced domestic supplies supported higher imports of U.S. oilseeds, cotton, grain, beef, and fats and oils.

The U.S. sector trade surplus with China fell by \$358 million (49 percent) to \$378 million in 1998 (table 5-1). The decline was largely the result of a \$306 million (18-percent) drop in U.S. exports of grains, oilseeds, and oilseed meals.

## COMMODITY ANALYSIS

### Cereals (Food and Feed Grains)<sup>5</sup>

The U.S. trade surplus in food and feed grains declined by \$904 million (9 percent) during 1997-98 to \$9.2 billion as the contraction in exports exceeded a slight drop in imports. Food and feed grain exports fell by 10 percent (\$1.1 billion) to \$9.9 billion in 1998. On a volume basis, exports were essentially flat at 77.7 million metric tons (MMT) in 1998 versus 76.9 MMT exported the previous year; however, the value of exports was down due to the sharp drop in grain prices. U.S. wheat prices fell in 1998 by 21 percent, and corn prices by 34 percent, continuing the downward price spiral begun in 1997.<sup>6</sup> These lower prices contributed to a decline in the value of U.S. grain imports of \$211 million (22 percent) to \$773 million in 1998 although the import volume also fell by 10 percent.

#### U.S. exports

U.S. grain exports in 1998 fell to most leading markets (except to Mexico, Colombia, and Korea). Exports to Japan fell by \$643 million (22 percent), to Taiwan by \$329 million (38 percent), to the

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<sup>5</sup> Grains include rice, wheat, barley, corn, sorghum, oats, and rye. Milled grain products, such as flour, are excluded.

<sup>6</sup> The export price (f.o.b. vessel, Gulf ports) of U.S. wheat dropped from \$4.35 per bushel in 1997 to \$3.43 per bushel in 1998; the comparable price of U.S. corn fell from \$2.98 to \$2.59 per bushel, respectively. USDA, *Agricultural Outlook*, various months.

Philippines by \$67 million (21 percent), and to Egypt by \$57 million (7 percent). Purchases of U.S. grain by these four leading foreign markets declined in value largely because of the sharp drop in grain prices and because of a shift to third-country suppliers. In Taiwan, the reduction in farm animals lowered the demand for feed grain, and thus lowered the volume of U.S. grain purchased (mostly U.S. corn) by 31 percent to 4.4 MMT. Other major wheat and feed grain exporters in 1998, particularly Argentina, China, and the EU, had abundant supplies, undercutting U.S. exports in most markets of the world, and weighing down U.S. grain prices.

Mexico and Colombia were the only bright spots among leading U.S. grain markets in 1998, with U.S. exports to Mexico rising by \$405 million (46 percent), and to Colombia by \$46 million (22 percent). Lower Mexican grain production (brought on by a drought) and expanding demand for meat and corn tortillas buoyed demand for U.S. corn, sorghum, and wheat.<sup>7</sup> Colombia purchased \$64 million (580 percent) more U.S. rough (paddy) rice because of favorable prices, quality, and availability owing to lower supplies from drought-affected third-country exporters.<sup>8</sup>

Wheat, corn, rice, and sorghum accounted for nearly all (96 percent) of the \$10.0 billion of U.S. grain exports in 1998.<sup>9</sup> Corn exports fell in 1998 by \$860 million (17 percent) to \$4.2 billion, as much lower corn prices and plentiful third-country supplies (particularly in key U.S. markets) undercut U.S. corn sales. Similarly, exports of sorghum, another feed grain, fell by \$145 million (20 percent) to \$594 million. Wheat exports declined by \$398 million (10 percent) to \$3.7 billion, with lower exports to Japan, Korea, and the Philippines. Buoyed by drought-reduced rice supplies in other countries (particularly in Central and South America), U.S. rice exports rose by \$276 million (30 percent) to \$1.2 billion in 1998.

Among the leading foreign markets for U.S. grain in 1998, Japan and Taiwan experienced the sharpest drop (on a value basis). The volume of U.S. grain exports to Japan fell by 10 percent to 28 MMT in 1998 as the value fell by \$643 million (22 percent) to \$2.2 billion. There were fewer Japanese purchases of feed grains (corn and sorghum) and wheat, although U.S. rice exports to Japan remained largely unchanged. U.S. grain exports to Japan have suffered over a number of years as Japan's falling domestic livestock production reduced demand for imported feed grains, and as increased competition from Argentine corn decreased the U.S. share of the Japanese corn market.<sup>10</sup>

U.S. corn sales to Taiwan fell in 1998 for related reasons. Taiwan reduced its overall imports of feed grain in 1998 as a result of lower hog production after an outbreak of foot and mouth disease in the previous year leading, in part, to an 11-percent drop in 1998 Taiwan corn consumption. Furthermore, Argentina--as in China--increased corn exports to Taiwan, notwithstanding its overall import decline, according to the USDA attache in Taipei.<sup>11</sup>

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<sup>7</sup> USDA, Foreign Agriculture Service (FAS), telegram No. MX9027, "Mexico Grain and Feed Annual," prepared by the U.S. Embassy, Mexico City, Mar. 10, 1999.

<sup>8</sup> USDA, FAS, telegram No. CO8030, "Colombia Grain and Feed, Update on Colombia's Rice Import Activity, 1998" prepared by the U.S. Embassy, Bogota, Oct. 27, 1998, p. 1.

<sup>9</sup> Corn accounted for 42 percent of the \$10 billion of 1998 exports; wheat, 37 percent; rice, 12 percent; and sorghum, 5 percent.

<sup>10</sup> USDA, FAS, telegram No. JA9013, "Japan Grain and Feed Annual," prepared by the U.S. Embassy, Tokyo, Feb. 8, 1999, p. 16.

<sup>11</sup> USDA, FAS, telegram No. TW8017, "Grain and Feed 1998 Annual," prepared by the American Institute in Taiwan, Taipei, Apr. 22, 1998, p. 1.

## Oilseeds<sup>12</sup>

During the years 1997-98, the U.S. trade surplus in oilseeds dropped by \$2.5 billion (34 percent) to the lowest level since 1994. The fall in U.S. exports of soybeans accounted for the trade surplus decline as imports were essentially unchanged. The oilseed group, like the cereals (grains) group, is one of the largest agricultural export sectors (imports being minor when compared to exports).

Encouraged by the high prices in 1996/97, U.S. soybean farmers in crop-year 1997/98<sup>13</sup> harvested 73.2 MMT, the largest on record, and 13 percent above the 1996/97 crop.<sup>14</sup> Farmers in three other leading soybean-producing countries, Brazil, Argentina, and China, also had record or near-record crops, resulting in a world crop of 156.7 MMT, about 19 percent above the 1996/97 world output.<sup>15</sup>

Although the volume of world trade of soybeans rose by 9 percent to 40.4 MMT in 1997/98, ending world stocks increased by nearly 55 percent to 20.8 MMT. These effectively depressed world soybean prices, and the U.S. export price of soybeans (the world price) fell by 15 percent during 1997-98.<sup>16</sup>

### U.S. exports

In 1998, the volume of U.S. oilseed exports (94 percent of which are soybeans)<sup>17</sup> dropped by 23 percent to 20 MMT, and its value dropped by \$2.5 billion (33 percent) to \$5.2 billion. All top 10 U.S. markets for oilseeds reduced purchases, often substituting third-country soybeans for U.S. product.

The largest single drop in oilseed exports was the decline of \$695 million (29-percent) to \$1.7 billion to the EU, the leading U.S. and world market for soybean imports. The volume of U.S. soybean exports to the EU fell by 22 percent during 1997-98 from 8.3 MMT to 6.5 MMT. EU soybean imports from all countries rose during this period, meaning that the loss of U.S. soybeans exports resulted primarily from increased sales of Brazilian and Argentine beans.

For Japan, the second-leading market for U.S. oilseeds, U.S. exports dropped by \$274 million (24 percent) during 1997-98 to \$889 million. The volume of soybean exports to Japan remained largely unchanged at about 3 MMT; thus, declining U.S. exports to Japan resulted from lower soybean prices. Total Japanese soybean imports from all countries remained flat at about 5 MMT annually, according to U.S. Department of Agriculture (USDA) data.<sup>18</sup>

U.S. oilseed exports to Taiwan, another important market, declined by \$373 million (57 percent) during 1997-98 to \$277 million. Taiwan has cut back its hog production since 1997 because of an outbreak of foot-and-mouth disease, thereby reducing its demand for soybeans to produce soybean meal for

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<sup>12</sup> Oilseeds include soybeans, sunflowerseed, cottonseed, flaxseed, safflowerseed, sesame seed, and rapeseed (canola); excluded are peanuts and the processed oilseed products: oilseed meal, vegetable oil, and animal fats.

<sup>13</sup> The crop-year begins September 1.

<sup>14</sup> USDA, FAS, *Oilseeds: World Markets and Trade*, May 1999, table 5.

<sup>15</sup> Ibid..

<sup>16</sup> The export price (f.o.b. vessel, Gulf ports) of U.S. soybeans fell from \$7.48 per bushel in 1997 to \$6.36 per bushel in 1998. USDA, *Agricultural Outlook*, various months.

<sup>17</sup> Soybeans are processed into soybean oil (used chiefly in cooking oils and baking fats), and soybean meal (a key animal feed ingredient).

<sup>18</sup> USDA, FAS, *Oilseeds*, Feb. 1999, table 5.

feed, and for feed grains (see previous article on cereals).<sup>19</sup> Compounding the U.S. export decline in 1998, Taiwan purchased more Argentine, Brazilian, and Paraguayan soybeans, thereby reducing the U.S. share of the Taiwanese market to a record low of 66 percent in 1998, according to USDA.

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<sup>19</sup> USDA, FAS, telegram No. TW9001, "Taiwan Oilseeds and Products: Soybean Imports Decline 1998," prepared by the American Institute in Taiwan, Taipei, Dec. 30, 1998, p. 2.

**Table 5-5**  
**Agricultural products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>**

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
AG001	Certain miscellaneous animals and meats:				
	Exports .....	1,848	1,859	11	0.6
	Imports .....	1,262	1,375	113	9.0
	Trade balance: .....	586	484	-102	-17.4
AG002	Cattle and beef:				
	Exports .....	2,573	2,382	-191	-7.4
	Imports .....	2,534	2,752	219	8.6
	Trade balance: .....	39	-370	-409	( <sup>3</sup> )
AG003	Swine and pork:				
	Exports .....	943	937	-6	-0.7
	Imports .....	792	922	131	16.5
	Trade balance: .....	152	15	-137	-90.4
AG004	Sheep and meat of sheep:				
	Exports .....	65	35	-30	-46.2
	Imports .....	144	166	22	15.4
	Trade balance: .....	-78	-131	-52	-66.7
AG005	Poultry:				
	Exports .....	2,515	2,255	-260	-10.3
	Imports .....	43	46	3	6.8
	Trade balance: .....	2,472	2,210	-263	-10.6
AG006	Fresh or chilled fish:				
	Exports .....	238	215	-23	-9.6
	Imports .....	1,025	902	-123	-12.0
	Trade balance: .....	-787	-686	100	12.8
AG007	Frozen fish:				
	Exports .....	1,371	1,071	-300	-21.9
	Imports .....	1,446	1,531	85	5.9
	Trade balance: .....	-75	-461	-386	-513.2
AG008	Canned fish and other fish:				
	Exports .....	326	317	-9	-2.8
	Imports .....	736	783	47	6.4
	Trade balance: .....	-411	-467	-56	-13.7
AG009	Shellfish:				
	Exports .....	720	589	-130	-18.1
	Imports .....	4,472	4,653	181	4.1
	Trade balance: .....	-3,752	-4,064	-312	-8.3
AG010	Dairy produce:				
	Exports .....	618	592	-26	-4.2
	Imports .....	1,109	1,325	215	19.4
	Trade balance: .....	-492	-733	-241	-49.1
AG011	Eggs:				
	Exports .....	207	207	1	0.3
	Imports .....	19	14	-5	-27.9
	Trade balance: .....	188	193	6	3.2
AG012	Sugar and other sweeteners:				
	Exports .....	359	381	22	6.1
	Imports .....	1,321	1,068	-253	-19.2
	Trade balance .....	-961	-687	275	28.6
AG013	Animal feeds:				
	Exports .....	4,837	4,317	-520	-10.8
	Imports .....	783	759	-24	-3.0
	Trade balance: .....	4,054	3,557	-497	-12.2
AG014	Live plants:				

See footnote(s) at end of table.

Table 5-5--Continued

Agricultural products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Exports .....	117	142	25	21.8
	Imports .....	336	387	51	15.3
	Trade balance: .....	-219	-245	-26	-11.8
AG015	Seeds:				
	Exports .....	776	737	-39	-5.0
	Imports .....	361	406	45	12.5
	Trade balance: .....	414	330	-84	-20.4
AG016	Cut flowers:				
	Exports .....	49	45	-4	-8.6
	Imports .....	595	614	19	3.2
	Trade balance: .....	-546	-570	-24	-4.3
AG017	Miscellaneous vegetable substances:				
	Exports .....	470	462	-7	-1.6
	Imports .....	855	993	138	16.1
	Trade balance: .....	-386	-531	-145	-37.7
AG018	Fresh, chilled, or frozen vegetables:				
	Exports .....	1,178	1,199	21	1.8
	Imports .....	1,857	2,313	456	24.6
	Trade balance: .....	-678	-1,114	-435	-64.2
AG019	Prepared or preserved vegetables, mushrooms, and olives:				
	Exports .....	1,433	1,586	153	10.7
	Imports .....	1,074	1,210	136	12.7
	Trade balance: .....	359	377	18	4.9
AG020	Edible nuts:				
	Exports .....	1,491	1,392	-99	-6.7
	Imports .....	630	660	30	4.8
	Trade balance: .....	861	732	-129	-15.0
AG021	Tropical fruit:				
	Exports .....	70	60	-10	-14.1
	Imports .....	1,466	1,495	28	1.9
	Trade balance: .....	-1,396	-1,434	-38	-2.7
AG022	Citrus fruit:				
	Exports .....	735	672	-63	-8.6
	Imports .....	201	211	11	5.3
	Trade balance: .....	535	461	-74	-13.8
AG023	Deciduous fruit:				
	Exports .....	780	665	-115	-14.7
	Imports .....	187	177	-11	-5.7
	Trade balance: .....	592	488	-104	-17.6
AG024	Other fresh fruit:				
	Exports .....	557	484	-73	-13.0
	Imports .....	717	890	173	24.2
	Trade balance: .....	-160	-406	-246	-153.9
AG025	Dried fruit other than tropical:				
	Exports .....	386	385	( <sup>4</sup> )	-0.1
	Imports .....	61	60	-1	-1.2
	Trade balance .....	325	325	( <sup>4</sup> )	0.1
AG026	Frozen fruit:				
	Exports .....	79	92	13	15.8

See footnote(s) at end of table.

Table 5-5--Continued

Agricultural products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Imports .....	88	89	( <sup>4</sup> )	0.3
	Trade balance: .....	-9	3	12	( <sup>3</sup> )
AG027	Prepared or preserved fruit:				
	Exports .....	182	185	3	1.8
	Imports .....	545	484	-61	-11.3
	Trade balance .....	-363	-299	65	17.8
AG028	Coffee and tea:				
	Exports .....	254	263	9	3.6
	Imports .....	4,071	3,656	-414	-10.2
	Trade balance: .....	-3,816	-3,393	423	11.1
AG029	Spices:				
	Exports .....	58	66	8	14.2
	Imports .....	416	455	40	9.5
	Trade balance: .....	-358	-389	-31	-8.8
AG030	Cereals:				
	Exports .....	11,106	9,991	-1,115	-10.0
	Imports .....	984	773	-211	-21.5
	Trade balance: .....	10,122	9,218	-904	-8.9
AG031	Milled grains, malts, and starches:				
	Exports .....	429	407	-22	-5.1
	Imports .....	167	160	-7	-4.2
	Trade balance .....	262	247	-15	-5.6
AG032	Oilseeds:				
	Exports .....	7,700	5,166	-2,535	-32.9
	Imports .....	335	315	-20	-6.1
	Trade balance: .....	7,365	4,851	-2,514	-34.1
AG033	Animal or vegetable fats and oils:				
	Exports .....	2,173	2,763	591	27.2
	Imports .....	1,517	1,475	-42	-2.8
	Trade balance: .....	656	1,289	633	96.5
AG034	Edible preparations:				
	Exports .....	4,029	3,677	-352	-8.7
	Imports .....	2,139	2,418	279	13.0
	Trade balance .....	1,890	1,260	-631	-33.4
AG035	Cocoa, chocolate, and confectionery:				
	Exports .....	662	602	-60	-9.0
	Imports .....	1,910	2,183	273	14.3
	Trade balance: .....	-1,248	-1,581	-333	-26.7
AG036	Fruit and vegetable juices:				
	Exports .....	677	668	-9	-1.4
	Imports .....	856	677	-179	-20.9
	Trade balance .....	-178	-9	170	95.2
AG037	Nonalcoholic beverages, excluding fruit and vegetable juices:				
	Exports .....	299	302	3	1.2
	Imports .....	524	568	44	8.4
	Trade balance: .....	-226	-266	-41	-18.0
AG038	Malt beverages:				
	Exports .....	319	254	-65	-20.3
	Imports .....	1,480	1,699	219	14.8
	Trade balance: .....	-1,162	-1,445	-284	-24.4
AG039	Wine and certain other fermented beverages:				
	Exports .....	415	532	117	28.3

Table 5-5--Continued

Agricultural products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Imports .....	1,716	1,881	165	9.6
	Trade balance: .....	-1,301	-1,349	-48	-3.7
AG040	Distilled spirits:				
	Exports .....	390	395	5	1.3
	Imports .....	1,966	2,084	118	6.0
	Trade balance: .....	-1,576	-1,689	-113	-7.2
AG041	Unmanufactured tobacco:				
	Exports .....	1,553	1,459	-94	-6.1
	Imports .....	1,089	771	-318	-29.2
	Trade balance .....	464	688	224	48.3
AG042	Cigars and certain other manufactured tobacco:				
	Exports .....	547	661	114	20.9
	Imports .....	419	377	-42	-10.0
	Trade balance: .....	128	284	156	121.9
AG043	Cigarettes:				
	Exports .....	4,409	4,166	-244	-5.5
	Imports .....	44	59	15	34.9
	Trade balance: .....	4,365	4,106	-259	-5.9
AG044	Hides, skins, and leather:				
	Exports .....	2,310	1,934	-376	-16.3
	Imports .....	1,133	1,124	-9	-0.8
	Trade balance .....	1,177	809	-368	-31.2
AG045	Furskins:				
	Exports .....	222	196	-26	-11.7
	Imports .....	115	86	-28	-24.6
	Trade balance: .....	107	109	2	1.9
AG062	Ethyl alcohol for nonbeverage purposes:				
	Exports .....	123	58	-65	-52.8
	Imports .....	119	124	5	4.3
	Trade balance: .....	4	-66	-70	( <sup>3</sup> )
AG063	Wool and other animal hair:				
	Exports .....	17	13	-4	-23.8
	Imports .....	179	141	-38	-21.5
	Trade balance .....	-163	-128	35	21.2
AG064	Cotton, not carded or combed:				
	Exports .....	2,682	2,545	-137	-5.1
	Imports .....	3	14	11	346.2
	Trade balance .....	2,679	2,532	-147	-5.5

<sup>1</sup> Import values 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> Not meaningful for purposes of comparison.

<sup>4</sup> Less than \$500,000.

Note.--Calculations based on unrounded data.

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

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# CHAPTER 6

## Forest Products

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The U.S. trade deficit in forest products expanded by \$3.6 billion (80 percent) to \$8.1 billion during the years 1997-98 (table 6-1). Exports fell by \$2.1 billion (8 percent) to \$23.9 billion (table 6-2), whereas imports rose by \$1.5 billion (5 percent) to \$32.0 billion (table 6-3). Exports of wood and wood products generally declined, with lumber exports down \$573 million (23 percent); logs and rough wood products down \$451 million (19 percent); and structural panel products, which includes plywood, down by \$237 million (20 percent). Exports of most categories of pulp, paper, and paper products also trended downward, as wood pulp and wastepaper fell by \$441 million (11 percent) and industrial papers and paperboard declined by \$222 million (4 percent). Imports rose in most wood and wood products categories, led by structural panel products, up \$518 million (23 percent), and moldings, millwork, and joinery, which increased by \$330 million (21 percent). A relatively strong U.S. construction market, including residential housing, contributed to these increases. U.S. imports of certain paper and paper products increased from all sources, with printing and writing papers rising by \$517 million (14 percent) and industrial papers and paperboard by \$223 million (11 percent). Imports of printed matter rose less dramatically, by \$204 million (8 percent). Trade statistics for all commodity industry groups in the forest products sector are presented in table 6-5 at the end of this chapter.

### U.S. BILATERAL TRADE

The United States posted a trade surplus in forest products among the top 10 trading countries, except for Canada, China, and Brazil (table 6-1). In 1998, the United States had a \$14.4 billion trade deficit with Canada, the country that is by far the largest U.S. trading partner in forest products. The trade deficit with Canada increased by \$487 million (4 percent) in 1998 from year-earlier levels reflecting an increase in U.S. imports that more than offset an increase in U.S. exports. In 1998, 66 percent of all forest product imports entering the United States came from Canada. U.S. imports from Canada rose by \$547 million (3 percent) to \$21.2 billion. The leading U.S. imports and exports of forest products for Canada and other major U.S. trading partner countries are presented in table 6-4. Canada traditionally supplies the United States softwood lumber (\$6.1 billion in 1998), newsprint (\$3.5 billion), printing and writing papers (\$1.7 billion), and woodpulp (\$1.7 billion). U.S. exports to Canada increased \$60 million (1 percent) to \$6.8 billion. The major U.S. exports of forest products to Canada in 1998 were printed matter, newspapers, journals and periodicals, and paper and paperboard.

Canadian forest product exporters increased sales of solid wood products to the United States in an effort to offset poor sales to Asia.<sup>1</sup> In the past, Asia has been Canada's second-largest export market for forest products after the United States. U.S. imports were also encouraged by the strength of the U.S.

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<sup>1</sup> Based on U.S. Department of Agriculture (USDA), Foreign Agricultural Service (FAS), *Greater Dependence on U.S. Market During Asian Economic Slowdown*, GAIN Report #CA8084, Dec. 16, 1998, p. 1, found at Internet address [http://www.fas.usda.gov/scripts/gain\\_display\\_report.exe?Rep\\_ID=25373130.0](http://www.fas.usda.gov/scripts/gain_display_report.exe?Rep_ID=25373130.0), retrieved Mar. 9, 1999.

Table 6-1

Forest products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	6,774	6,833	60	0.9
Mexico .....	2,526	2,828	302	12.0
Japan .....	3,963	2,946	-1,018	-25.7
United Kingdom .....	1,334	1,169	-164	-12.3
China .....	485	611	126	25.9
Germany .....	933	867	-66	-7.0
Brazil .....	429	359	-69	-16.2
Italy .....	720	678	-42	-5.9
Hong Kong .....	651	495	-156	-23.9
France .....	456	421	-35	-7.8
All Other .....	7,693	6,693	-999	-13.0
Total .....	25,964	23,901	-2,063	-7.9
<b>Selected country groups:</b>				
EU-15 .....	5,036	4,724	-313	-6.2
OPEC .....	617	499	-118	-19.1
Latin America .....	4,834	5,052	219	4.5
CBERA .....	970	1,025	55	5.7
Asian Pacific Rim .....	8,184	6,181	-2,003	-24.5
ASEAN .....	968	655	-313	-32.3
Central and Eastern Europe .....	56	60	4	6.6
<b>U.S. imports for consumption:</b>				
Canada .....	20,687	21,234	547	2.6
Mexico .....	967	1,003	35	3.6
Japan .....	491	515	24	4.8
United Kingdom .....	726	789	63	8.7
China .....	965	1,244	278	28.8
Germany .....	594	696	102	17.2
Brazil .....	735	797	62	8.5
Italy .....	322	364	42	13.1
Hong Kong .....	348	333	-14	-4.1
France .....	395	376	-19	-4.7
All Other .....	4,227	4,648	421	10.0
Total .....	30,456	31,998	1,542	5.1
<b>Selected country groups:</b>				
EU-15 .....	3,487	3,846	359	10.3
OPEC .....	573	610	37	6.5
Latin America .....	2,280	2,399	119	5.2
CBERA .....	98	97	-1	-1.1
Asian Pacific Rim .....	3,503	3,967	464	13.2
ASEAN .....	1,150	1,234	83	7.2
Central and Eastern Europe .....	24	21	-3	-12.2
<b>U.S. merchandise trade balance:</b>				
Canada .....	-13,913	-14,400	-487	-3.5
Mexico .....	1,559	1,825	267	17.1
Japan .....	3,472	2,431	-1,042	-30.0
United Kingdom .....	608	380	-228	-37.4
China .....	-480	-633	-152	-31.7
Germany .....	339	171	-168	-49.5
Brazil .....	-306	-438	-132	-43.0
Italy .....	398	313	-84	-21.2
Hong Kong .....	304	162	-142	-46.7
France .....	62	45	-17	-27.1
All Other .....	3,465	2,045	-1,420	-41.0
Total .....	-4,492	-8,097	-3,605	-80.2
<b>Selected country groups:</b>				
EU-15 .....	1,549	878	-671	-43.3
OPEC .....	44	-111	-155	( <sup>2</sup> )
Latin America .....	2,553	2,653	100	3.9
CBERA .....	872	928	56	6.4
Asian Pacific Rim .....	4,681	2,214	-2,467	-52.7
ASEAN .....	-183	-579	-396	-216.5
Central and Eastern Europe .....	33	39	7	20.3

<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.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

**Table 6-2**  
**Leading decreases in U.S. exports of forest products, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
————— <i>Million dollars</i> —————				
<b>Decreases:</b>				
Lumber (AG047) . . . . .	2,532	1,959	-573	-23
Logs and rough wood products (AG046) . . . . .	2,420	1,970	-451	-19
Woodpulp and wastepaper (AG054) . . . . .	3,893	3,452	-441	-11
Structural panel products (AG049) . . . . .	1,166	929	-237	-20
Industrial papers and paperboards (AG056) . . . . .	5,407	5,185	-222	-4
<b>All other</b> . . . . .	10,546	10,406	-139	-1
<b>Total</b> . . . . .	25,964	23,901	-2,063	-8

Note.--Calculations based on unrounded data.

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

**Table 6-3**  
**Leading increases in U.S. imports of forest products, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
————— <i>Million dollars</i> —————				
<b>Increases:</b>				
Structural panel products (AG049) . . . . .	2,249	2,767	518	23
Printing and writing papers (AG058) . . . . .	3,773	4,289	517	14
Moldings, millwork, and joinery (AG048) . . . . .	1,594	1,924	330	21
Industrial papers and paperboard (AG056) . . . . .	2,044	2,267	223	11
Printed matter (AG061) . . . . .	2,719	2,923	204	8
<b>All other</b> . . . . .	18,077	17,828	-250	-2
<b>Total</b> . . . . .	30,456	31,998	1,542	5

Note.--Calculations based on unrounded data.

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

dollar in relation to the Canadian dollar. However, some Canadian export interests contend that Canadian exports of softwood lumber were limited by the U.S.-Canada Softwood Lumber Agreement.<sup>2</sup>

The U.S. trade surplus with Mexico grew by \$267 million (17 percent) to \$1.8 billion in 1998 and was primarily the result of increased U.S. exports, which rose by \$302 million (12 percent), more than offsetting a \$35 million (4-percent) increase in U.S imports from Mexico. The major U.S. export of forest products to Mexico in 1998 was packing containers, which accounted for nearly one-fourth of the value of U.S. exports of forest products from the United States. Many of these containers are shipped to

<sup>2</sup> Canadian Pulp and Paper Association (CPPA), *CPPA Weekly News*, "News Summary - Week Ending Mar. 5, 1999," p. 1, found at Internet address <http://www.cppa.org/english/w-news/index.htm>, retrieved Mar. 8, 1999.

**Table 6-4**  
**Forest products: Leading U.S. import and export products, by major partner, 1998**

Partner	Leading imports	Leading exports
Canada . . . . .	Wood, sawn or chipped lengthwise, sliced or peeled, more than 6mm thick News print, in rolls or sheets Paper and paperboard, uncoated, for writing, printing etc, punch card stock etc. in rolls or sheets, hand made paper and paperboard Chemical woodpulp, soda or sulfate Particle board and similar boards of wood or other ligneous materials Paper and paperboard, coated with kaolin or other inorganic substance	Books, brochures and similar printed matter Newspapers, journals and periodicals Paper and paperboard, coated with kaolin or other inorganic substances Wood, sawn or chipped lengthwise, sliced or peeled, more than 6mm thick Toilet paper, towels, and the like, household or sanitary items
Mexico . . . . .	Paper and paperboard registers, notebooks, stationary and similar articles Toilet paper, towels, and the like, household or sanitary items Wooden frames for paintings, photographs, mirrors or similar objects	Cartons, bags, and other containers of paper, paperboard, etc., and office paper products Chemical woodpulp, soda or sulfate Paper and paperboard, coated with kaolin or other inorganic substance
Japan . . . . .	Paper, paperboard, wadding, and webs, surface prepared	Wood in the rough, whether or not stripped of bark or sapwood Fuel wood in logs, etc., wood in chips, etc. Chemical woodpulp, soda or sulfate Wood, sawn or chipped lengthwise, sliced or peeled, more than 6mm thick News print, in rolls or sheets Paper, paperboard, wadding, and webs, surface prepared
United Kingdom . . . . .	Books, brochures, and similar printed matter Wallpaper and similar wall coverings	Books, brochures, and similar printed matter Wood, sawn or chipped lengthwise, sliced or peeled, more than 6mm thick
China . . . . .	Paper and paperboard registers, notebooks, stationary and similar articles Wood marquetry and inlaid wood, cases for jewelry or cutlery and similar articles statuettes and other ornaments, wood furniture Basketwork, wicker craft and other made to shape from plaiting materials, articles of loofah	Kraft paper and paperboard, uncoated
Germany . . . . .	Paper and paperboard, coated with kaolin or other inorganic substance Paper, paperboard, wadding, and webs, surface prepared	Chemical woodpulp, soda or sulfate Chemical woodpulp, dissolving grades Wood, sawn or chipped lengthwise, sliced or peeled, more than 6mm thick

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

maquiladora plants for use in packaging/packing articles assembled from U.S. components for shipment back to the United States. A leading U.S. paper company has established subsidiaries in Mexico to supply these maquiladoras with containers on a just-in-time basis. The leading imports from Mexico have been paper and paperboard registers, notebooks, stationery and similar articles, toilet paper, paper towels and the like, and wooden frames for paintings, photographs, mirrors or similar objects.

The largest bilateral trade balance surplus in the forest products sector in 1997 and 1998 was with Japan. In 1998, however, that surplus declined by \$1.0 billion (30 percent). The contraction in the surplus was accounted for almost entirely by a decline in U.S. exports. The overall decline in U.S. sector exports reflects the economic downturn in Asia, especially the depressed residential housing construction sector and plywood markets in Japan, one of the top U.S. wood and wood products markets.<sup>3</sup> Also, exports suffered from declining price competitiveness in the Japanese market due to weaknesses of the yen in relation to the dollar.<sup>4</sup> Exports of sector products to Japan dropped \$1.0 billion (26 percent) to \$2.9 billion during 1997-98. The Asian financial situation and the strength of the dollar in relation to the yen have been cited as contributing to the decline of exports, and increase in U.S. imports of paper and paper products.<sup>5</sup>

The U.S. trade surplus with the United Kingdom declined by \$228 million (37 percent) in 1998 from the previous year level. The drop in the trade surplus resulted from both a decline in U.S. exports of \$164 million (12 percent) and an increase in U.S. imports of \$63 million (9 percent). U.S. exports of forest products to the United Kingdom include books, brochures, and similar printed matter, and lumber. Books, brochures, and similar printed matter accounted for 41 percent of U.S. imports of forest products from the United Kingdom in 1998.

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<sup>3</sup> USDA, FAS, *Japan's Current Plywood Imports and Softwood Plywood Production*, Global Agriculture Information Network (GAIN) Report #JA8078, Oct. 13, 1998, p. 1, found at Internet address [http://www.fas.usda.gov/scripts/gain\\_display\\_report.exe?Rep\\_ID=25372335.0](http://www.fas.usda.gov/scripts/gain_display_report.exe?Rep_ID=25372335.0), retrieved Mar. 9, 1999.

<sup>4</sup> USDA, FAS, *Forest Products Annual Report*, GAIN Report #JA8064, Aug. 3, 1998, p. 1., found at Internet address [http://www.fas.usda.gov/scripts/gain\\_display\\_report.exe?Rep\\_ID=25351792.0](http://www.fas.usda.gov/scripts/gain_display_report.exe?Rep_ID=25351792.0), retrieved Mar 9, 1999.

<sup>5</sup> American Forest & Paper Association, *Asian Crisis, Strong Dollar Dampen Paper and Paperboard Production*, news release, Mar. 9, 1999, found at Internet address [http://www.afandpa.org/Media/press\\_release/sumryrel.html](http://www.afandpa.org/Media/press_release/sumryrel.html), retrieved Mar. 12, 1999.

**Table 6-5**  
**Forest products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>**

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
AG046	Logs and rough wood products:				
	Exports .....	2,420	1,970	-451	-18.6
	Imports .....	427	436	9	2.1
	Trade balance .....	1,993	1,533	-460	-23.1
AG047	Lumber:				
	Exports .....	2,532	1,959	-573	-22.6
	Imports .....	7,360	6,730	-630	-8.6
	Trade balance: .....	-4,828	-4,771	57	1.2
AG048	Moldings, millwork, and joinery:				
	Exports .....	642	548	-94	-14.6
	Imports .....	1,594	1,924	330	20.7
	Trade balance: .....	-952	-1,376	-424	-44.6
AG049	Structural panel products:				
	Exports .....	1,166	929	-237	-20.3
	Imports .....	2,249	2,767	518	23.0
	Trade balance .....	-1,083	-1,838	-754	-69.6
AG050	Wooden containers:				
	Exports .....	112	138	26	23.0
	Imports .....	348	419	71	20.4
	Trade balance: .....	-236	-281	-45	-19.2
AG051	Tools and tool handles of wood:				
	Exports .....	37	36	( <sup>3</sup> )	-1.1
	Imports .....	117	117	( <sup>3</sup> )	0.3
	Trade balance: .....	-80	-81	-1	-1.0
AG052	Miscellaneous articles of wood:				
	Exports .....	185	202	17	8.9
	Imports .....	733	846	113	15.4
	Trade balance .....	-547	-644	-97	-17.6
AG053	Cork and rattan:				
	Exports .....	76	85	9	11.6
	Imports .....	407	447	39	9.6
	Trade balance: .....	-332	-362	-31	-9.2
AG054	Wood pulp and wastepaper:				
	Exports .....	3,893	3,452	-441	-11.3
	Imports .....	2,656	2,447	-209	-7.9
	Trade balance: .....	1,237	1,005	-232	-18.7
AG055	Paper boxes and bags:				
	Exports .....	1,296	1,345	48	3.7
	Imports .....	674	745	71	10.5
	Trade balance .....	622	600	-22	-3.6
AG056	Industrial papers and paperboards:				
	Exports .....	5,407	5,185	-222	-4.1
	Imports .....	2,044	2,267	223	10.9
	Trade balance: .....	3,363	2,918	-445	-13.2
AG057	Newsprint:				
	Exports .....	522	460	-62	-11.9
	Imports .....	3,590	3,766	175	4.9
	Trade balance: .....	-3,068	-3,305	-237	-7.7
AG058	Printing and writing papers:				

See footnote(s) at end of table.

Table 6-5--Continued

Forest products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Exports .....	1,431	1,350	-81	-5.7
	Imports .....	3,773	4,289	517	13.7
	Trade balance .....	-2,341	-2,939	-598	-25.5
AG059	Certain specialty papers:				
	Exports .....	760	701	-60	-7.9
	Imports .....	808	845	36	4.5
	Trade balance: .....	-48	-144	-96	-200.2
AG060	Miscellaneous paper products:				
	Exports .....	1,196	1,234	38	3.2
	Imports .....	956	1,029	73	7.6
	Trade balance .....	239	204	-35	-14.6
AG061	Printed matter:				
	Exports .....	4,287	4,308	20	0.5
	Imports .....	2,719	2,923	204	7.5
	Trade balance: .....	1,569	1,385	-184	-11.7

<sup>1</sup> Import values 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.

Note.--Calculations based on unrounded data.

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

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# CHAPTER 7

## Chemicals and Related Products

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During the years 1997-98, the U.S. trade surplus for chemicals and related products decreased by \$4.8 billion (40 percent) to \$7.4 billion (table 7-1). U.S. exports of these products decreased by \$174 million (less than 1 percent) to \$78.1 billion, while U.S. imports rose by \$4.7 billion (7 percent) to \$70.7 billion. Since this sector comprises many products, such as coatings, adhesives, plastics, and pigments, used in the production of manufactured goods, the performance of the sector is strongly linked to the general health of the economy. Hence, shifts in U.S. sector exports and imports reflect the relative strength of the U.S. economy compared with other trade partners' economies in 1998.

Among major types of chemicals and related products, U.S. export and import performance varied widely during 1997-98 (table 7-2). Exports of pharmaceuticals (medicinal chemicals) exhibited the largest increase, rising by \$1.6 billion (16 percent) to \$12.0 billion; this increase primarily reflects the introduction of several innovative products, which command high market prices. Offsetting declines occurred in exports of general organic chemicals, which declined by \$1.4 billion (9 percent) to \$15.4 billion. Reduced exports of organic and inorganic chemicals reflect a combination of decreased demand and lower sales prices for certain U.S. commodity chemical products, which can be attributed, in-part, to poor economic conditions in Asia. Abundant supplies on the world market, due to reduced demand in Asia, increased competition for alternative markets, thereby lowering prices worldwide as well as reducing the U.S. global market share.

For U.S. imports of chemicals and related products, pharmaceuticals exhibited the largest increase, rising by \$3.8 billion (27 percent) to \$17.9 billion, followed by plastics, rubber, and products thereof (especially new pneumatic tires and tubes), which grew by \$1.4 billion (7 percent) to \$22.6 billion. Both the strong U.S. economy and increased automobile and truck traffic, due to low petroleum costs, led to greater demand for new tires and tubing for vehicles, requiring foreign products to supplement domestic supply.

The trade position fluctuated significantly across the spectrum from commodity to specialty chemical products. The largest trade deficit was in the pharmaceutical industry, where the trade balance fell by \$2.1 billion (56 percent) to a deficit of \$6.0 billion in 1998. The largest trade surplus, in plastics, rubber, and products thereof, decreased during 1998, falling by \$2 billion (22 percent) to \$5.4 billion. The U.S. plastics industry was adversely affected by the conditions in Asia, which resulted in diminished demand abroad for U.S. products and lower prices for plastics resins worldwide. Trade statistics for all commodity/industry groups in the chemicals and related products sector are presented in table 7-4 at the end of this chapter.

Table 7-1

Chemicals and related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	16,399	17,305	906	5.5
Japan .....	6,117	5,357	-760	-12.4
Mexico .....	8,932	9,885	952	10.7
Germany .....	2,799	2,837	38	1.4
United Kingdom .....	3,207	3,289	82	2.6
China .....	1,978	2,017	39	2.0
France .....	2,054	2,308	254	12.3
Belgium .....	3,530	3,898	369	10.4
Netherlands .....	3,796	4,018	222	5.9
Ireland .....	805	918	114	14.1
All Other .....	28,663	26,273	-2,390	-8.3
Total .....	78,279	78,105	-174	-0.2
<b>Selected country groups:</b>				
EU-15 .....	18,824	20,139	1,315	7.0
OPEC .....	2,085	1,714	-371	-17.8
Latin America .....	17,773	18,688	915	5.1
CBERA .....	1,814	1,818	5	0.3
Asian Pacific Rim .....	20,424	17,095	-3,328	-16.3
ASEAN .....	3,925	2,767	-1,158	-29.5
Central and Eastern Europe .....	251	241	-10	-4.1
<b>U.S. imports for consumption:</b>				
Canada .....	12,463	12,769	306	2.5
Japan .....	8,209	8,288	80	1.0
Mexico .....	2,689	2,767	78	2.9
Germany .....	6,568	7,814	1,245	19.0
United Kingdom .....	4,857	5,433	576	11.9
China .....	3,371	3,706	335	9.9
France .....	2,959	3,289	330	11.2
Belgium .....	1,404	1,405	1	0.1
Netherlands .....	1,143	1,217	74	6.4
Ireland .....	2,643	4,125	1,482	56.1
All Other .....	19,759	19,904	145	0.7
Total .....	66,065	70,717	4,652	7.0
<b>Selected country groups:</b>				
EU-15 .....	23,470	27,754	4,284	18.3
OPEC .....	3,417	3,044	-373	-10.9
Latin America .....	5,585	5,626	41	0.7
CBERA .....	799	757	-42	-5.2
Asian Pacific Rim .....	17,518	17,721	203	1.2
ASEAN .....	2,755	2,291	-464	-16.8
Central and Eastern Europe .....	302	339	37	12.1
<b>U.S. merchandise trade balance:</b>				
Canada .....	3,936	4,536	600	15.2
Japan .....	-2,092	-2,932	-840	-40.1
Mexico .....	6,243	7,118	874	14.0
Germany .....	-3,769	-4,977	-1,207	-32.0
United Kingdom .....	-1,650	-2,144	-494	-29.9
China .....	-1,392	-1,688	-296	-21.2
France .....	-905	-981	-76	-8.4
Belgium .....	2,126	2,493	367	17.3
Netherlands .....	2,652	2,801	149	5.6
Ireland .....	-1,839	-3,207	-1,368	-74.4
All Other .....	8,904	6,369	-2,535	-28.5
Total .....	12,214	7,388	-4,826	-39.5
<b>Selected country groups:</b>				
EU-15 .....	-4,646	-7,615	-2,968	-63.9
OPEC .....	-1,332	-1,330	2	0.2
Latin America .....	12,188	13,063	874	7.2
CBERA .....	1,015	1,061	46	4.6
Asian Pacific Rim .....	2,906	-625	-3,531	( <sup>2</sup> )
ASEAN .....	1,170	477	-694	-59.3
Central and Eastern Europe .....	-51	-98	-47	-91.9

<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.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

Table 7-2

**Chemicals and related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major types, 1997 and 1998<sup>1</sup>**

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
U.S. exports of domestic merchandise:				
Plastics, rubber, and products thereof	28,181	28,048	-134	-0.5
General organic chemicals	16,849	15,421	-1,428	-8.5
General inorganic chemicals	6,024	5,585	-439	-7.3
Pharmaceuticals	10,344	11,955	1,611	15.6
Consumer and industrial products	7,679	7,425	-254	-3.3
Fertilizers and pesticides	5,414	5,731	318	5.9
Dyes, pigments, paints, and inks	3,789	3,940	151	4.0
Total	78,279	78,105	-174	-0.2
U.S. imports for consumption:				
Plastics, rubber, and products thereof	21,221	22,612	1,391	6.6
General organic chemicals	13,795	13,357	-438	-3.2
General inorganic chemicals	5,620	5,288	-332	-5.9
Pharmaceuticals	14,184	17,941	3,758	26.5
Consumer and industrial products	4,741	4,977	236	5.0
Fertilizers and pesticides	3,680	3,758	78	2.1
Dyes, pigments, paints, and inks	2,825	2,784	-41	-1.5
Total	66,065	70,717	4,652	7.0
U.S. merchandise trade balance:				
Plastics, rubber, and products thereof	6,961	5,436	-1,524	-21.9
General organic chemicals	3,054	2,064	-990	-32.4
General inorganic chemicals	404	297	-107	-26.5
Pharmaceuticals	-3,840	-5,987	-2,147	-55.9
Consumer and industrial products	2,938	2,448	-490	-16.7
Fertilizers and pesticides	1,734	1,973	240	13.8
Dyes, pigments, paints, and inks	964	1,156	192	19.9
Total	12,214	7,388	-4,826	-39.5

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

Note.--Calculations based on unrounded data.

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

## U.S. BILATERAL TRADE

The primary U.S. trading partner in chemicals and related products is Canada (table 7-1), largely due to physical proximity, fostering of regional integration of the industries and markets, and establishment of mutually favorable tariff rates under the United States-Canada Free Trade Agreement (CFTA) and the North American Free Trade Agreement (NAFTA). In 1998, Canada was both the leading source of sector products imported by the United States as well as the leading market for U.S. exports in this sector. The U.S. bilateral trade surplus with Canada increased by \$600 million (15 percent) to \$4.5 billion. Exports to Canada increased by \$906 million (6 percent) to \$17.3 billion, and imports rose by \$306 million (3 percent) to \$12.8 billion. The leading U.S. exports and imports of chemicals and related products for Canada and the other major trading partners are presented in table 7-3.

The largest improvement in U.S. sector bilateral trade position was with Mexico, the third-largest partner, where the U.S. trade surplus increased by \$874 million (14 percent) to \$7.1 billion. Exports to Mexico increased by \$952 million (11 percent) to \$9.9 billion, while imports only grew by \$78 million (3 percent) to \$2.8 billion. Growth in U.S.-Mexican sector trade can be attributed to the development of Mexico's downstream manufacturing industries that utilize chemicals and related products as well as the strengthening of Mexican markets for the finished products. The bulk of the growth in U.S. exports to

**Table 7-3**

**Chemicals and related products: Leading U.S. import and export products, by major partner, 1998**

<b>Partner</b>	<b>Leading imports</b>	<b>Leading exports</b>
Canada . . . . .	New rubber pneumatic tires Polymers of ethylene in primary forms Mineral or chemical fertilizers Plastic boxes, bags, lids, caps, etc.	Certain dosage-form medicaments New rubber pneumatic tires Certain plastic plates, sheets, film, foil, and strips Miscellaneous articles of plastics
Japan . . . . .	New rubber pneumatic tires Certain dosage-form medicaments Photographic chemicals Certain carboxylic acids and their derivatives	Human and animal blood and related products Hydrogen, rare gases, and other nonmetals Antibiotics in bulk-form Composite diagnostic/laboratory reagents
Mexico . . . . .	Miscellaneous articles of plastics New rubber pneumatic tires Organic surface-active agents, other than soap Cyclic hydrocarbons	Miscellaneous articles of plastics New rubber pneumatic tires Plastic boxes, bags, lids, caps, etc. Polymers of ethylene in primary forms
Germany . . . . .	Certain dosage-form medicaments Heterocyclic compounds with nitrogen Synthetic organic coloring matter and preparations Pesticides	Composite diagnostic/laboratory reagents Human and animal blood and related products Dried glands and other organs, their extracts, and other human or animal substances for therapeutic use Certain plastic plates, sheets, film, foil, and strips
United Kingdom . . . . .	Certain dosage-form medicaments Nucleic acids and their salts Oxygen-function amino-compounds Heterocyclic compounds with nitrogen	Certain dosage-form medicaments Composite diagnostic/laboratory reagents Certain plastic plates, sheets, film, foil, and strips Human and animal blood and related products
China . . . . .	Miscellaneous articles of plastics Certain plastic household articles Plastic boxes, bags, lids, caps, etc. Certain plastic builders' ware	Fertilizers Certain polymers and resins in primary forms Cellulose and its derivatives in primary forms Polymers of ethylene in primary forms

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

Mexico consisted of tires to motor vehicle assembly plants and packing materials and industrial chemicals to the maquiladora industry.

Total trade (exports plus imports) in chemicals and related products between the European Union (EU) and the United States grew in 1998, reflecting an increase in both U.S. exports and imports. U.S. exports rose by \$1.3 billion (7 percent) to \$20.1 billion, while imports from the EU increased by \$4.3 billion (18 percent) to \$27.8 billion; the U.S. bilateral trade deficit widened by \$3.0 billion (64 percent) to a deficit of \$7.6 billion. In most chemical industry segments, the United States absorbed many of the EU products that would normally have been imported by Asian markets. The two leading European trading partners with the United States were the United Kingdom and Germany. For both countries, the primary types of product traded were medicinal chemicals; this industry benefitted from a rise in new medicines, which command higher market prices, and increasing use of British and German custom manufacturing facilities for pharmaceutical products. Overall, U.S. bilateral trade trends varied among EU countries

included among the top 10 trade partners for chemicals and related products. For example, as the U.S. trade position declined with Germany and the United Kingdom, it increased with Belgium and the Netherlands.

For trade with Japan, the second-leading sector trade partner, the U.S. trade deficit grew by \$840 million (40 percent) to \$2.9 billion in 1998. U.S. exports fell by \$760 million (12 percent) to \$5.4 billion, while imports from Japan increased by \$80 million (1 percent) to \$8.3 billion. Increased imports were largely due to the sluggish Japanese economy, as Japanese companies, confronted with limited domestic demand, cut production or sought foreign markets for their products. Japanese demand for U.S. sector exports was stagnant, except in specialized categories such as medicinal chemicals.

The U.S. bilateral trade deficit with China increased for this sector, growing by \$296 million (21 percent) to \$1.7 billion. U.S. imports were led by miscellaneous rubber or plastic products, which amounted to \$1.5 billion (42 percent) of the \$3.7 billion all sector imports. Due in part to low Chinese wages, Chinese companies are able to produce these labor-intensive products for less than U.S. companies. The two largest categories for U.S. chemical exports to China in 1998 (\$2.0 billion) were fertilizers<sup>1</sup> (\$1.1 billion), to enhance food production, and plastic resins (\$199 million), the raw materials required for China's exported manufactures.

## COMMODITY ANALYSIS OF MEDICINAL CHEMICALS

The U.S. trade deficit in medicinal chemicals (pharmaceuticals) increased by \$2.1 billion (56 percent) to \$6.0 billion in 1998. Although U.S. exports continued to increase, the growing deficit reflects a larger rise in imports, particularly from Western Europe.

Global trade in the pharmaceutical industry has generally increased since January 1, 1995, following the elimination of duties on most medicinal chemical products under the Uruguay Round Agreement. The United States, the United Kingdom, Germany, Ireland, Japan, and several other large pharmaceutical producing countries participated in this agreement. Because the world pharmaceutical industry is dominated by multinational corporations, there is substantial intracompany trade throughout the industry.

In addition, there is a continuing trend in the pharmaceutical industry toward outsourcing the production of bulk active ingredients and chemical intermediates used in the production of drugs. Such chemicals are often produced in highly specialized processes that only a limited number of facilities are equipped to perform. Outsourcing benefits pharmaceutical companies that need a timely and flexible source of these chemicals, which is often the situation for firms looking to push their products through clinical trials and, after regulatory approval, benefit as long as possible from patent protection. Because of the importance of getting new pharmaceutical products to the market as quickly as possible, companies are typically willing to use either domestic or foreign production facilities.<sup>2</sup>

In 1998, several new and innovative medicines were introduced on the market. Such products command high sales prices, which may also account for the increase in total trade (by value) in the pharmaceutical industry.

### U.S. imports

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<sup>1</sup> In 1997, China imposed a ban on imports of certain nitrogenous fertilizers.

<sup>2</sup> Stephen C. Stinson, "Custom Chemicals," *Chemical & Engineering News*, Jan. 19, 1998, pp. 49-52.

U.S. imports of pharmaceuticals increased by \$3.8 billion (27 percent) to \$17.9 billion in 1998. Imports from Germany, the United Kingdom, and Ireland, the top three suppliers (by value) to the United States in 1998, increased by \$1.2 billion (50 percent) to \$3.5 billion, \$454 million (18 percent) to \$3.0 billion, and \$1.3 billion (71 percent) to \$3.2 billion, respectively, and together accounted for 54 percent of total U.S. imports of these products.

The United Kingdom and Germany benefitted from the trend toward outsourcing in the pharmaceutical industry. Because of the large number of prominent multinational pharmaceutical companies that are active in these two countries (e.g., Glaxo Wellcome, SmithKline Beecham, and Hoechst Marion Roussell), and their reputations for strong academic programs in organic chemistry, both the United Kingdom and Germany are attractive sites for contract manufacturing.<sup>3</sup> An increasing amount of U.S. imports from Germany and the United Kingdom can be attributed to outsourced production by U.S. firms, in addition to intracompany trade.

The Irish economy has been strong over the past decade, largely because of its membership in the EU and a national tax policy that is favorable to large corporations. The most significant growth has been in high technology areas such as pharmaceuticals. Reportedly, 13 of the 15 leading multinational drug companies worldwide have established manufacturing facilities in Ireland.<sup>4</sup> Because its production costs are low, Ireland's medicinal chemicals are highly price-competitive in the U.S. market, which has led to a rise in imports that continued in 1998.<sup>5</sup> However, because of the strong multinational presence, these U.S. imports from Ireland, in part, reflect intracompany trade.

## **U.S. exports**

U.S. exports increased by \$1.6 billion (16 percent) to \$12.0 billion in 1998. The top three markets for U.S. pharmaceuticals (by value) were Canada, the Netherlands, and Germany. Overall, the combination of higher drug prices, increasing demand by aging populations, and an industry environment conducive to trade led to the continued rise in U.S. exports (by value). U.S. exports to the Netherlands rose more by value in 1998 than those to Canada or Germany, increasing by \$280 million (30 percent) to \$1.2 billion. To a large extent, this increase can be attributed to acquisitions by the Dutch pharmaceutical industry, which has led to the transfer of production to other locations, particularly of antibiotics.<sup>6</sup> U.S. exports to Germany decreased by \$16 million (2 percent) to \$1.1 billion, in-part reflecting increased investment in the German contract manufacturing facilities that support the domestic pharmaceutical industry.<sup>7</sup>

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<sup>3</sup> Sean Milmo, "Europe in Contract Mode," *Chemical Market Reporter*, Jan. 18, 1999, p. FR11.

<sup>4</sup> Charles W. Thurston, "Branded Offshore Manufacturing Finds a Home in Ireland and Singapore," *Chemical Market Reporter*, June 8, 1998, p. FR12.

<sup>5</sup> Dyan Machan, "Irish Tiger," *Forbes*, Mar. 9, 1998, p. 86.

<sup>6</sup> Sean Milmo, "DSM to Shift Antibiotics Production," *Chemical Market Reporter*, Sept. 8, 1997, p. 6; and Sean Milmo, "DSM to Acquire Gist-Brocade in Pharma Move," *Chemical Market Reporter*, Mar. 2, 1998, p. 1.

<sup>7</sup> Milmo, "Europe in Contract Mode," p. FR11.

Table 7-4

Chemicals and related products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
CH007	Major primary olefins:				
	Exports .....	306	169	-137	-44.8
	Imports .....	1,520	1,360	-159	-10.5
	Trade balance .....	-1,214	-1,191	22	1.8
CH008	Other olefins:				
	Exports .....	175	211	36	20.5
	Imports .....	62	82	20	32.6
	Trade balance: .....	113	129	16	13.9
CH009	Primary aromatics:				
	Exports .....	255	56	-199	-77.8
	Imports .....	856	704	-153	-17.8
	Trade balance: .....	-601	-647	-46	-7.6
CH010	Benzenoid commodity chemicals:				
	Exports .....	1,283	1,266	-17	-1.3
	Imports .....	923	741	-182	-19.7
	Trade balance: .....	361	526	165	45.8
CH011	Benzenoid specialty chemicals:				
	Exports .....	5,587	5,476	-111	-2.0
	Imports .....	4,136	4,201	65	1.6
	Trade balance: .....	1,451	1,275	-176	-12.2
CH012	Miscellaneous organic chemicals:				
	Exports .....	7,780	6,804	-975	-12.5
	Imports .....	5,493	5,316	-177	-3.2
	Trade balance: .....	2,286	1,488	-799	-34.9
CH013	Miscellaneous inorganic chemicals:				
	Exports .....	4,859	4,418	-441	-9.1
	Imports .....	5,118	4,752	-366	-7.2
	Trade balance: .....	-259	-334	-75	-29.1
CH014	Inorganic acids:				
	Exports .....	192	186	-6	-3.1
	Imports .....	262	282	20	7.5
	Trade balance: .....	-70	-95	-26	-36.9
CH015	Chlor-alkali chemicals:				
	Exports .....	824	834	9	1.1
	Imports .....	184	191	8	4.1
	Trade balance: .....	641	642	2	0.3
CH016	Industrial gases:				
	Exports .....	148	147	-1	-0.4
	Imports .....	57	63	7	12.2
	Trade balance: .....	91	84	-8	-8.3
CH017	Fertilizers:				
	Exports .....	3,138	3,339	201	6.4
	Imports .....	2,492	2,472	-20	-0.8
	Trade balance: .....	646	867	221	34.3
CH018	Paints, inks, and related items, and certain components thereof:				
	Exports .....	2,935	3,112	178	6.1
	Imports .....	1,726	1,755	29	1.7
	Trade balance: .....	1,208	1,357	149	12.3
CH019	Synthetic organic pigments:				

See footnote(s) at end of table.

Table 7-4 --Continued

Chemicals and related products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Exports .....	337	349	12	3.5
	Imports .....	401	402	1	0.3
	Trade balance: .....	-63	-53	11	16.8
CH020	Synthetic dyes and azoic couplers:				
	Exports .....	479	439	-40	-8.4
	Imports .....	628	555	-73	-11.6
	Trade balance .....	-149	-116	33	22.0
CH021	Synthetic tanning agents:				
	Exports .....	17	19	2	10.1
	Imports .....	8	6	-2	-21.6
	Trade balance: .....	9	13	3	37.1
CH022	Natural tanning and dyeing materials:				
	Exports .....	21	21	( <sup>3</sup> )	0.6
	Imports .....	62	66	3	5.5
	Trade balance .....	-42	-45	-3	-8.0
CH023	Photographic chemicals and preparations:				
	Exports .....	501	449	-53	-10.5
	Imports .....	733	633	-100	-13.6
	Trade balance: .....	-231	-184	47	20.4
CH024	Pesticide products and formulations:				
	Exports .....	2,276	2,392	116	5.1
	Imports .....	1,188	1,286	98	8.2
	Trade balance: .....	1,088	1,106	18	1.7
CH025	Adhesives and glues:				
	Exports .....	457	477	19	4.3
	Imports .....	150	159	9	5.7
	Trade balance: .....	307	318	11	3.6
CH026	Medicinal chemicals:				
	Exports .....	10,344	11,955	1,611	15.6
	Imports .....	14,184	17,941	3,758	26.5
	Trade balance: .....	-3,840	-5,987	-2,147	-55.9
CH027	Essential oils and other flavoring materials:				
	Exports .....	1,014	914	-100	-9.9
	Imports .....	809	833	23	2.9
	Trade balance: .....	205	81	-124	-60.4
CH028	Perfumes, cosmetics, and toiletries:				
	Exports .....	2,607	2,572	-35	-1.3
	Imports .....	1,428	1,629	202	14.1
	Trade balance: .....	1,179	943	-236	-20.0
CH029	Soaps, detergents, and surface-active agents:				
	Exports .....	2,029	1,962	-67	-3.3
	Imports .....	854	883	29	3.4
	Trade balance: .....	1,175	1,079	-96	-8.2
CH030	Miscellaneous chemicals and specialties:				
	Exports .....	2,183	2,147	-36	-1.6
	Imports .....	1,200	1,421	221	18.4
	Trade balance: .....	982	726	-257	-26.1
CH031	Explosives, propellant powders, and related items:				
	Exports .....	291	292	1	0.5
	Imports .....	237	248	11	4.7
	Trade balance: .....	54	44	-10	-18.3
CH032	Polyethylene resins in primary forms:				
	Exports .....	2,455	2,134	-321	-13.1

See footnote(s) at end of table.

Table 7-4 --Continued

Chemicals and related products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Imports .....	1,261	1,150	-111	-8.8
	Trade balance: .....	1,194	984	-210	-17.6
CH033	Polypropylene resins in primary forms:				
	Exports .....	844	760	-84	-9.9
	Imports .....	212	220	8	3.8
	Trade balance .....	632	540	-92	-14.5
CH034	Polyvinyl chloride resins in primary forms:				
	Exports .....	858	767	-91	-10.6
	Imports .....	271	247	-23	-8.7
	Trade balance: .....	587	520	-68	-11.5
CH035	Styrene polymers in primary forms:				
	Exports .....	824	779	-45	-5.4
	Imports .....	353	418	65	18.6
	Trade balance .....	471	361	-110	-23.4
CH036	Saturated polyester resins:				
	Exports .....	696	626	-70	-10.1
	Imports .....	355	451	96	27.0
	Trade balance .....	341	175	-166	-48.7
CH037	Other plastics in primary forms:				
	Exports .....	6,064	6,099	35	0.6
	Imports .....	2,204	2,286	82	3.7
	Trade balance .....	3,860	3,813	-47	-1.2
CH038	Styrene-butadiene rubber in primary forms:				
	Exports .....	348	322	-26	-7.5
	Imports .....	163	175	12	7.3
	Trade balance: .....	184	146	-38	-20.6
CH039	Other synthetic rubber:				
	Exports .....	1,111	1,064	-47	-4.2
	Imports .....	614	669	55	8.9
	Trade balance .....	496	395	-102	-20.5
CH040	Pneumatic tires and tubes (new):				
	Exports .....	2,403	2,532	129	5.4
	Imports .....	3,343	4,011	669	20.0
	Trade balance: .....	-939	-1,479	-540	-57.5
CH041	Other tires:				
	Exports .....	86	93	7	8.2
	Imports .....	132	143	10	7.8
	Trade balance: .....	-46	-50	-3	-7.2
CH042	Plastic or rubber semifabricated forms:				
	Exports .....	4,791	4,648	-143	-3.0
	Imports .....	3,073	3,220	147	4.8
	Trade balance: .....	1,718	1,428	-290	-16.9
CH043	Plastic containers and closures:				
	Exports .....	1,649	1,893	244	14.8
	Imports .....	1,489	1,569	81	5.4
	Trade balance: .....	160	323	163	101.7
CH044	Hose, belting, and plastic pipe:				
	Exports .....	1,583	1,594	11	0.7
	Imports .....	1,134	1,226	92	8.1
	Trade balance .....	449	367	-81	-18.1
CH045	Miscellaneous rubber or plastic products:				
	Exports .....	4,429	4,702	273	6.2
	Imports .....	5,387	5,848	461	8.6

See footnote(s) at end of table.

Table 7-4 --Continued

Chemicals and related products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
CH046	Trade balance: . . . . .	-958	-1,146	-188	-19.6
	Gelatin:				
	Exports . . . . .	59	51	-8	-13.9
	Imports . . . . .	133	122	-11	-8.3
	Trade balance: . . . . .	-74	-71	3	3.8
CH047	Natural rubber:				
	Exports . . . . .	41	36	-5	-11.8
	Imports . . . . .	1,229	977	-253	-20.6
	Trade balance: . . . . .	-1,189	-941	248	20.9

<sup>1</sup> Import values 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.

Note.--Calculations based on unrounded data.

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

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# CHAPTER 8

## Energy-Related Products

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The overall U.S. trade deficit in energy-related products decreased by \$14.9 billion (25 percent), to \$43.9 billion in 1998 (table 8-1), because of a decrease in the value of crude petroleum coupled with decreased imports of certain petroleum products. Historically, the United States has maintained a trade deficit in the energy-related products sector primarily because of an increased reliance on imported crude petroleum.

The nations showing the largest changes in sector trade with the United States in 1998 were Venezuela, Canada, Mexico, and Saudi Arabia, which were also the principal sources of U.S. imports of energy-related products in 1998. Overall, U.S. imports of energy-related products decreased by \$17.8 billion (24 percent) to \$56.3 billion in 1998. Major trading partners and commodities are presented in table 8-2.

In terms of quantity (barrels), crude petroleum accounted for 71 percent of these imports in 1998, natural gas accounted for 15 percent, and petroleum products accounted for 10 percent. U.S. exports of energy-related products decreased by \$2.8 billion (19 percent) to \$12.3 billion in 1998. In terms of quantity, petroleum products accounted for 52 percent of U.S. exports of energy-related products, while coal, coke, and related products accounted for 40 percent in 1998. The primary markets for U.S. exports of energy-related products were Canada and Mexico, which experienced the largest bilateral trade changes in 1998, and Japan.

Factors contributing to overall shifts in trade for the products in this sector in 1998 included decreased imports of reformulated gasoline from Venezuela and a decrease in the wellhead price of natural gas due to mild winter conditions in the Northeast United States. Trade statistics for all commodity/industry groups in the energy-related products sector are presented in table 8-3 at the end of this chapter.

### **U.S. BILATERAL TRADE**

Canada remained the leading U.S. trading partner for energy-related products in 1998. The United States and Canada are connected by a sophisticated and intricate system of pipelines that carry natural gas, crude petroleum, and refined petroleum products between the two countries. Also, the United States and Canada share an intricate system of interconnection grids used to transmit electricity across the border. The U.S. trade deficit with Canada decreased by \$3.3 billion (21 percent) to \$12.6 billion in 1998, primarily as a result of the drop in the per-barrel price of crude petroleum and the decrease in the wellhead price of natural gas.

Table 8-1

**Energy-related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>**

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	2,493	2,565	72	2.9
Venezuela .....	230	131	-99	-43.1
Mexico .....	2,022	1,845	-177	-8.7
Saudi Arabia .....	39	30	-9	-22.4
Nigeria .....	47	36	-11	-23.6
Angola .....	2	1	-1	-38.1
United Kingdom .....	439	355	-84	-19.1
Colombia .....	129	48	-81	-62.9
Japan .....	1,890	1,440	-450	-23.8
Algeria .....	13	16	2	18.9
All Other .....	7,861	5,879	-1,982	-25.2
Total .....	15,165	12,346	-2,819	-18.6
<b>Selected country groups:</b>				
EU-15 .....	2,946	2,286	-660	-22.4
OPEC .....	466	287	-179	-38.5
Latin America .....	4,387	3,690	-697	-15.9
CBERA .....	969	806	-163	-16.9
Asian Pacific Rim .....	4,227	2,950	-1,278	-30.2
ASEAN .....	551	350	-201	-36.5
Central and Eastern Europe .....	173	99	-74	-42.6
<b>U.S. imports for consumption:</b>				
Canada .....	18,481	15,207	-3,274	-17.7
Venezuela .....	10,676	7,167	-3,509	-32.9
Mexico .....	7,821	4,903	-2,919	-37.3
Saudi Arabia .....	8,087	5,919	-2,168	-26.8
Nigeria .....	5,573	4,213	-1,361	-24.4
Angola .....	2,789	2,166	-623	-22.3
United Kingdom .....	2,220	1,516	-704	-31.7
Colombia .....	1,876	1,745	-131	-7.0
Japan .....	253	242	-11	-4.4
Algeria .....	2,304	1,562	-742	-32.2
All Other .....	13,936	11,614	-2,322	-16.7
Total .....	74,017	56,254	-17,763	-24.0
<b>Selected country groups:</b>				
EU-15 .....	4,322	3,456	-867	-20.1
OPEC .....	28,652	21,064	-7,588	-26.5
Latin America .....	23,477	16,230	-7,247	-30.9
CBERA .....	1,356	985	-371	-27.3
Asian Pacific Rim .....	1,817	1,844	27	1.5
ASEAN .....	786	771	-15	-1.9
Central and Eastern Europe .....	68	20	-49	-71.4
<b>U.S. merchandise trade balance:</b>				
Canada .....	-15,988	-12,642	3,346	20.9
Venezuela .....	-10,447	-7,036	3,410	32.6
Mexico .....	-5,799	-3,057	2,742	47.3
Saudi Arabia .....	-8,048	-5,889	2,159	26.8
Nigeria .....	-5,527	-4,177	1,350	24.4
Angola .....	-2,787	-2,165	622	22.3
United Kingdom .....	-1,781	-1,161	620	34.8
Colombia .....	-1,746	-1,697	49	2.8
Japan .....	1,637	1,198	-438	-26.8
Algeria .....	-2,291	-1,547	744	32.5
All Other .....	-6,075	-5,735	340	5.6
Total .....	-58,852	-43,908	14,944	25.4
<b>Selected country groups:</b>				
EU-15 .....	-1,377	-1,170	207	15.0
OPEC .....	-28,186	-20,777	7,409	26.3
Latin America .....	-19,091	-12,540	6,550	34.3
CBERA .....	-387	-180	207	53.5
Asian Pacific Rim .....	2,410	1,106	-1,305	-54.1
ASEAN .....	-234	-421	-186	-79.6
Central and Eastern Europe .....	104	79	-25	-23.8

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

Note.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

**Table 8-2**  
**Energy-related products: Leading U.S. import and export products, by major partner, 1998**

Partner	Leading imports	Leading exports
Canada . . . . .	Natural gas and other petroleum gases Crude petroleum Petroleum products Electrical energy	Petroleum products Coal Crude petroleum Electrical energy Anti-knock preparations and other additives
Venezuela . . . . .	Crude petroleum Petroleum products	( <sup>1</sup> )
Mexico . . . . .	Crude petroleum Petroleum products Petroleum coke Natural gas and other petroleum gases	Petroleum products Natural gas and other petroleum gases Coal Crude coal tars Coke and semicoke from coal
Saudi Arabia . . .	Crude petroleum Petroleum products	( <sup>1</sup> )
Nigeria . . . . .	Crude petroleum Petroleum products	( <sup>1</sup> )
Angola . . . . .	Crude petroleum Petroleum products Natural gas and other petroleum gases	( <sup>1</sup> )

<sup>1</sup>Not a significant export market.

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

The U.S. trade deficit with Venezuela, the second-largest trading partner, decreased by \$3.4 billion (33 percent) to \$7.0 billion while the deficit with Saudi Arabia decreased by \$2.2 billion (27 percent) to \$5.9 billion. The trade deficit with the Organization of Petroleum Exporting Countries (OPEC), of which both Venezuela and Saudi Arabia are members, decreased by \$7.4 billion (26 percent) to \$20.8 billion in 1998. Venezuela, historically a major supplier of petroleum products to U.S. markets, accounted for 34 percent of this deficit.

The U.S. energy-related products trade deficit with Latin America decreased by \$6.6 billion (34 percent) to \$12.5 billion in 1998, primarily as a result of decreased U.S. imports of petroleum products. The trade deficit with Mexico decreased by \$2.7 billion (47 percent) to \$3.1 billion in 1998 because of the decrease in the price of crude petroleum and natural gas. The U.S. trade deficit with the European Union in energy-related products decreased by \$207 million (15 percent) in 1998 to \$1.2 billion because of decreased world crude petroleum prices.

## COMMODITY ANALYSIS

### Crude Petroleum

The U.S. trade deficit in crude petroleum decreased by \$12.8 billion (34 percent) to \$24.8 billion in 1998, because the world price of crude petroleum declined by an average of \$6 per barrel. As a result of continued steady production of crude petroleum worldwide and reduced demand related to the Asian financial crisis, crude petroleum prices reached a low of \$11.50 per barrel, a level not seen since the late 1970s. This dramatic price drop resulted in the value of U.S. crude petroleum imports decreasing by \$12.9 billion (34 percent) to \$25.5 billion, and exports decreasing by \$110 million (14 percent) to \$670 million in 1998. U.S. exports of crude petroleum have generally been prohibited since 1973; however, Canada, has been the principal recipient of \$417 million (62 percent) of U.S. crude petroleum shipments as part of a commercial exchange agreement between U.S. and Canadian refiners, approved by the Secretary of the U.S. Department of Energy (DOE).

#### U.S. imports

The quantity of U.S. imports of crude petroleum increased slightly by 131 million barrels (4 percent), to 2.3 billion barrels in 1998. Canada, Mexico, Saudi Arabia, Venezuela, and Nigeria continued to be the principal sources of U.S. imports in 1998. The OPEC nations accounted for more than 39 percent of total U.S. imports of crude. In terms of value, these nations also showed the largest changes in trade in 1998. U.S. imports of crude petroleum began to rise in 1985 when declining world crude petroleum prices resulted in the reduced profitability of certain high cost U.S. wells, many of which were then shut down. Consequently, U.S. production has declined each year, reaching an all-time low of 2.2 billion barrels in 1998. During 1998, total U.S. imports of crude petroleum accounted for over 60 percent of domestic consumption.

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### Petroleum Products

The U.S. trade deficit in petroleum products decreased by \$2.4 billion (18 percent) to \$11.4 billion in 1998. The United States is a major world consumer of petroleum products and relies primarily upon Canada and Venezuela to supplement domestic production.

#### U.S. imports

The value of U.S. imports of petroleum products decreased by \$3.9 billion (18 percent) to \$17.6 billion in 1998. Venezuela, Canada, and Saudi Arabia were the leading import sources. The decrease in imports was almost entirely accounted for by decreased imports of reformulated gasoline (RFG) from Venezuela. In 1996, Venezuela modified refineries to meet the RFG standards of the U.S. Clean Air Act to produce RFG for the U.S. market under the 1997 RFG specifications; however, during 1998, U.S. refineries were producing sufficient quantities of RFG to meet domestic demand and at lower prices than the imported material. Also, imports of distillate fuel oils, used as heating fuels, declined as a result of a relatively mild winter in the Northeast United States.

## **U.S. exports**

The United States is not a major world exporter of petroleum products, exporting less than 5 percent of total production and accounting for less than 6 percent of total world exports of petroleum products. The value of U.S. exports of petroleum products decreased by \$1.5 billion (19 percent) to \$6.2 billion in 1998. Most of these exports were petroleum coke, used in the production of certain petrochemicals, and distillate fuel oils, used as heating and bunker fuels. Mexico and Canada were the major U.S. markets for these exports because of their close proximity.

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## **Natural Gas and Components**

The merchandise trade balance deficit for natural gas and its products decreased by \$771 million (8 percent) to approximately \$8.6 billion in 1998, according to statistics of the U.S. Department of Commerce (USDOC). Average prices for wellhead natural gas decreased significantly during 1997-98 (from \$2.32 to about \$1.96 per thousand cubic feet) owing to ample supplies throughout 1998, at least partially owing to relatively warm weather in early 1998.<sup>1</sup> Such price changes among the different components of natural gas led to accentuated changes in the trade deficit, when actual differences in the volume of gas and its components traded were not significant. Exports of natural gas are minimal compared with domestic production. According to the DOE, the trade balance for natural gas in terms of volume (not including products) has remained fairly steady. In 1997, the natural gas trade deficit reported by DOE was 2.8 trillion cubic feet and in 1998 it was about 3.0 trillion cubic feet (an increase of less than 5 percent).

## **U.S. imports**

U.S. imports as reported by the USDOC for natural gas and its products, more than 90 percent of which enter from Canada, decreased by \$1.0 billion (10 percent) to \$9.2 billion in 1998. Natural gas imports (both gaseous and liquefied), however, increased in value from \$5.2 billion in 1997 to more than \$5.3 billion in 1998 (2-percent increase). The volume of U.S. imports of natural gas in 1998 as reported by the U.S. Department of Energy, of which 97 percent entered from Canada, increased by about 5 percent, from 3.0 trillion cubic feet in 1997 to 3.1 trillion cubic feet in 1998.

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<sup>1</sup> Average prices for Canadian imports in 1998 are estimated to have dropped to \$2.90 per thousand cubic feet from an average of \$3.83 in 1997. U.S. Department of Energy, *Natural Gas Monthly*, Mar. 1999.

**Table 8-3**  
**Energy-related products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>**

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
CH001	Electrical energy:				
	Exports .....	124	185	61	48.9
	Imports .....	978	1,039	61	6.2
	Trade balance: .....	-854	-854	( <sup>3</sup> )	( <sup>4</sup> )
CH002	Nuclear materials:				
	Exports .....	1,444	1,041	-403	-27.9
	Imports .....	1,219	1,382	162	13.3
	Trade balance .....	225	-340	-565	( <sup>5</sup> )
CH003	Coal, coke, and related chemical products:				
	Exports .....	4,276	3,635	-640	-15.0
	Imports .....	1,688	1,570	-117	-6.9
	Trade balance: .....	2,588	2,065	-523	-20.2
CH004	Crude petroleum:				
	Exports .....	780	670	-110	-14.1
	Imports .....	38,394	25,467	-12,928	-33.7
	Trade balance .....	-37,615	-24,797	12,818	34.1
CH005	Petroleum products:				
	Exports .....	7,728	6,233	-1,495	-19.3
	Imports .....	21,523	17,584	-3,938	-18.3
	Trade balance: .....	-13,794	-11,351	2,443	17.7
CH006	Natural gas and components:				
	Exports .....	814	581	-232	-28.5
	Imports .....	10,215	9,212	-1,003	-9.8
	Trade balance: .....	-9,401	-8,630	771	8.2

<sup>1</sup> Import values 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> Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

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# CHAPTER 9

## Textiles and Apparel, and Footwear

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### TEXTILES AND APPAREL

The U.S. trade deficit in textiles and apparel widened further in 1998, rising by \$6.4 billion (15 percent) over the 1997 level to \$48.6 billion (table 9-1).<sup>1</sup> The widening of the trade deficit resulted from a significant increase in U.S. imports and a small decline in U.S. exports. Imports rose by \$6.3 billion (10 percent) to \$67.1 billion and exports fell by \$76 million (less than 1 percent) to \$18.5 billion.

The import increase in 1998 reflected the ongoing growth in imports from countries benefiting from preferential market access, namely Mexico, Canada, and the Caribbean Basin Economic Recovery Act (CBERA) beneficiary countries, and a significant increase in imports from Asia for the second consecutive year. Excluding China, whose shipments to the United States fell in 1998, sector imports from Asia again rose by 11 percent (\$2.9 billion) to \$28.1 billion in 1998. Industry sources report that because of the Asian economic crisis and significant currency devaluations, that effectively reduced the dollar price of their goods in the U.S. market, the Asian countries have sought to boost exports in an effort to earn much needed foreign exchange.<sup>2</sup> The growth in sector imports is likely to continue as U.S. quotas are gradually phased out under the Uruguay Round Agreement on Textiles and Clothing (ATC), which went into effect as part of the World Trade Organization agreements in 1995.<sup>3</sup>

Sector imports mainly consist of apparel (80 percent in 1998), and imports now supply just over one-half of the U.S. apparel market. The 1998 growth in sector imports partly reflected a pickup in consumer spending on apparel; real personal consumption expenditures (PCEs) on apparel rose by 8.0 percent in 1998, up from increases of 4.6 percent in 1997 and 3.9 percent in 1996.<sup>4</sup> According to an industry source, the rise in consumer spending on apparel likely reflected the rebound in the stock market, continued job creation, and wage increases that still outpace the inflation rate.<sup>5</sup> The industrial

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<sup>1</sup> The apparel articles covered here include those of textile and nontextile (e.g., leather) materials.

<sup>2</sup> American Textile Manufacturers Institute (ATMI), "International Trade," *Textile HiLights*, Dec. 1998, Washington, DC, pp. i-v.

<sup>3</sup> See the textile and apparel section of ch. 4 for information on the ATC.

<sup>4</sup> U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA) official, telephone conversation with USITC staff, Mar. 15, 1999. BEA revised the PCE data for 1996 and 1997 and, therefore, the annual growth rates in this report differ slightly from those in last year's report.

<sup>5</sup> ATMI, "Apparel Indicators Firm," *Textile HiLights*, Dec. 1998, p. iv.

Table 9-1

Textiles and apparel: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Mexico .....	3,812	4,656	844	22.1
China .....	168	147	-21	-12.7
Canada .....	3,335	3,457	123	3.7
Hong Kong .....	436	371	-65	-14.9
Dominican Rep .....	1,310	1,327	16	1.2
Honduras .....	971	1,212	242	24.9
Taiwan .....	139	107	-32	-23.3
Korea .....	251	152	-100	-39.6
India .....	34	26	-9	-25.1
Italy .....	147	148	2	1.0
All Other .....	8,005	6,929	-1,076	-13.4
Total .....	18,609	18,533	-76	-0.4
<b>Selected country groups:</b>				
EU-15 .....	2,308	2,068	-241	-10.4
OPEC .....	491	402	-89	-18.2
Latin America .....	9,170	10,100	929	10.1
CBERA .....	4,364	4,597	233	5.3
Asian Pacific Rim .....	2,696	2,015	-681	-25.3
ASEAN .....	395	268	-127	-32.1
Central and Eastern Europe .....	62	54	-8	-12.5
<b>U.S. imports for consumption:</b>				
Mexico .....	6,538	8,069	1,531	23.4
China .....	8,813	8,607	-205	-2.3
Canada .....	2,845	3,197	352	12.4
Hong Kong .....	4,193	4,687	493	11.8
Dominican Rep .....	2,272	2,397	126	5.5
Honduras .....	1,694	1,911	217	12.8
Taiwan .....	2,957	3,011	54	1.8
Korea .....	2,575	2,953	378	14.7
India .....	2,279	2,520	241	10.6
Italy .....	2,173	2,315	142	6.6
All Other .....	24,457	27,423	2,966	12.1
Total .....	60,794	67,089	6,295	10.4
<b>Selected country groups:</b>				
EU-15 .....	4,702	4,974	272	5.8
OPEC .....	2,385	2,518	133	5.6
Latin America .....	15,255	17,452	2,197	14.4
CBERA .....	7,771	8,462	691	8.9
Asian Pacific Rim .....	27,531	29,342	1,810	6.6
ASEAN .....	7,318	8,359	1,041	14.2
Central and Eastern Europe .....	459	530	72	15.6
<b>U.S. merchandise trade balance:</b>				
Mexico .....	-2,726	-3,412	-686	-25.2
China .....	-8,644	-8,460	184	2.1
Canada .....	490	261	-229	-46.8
Hong Kong .....	-3,758	-4,316	-558	-14.9
Dominican Rep .....	-961	-1,071	-109	-11.4
Honduras .....	-723	-698	25	3.5
Taiwan .....	-2,818	-2,904	-86	-3.1
Korea .....	-2,324	-2,802	-478	-20.6
India .....	-2,244	-2,494	-249	-11.1
Italy .....	-2,026	-2,167	-141	-7.0
All Other .....	-16,452	-20,493	-4,041	-24.6
Total .....	-42,186	-48,556	-6,370	-15.1
<b>Selected country groups:</b>				
EU-15 .....	-2,393	-2,906	-512	-21.4
OPEC .....	-1,893	-2,116	-222	-11.7
Latin America .....	-6,084	-7,352	-1,267	-20.8
CBERA .....	-3,407	-3,865	-457	-13.4
Asian Pacific Rim .....	-24,835	-27,327	-2,492	-10.0
ASEAN .....	-6,923	-8,091	-1,168	-16.9
Central and Eastern Europe .....	-396	-476	-79	-20.0

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

Note.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

production index for apparel shows that U.S. apparel output in 1998 declined for the fourth year in a row, by 4.0 percent, the largest annual decrease since 1995.<sup>6</sup>

U.S. sector exports turned down in 1998, following steady annual growth since at least 1989, mainly resulting from smaller shipments to major markets in Asia. Exports to Asia, after peaking at \$2.8 billion in 1996, fell by 9 percent in 1997 and by 26 percent (\$677 million) in 1998, to just under \$1.9 billion. Exports to the European Union (EU) also declined in 1998, by 10 percent (\$241 million) to \$2.1 billion, as European consumers reportedly have been shifting to less expensive apparel from Asia.<sup>7</sup> U.S. sector exports primarily consisted of cut garment parts to Mexico and CBERA countries for assembly. Trade statistics for all commodity/industry groups in the textiles and apparel sector are presented in table 9-5 at the end of this chapter.

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

The growth in U.S. sector trade with countries benefitting from preferential trade agreements with the United States, namely the North American Free Trade Agreement (NAFTA) partners and CBERA countries, slowed in 1998. Imports from Mexico grew by 23 percent in 1998, down from 36 percent in 1997, and by 9 percent from the CBERA countries, down from 26 percent. Although Mexico's share of U.S. sector imports rose by about 1 percentage point in 1998, to 12 percent, the CBERA countries' share fell slightly, to 13 percent. The leading U.S. imports and exports of textile and apparel articles for major trading partner countries are presented in table 9-2.

Sector trade with Mexico and the CBERA countries mainly involves U.S. exports of cut garment pieces for assembly and U.S. imports of the finished garments for retail sale. Mexico is the largest U.S. trading partner in textiles and apparel, with total sector trade (exports plus imports) of \$12.7 billion in 1998, up \$2.3 billion (22 percent) from 1997. Mexico is the largest market for U.S. sector exports (25 percent by value in 1998) and the second-largest source of U.S. sector imports (12 percent by value in 1998) after China. The U.S. trade deficit in sector goods with Mexico widened by \$686 million (25 percent) to \$3.4 billion in 1998, as imports grew by \$1.5 billion (23 percent) to \$8.1 billion and exports grew by \$844 million (22 percent) to \$4.7 billion. The U.S. trade deficit in sector goods with the CBERA countries widened by \$457 million (13 percent) to \$3.9 billion in 1998, as imports grew by \$691 million (9 percent) and exports rose by \$233 million (5 percent). According to industry sources, the slowdown in growth of U.S. sector trade with Mexico and the CBERA countries reflected competition from the East Asian countries that devalued their currencies.

The CBERA countries and Mexico compete mainly with one another for assembly work from U.S. apparel producers. Most sector imports from these countries consisted of apparel and other made-up textile articles that were assembled from U.S. components and entered under the production-sharing provisions under chapter 98 of the Harmonized Tariff Schedule of the United States. The CBERA countries and Mexico offer competitively priced labor to perform sewing tasks, and their proximity to suppliers and markets in the United States enables U.S. producers to maintain greater management control over the assembly process and obtain quicker turnaround than those firms that import from Asia. Competition between the CBERA countries and Mexico has changed since NAFTA's implementation in

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<sup>6</sup> Board of Governors of the Federal Reserve System, "Industrial Production and Capacity Utilization: 1998 Annual Revision," *Federal Reserve Bulletin*, Jan. 1999, p. 29.

<sup>7</sup> Paula L. Green, "Asia Woes Stunt Growth of U.S. Textile, Apparel Exports," *Journal of Commerce*, Mar. 1, 1999, found at Internet address <http://www.joc.com/issues/current/trade/e26311.htm>, retrieved Feb. 26, 1999.

1994, however. As discussed in the textile and apparel section of chapter 4, imports of sector goods assembled in Mexico from fabrics wholly formed and cut in the United States can enter completely free

**Table 9-2**  
**Textiles and apparel: Leading U.S. import and export products, by major partner, 1998**

Partner	Leading imports	Leading exports
Mexico . . . . .	Men's or boys' suits, ensembles, etc., not knitted or crocheted Women's or girls' suits, ensembles, etc., not knitted or crocheted T-shirts, singlets, tank tops, etc. knitted or crocheted Sweaters, pullovers, vests, etc., knitted or crocheted	Men's or boys' suits, ensembles, etc. not knitted or crocheted T-shirts, singlets, tank tops, etc. knitted or crocheted Women's or girls' suits, ensembles, etc., not knitted or crocheted Sweaters, pullovers, vests, etc., knitted or crocheted
China . . . . .	Women's or girls' suits, ensembles, etc., not knitted or crocheted Sweaters, pullovers, vests, etc., knitted or crocheted Leather articles of apparel and clothing accessories Women's or girls' blouses, shirts, etc. not knitted or crocheted	Artificial filament tow Synthetic staple fibers, not carded, combed, etc. Synthetic filament yarn Nonwovens, whether or not impregnated, coated, etc.
Canada . . . . .	Men's or boys' suits, ensembles, etc., not knitted or crocheted Synthetic filament yarn Women's or girls' suits, ensembles, etc., not knitted or crocheted Sweaters, pullovers, vests, etc., knitted or crocheted	Carpets and other textile floor coverings, tufted Synthetic filament yarn Bed, table, toilet, and kitchen linens Nonwovens, whether or not impregnated, coated, etc.
Hong Kong . . . . .	Sweaters, pullovers, vests, etc., knitted or crocheted Women's or girls' suits, ensembles, etc., not knitted or crocheted Men's or boys' shirts, not knitted or crocheted Women's or girls' blouses, shirts, etc., not knitted or crocheted	Artificial filament tow Textile fabrics (not tire cord), coated, etc., with plastic Woven fabrics of synthetic filament yarn Pile fabrics, knitted or crocheted
Dominican Republic . . . . .	Men's or boys' suits, ensembles, etc., not knitted or crocheted Women's or girls' suits, ensembles, etc., not knitted or crocheted T-shirts, singlets, tank tops, etc., knitted or crocheted Bras, girdles, garters, etc.	Men's or boys' suits, ensembles, etc., not knitted or crocheted Other made up clothing accessories and certain parts of garments or clothing accessories Women's or girls' suits, ensembles, etc., not knitted or crocheted Bras, girdles, garters, etc.
Honduras . . . . .	T-shirts, singlets, tank tops, etc., knitted or crocheted Sweaters, pullovers, vests, etc., knitted or crocheted Men's or boys' suits, ensembles, etc., not knitted or crocheted Men's or boys' shirts, knitted or crocheted	Other made up clothing accessories and certain parts of garments or clothing accessories T-shirts, singlets, tank tops, etc., knitted or crocheted Bras, girdles, garters, etc. Men's or boys' shirts, not knitted or crocheted

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

of duty and quota, but imports of similar goods from the CBERA countries can enter under preferential quotas but are still subject to duty on the value-added offshore.

Canada is the second-largest market for U.S. sector exports after Mexico, and the only major trading partner with which the United States registered a trade surplus in this sector in 1998. U.S.-Canada sector trade has grown significantly since implementation of the United States-Canada Free Trade Agreement (CFTA) in 1989.<sup>8</sup> The sector trade surplus with Canada decreased by \$229 million (47 percent) in 1998, as U.S. imports from Canada rose by \$352 million (12 percent) to \$3.2 billion and U.S. exports to Canada increased by \$123 million (4 percent) to \$3.5 billion. Much of the U.S.-Canada trade continued to be in textiles such as yarn and fabric. As discussed in the textile and apparel section of chapter 4, the growth in U.S. imports of men's and boys' wool suits from Canada under a NAFTA tariff preference level for wool apparel has been a subject of concern of the U.S. industry.

Imports from Asia in 1998 rose by \$2.7 billion (8 percent) over the 1997 level to \$36.7 billion, and their share of all imports of textiles and apparel fell by 1 percentage point to 55 percent. The largest U.S. bilateral trade deficit in textiles and apparel continued to be with China, with almost all U.S. sector trade consisting of U.S. imports. Although imports declined by \$205 million (2 percent) to \$8.6 billion in 1998, China remained the largest supplier with 13 percent of all sector imports. Sector exports to China also declined, by \$21 million (13 percent), to \$147 million. Apparel accounted for 83 percent of the overall value of U.S. sector imports from China, and unfinished textile materials such as manmade fibers and yarns accounted for the majority of U.S. sector exports to China.

The import decline from China in 1998 reportedly is partly attributable to increased competition from East Asian nations (Indonesia, Thailand, Korea, and Malaysia) that had previously devalued their currencies.<sup>9</sup> In addition, floods that destroyed many textile factories in South China and efforts by the Chinese Government to restructure the textile industry may have slowed production of sector goods for export to the United States.<sup>10</sup> Trade sources have suggested that the U.S. Government's imposition of "triple charges" against China's quotas in May 1998<sup>11</sup> because of illegal Chinese transshipments may also have contributed to the import decline, as such enforcement measures may have discouraged some U.S. firms from importing textiles and apparel from China.<sup>12</sup>

U.S. sector imports from the traditional "Big Three" Asian suppliers--Hong Kong, Taiwan, and Korea--increased for the second consecutive year, rising by \$926 million (10 percent) over the 1997 level to \$10.7 billion in 1998. Imports from Hong Kong rose by \$493 million (12 percent), those from Korea grew by \$378 million (15 percent), and those from Taiwan rose by \$54 million (2 percent).<sup>13</sup> The Big Three's

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<sup>8</sup> The duty phaseout schedule for the CFTA was incorporated and continued under NAFTA.

<sup>9</sup> Industry trade consultant, telephone interview with USITC staff, Jan. 22, 1999.

<sup>10</sup> U.S. Department of State telegram No. 017845, "China/Textile Industry: Everything You Might Possibly Want to Know," prepared by the U.S. Embassy, Beijing, Oct. 22, 1998.

<sup>11</sup> Office of the U.S. Trade Representative (USTR), "Triple Charges Assess on Chinese Textile Transshipments," press release 98-45, posted May 4, 1998, found at Internet address <http://www.ustr.gov/releases/1998/05/98-45.pdf>, retrieved May 8, 1998.

<sup>12</sup> ATMI, "International Trade," *Textile HiLights*, Sept. 1998, p. v.

<sup>13</sup> On April 2, 1999, the USITC instituted antidumping investigations under section 733(a) of the Tariff Act of 1930 to determine whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from Korea and Taiwan of certain polyester staple fiber that are alleged to be sold in the United States at less than fair value. See USITC, "Investigations Nos. 731-TA-825-826 (Preliminary): Certain Polyester Staple Fiber From Korea and Taiwan," *Federal Register* (64 F.R. 17414), Apr. 9, 1999.

share of U.S. imports in 1998 remained unchanged from the previous year level at 16 percent. U.S. sector exports to the Big Three fell by \$196 million (24 percent) to \$630 million in 1998.

U.S. imports from Hong Kong increased despite competition from lower cost countries in East Asia and ongoing U.S. efforts to combat alleged transshipments of Chinese sector goods through Hong Kong.<sup>14</sup> The import growth may be partly attributable to Hong Kong's relative economic and political stability during a year of economic uncertainty in East Asia, its reputation for reliable deliveries and quality production and service, and the limited overlap in the composition of its sector exports with other East Asian countries.<sup>15</sup> Declining fabric and fiber prices and decreasing overhead costs resulting from recessionary conditions also helped keep Hong Kong's apparel exports price competitive.<sup>16</sup> Trade sources partially attributed the significant import increase from Korea to lower export prices as a result of its recent currency devaluation, and the small import increase from Taiwan to a decrease in its price competitiveness relative to other East Asian nations that devalued their currencies. Trade sources partially attributed the decline in U.S. sector exports to the Big Three to weak demand, increased competition from financially troubled Asian suppliers seeking to generate foreign exchange, and, reportedly in Korea, a lack of capital to purchase U.S. exports in the midst of the economic crisis.

U.S. sector imports from the Association of Southeast Asian Nations (ASEAN) rose by \$1.0 billion (14 percent) to \$8.4 billion in 1998.<sup>17</sup> The ASEAN countries that devalued their currencies reportedly have sought to boost exports to the United States in an effort to earn much-needed foreign exchange. The import increase was led by Thailand, whose shipments rose by \$320 million (19 percent) to \$2.0 billion. Sector imports from the largest ASEAN supplier, Indonesia, grew by \$81 million (4 percent) to \$2.1 billion. Substantial growth also occurred in imports from the newest ASEAN member, Cambodia, whose shipments totaled \$361 million in 1998, up from \$99 million in 1997 and from less than \$1 million in 1995. In January 1999, the United States and Cambodia signed a new textile agreement establishing quotas for apparel, as discussed in the textile and apparel section of chapter 4. U.S. sector exports to the ASEAN countries fell by \$127 million (32 percent) to \$268 million, following an increase of 5 percent in 1997.

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## FOOTWEAR

The U.S. trade deficit in footwear and footwear parts in 1998 remained virtually unchanged from the 1997 level of \$13.2 billion (table 9-3), following a \$1.2 billion increase during 1996-97. Sector trade consists almost entirely of imports, which declined in value for the first time during the decade in 1998,

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<sup>14</sup> The United States and Hong Kong agreed to enhanced enforcement measures (expanded information sharing, increased cooperation on factory observation visits, and greater access to statistical information) on September 18, 1998. USDOC, Office of Textiles and Apparel official, telephone interview with USITC staff, Jan. 21, 1999.

<sup>15</sup> "Price Pressure on Exporters," *Textile Asia*, June 1998, p. 87; and U.S. Department of State telegram No. 001495, "Hong Kong Trade Outlook: A Bit Weak, but No Dramatic Decline," prepared by the U.S. Department of State, Washington, DC, Feb. 19, 1998.

<sup>16</sup> "Monthly Asian Updates for the Apparel Retailing Industry, Its Suppliers, and Investors," *Pacific Trade Winds*, Apr. 1999.

<sup>17</sup> See appendix D for a list of the 10 ASEAN countries.

Table 9-3

Footwear: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
China	21	29	8	37.1
Italy	7	5	-2	-31.9
Brazil	5	4	-1	-26.2
Indonesia	23	12	-11	-48.6
Mexico	103	96	-7	-6.9
Spain	6	5	( <sup>2</sup> )	-6.7
Dominican Rep	90	78	-13	-14.1
Thailand	4	4	( <sup>2</sup> )	-11.3
United Kingdom	16	15	-1	-6.2
Korea	24	8	-16	-65.6
All Other	504	466	-38	-7.6
Total	802	720	-82	-10.2
<b>Selected country groups:</b>				
EU-15	92	82	-10	-10.9
OPEC	44	33	-11	-24.3
Latin America	278	255	-23	-8.2
CBERA	133	124	-9	-6.7
Asian Pacific Rim	297	256	-42	-14.0
ASEAN	54	41	-13	-23.5
Central and Eastern Europe	4	4	( <sup>2</sup> )	-10.4
<b>U.S. imports for consumption:</b>				
China	7,354	8,016	661	9.0
Italy	1,195	1,170	-25	-2.1
Brazil	1,148	1,025	-124	-10.8
Indonesia	1,080	746	-334	-30.9
Mexico	384	349	-35	-9.1
Spain	417	391	-27	-6.4
Dominican Rep	292	284	-7	-2.5
Thailand	388	343	-44	-11.4
United Kingdom	240	234	-7	-2.8
Korea	235	181	-53	-22.7
All Other	1,218	1,139	-78	-6.4
Total	13,951	13,879	-72	-0.5
<b>Selected country groups:</b>				
EU-15	2,087	2,047	-40	-1.9
OPEC	1,081	747	-333	-30.9
Latin America	1,895	1,726	-169	-8.9
CBERA	336	325	-11	-3.2
Asian Pacific Rim	9,558	9,712	154	1.6
ASEAN	1,675	1,291	-384	-22.9
Central and Eastern Europe	120	122	2	1.5
<b>U.S. merchandise trade balance:</b>				
China	-7,333	-7,986	-653	-8.9
Italy	-1,188	-1,166	23	1.9
Brazil	-1,143	-1,021	122	10.7
Indonesia	-1,057	-735	323	30.5
Mexico	-281	-254	28	9.9
Spain	-412	-385	26	6.4
Dominican Rep	-201	-207	-5	-2.7
Thailand	-384	-340	44	11.4
United Kingdom	-225	-219	6	2.6
Korea	-211	-173	38	17.9
All Other	-714	-674	40	5.6
Total	-13,149	-13,159	-10	-0.1
<b>Selected country groups:</b>				
EU-15	-1,995	-1,965	30	1.5
OPEC	-1,037	-714	323	31.1
Latin America	-1,617	-1,471	146	9.0
CBERA	-203	-201	2	1.0
Asian Pacific Rim	-9,261	-9,456	-195	-2.1
ASEAN	-1,621	-1,250	371	22.9
Central and Eastern Europe	-116	-118	-2	-1.9

<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>Less than \$500,000.

Note.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

by \$72 million (1 percent) to \$13.9 billion. U.S. sector exports also declined by \$82 million (10 percent) to \$720 million.

The U.S. footwear sector consists of three subsectors, namely nonrubber footwear, rubber footwear, and footwear parts. Nonrubber and rubber footwear together accounted for 94 percent of sector trade and almost all of the sector trade deficit in 1998 (table 9-4). U.S. trade in footwear parts, which represented 6 percent of overall sector trade, primarily consisted of shipments of components to Mexico and Caribbean countries for assembly into stitched uppers and subsequent return to the United States for further processing. U.S. trade in footwear parts declined by \$76 million (8 percent) to \$831 million in 1998, after growing significantly in previous years, as stagnant U.S. footwear demand and keen price competition from traditional Asian suppliers, especially China, affected U.S. production-sharing operations with Mexico and Caribbean countries.

**Table 9-4**

**Footwear: U.S. exports of domestic merchandise, imports for consumption, total trade, and merchandise trade balance, by subsectors, 1997 and 1998<sup>1</sup>**

Item	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	<i>Million dollars</i>			
U.S. exports of domestic merchandise:				
Nonrubber footwear .....	373	324	-49	-13
Rubber footwear .....	90	95	5	6
Footwear parts .....	339	301	-38	-11
Total .....	802	720	-82	-10
U.S. imports for consumption:				
Nonrubber footwear .....	11,480	11,412	-68	-1
Rubber footwear .....	1,903	1,937	34	2
Footwear parts .....	568	530	-38	-7
Total .....	13,951	13,879	-72	-1
U.S. total trade:				
Nonrubber footwear .....	11,853	11,736	-117	-1
Rubber footwear .....	1,993	2,032	39	2
Footwear parts .....	907	831	-76	-8
Total .....	14,753	14,599	-154	-1
U.S. merchandise trade balance:				
Nonrubber footwear .....	-11,107	-11,088	19	( <sup>2</sup> )
Rubber footwear .....	-1,813	-1,842	-29	2
Footwear parts .....	-229	-229	( <sup>3</sup> )	( <sup>3</sup> )
Total .....	-13,149	-13,159	-10	( <sup>2</sup> )

<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>Less than 0.5 percent.

<sup>3</sup>No change.

Note.--Calculations based on unrounded data.

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

Apparent U.S. consumption of footwear in 1998 increased slightly in quantity, by 6 million pairs (less than 1 percent) to 1.6 billion pairs, but declined slightly in value (at U.S. producers' and import f.o.b. levels), by \$144 million (1 percent) to \$15.9 billion. The quantity of footwear imports (excluding footwear parts) rose by 26 million pairs (2 percent) to nearly 1.5 billion pairs, but their value fell by \$33 million (less than 1 percent) to \$13.3 billion. The share of the U.S. footwear market supplied by imports in 1998 increased by 1 percentage point in terms of both quantity and value, to 92 percent and 84 percent, respectively. The quantity of U.S. footwear production declined by 12 percent to 165 million pairs, and the

value of U.S. producers' shipments declined by 6 percent (\$202 million) to \$3.3 billion. U.S. consumer spending on footwear rose by 5 percent in real terms to \$42.3 billion in 1998, following an increase of 3.5 percent in 1997.<sup>18</sup>

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

China was by far the leading U.S. supplier of footwear, accounting for 73 percent of sector imports by quantity in 1998, compared with 70 percent in the previous year. China was also the only major supplier to expand its footwear shipments in 1998, as U.S. imports from that country rose by \$661 million (9 percent) to \$8.0 billion. Consequently, the U.S. sector trade deficit with China increased by \$653 million (9 percent) to \$8.0 billion. The dominance of China in footwear production is attributed to its low wages, established production infrastructure, and continued influx of footwear operations from Korea and Taiwan. The growth in imports from China largely offset declines from other major footwear suppliers--Indonesia, Thailand, the EU, and Brazil.

U.S. sector imports from Indonesia dropped by \$334 million (31 percent) to \$746 million and those from Thailand dropped by \$44 million (11 percent) to \$343 million in 1998. As a result, the combined U.S. sector trade deficit with these countries narrowed by \$366 million (25 percent) to \$1.1 billion. According to trade sources, these significant import declines largely reflected the 1998 regional economic problems which, along with lack of footwear infrastructure and dependency on dollar-denominated inputs, hampered the sector's growth and constrained exports.<sup>19</sup>

U.S. sector trade with the EU declined in 1998 as imports fell by \$40 million (2 percent) to just over \$2.0 billion and exports dropped by \$10 million (11 percent) to \$82 million. As a result, the U.S. sector trade deficit with the EU narrowed by \$30 million (2 percent) to nearly \$2.0 billion. Combined imports from Italy and Spain, the leading EU suppliers, declined by \$52 million (3 percent) to \$1.6 billion or 76 percent of U.S. sector imports from the EU. Sector imports from Italy, after peaking at \$1.2 billion in 1996, declined by less than 1 percent in 1997 and 2 percent in 1998. Nevertheless, Italy supplanted Brazil as the second-leading source of sector imports by value in 1997 and 1998. Sector imports from Spain, the fifth-largest supplier, fell by \$27 million (6 percent) to \$391 million in 1998.

U.S. sector imports from Brazil, the third-leading supplier, declined for the second successive year in 1998, dropping by \$124 million (11 percent) to \$1.0 billion, the lowest level since 1991. As a result, the sector trade deficit with Brazil, narrowed by \$122 million to \$1.0 billion. The decline in sector imports from Brazil reflected keen price competition from Italy, Spain, and China in women's leather footwear, which accounted for over 80 percent of sector imports from Brazil. More than 90 percent of the women's leather footwear imports from Brazil were in the price range of \$12 to \$16 per pair (f.o.b.), where Italy and Spain are major competitors. These shoes also compete with the lower priced women's leather footwear from China, a major supplier of such footwear in the price range of \$8 to \$12 a pair. In addition, according to trade sources, an overvalued currency kept Brazilian prices high relative to those of its competitors in the U.S. market.<sup>20</sup>

The combined U.S. trade deficit in footwear with Korea and Taiwan, the leading suppliers during the 1980s, narrowed by \$72 million to \$313 million in 1998, as imports from these countries continued to decline--Korea, down \$53 million (23 percent) to \$181 million, and Taiwan, down \$40 million (21 percent)

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<sup>18</sup> USDOC, BEA official, telephone conversation with USITC staff on Apr. 7, 1999.

<sup>19</sup> Information obtained by USITC staff in January and February 1998, talking to various industry associations on Asian economic crisis and its impact on the U.S. textiles, apparel, and footwear industries.

<sup>20</sup> Michael Kepp, "Blame It on the Real," *Footwear News*, Feb. 8, 1999, pp. 34-38.

to \$144 million. The declines in imports from these countries reflected continued shifting of footwear operations to China, and more recently to Vietnam, due to erosion of Korea and Taiwan competitive position in the world footwear market.

Aside from China, Vietnam is the only other country in the top 15 from which U.S. sector imports increased during 1997-98, rising by \$17 million (18 percent) to \$115 million. Vietnam first entered the U.S. footwear market in 1994, and is now the 12th-leading supplier. The principal import items from Vietnam are running shoes with outer soles and uppers primarily of rubber or plastics, priced over \$12 per pair (f.o.b.). These footwear of Vietnamese origin are subject to a duty rate of 35 percent compared with the normal trade relations duty rate of 20 percent.<sup>21</sup>

U.S. sector trade with Mexico and CBERA countries largely consists of footwear components exported to those countries for assembly into stitched uppers that are subsequently returned to the United States for further processing. Sector trade with Mexico declined by \$42 million (9 percent) to \$445 million in 1998, which was partly attributable to a slowdown in production-sharing activity by U.S. firms operating in Mexico. The U.S. sector trade deficit with Mexico improved by \$28 million (10 percent) to \$254 million in 1998, as imports from Mexico dropped by \$35 million (9 percent) to \$349 million and exports declined by \$7 million (7 percent) to \$96 million. The sector trade deficit with the CBERA countries remained virtually unchanged at \$201 million in 1998, as both U.S. sector imports and exports each declined by approximately \$10 million to \$325 million and \$124 million, respectively. The Dominican Republic, which represented 80 percent of total sector trade with the CBERA countries, accounted for all the U.S. sector trade deficit with the CBERA countries.

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<sup>21</sup> Working through five different foreign-owned shoe factories, employing 35,000 people, Nike is the largest overseas shoe company operating in Vietnam. Nike's suppliers include Sam Yang of Korea, which employs 6,000 people and makes shoes only for Nike at their factory in Trung An; Taekwong Corporation, also of Korea, which employs 9,000 people and produces 6 million pairs; and Taiwanese-owned Pou Chen, in Dong Nai, whose Vietnam factory employs 8,000 workers. See "Vietnam Heads for the Big Time," *World Footwear, Country Survey: Vietnam*, vol. 12, No. 2, Mar./Apr. 1998, pp. 45-47.

Table 9-5

Textiles and apparel, and footwear sectors: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
CH048	Manmade fibers and filament yarns:				
	Exports .....	2,166	1,981	-186	-8.6
	Imports .....	1,555	1,575	20	1.3
	Trade balance: .....	611	405	-206	-33.6
CH049	Spun yarns and miscellaneous yarns:				
	Exports .....	712	745	33	4.6
	Imports .....	777	822	45	5.8
	Trade balance .....	-65	-78	-13	-19.3
CH050	Broadwoven fabrics:				
	Exports .....	2,254	2,294	40	1.8
	Imports .....	3,802	3,793	-9	-0.2
	Trade balance .....	-1,548	-1,499	50	3.2
CH051	Knit fabrics:				
	Exports .....	615	601	-14	-2.3
	Imports .....	784	792	7	1.0
	Trade balance: .....	-169	-191	-21	-12.7
CH052	Miscellaneous fabrics:				
	Exports .....	311	353	42	13.5
	Imports .....	180	202	22	12.1
	Trade balance: .....	131	151	20	15.3
CH053	Coated, covered, impregnated, or laminated textile fabrics:				
	Exports .....	678	708	30	4.4
	Imports .....	288	311	23	8.1
	Trade balance: .....	391	397	6	1.6
CH054	Cordage, nets, and netting:				
	Exports .....	58	63	5	9.5
	Imports .....	171	167	-4	-2.5
	Trade balance: .....	-113	-104	10	8.6
CH055	Certain textile articles and fabrics suitable for industrial use:				
	Exports .....	302	303	1	0.2
	Imports .....	264	303	39	14.7
	Trade balance: .....	38	( <sup>3</sup> )	-38	( <sup>4</sup> )
CH056	Miscellaneous textiles and articles:				
	Exports .....	1,225	1,128	-98	-8.0
	Imports .....	1,703	1,929	225	13.2
	Trade balance: .....	-478	-801	-323	-67.5
CH057	Sacks and bags of textile materials:				
	Exports .....	20	23	2	11.7
	Imports .....	18	18	( <sup>3</sup> )	1.1
	Trade balance .....	2	4	2	101.9
CH058	Carpets and rugs:				
	Exports .....	858	826	-32	-3.7
	Imports .....	961	1,109	148	15.4
	Trade balance: .....	-103	-283	-180	-174.3
CH059	Home furnishings:				
	Exports .....	328	349	20	6.2
	Imports .....	1,530	1,897	367	24.0
	Trade balance: .....	-1,201	-1,548	-346	-28.8
CH060	Men's and boys' suits and sports coats:				

See footnote(s) at end of table.

Table 9-5--Continued

Textiles and apparel, and footwear sectors: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Exports .....	126	89	-37	-29.5
	Imports .....	1,054	1,156	102	9.7
	Trade balance: .....	-928	-1,067	-139	-15.0
CH061	Men's and boys' coats and jackets:				
	Exports .....	131	124	-7	-5.3
	Imports .....	2,230	2,163	-67	-3.0
	Trade balance: .....	-2,099	-2,039	60	2.8
CH062	Men's and boys' trousers:				
	Exports .....	1,364	1,249	-115	-8.4
	Imports .....	4,933	5,705	772	15.6
	Trade balance .....	-3,569	-4,456	-887	-24.8
CH063	Women's and girls' trousers:				
	Exports .....	637	706	69	10.8
	Imports .....	5,097	5,887	790	15.5
	Trade balance .....	-4,460	-5,181	-721	-16.2
CH064	Shirts and blouses:				
	Exports .....	1,657	1,582	-75	-4.5
	Imports .....	14,416	16,436	2,020	14.0
	Trade balance .....	-12,759	-14,854	-2,095	-16.4
CH065	Sweaters:				
	Exports .....	34	29	-5	-16.0
	Imports .....	2,239	2,546	307	13.7
	Trade balance: .....	-2,204	-2,517	-313	-14.2
CH066	Women's and girls' suits, skirts, and coats:				
	Exports .....	311	312	1	0.4
	Imports .....	4,144	4,285	141	3.4
	Trade balance: .....	-3,833	-3,973	-140	-3.6
CH067	Women's and girls' dresses:				
	Exports .....	148	124	-24	-16.3
	Imports .....	1,636	1,686	50	3.1
	Trade balance .....	-1,488	-1,563	-74	-5.0
CH068	Robes, nightwear, and underwear:				
	Exports .....	978	956	-21	-2.2
	Imports .....	3,597	4,117	521	14.5
	Trade balance: .....	-2,619	-3,161	-542	-20.7
CH069	Hosiery:				
	Exports .....	352	417	64	18.3
	Imports .....	566	685	119	21.1
	Trade balance: .....	-214	-269	-55	-25.7
CH070	Body-supporting garments:				
	Exports .....	507	518	11	2.1
	Imports .....	968	1,114	146	15.0
	Trade balance .....	-461	-596	-135	-29.2
CH071	Neckwear, handkerchiefs, and scarves:				
	Exports .....	40	37	-3	-7.9
	Imports .....	414	411	-3	-0.7
	Trade balance .....	-374	-374	( <sup>3</sup> )	-0.1
CH072	Gloves, including gloves for sports:				
	Exports .....	205	203	-2	-0.8

See footnote(s) at end of table.

Table 9-5--Continued

Textiles and apparel, and footwear sectors: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Imports . . . . .	2,004	2,156	152	7.6
	Trade balance: . . . . .	-1,799	-1,953	-154	-8.5
CH073	Headwear:				
	Exports . . . . .	113	93	-20	-17.9
	Imports . . . . .	867	959	93	10.7
	Trade balance: . . . . .	-754	-866	-113	-15.0
CH074	Leather apparel and accessories:				
	Exports . . . . .	104	92	-12	-11.7
	Imports . . . . .	1,227	1,195	-32	-2.6
	Trade balance: . . . . .	-1,123	-1,103	20	1.8
CH075	Fur apparel and other fur articles:				
	Exports . . . . .	91	57	-33	-36.9
	Imports . . . . .	177	160	-17	-9.9
	Trade balance . . . . .	-86	-102	-16	-18.5
CH076	Rubber, plastic, and coated-fabric apparel:				
	Exports . . . . .	88	82	-6	-7.2
	Imports . . . . .	230	231	1	0.5
	Trade balance . . . . .	-142	-149	-7	-5.3
CH077	Nonwoven and related products:				
	Exports . . . . .	726	693	-33	-4.5
	Imports . . . . .	548	598	50	9.1
	Trade balance . . . . .	178	95	-83	-46.5
CH078	Other wearing apparel:				
	Exports . . . . .	1,469	1,798	329	22.4
	Imports . . . . .	2,414	2,681	267	11.1
	Trade balance . . . . .	-945	-883	62	6.6
CH079	Footwear and footwear parts:				
	Exports . . . . .	802	720	-82	-10.2
	Imports . . . . .	13,951	13,879	-72	-0.5
	Trade balance: . . . . .	-13,149	-13,159	-10	-0.1

<sup>1</sup>Import values 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>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

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# CHAPTER 10

## Minerals and Metals

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The U.S. trade deficit in the minerals and metals sector widened by \$9.9 billion (33 percent) in 1998 to \$40.0 billion (table 10-1), as U.S. exports of minerals and metals declined by \$2.0 billion (5 percent) to \$41.1 billion and imports rose by \$7.8 billion (11 percent) to \$81.1 billion. The rise in U.S. imports reflected strong U.S. economic growth, while the decline in U.S. exports reflected a slowing of economic growth in most other regions of the world and a strengthening of the U.S. dollar relative to currencies of major trading partners. The increasing trade deficit in minerals and metals in 1998 follows the experience of 1997, when the deficit for the sector expanded by \$4.4 billion (17 percent) to \$30.1 billion.

The decline in U.S. exports of minerals and metals in 1998 was caused by declines in a number of key sectors (table 10-2). U.S. exports of iron and steel waste and scrap fell by \$539 million (40 percent) to \$817 million, reflecting sharp declines in the price of scrap in 1998 and weak demand for scrap in principal markets, such as Korea, Taiwan, and Mexico, as the steelmaking industries in these nations experienced declines or slowdowns in economic activity. U.S. exports of copper ores and concentrates and copper metal and related articles fell by \$563 million (23 percent) to \$1.9 billion, as copper prices fell by as much as 40 percent from peak levels reached in June 1997, due to weakened demand in Asia, most notably in Korea.<sup>1</sup> Exports of copper concentrate also declined due to withdrawal from export markets of material mined by Kennecott Copper in order to supply its new domestic smelter, inaugurated in 1998.

The increase in U.S. imports of minerals and metals in 1998 (table 10-3) was led by steel mill and primary iron products, which advanced by \$3.1 billion (22 percent) to \$17.3 billion, largely due to increases in imports from Asian nations such as Japan and Korea. Declining economic demand in their domestic markets<sup>2</sup> and a depreciation of their currencies relative to the U.S. dollar in the case of Korea,<sup>3</sup> encouraged exports to non-Asian markets. U.S. imports of precious metals and related articles increased \$1.9 billion (32 percent) to \$7.7 billion in 1998 due to strong demand for gold, supplied by Canada, South Africa, and Russia, for use in jewelry and by investors, and demand for platinum-group metals from Russia and South Africa for use by U.S. automakers in catalytic convertors. Finally, U.S. imports of natural and synthetic gemstones increased by \$885 million (10 percent) to \$9.4 billion in 1998, as continued U.S. economic growth and further gains in consumer confidence contributed to a greater

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<sup>1</sup> Tom Stundza, "Copper Can't Escape Price Doldrums," *Purchasing*, Dec. 10, 1998, found at Internet address <http://www.umi.com/proquest.com/pqdweb?RQT=341>, retrieved Mar. 18, 1999.

<sup>2</sup> Korea and Japan experienced estimated declines of 5.8 percent and 2.8 percent in gross domestic products in 1998.

<sup>3</sup> The Korean won declined by 58 percent relative to the U.S. dollar from the average rate that prevailed during the first 3 quarters of 1997 and the average rate that prevailed during 1998, International Monetary Fund, *International Financial Statistics*, Feb. 1999.

Table 10-1

Minerals and metals: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	13,284	13,268	-16	-0.1
Mexico .....	5,508	6,119	610	11.1
Japan .....	2,623	2,023	-600	-22.9
United Kingdom .....	3,137	4,294	1,157	36.9
China .....	624	600	-24	-3.9
Germany .....	1,221	1,184	-37	-3.0
Russia .....	78	65	-13	-16.8
Israel .....	179	200	21	11.8
Taiwan .....	894	685	-209	-23.4
Belgium .....	804	734	-70	-8.7
All Other .....	14,750	11,890	-2,860	-19.4
Total .....	43,103	41,061	-2,042	-4.7
<b>Selected country groups:</b>				
EU-15 .....	7,745	8,762	1,017	13.1
OPEC .....	1,150	1,002	-148	-12.9
Latin America .....	8,372	8,804	432	5.2
CBERA .....	833	824	-9	-1.1
Asian Pacific Rim .....	8,845	6,888	-1,956	-22.1
ASEAN .....	1,888	1,320	-568	-30.1
Central and Eastern Europe .....	70	90	20	28.8
<b>U.S. imports for consumption:</b>				
Canada .....	17,038	17,082	44	0.3
Mexico .....	5,151	5,793	642	12.5
Japan .....	5,490	6,662	1,172	21.3
United Kingdom .....	2,334	2,643	309	13.2
China .....	3,796	4,624	829	21.8
Germany .....	3,422	3,434	12	0.3
Russia .....	2,943	3,954	1,012	34.4
Israel .....	3,259	3,807	549	16.8
Taiwan .....	2,922	3,079	158	5.4
Belgium .....	2,468	2,507	39	1.6
All Other .....	24,388	27,472	3,084	12.6
Total .....	73,209	81,058	7,849	10.7
<b>Selected country groups:</b>				
EU-15 .....	15,691	16,413	722	4.6
OPEC .....	1,192	1,352	161	13.5
Latin America .....	10,395	11,036	641	6.2
CBERA .....	502	468	-34	-6.9
Asian Pacific Rim .....	16,180	20,038	3,858	23.8
ASEAN .....	1,425	1,674	248	17.4
Central and Eastern Europe .....	635	653	18	2.9
<b>U.S. merchandise trade balance:</b>				
Canada .....	-3,754	-3,813	-60	-1.6
Mexico .....	358	326	-32	-8.8
Japan .....	-2,867	-4,639	-1,772	-61.8
United Kingdom .....	803	1,651	848	105.6
China .....	-3,171	-4,025	-853	-26.9
Germany .....	-2,201	-2,250	-49	-2.2
Russia .....	-2,865	-3,890	-1,025	-35.8
Israel .....	-3,080	-3,607	-528	-17.1
Taiwan .....	-2,028	-2,395	-367	-18.1
Belgium .....	-1,664	-1,773	-109	-6.6
All Other .....	-9,638	-15,582	-5,944	-61.7
Total .....	-30,106	-39,997	-9,890	-32.9
<b>Selected country groups:</b>				
EU-15 .....	-7,947	-7,652	295	3.7
OPEC .....	-42	-350	-309	-737.7
Latin America .....	-2,023	-2,232	-209	-10.3
CBERA .....	331	356	25	7.7
Asian Pacific Rim .....	-7,335	-13,149	-5,814	-79.3
ASEAN .....	463	-354	-817	( <sup>2</sup> )
Central and Eastern Europe .....	-565	-563	2	0.3

<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.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

**Table 10-2**  
**Leading changes in U.S. exports of minerals and metals, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<i>Million dollars</i>				
<b>Decreases:</b>				
Iron and steel waste and scrap (MM023) . . . . .	1,356	817	-539	-40
Copper and related articles (MM036) . . . . .	2,228	1,813	-415	-19
Precious metals and related articles (MM020) . . .	7,149	6,853	-297	-4
Steel mill products, all grades (MM025) . . . . .	4,843	4,636	-207	-4
Copper ores and concentrates (MM004) . . . . .	211	63	-148	-70
Nonpowered handtools (MM042) . . . . .	2,188	2,060	-128	-6
<b>Increases:</b>				
Chain and miscellaneous products of base metal (MM031) . . . . .	4,644	5,077	432	9
Industrial fasteners of base metals (MM032) . . . .	1,280	1,397	117	9
Steel pipe and tube fittings, and certain cast products (MM026) . . . . .	749	809	60	8
Certain builder's hardware (MM045) . . . . .	600	636	37	6
Cutlery, other than tableware, certain sewing implements, and related products (MM043) . . .	475	511	36	8
Lead ores and residues (MM005) . . . . .	35	65	30	84
<b>All other</b> . . . . .	17,343	16,324	1,020	-6
<b>Total</b> . . . . .	43,103	41,061	-2,042	-5

Note.--Calculations based on unrounded data.

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

**Table 10-3**  
**Leading increases in U.S. imports of minerals and metals, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<i>Million dollars</i>				
<b>Increases:</b>				
Steel mill products, all grades (MM025) . . . . .	13,602	16,434	2,833	21
Precious metals and related articles (MM020) . . .	5,869	7,735	1,866	32
Natural and synthetic gemstones (MM019) . . . . .	8,564	9,449	885	10
Chain and miscellaneous products of base metal (MM031) . . . . .	5,866	6,473	607	10
Certain nonmetallic minerals and articles (MM009) . . . . .	2,860	3,426	567	20
Primary iron products (MM021) . . . . .	608	856	248	41
Aluminum mill products (MM038) . . . . .	2,009	2,181	172	9
Unwrought aluminum (MM037) . . . . .	4,389	4,558	169	4
<b>All other</b> . . . . .	29,443	29,945	503	2
<b>Total</b> . . . . .	73,209	81,058	7,849	11

Note.--Calculations based on unrounded data.

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

demand for lower priced diamonds, largely from Israel, India, and Belgium, major diamond cutting and trading centers.

The growth in U.S. imports in the minerals and metals sector was partially offset by increased U.S. exports of miscellaneous products of base metal and declining imports of copper and related articles. U.S. exports of miscellaneous products of base metal increased by \$432 million (9 percent) in 1998 to \$5.1 billion, largely due to rising exports to Canada. Declining copper prices contributed to the decline in imports of copper and related articles, which fell by \$384 million (10 percent) to \$3.4 billion.

Various ferrous and nonferrous metal-consuming sectors, such as the steel, automotive, and appliances industries are highly integrated between the United States and Canada, resulting in extensive trade flows of raw materials, intermediate products, and finished products between the two nations. The lowering of trade restrictions between North American Free Trade Agreement (NAFTA) countries has encouraged metals producers and consumers to integrate their North American production and distribution operations to more efficiently serve regional end-use markets in North America.<sup>4</sup> Trade statistics for all commodity/industry groups in the minerals and metals sector are presented in table 10-7 at the end of this chapter.

## U.S. BILATERAL TRADE

The leading U.S. import and export products in the minerals and metals sector for major trading partner countries are presented in table 10-4. The principal product categories comprising U.S. bilateral trade in 1998 were steel mill products, accounting for 20 percent of U.S. imports and 11 percent of U.S. exports; natural and synthetic gemstones, accounting for 12 percent of U.S. imports; and precious metals and related articles, accounting for 10 percent of U.S. imports and 17 percent of U.S. exports. These product categories and trade proportions remained virtually unchanged from 1997 levels.

The largest U.S. trading partners in the minerals and metals sector in 1998 were Canada, Mexico, and Japan. Canada was the leading destination for U.S. exports in 1998, accounting for 32 percent (\$13.3 billion) of sector exports, and the leading source of imports, accounting for 21 percent (\$17.1 billion) of sector imports. The U.S. trade deficit in minerals and metals with Canada increased by a modest \$60 million (2 percent) to \$3.8 billion in 1998. U.S. exports to Canada remained virtually unchanged during the period, totaling \$13.3 billion, while U.S. imports from Canada rose by \$44 million (less than 1 percent) to \$17.1 billion. U.S. steel mill products exports to Canada declined by \$156 million (7 percent) to \$2.2 billion, partially reflecting the increased penetration of lower-priced Asian exports into the Canadian market and their displacement of U.S.-produced goods.<sup>5</sup> U.S. exports of copper and related articles declined by \$179 million (24 percent) to \$577 million in 1998, largely reflecting reductions in the world price of copper and the diversion of domestic copper concentrate to supply Kennecott Copper's new U.S. copper smelter, which in prior years was exported to Canada.

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<sup>4</sup> "Steel Trade Ties U.S. and Canada," *Purchasing*, Oct. 9, 1997, p. B9.

<sup>5</sup> "Canadians Invest in Steel," *Purchasing*, Oct. 8, 1998, found at Internet address <http://proquest.umi.com/pqdweb?/RQT=341>.

**Table 10-4**  
**Minerals and metals: Leading U.S. import and export products, by major partner, 1998**

Partner	Leading imports	Leading exports
Canada . . . . .	Unwrought aluminum Gold, unwrought or semimanufactured Mountings and other hardware for furniture, doors, rivets, etc. Aluminum plates, sheets, and strip, over 0.2 mm thick Unwrought zinc	Aluminum plates, sheets, and strip, over 0.2 mm thick Screws, bolts, nuts, coach screws, etc. Mountings and other hardware for furniture, doors, rivets, etc. Articles of iron or steel Gold, unwrought or semimanufactured
Mexico . . . . .	Semifinished products of iron or nonalloy steel Refined copper and alloys Padlocks and locks, of base metal Stoves, ranges, grates, cookers, etc. Springs and leaves for springs, of iron or steel	Articles of iron and steel Aluminum plates, sheets and strip, over 0.2 mm thick Screws, bolts, nuts, coach screws, etc. Gold, unwrought or semimanufactured
Japan . . . . .	Flat-rolled or nonalloy steel products, 600 mm or more wide Interchangeable tools for handtools, or for machine tools Screws, bolts, nuts, coach screws, etc. Flat-rolled alloy steel, 600 mm or more wide Angles, shapes and sections, of iron or nonalloy steel	Kaolin and other kaolinic clays Safety glass, consisting of tempered or laminated glass Unwrought aluminum Aluminum plates, sheets, and strip, over 0.2 mm. thick Platinum, unwrought or semimanufactured
United Kingdom . . . . .	Diamonds, whether or not worked Platinum, unwrought or semimanufactured  Gold, unwrought or semimanufactured Ceramic tableware, kitchenware, etc., other than of porcelain or china Aluminum plates, sheets, and strip, over 0.2 mm thick	Gold, unwrought or semimanufactured Silver, unwrought or semimanufactured Waste and scrap of precious metals Screws, bolts, nuts, coach screws, etc. Razors and razor blades, and base metal parts
China . . . . .	Ceramic tableware, kitchenware, etc., other than of porcelain or china Table, kitchen, or other household articles, of iron or steel Statuettes and other ornamental ceramic articles Articles of cement, concrete, or artificial stone Articles of iron or steel	Aluminum plates, sheets, and strip, over 0.2 mm thick Copper waste and scrap Ferrous waste and scrap Aluminum waste and scrap Unworked glass in balls, rods, or tubes
Germany . . . . .	Flat-rolled alloy steel, 600 mm or more wide Aluminum plates, sheets, and strip, over 0.2 mm thick Iron tubes, pipes, and hollow profiles Interchangeable tools for handtools, or for machine tools Platinum, unwrought or semimanufactured	Articles of aluminum Waste and scrap of precious metals Glass mirrors, including rearview mirrors Interchangeable tools for handtools, or for machine tools Plates, sticks, tips, etc., for tools

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

The principal export sector registering an increase in 1998 was miscellaneous products of base metal, which increased \$325 million (19 percent) to \$2.1 billion and consisted largely of miscellaneous iron and steel articles and various mountings, fittings, and hinges designed for motor vehicles and exported to U.S.-owned automotive plants in Canada. The principal U.S. import trade sector that registered an increase from Canada in 1998 was miscellaneous products of base metal, which increased by \$192 million (12 percent) to \$1.8 billion due to strong U.S. metals and automotive-related demand. The principal U.S. trade sector experiencing a decline in imports in 1998 was copper metal and related articles, declining by \$249 million (18 percent) to \$1.1 billion; that decline was in spite of the strong demand in copper end-use markets resulting from the rapid drop in copper prices.

Mexico was the second-leading market for U.S. sector exports and the third-leading supplier of U.S. imports of minerals and metals in 1998. U.S. exports to Mexico of minerals and metals in 1998 registered a \$610 million (11-percent) increase to \$6.1 billion, which accounted for 15 percent of overall sector exports. The increase in U.S. exports to Mexico was accounted for largely by aluminum metal and related articles, which rose by \$184 million (22 percent) to \$1.0 billion and articles of iron and steel, which grew by \$137 million (9 percent) to \$1.7 billion. Both increases reflected a growing demand for construction- and automotive-related metals and materials in Mexico. U.S. imports of minerals and metals from Mexico increased by \$642 million (13 percent) to \$5.8 billion, accounting for 7 percent of overall sector imports. Most of the growth was accounted for by an increase in imports of copper metal and related articles, which climbed by \$198 million (46 percent) to \$630 million, continuing a trend of rising imports of copper from Mexico in response to strong demand by the U.S. construction market.

U.S. exports of minerals and metals to Japan, the fourth-largest market for U.S. exports of minerals and metals, registered a \$600 million (23-percent) decline in 1998 to \$2.0 billion (representing 5 percent of sector exports). The reduction in U.S. exports to Japan in 1998 was principally concentrated in glass and glassware, which fell by \$152 million (33 percent) to \$304 million; aluminum and aluminum articles, which contracted by \$126 million (27 percent) to \$348 million; copper and copper articles, which decreased by \$58 million (31 percent) to \$131 million; and iron and steel articles, which fell by \$32 million (27 percent) to \$87 million. These reductions are largely attributable to weakness in major Japanese automobile, construction, and appliance-related end-use markets, as the Japanese economy experienced negative economic growth in 1998. U.S. imports of minerals and metals from Japan, the second-leading source of sector imports, grew by \$1.2 billion (21 percent) to \$6.7 billion (representing 8 percent of sector imports), an increase due principally to a near-doubling of iron and steel imports from \$1.2 billion (94 percent) to \$2.4 billion in 1998 as the strong growth in the U.S. economy and aggressive pricing by Japanese producers stimulated purchases of materials in this product category. Other product sectors experiencing import growth from Japan included aluminum and aluminum articles, which increased by \$26 million (11 percent) to \$271 million, and articles of stone, plaster, cement, and similar materials, which rose by \$32 million (18 percent) to \$216 million.

Exports of minerals and metals to Asian Pacific Rim and Latin American nations totaled 17 percent and 21 percent, respectively, of all U.S. sector exports in 1998, with European Union (EU) nations representing 21 percent. The U.S. sector trade deficit with these major trading regions increased due to strong U.S. economic growth and weak foreign demand in major U.S. export markets. The sector trade deficit with Latin America widened by \$209 million (10 percent) to \$2.2 billion as the rise in imports from the region of \$641 million (6 percent) to \$11.0 billion exceeded the rise in exports of \$432 million (5 percent) to \$8.8 billion. The trade deficit in sector products with Asian Pacific nations grew by \$5.8 billion (79 percent) to \$13.1 billion as weakening exchange rates relative to the U.S. dollar and declining economic conditions in this region encouraged foreign exports to the U.S. market and discouraged U.S. exports to the region. Sector exports to the Asian Pacific region fell by \$2.0 billion (22 percent) in 1998 to \$6.9 billion, while imports from Asian Pacific nations rose by \$3.9 billion (24 percent) to \$20.0 billion. The trade

deficit in sector products with the EU narrowed by \$295 million (4 percent) to \$7.7 billion in 1998, as exports to EU nations increased by \$1.0 billion (13 percent) to \$8.8 billion, while imports from EU nations expanded by \$722 million (5 percent) to \$16.4 billion.

## COMMODITY ANALYSIS

### Natural and Synthetic Gemstones

The U.S. trade deficit for natural and synthetic gemstones continued to grow in 1998, expanding by about \$900 million (11 percent) to \$9.2 billion. Strong U.S. demand for gemstones, especially diamonds, caused imports of natural and synthetic gemstones to increase by \$885 million. Major factors behind the \$14 million decline in exports were lower export prices<sup>6</sup> and a \$10 million (97-percent) decrease in 1998 from an anomalous 1997 shipment of colored gemstones to Israel.<sup>7</sup> Exports of diamonds rose, however, reflecting greater demand for lower priced products.<sup>8</sup> Although the United States is not a significant producer of gemstones, it is the world's largest consumer of gemstones, particularly diamonds. Imports supplied virtually all domestic requirements in 1998.

#### U.S. imports

Continued strengthening of the U.S. economy during 1997-98 is credited with the growth in imports of natural and synthetic gemstones, which are considered luxury items. Improvements in real disposable personal income, consumer confidence in the economy, lower interest rates, and an increase in real gross domestic product were the key factors.

U.S. imports grew by \$885 million (10 percent) to \$9.4 billion in 1998, and were led by greater demand for slightly lower priced diamonds (table 10-5). While the value of imported diamonds alone rose by \$890 million (12 percent) to \$8.5 billion, the combined value of U.S. diamond imports from Israel, India, and Belgium—major diamond cutting and trading centers—increased by \$870 million (about 14 percent) to \$7.3 billion. These countries continue to account for the bulk of U.S. diamond imports, representing 78 percent of the value of imported natural and synthetic gemstones in 1998. Pearls also contributed to the growth in U.S. imports, rising by \$15 million (6 percent) to \$280 million. Japan is the global trade center for pearls and continued to supply most of these products. The growth in U.S. imports was tempered, however, by a \$20 million (3-percent) decrease in the import value of colored gemstones, which fell to \$615 million; Thailand and India supplied most of these products.

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<sup>6</sup> The export value of uncut colored gemstones decreased by about \$21 million (68 percent) to \$10 million; the quantity decreased by 11 million carats (11 percent) to 88 million; and the trade weighted average unit export price decreased by 20 cents to 11 cents per carat. Similar analysis is not possible for cut colored gemstones because export quantity is not reported.

<sup>7</sup> Shipment values of colored gemstones to Israel ranged from about \$100,000 to \$1 million prior to 1997.

<sup>8</sup> The export value of diamonds increased by about \$16 million (14 percent) to \$124 million; the quantity increased by 55,000 carats (31 percent) to 234,000; but the trade weighted average unit export price decreased by \$75 to \$529 per carat.

**Table 10-5**  
**Changes in U.S. imports of natural and synthetic gemstones, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
————— Million dollars —————				
<b>Increases:</b>				
Diamonds .....	7,599	8,489	890	12
Pearls .....	265	280	15	6
Synthetic and reconstructed gemstones .....	65	66	1	1
<b>Decreases:</b>				
Natural colored gemstones .....	635	615	-20	-3
<b>Total</b> .....	<b>8,564</b>	<b>9,449</b>	<b>885</b>	<b>10</b>

Note.--Calculations based on unrounded data.

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

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### Precious Metals and Related Articles

During the years 1997-98, the U.S. merchandise trade balance in precious-metals and related articles<sup>9</sup> shifted from a surplus of nearly \$1.3 billion to a deficit of \$883 million, as imports increased significantly by \$1.9 billion, whereas exports declined slightly by \$297 million.<sup>10</sup> Although the United States is a world-scale producer of gold and silver, as well as a major global center for precious-metals refining, fabricating, and trading, it must rely on imports to meet domestic consumption needs. Demand for precious metals and related products remained robust in 1998, prompted by high levels of consumer discretionary spending and industrial output, as the U.S. economy continued to expand. Increased import quantities of the individual commodities appeared to have had greater impact on the import shift for this commodity group than did continued weaker prices for gold and platinum (table 10-6).<sup>11</sup> In contrast, decreased export quantities of silver and platinum-group metals (PGMs), and increased export quantities of non-monetary gold, appeared to have had less impact on the export shift for this commodity group than did firmer prices for silver and palladium,<sup>12</sup> and weaker gold prices.

<sup>9</sup> Precious metals and related articles includes gold, silver, and platinum-group metals (platinum, palladium, rhodium, iridium, ruthenium, and osmium) in unwrought or semimanufactured forms; precious-metals waste and scrap; and nonnumismatic bullion coins. Monetary gold held as official reserves by central banks is excluded from this category.

<sup>10</sup> U.S. exports of these products declined by 4 percent during 1997-98 to \$6.9 billion.

<sup>11</sup> For gold, the annual average London Final fix was \$294.16 per troy ounce in 1998, down from \$331.15 per troy ounce in 1997, primarily due to market uncertainty over gold reserve requirements for the planned European Central Bank System, and dishoarding from Southeast and East Asia. For platinum, the annual average Engelhard Industries price was \$372.04 per troy ounce in 1998, down from \$396.58 per troy ounce in 1997, with continued supplies from South Africa (the world's largest producer), and decreased demand from East Asia's economic slump. *Platt's Metals Week*, various issues, 1998-99; U.S. Geological Survey (USGS), "Precious Metals," *Mineral Industry Surveys*, various issues, 1998-99.

<sup>12</sup> The corresponding annual average London Final fix for silver was \$5.54 per troy ounce in 1998, up from \$4.90 per troy ounce during the previous year, as prices spiked in first quarter 1998 from market news of contracts coming due for large-volume purchases by a major investment fund, which it had been arranging since the latter

**Table 10-6**  
**Changes in U.S. imports of precious metals and related articles, 1997-98**

Commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	————— <i>Million dollars</i> —————			
Platinum-group metals . . . . .	1,959	3,057	1,099	56
Gold (non-monetary) . . . . .	2,944	3,467	523	18
Silver . . . . .	472	663	191	40
Waste and scrap . . . . .	204	237	33	16
Bullion coins . . . . .	291	311	20	7
<b>Total</b> . . . . .	<b>5,869</b>	<b>7,735</b>	<b>1,866</b>	<b>32</b>

Note.--Calculations based on unrounded data.

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

### U.S. imports

U.S. imports of precious metals and related products rose by \$1.9 billion (32 percent) during 1997-98 to \$7.7 billion, reflecting primarily increased imports of nonmonetary gold and PGMs, due to the large trading volumes for gold and the relatively high unit values for both. The top three import sources for this commodity group in 1998 continued to be Canada (\$2.2 billion or 29 percent of U.S. imports), South Africa (\$1.1 billion or 14 percent), and Russia (\$1.0 billion or 13 percent). Together, these countries accounted for over half of the total value of U.S. imports of these products. U.S. imports from Canada, enhanced by extensive cross-border linkages among refiners and fabricators, and cross-border investments in the mining sector, grew for a fourth straight year, by \$88 million (4 percent) during 1997-98, due to increased quantities of nearly all commodities in this group, especially higher-priced palladium and silver.

Nonmonetary gold imports rose by \$523 million (18 percent) during 1997-98 to \$3.5 billion, or 45 percent of imports of all precious metals and related articles. Sustained robust domestic demand for gold was driven by continued strong jewelry and investment demand; the former was further boosted by growth in nontraditional distribution channels, including television promotion sales, electronic retailing, and discount retail chains, which made gold jewelry increasingly accessible and affordable to consumers.<sup>13</sup> Precious jewelry demand in the United States was 353.0 metric tons in 1998, an all-time record and 8 percent higher than the previous year.<sup>14</sup> Likewise, bullion coin sales from issuing mints amounted to 75.4 metric tons, exceeding all-time record years of the late 1970s, when gold investment was at its peak, and 109 percent higher than the previous year's level.<sup>15</sup> Although only the fourth-largest worldwide gold producer,<sup>16</sup> Canada remained the United States's primary source of nonmonetary gold imports,<sup>17</sup> but the

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half of the previous year. The corresponding annual average Engelhard Industries price for palladium was \$295.65 per troy ounce in 1998, up from \$184.14 per troy ounce during the previous year, due to concerns over prolonged delays in shipments from Russia, traditionally the world's largest supplier. Ibid.

<sup>13</sup> For example, U.S. consumption of gold jewelry and coins reached an all-time high of 428.4 metric tons in 1998, 18 percent higher than the previous record set in 1997 of 362.1 metric tons. World Gold Council, *Gold Demand Trends*, issue No. 26, Feb. 1999, p. 15.

<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> 1998 gold production was estimated for Canada at 155 metric tons, or 6 percent of the estimated 2,400 metric tons produced world-wide. Earle B. Amey, "Gold," *Mineral Commodity Summaries*, USGS, Jan. 1999.

<sup>17</sup> Canada supplied \$1.7 billion or 50 percent of all U.S. non-monetary gold imports in 1998, compared to \$1.8 billion or 60 percent in the previous year. Ibid.

value of such imports during 1997-98 declined by \$40 million (2 percent) to \$1.7 billion. Weaker gold prices and lower quantities of unwrought forms appeared to have had a greater impact on this trend than increased quantities of semimanufactured forms, including minted bars, and nonnumismatic gold coins.

Platinum-group metals imports increased for a fifth consecutive year, by \$1.1 billion (56 percent) during 1997-98 to \$3.1 billion, or 40 percent of all imports of precious metals and related articles. Without significant domestic PGM resources, the United States is highly dependent on foreign sources. Sustained demand for PGM was driven primarily by demand for catalytic materials by the automotive, chemicals, and petroleum industries. Russia overtook South Africa as the leading PGM supplier to the United States in 1998.<sup>18</sup> The value of imports from Russia rose by \$593 million (122 percent) to \$1.1 billion, led by increased quantities of higher-priced palladium, as well as larger quantities of platinum, despite a second consecutive year of supply disruptions due to delays during the first half of 1998 in official approvals for export shipments.<sup>19</sup> U.S. imports from South Africa climbed \$252 million (33 percent) to \$1.0 billion, with growing quantities of higher priced palladium, as well as expanded quantities of platinum and rhodium.

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### **Steel Mill Products<sup>20</sup>**

Strong domestic demand conditions early in the year, combined with weak economic conditions in several major overseas markets, resulted in a record-setting \$16.4 billion of U.S. steel imports in 1998, up \$2.8 billion (21 percent) from 1997.<sup>21</sup> The U.S. trade deficit in steel mill products increased by \$3.0 billion (35 percent) to \$11.8 billion, as exports declined \$207 million (4 percent) to \$4.6 billion in 1998, reversing trends evident in 1997 when exports rose 19 percent (\$768 million). Exports appeared to be less directly affected by the Asian financial crisis, currency devaluations, and increased supply of steel mill products in the world steel market, than were imports. The product group with the largest value decrease in U.S. exports was oil country tubular goods, which declined by \$122 million (16 percent) to \$658 million in 1998, reflecting weak world markets. These trade trends contributed to a record-setting annual apparent supply level of 131 million tons. However, monthly apparent supply levels (excluding semifinished imports), which were trending upwards early in the year, stalled over the summer months in a range around 11.0-11.5 million tons, before declining in December to 9 million tons, the lowest level since February 1996.<sup>22</sup>

This pattern of growth early in the year, followed by monthly declines later in the year, was evident for several major industry indicators. U.S. raw steel production, which for the year exceeded 1997 levels by 700,000 tons (less than 1 percent) and accounted for an increased share of world steel production,<sup>23</sup>

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<sup>18</sup> South Africa and Russia are the world's largest producers of PGMs. In 1998, Russia supplied \$1.1 billion or 35 percent of all U.S. PGM imports, compared with \$486 million or 25 percent in the previous year. Over the same period, South Africa supplied \$1.0 billion or 33 percent, compared with \$754 million or 38 percent. *Ibid.*

<sup>19</sup> Brent Shearer, "Market Keyed to Russian Shipments," *American Metals Market Supplement, Precious Metals, Special Issue*, June 12, 1998, pp. 3A and 10A.

<sup>20</sup> Includes semifinished, flat-rolled (plate and sheet), bars, rods, angles and sections, wire, rails, pipes, and tubes.

<sup>21</sup> Semifinished products, which are primarily purchased by steel mills, accounted for \$1.7 billion (10 percent) of the total.

<sup>22</sup> *Selected Steel Industry Data*, American Iron and Steel Institute, Dec. 1998 issue.

<sup>23</sup> U.S. steel production rose from 12.3 percent of world production in 1997 to 12.6 percent in 1998. "Economic Indicators," *Economist*, Feb. 6, 1999, p. 108.

peaked on a monthly basis in March (10 million tons) before falling to a low in November of 8 million tons. Raw steel capacity utilization fell from 95 percent in February to 75 percent in December.<sup>24</sup> In addition to these reported decreases in raw steel capacity utilization, steel mills announced equipment closures at associated upstream and downstream facilities.<sup>25</sup>

U.S. shipments followed a similar monthly pattern as production, but ended 1998 at 102 million tons, 2 percent lower at yearend than in 1997, indicating inventory building at some point in the year by steel producers. Service centers also built inventories; the Steel Service Center Institute reported that their measure of “months of shipments on hand” rose from 2.9 in January to 4.0 in December, the highest level since February 1991.<sup>26</sup>

After a small rise in early 1998, steel product spot market prices began to decline in the spring, echoing earlier price declines in many overseas markets, and by December were significantly lower than early in the year.<sup>27</sup> Market participants have blamed a variety of factors as causing the decline in domestic price levels, including high import deliveries, high inventory levels throughout the supply chain, increased U.S. capacity, sales at less-than-fair value in certain product lines, and strike activity at General Motors.<sup>28</sup>

The conditions in the industry led to legal, political, and public relations responses by various industry and labor groups. Antidumping and countervailing duty cases continued to be filed,<sup>29</sup> accompanied by the industry/labor “Stand up for Steel” campaign, and the introduction of several bills by members of Congress from steel-producing states proposing a variety of changes to U.S. trade laws.<sup>30</sup>

## U.S. imports

Import tonnage increased by 10.4 million tons (33 percent) to 41.9 million tons in 1998. In contrast, the unit value per ton fell 9 percent during the same period, reflecting the deterioration in steel prices over the year. U.S. imports from Japan of \$2.9 billion (up 82 percent in 1998), Russia of \$1.3 billion (up 39 percent), and Korea of \$1.2 billion (up 85 percent) made up a third of the total value in imports of steel mill products during 1998. The largest change was in flat-rolled nonalloy steel products, which increased by \$1.2 billion (58 percent) to \$3.3 billion in 1998. This was followed by angles, shapes and sections, with an increase of \$576 million (147 percent) to \$967 million in 1998.

On a monthly basis, import volumes declined later in the year than did several other indicators (e.g. production, capacity utilization), which may be attributable to the longer lead times (time between order and delivery) for imported steel than for domestic shipments. Import orders that were placed in the beginning of the year when the business environment surrounding the steel market looked favorable were still “in the pipeline” when domestic market conditions deteriorated.

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<sup>24</sup> *Selected Steel Industry Data*, American Iron and Steel Institute, various issues, 1998.

<sup>25</sup> See, for example, “Geneva, Lone Star, National to Cut Their Operating Rates,” *Metal/Center News*, ABC Media Inc., Radnor, Nov. 1998, found at Internet address <http://proquest.umi.com>, retrieved Apr. 27, 1999.

<sup>26</sup> *Business Conditions*, Steel Service Center Institute, Dec. 1998, Dec. 1996, and Dec. 1993.

<sup>27</sup> Peter Marcus, *World Steel Dynamics*, PriceTrack #61, Mar. 22, 1999, p. 8.

<sup>28</sup> U.S. service centers reported that with the onset of the General Motor strike, steel producers saw inventories building up and, in order to reduce their inventories, offered their products at reduced prices. Kurt Wiebe, “Record Shipping Year Despite December Slump,” *Steel Service Center Institute*, Jan. 22, 1999, p. 1.

<sup>29</sup> Cases initiated or completed during the year under title VII of the Tariff Act of 1930, including 5-year review cases, covered stainless steel sheet and strip, stainless steel plate, stainless steel round wire, carbon steel wire rod, stainless steel wire rod, and hot-rolled carbon steel sheet and plate in coil.

<sup>30</sup> These bills propose changes to both antidumping and countervailing duty statutes, as well as changes to safeguard provisions. None of these bills was passed in 1998.

Imports of steel mill products from Canada increased by \$35 million (1 percent) to \$2.5 billion in 1998 with imports from Mexico decreasing by \$63 million (5 percent) to \$1.1 billion. This represented an overall decrease of \$27 million (less than 1 percent) to \$3.6 billion with NAFTA partners in 1998. Canada and Mexico also experienced increases in imported steel mill products in 1998, which has prompted Mexican and Canadian steel producers into discussions with their U.S. counterparts regarding the possibility of establishing a North American steel trading block.<sup>31</sup> U.S. imports from the European Union in 1998 decreased by \$18 million (less than 1 percent) to \$4.0 billion.

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<sup>31</sup> James F. Collins, "U.S. Dropped The Ball On Steel Trade Agreement," *Metal/Center News*, ABC Media Inc., Radnor, Feb. 1999, found at Internet address <http://proquest.umi.com>, retrieved Mar. 17, 1999.

Table 10-7

Minerals and metals sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
MM001	Clays and nonmetallic minerals, not elsewhere specified or included:				
	Exports .....	1,083	1,036	-48	-4.4
	Imports .....	240	282	42	17.4
	Trade balance: .....	843	754	-90	-10.6
MM002	Certain miscellaneous minerals substances:				
	Exports .....	14	10	-4	-30.7
	Imports .....	57	40	-16	-28.6
	Trade balance: .....	-42	-30	12	27.9
MM003	Iron ores and concentrates:				
	Exports .....	235	244	10	4.1
	Imports .....	551	527	-24	-4.4
	Trade balance .....	-316	-283	34	10.6
MM004	Copper ores and concentrates:				
	Exports .....	211	63	-148	-70.1
	Imports .....	68	228	160	236.7
	Trade balance .....	143	-165	-308	( <sup>3</sup> )
MM005	Lead ores and residues:				
	Exports .....	35	65	30	83.6
	Imports .....	6	8	2	41.9
	Trade balance: .....	30	57	27	91.3
MM006	Zinc ores and residues:				
	Exports .....	379	304	-75	-19.9
	Imports .....	45	37	-9	-19.0
	Trade balance: .....	333	267	-67	-20.0
MM007	Certain ores, concentrates, ash, and residues:				
	Exports .....	432	350	-82	-19.0
	Imports .....	645	710	65	10.0
	Trade balance: .....	-213	-360	-146	-68.7
MM008	Precious metal ores and concentrates:				
	Exports .....	21	11	-10	-49.0
	Imports .....	38	45	7	18.6
	Trade balance .....	-17	-35	-17	-101.1
MM009	Certain nonmetallic minerals and articles:				
	Exports .....	1,213	1,201	-12	-1.0
	Imports .....	2,860	3,426	567	19.8
	Trade balance: .....	-1,647	-2,226	-579	-35.1
MM010	Industrial ceramics:				
	Exports .....	723	668	-55	-7.6
	Imports .....	550	545	-5	-0.8
	Trade balance: .....	174	123	-51	-29.1
MM011	Ceramic bricks and miscellaneous ceramic construction articles:				
	Exports .....	25	26	2	7.3
	Imports .....	17	20	2	13.3
	Trade balance: .....	7	7	-1	-7.0
MM012	Ceramic floor and wall tiles:				
	Exports .....	29	27	-2	-8.0
	Imports .....	716	860	145	20.2
	Trade balance .....	-687	-834	-147	-21.4
MM013	Ceramic household articles:				

See footnote(s) at end of table.

Table 10-7--Continued

Minerals and metals sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Exports .....	101	103	2	2.4
	Imports .....	1,675	1,716	41	2.4
	Trade balance .....	-1,575	-1,613	-38	-2.4
MM014	Flat glass and certain flat-glass products:				
	Exports .....	1,488	1,416	-72	-4.8
	Imports .....	1,063	1,120	57	5.4
	Trade balance: .....	425	296	-129	-30.4
MM015	Glass containers:				
	Exports .....	157	173	15	9.8
	Imports .....	428	452	24	5.6
	Trade balance: .....	-271	-279	-8	-3.1
MM016	Household glassware:				
	Exports .....	250	179	-70	-28.2
	Imports .....	818	864	46	5.6
	Trade balance: .....	-568	-685	-116	-20.5
MM017	Certain glass and glass products:				
	Exports .....	770	662	-108	-14.1
	Imports .....	767	702	-64	-8.4
	Trade balance: .....	3	-41	-44	( <sup>3</sup> )
MM018	Fiberglass products:				
	Exports .....	562	576	14	2.5
	Imports .....	347	390	43	12.4
	Trade balance: .....	215	186	-29	-13.4
MM019	Natural and synthetic gemstones:				
	Exports .....	231	217	-14	-6.2
	Imports .....	8,564	9,449	885	10.3
	Trade balance: .....	-8,333	-9,233	-899	-10.8
MM020	Precious metals and related articles:				
	Exports .....	7,149	6,853	-297	-4.1
	Imports .....	5,869	7,735	1,866	31.8
	Trade balance: .....	1,280	-883	-2,163	( <sup>3</sup> )
MM021	Primary iron products:				
	Exports .....	19	17	-1	-6.6
	Imports .....	608	856	248	40.7
	Trade balance: .....	-590	-838	-249	-42.2
MM022	Ferroalloys:				
	Exports .....	153	103	-49	-32.3
	Imports .....	1,044	1,018	-26	-2.5
	Trade balance: .....	-891	-914	-23	-2.6
MM023	Iron and steel waste and scrap:				
	Exports .....	1,356	817	-539	-39.7
	Imports .....	400	418	18	4.4
	Trade balance .....	956	399	-557	-58.2
MM024	Abrasive and ferrous products:				
	Exports .....	529	531	2	0.3
	Imports .....	735	735	-1	-0.1
	Trade balance .....	-206	-204	2	1.1
MM025	Steel mill products, all grades:				
	Exports .....	4,843	4,636	-207	-4.3
	Imports .....	13,602	16,434	2,833	20.8
	Trade balance: .....	-8,758	-11,798	-3,040	-34.7
MM026	Steel pipe and tube fittings and certain cast products:				

See footnote(s) at end of table.

Table 10-7--Continued

Minerals and metals sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Exports .....	749	809	60	8.0
	Imports .....	555	591	35	6.4
	Trade balance: .....	194	219	24	12.6
MM027	Fabricated structurals:				
	Exports .....	189	151	-38	-20.2
	Imports .....	205	328	124	60.5
	Trade balance: .....	-15	-177	-162	-1,056.0
MM028	Metal construction components:				
	Exports .....	689	611	-78	-11.4
	Imports .....	435	562	126	29.0
	Trade balance .....	254	49	-205	-80.6
MM029	Metallic containers:				
	Exports .....	901	819	-81	-9.0
	Imports .....	458	463	5	1.1
	Trade balance: .....	443	356	-87	-19.6
MM030	Wire products of iron, steel, aluminum, copper, and nickel:				
	Exports .....	817	815	-3	-0.3
	Imports .....	1,247	1,264	17	1.4
	Trade balance: .....	-430	-450	-20	-4.6
MM031	Chain and miscellaneous products of base metal:				
	Exports .....	4,645	5,077	432	9.3
	Imports .....	5,866	6,473	607	10.3
	Trade balance: .....	-1,221	-1,396	-175	-14.3
MM032	Industrial fasteners of base metal:				
	Exports .....	1,280	1,397	117	9.2
	Imports .....	1,874	1,985	111	5.9
	Trade balance: .....	-594	-588	6	1.0
MM033	Cooking and kitchen ware:				
	Exports .....	242	244	2	1.0
	Imports .....	1,303	1,393	90	6.9
	Trade balance .....	-1,061	-1,149	-88	-8.3
MM034	Metal and ceramic sanitary ware:				
	Exports .....	159	147	-12	-7.7
	Imports .....	332	403	71	21.3
	Trade balance .....	-173	-257	-83	-47.9
MM035	Iron construction castings and other nonmalleable cast-iron articles:				
	Exports .....	46	37	-9	-19.8
	Imports .....	99	110	11	11.2
	Trade balance: .....	-53	-73	-20	-37.9
MM036	Copper and related articles:				
	Exports .....	2,228	1,813	-415	-18.6
	Imports .....	3,743	3,359	-384	-10.3
	Trade balance: .....	-1,516	-1,546	-31	-2.0
MM037	Unwrought aluminum:				
	Exports .....	1,023	917	-106	-10.4
	Imports .....	4,389	4,558	169	3.9
	Trade balance .....	-3,366	-3,641	-276	-8.2
MM038	Aluminum mill products:				
	Exports .....	3,133	3,046	-87	-2.8
	Imports .....	2,009	2,181	172	8.6

See footnote(s) at end of table.

Table 10-7--Continued

Minerals and metals sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Trade balance .....	1,124	866	-258	-23.0
MM039	Lead and related articles:				
	Exports .....	181	160	-22	-12.1
	Imports .....	201	190	-11	-5.5
	Trade balance .....	-19	-30	-11	-56.8
MM040	Zinc and related articles:				
	Exports .....	113	102	-11	-9.9
	Imports .....	1,328	1,119	-209	-15.7
	Trade balance .....	-1,215	-1,017	198	16.3
MM041	Certain base metals and chemical elements:				
	Exports .....	1,401	1,398	-3	-0.2
	Imports .....	2,777	2,424	-353	-12.7
	Trade balance: .....	-1,376	-1,025	351	25.5
MM042	Nonpowered handtools:				
	Exports .....	2,188	2,060	-128	-5.8
	Imports .....	2,725	2,885	160	5.9
	Trade balance .....	-537	-825	-288	-53.6
MM043	Cutlery other than tableware, certain sewing implements, and related products:				
	Exports .....	475	511	36	7.5
	Imports .....	719	781	62	8.7
	Trade balance: .....	-244	-271	-27	-11.0
MM044	Table flatware and related products:				
	Exports .....	36	24	-12	-32.3
	Imports .....	325	327	2	0.5
	Trade balance .....	-289	-303	-13	-4.6
MM045	Certain builders' hardware:				
	Exports .....	600	636	37	6.1
	Imports .....	908	1,045	138	15.2
	Trade balance .....	-308	-409	-101	-32.8

<sup>1</sup>Import values 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>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

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# CHAPTER 11

## Machinery

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The financial crisis in Asia was largely responsible for a \$3.7 billion (5-percent) decline in U.S. exports of machinery in 1998, which, in combination with a \$5.1 billion (7-percent) increase in sector imports, resulted in a \$7.8 billion deficit in U.S. machinery trade (table 11-1). The trade deficit in this sector contrasts with the surplus of \$979 million that was recorded in 1997. The impact of the Asian financial crisis on U.S. machinery trade is further evidenced by the \$4.9 billion (24 percent) decline in U.S. exports to the countries of the Asia Pacific Rim in 1998, while U.S. imports from the region rose by \$815 million (3 percent). The strength of the U.S. economy relative to that of other nations contributed to the rise in imports of machinery for industrial purposes and private use, and the trade deficit in these goods.

As shown in table 11-2, collectively, miscellaneous machinery<sup>1</sup> and nonmetalworking machine tools accounted for over half (\$2.0 billion) of the total decrease in U.S. exports in the machinery sector in 1998. Other substantial decreases in exports were recorded in centrifuges and filtering and purifying equipment; certain industrial thermal-processing equipment; boilers, turbines, and related machinery; and farm and garden machinery and equipment. The most significant offsetting increase in machinery exports was recorded in the high-technology category encompassing semiconductor manufacturing equipment and industrial robots, which grew by \$1.4 billion (19 percent) in 1998 to \$8.6 billion.

Increases in U.S. imports were widespread through the range of machinery categories. As shown in table 11-3, collectively, six categories, each with growth in the \$400-600 million range, accounted for over half of the total expansion in U.S. machinery imports in 1998: electrical household appliances; electric motors, generators, and related equipment; air-conditioning equipment and parts; miscellaneous machinery; semiconductor manufacturing equipment and robotics; and insulated electrical wire and cable and conduit. The only notable decline in machinery imports was recorded in non-metalworking machine tools, which fell by \$235 million (16 percent) to \$1.2 billion. Trade statistics for all commodity/industry groups in the machinery sector are presented in table 11-5 at the end of this chapter.

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<sup>1</sup> This extensive product grouping covers a wide and heterogeneous range of products such as: producer gas or water gas generators; calendaring and similar rolling machines; pulley tackle and hoists; winches; jacks; elevators, moving stairways, and conveyers; ski lifts and draglines; lifting, handling, and unloading equipment; casting machines; hand-held blow torches; evaporative air coolers; trash compactors; and additional categories of industrial and commercial equipment not specifically provided for elsewhere in the tariff schedules.

Table 11-1

**Machinery: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>**

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	15,811	16,143	332	2.1
Mexico .....	8,889	10,034	1,144	12.9
Japan .....	4,157	3,498	-659	-15.8
Germany .....	2,482	2,700	218	8.8
United Kingdom .....	3,206	3,160	-47	-1.5
China .....	1,869	1,675	-194	-10.4
Taiwan .....	2,874	2,588	-286	-10.0
Italy .....	812	934	122	15.1
France .....	1,813	1,800	-13	-0.7
Korea .....	3,285	1,438	-1,847	-56.2
All Other .....	25,664	23,198	-2,467	-9.6
Total .....	70,863	67,168	-3,695	-5.2
<b>Selected country groups:</b>				
EU-15 .....	12,557	13,028	471	3.8
OPEC .....	3,416	2,854	-562	-16.5
Latin America .....	15,940	16,779	840	5.3
CBERA .....	1,545	1,851	306	19.8
Asian Pacific Rim .....	20,517	15,620	-4,897	-23.9
ASEAN .....	5,363	3,833	-1,530	-28.5
Central and Eastern Europe .....	402	365	-36	-9.0
<b>U.S. imports for consumption:</b>				
Canada .....	8,523	9,125	602	7.1
Mexico .....	11,229	12,526	1,298	11.6
Japan .....	13,559	13,248	-312	-2.3
Germany .....	8,691	9,549	858	9.9
United Kingdom .....	3,394	3,581	187	5.5
China .....	4,272	5,013	741	17.3
Taiwan .....	2,770	2,838	68	2.5
Italy .....	3,310	3,539	228	6.9
France .....	1,793	2,325	531	29.6
Korea .....	1,266	1,521	255	20.1
All Other .....	11,075	11,750	674	6.1
Total .....	69,884	75,014	5,131	7.3
<b>Selected country groups:</b>				
EU-15 .....	21,990	24,128	2,138	9.7
OPEC .....	178	209	31	17.7
Latin America .....	12,130	13,384	1,255	10.3
CBERA .....	154	154	-1	-0.6
Asian Pacific Rim .....	24,301	25,116	815	3.4
ASEAN .....	1,883	1,875	-8	-0.4
Central and Eastern Europe .....	520	576	56	10.9
<b>U.S. merchandise trade balance:</b>				
Canada .....	7,287	7,018	-270	-3.7
Mexico .....	-2,339	-2,493	-154	-6.6
Japan .....	-9,402	-9,749	-347	-3.7
Germany .....	-6,209	-6,849	-640	-10.3
United Kingdom .....	-188	-421	-234	-124.4
China .....	-2,404	-3,338	-934	-38.9
Taiwan .....	104	-250	-354	( <sup>2</sup> )
Italy .....	-2,499	-2,605	-106	-4.2
France .....	20	-525	-545	( <sup>2</sup> )
Korea .....	2,019	-82	-2,101	( <sup>2</sup> )
All Other .....	14,589	11,448	-3,141	-21.5
Total .....	979	-7,847	-8,826	( <sup>2</sup> )
<b>Selected country groups:</b>				
EU-15 .....	-9,433	-11,100	-1,667	-17.7
OPEC .....	3,238	2,644	-594	-18.3
Latin America .....	3,810	3,395	-415	-10.9
CBERA .....	1,391	1,698	307	22.1
Asian Pacific Rim .....	-3,784	-9,496	-5,712	-150.9
ASEAN .....	3,480	1,957	-1,522	-43.7
Central and Eastern Europe .....	-118	-211	-93	-78.1

<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>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

**Table 11-2**  
**Leading changes in U.S. exports of machinery, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<i>Million dollars</i>				
<b>Increases:</b>				
Semiconductor manufacturing equipment and robots (MT023) . . . . .	7,270	8,631	1,361	19
Electric motors, generators, etc. (MT028) . . . . .	3,849	3,962	113	3
<b>Decreases:</b>				
Miscellaneous machinery (MT045) . . . . .	6,131	5,091	-1,040	-17
Non-metalworking machine tools (MT022) . . . . .	1,610	617	-993	-62
Centrifuges, filtering and purifying equipment (MT008) . . . . .	2,845	2,452	-393	-14
Certain industrial thermal-processing equipment (MT005) . . . . .	2,698	2,321	-377	-14
Boilers, turbines, and related equipment (MT027) . .	1,864	1,495	-368	-20
Farm and garden machinery and equipment (MT014) . . . . .	5,855	5,558	-296	-5
<b>All other</b> . . . . .	<b>38,741</b>	<b>37,041</b>	<b>-1,700</b>	<b>-4</b>
<b>Total</b> . . . . .	<b>70,863</b>	<b>67,168</b>	<b>-3,695</b>	<b>-5</b>

Note.--Calculations based on unrounded data.

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

**Table 11-3**  
**Leading changes in U.S. imports of machinery, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
<i>Million dollars</i>				
<b>Increases:</b>				
Electrical household appliances (MT007) . . . . .	4,593	5,194	601	13
Electric motors, generators, etc (MT028) . . . . .	4,179	4,749	569	14
Air-conditioning equipment and parts (MT004) . . .	4,433	4,945	513	12
Miscellaneous equipment (MT045) . . . . .	4,715	5,176	461	10
Semiconductor manufacturing equipment and robots (MT023) . . . . .	3,721	4,134	412	11
Insulated electrical wire and cable (MT036) . . . . .	6,819	7,221	403	6
<b>Decreases:</b>				
Non-metalworking machine tools (MT022) . . . . .	1,464	1,229	-235	-16
<b>All other</b> . . . . .	<b>39,960</b>	<b>42,366</b>	<b>2,406</b>	<b>6</b>
<b>Total</b> . . . . .	<b>69,884</b>	<b>75,014</b>	<b>5,131</b>	<b>7</b>

Note.--Calculations based on unrounded data.

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

## U.S. BILATERAL TRADE

Canada, Mexico, Japan, Germany, and the United Kingdom were again the predominant markets for U.S. exports and sources of imports of machinery during 1998 (table 11-1). Together, these countries represented 53 percent of the value of U.S. machinery exports, 64 percent of U.S. imports, and 51 percent of the increased value of machinery imports during 1998. The reversal of the trade surplus that had been emerging in the machinery sector during 1997, was largely due to a substantial downturn (\$4.9 billion or

24 percent) in the value of U.S. machinery exports to the countries of the Asian Pacific Rim. This decline was most notably related to machinery markets in Korea, Japan, and Taiwan, all of which were severely depressed as a result of the regional economic crisis. At the same time, U.S. demand for machinery imports from the European Union (EU) (particularly Germany and France), Latin America (Mexico), and the Asian Pacific Rim (notably China), remained high as a result of the continued strength and expansion of the U.S. economy.

U.S. imports of machinery from Canada during 1998 grew at approximately the same rate as the annual rate for all countries, rising by \$602 million (7 percent) to \$9.1 billion. The most significant import increases occurred in miscellaneous machinery (especially mechanical spraying apparatus; elevators and conveyors; and material-handling equipment), which rose by \$208 million (24 percent) to \$1.1 billion; air-conditioning equipment and parts, which were up by \$72 million (26 percent) to \$351 million; and pumps for liquids, up by \$65 million (24 percent) to \$330 million (table 11-4). U.S. exports of machinery to Canada in 1998 recorded a more modest increase, rising by \$332 million (2 percent) to \$16.1 billion. This advance was led by exports of electric motors, generators, and related equipment, which were up by \$262 million (38 percent) to \$954 million; and molds and molding machinery, which increased by \$141 million (27 percent) to \$664 million. The extensive interrelationships of U.S. companies and their Canadian subsidiaries, particularly those related to motor-vehicle assembly operations, are a major factor in U.S. trade with Canada. U.S.-Canadian trade was the beneficiary of continued strong U.S. motor vehicle and consumer electrical and electronic product markets in 1998.

U.S. trade with Mexico in machinery continued to exhibit a double digit growth during 1998 as imports rose by \$1.3 billion (12 percent) to \$12.5 billion and exports increased by \$1.1 billion (13 percent) to \$10.0 billion, largely on the strength of the continued expansion of integrated North American manufacturing strategies by U.S.-and foreign-based companies. On the export side, the most significant increases were recorded in semiconductor manufacturing equipment and robotics, which rose by \$328 million (82 percent) to \$727 million; air-conditioning equipment and parts, which were up by \$128 million (19 percent) to \$804 million; and insulated electrical wire and cable and conduit, which expanded by \$122 million (7 percent) to \$2.0 billion. The import increase was driven principally by accelerated entries of insulated electrical wire and cable and conduit (notably motor-vehicle electrical wiring harnesses), which rose by \$271 million (6 percent) to \$4.8 billion; electric motors, generators, and related equipment, up by \$263 million (20 percent) to \$1.6 billion; and electrical transformers, static converters, and inductors, that climbed by \$146 million (11 percent) to \$1.5 billion. A significant portion of U.S. trade in machinery with Mexico consists of U.S. exports of parts and subassemblies, and U.S. imports of assembled or substantially advanced finished goods and components. The strength of the U.S. automotive, construction, and consumer electrical and electronic products markets (which expanded during 1998) is a major force driving U.S. trade with Mexico.

With respect to Japan, the third-largest U.S. trading partner in machinery, the decline in economic growth in Japan dampened bilateral trade during 1998, with U.S. exports taking the brunt of the downturn. U.S. machinery exports to Japan declined by \$659 million (16 percent) to \$3.5 billion, while U.S. imports receded by a less pronounced \$312 million (2 percent) to \$13.2 billion. The U.S. export decline was widespread, with the deepest reductions occurring in miscellaneous machinery, certain thermal-processing equipment, and centrifuges and filtering and purifying equipment. The U.S. import declines were more concentrated, with the largest reductions occurring in electric and gas welding and soldering equipment, which were down by \$152 million (37 percent) to \$255 million, and molds and molding machinery, which were off by \$108 million (14 percent) to \$695 million.

**Table 11-4**  
**Machinery: Leading U.S. import and export products, by major partner, 1998**

Partner	Leading imports	Leading exports
Canada . . . . .	Molding boxes for metal foundries and related products Insulated wire and cable Machinery for working rubber or plastics Lifting, handling, loading, and unloading equip. Electrical transformers, static converters, and inductors	Taps, cocks, valves and similar appliances Air-conditioning machines and parts Ignition wiring harnesses Pumps for liquids and liquid elevators Air or vacuum pumps, compressors, and fans
Mexico . . . . .	Insulated wire and cable Electrical transformers, static converters, and inductors Electric motors and generators Taps, cocks, valves and similar appliances Air-conditioning machines and parts	Ignition wiring harnesses Miscellaneous machinery and parts Electrical transformers, static converters, and inductors Parts of electric motors, generators, and generating sets Air or vacuum pumps, compressors, and fans
Japan . . . . .	Miscellaneous machinery and parts Machining centers, unit construction machines, and other machines for working metal Lathes for removing metal including turning centers Tractors Air or vacuum pumps, compressors, and fans Taps, cocks, valves and similar appliances	Miscellaneous machinery and parts Centrifuges, filtering, and purifying equipment Parts and accessories for machine tools of HTS headings 8456 and 8465 Machine tools for removal of material by laser, ultrasonic, plasma, or related methods Electrical transformers, static converters, and inductors
Germany . . . . .	Printing machinery and related products Miscellaneous machinery and parts Pumps for liquids and liquid elevators Machinery for working rubber or plastics Taps, cocks, valves and similar appliances	Miscellaneous machinery and parts Pumps for liquids and liquid elevators Parts and accessories for machine tools of HTS headings 8456 and 8465 Taps, cocks, valves and similar appliances Printing machinery and related products
United Kingdom . . . . .	Tractors Air or vacuum pumps, compressors, and fans Taps, cocks, valves and similar appliances Pumps for liquids and liquid elevators Miscellaneous machinery and parts Printing machinery and related products	Miscellaneous machinery and parts Pumps for liquids and liquid elevators Taps, cocks, valves and similar appliances Insulated wire and cable Parts and accessories for machine tools of HTS headings 8456 and 8465
China . . . . .	Electric water, space, and soil heaters and related products Electrical transformers, static converters, and inductors Insulated wire and cable Air or vacuum pumps, compressors, and fans Electromechanical home appliances	Miscellaneous machinery and parts Steam turbines and other vapor turbines Air or vacuum pumps, compressors, and fans Auxiliary equipment for boilers, vapor condensers, and parts Lifting, handling, loading, or unloading equip.

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

The U.S. bilateral trade deficit with the EU-15 in machinery widened by an additional \$1.7 billion in 1998 on the strength of a \$2.1 billion (10-percent) increase in U.S. imports to \$24.1 billion, and a more modest \$471 million (4-percent) rise in U.S. exports to \$13.0 billion. At \$11.1 billion, the U.S. trade deficit with the EU-15 in machinery was larger than that for any other geographic region. Germany was the single-largest contributor to the regional deficit, as imports from Germany rose by \$858 million (10 percent) to \$9.5 billion in 1998. This expansion was led by U.S. imports of textile machinery and parts, which climbed by \$143 million (26 percent) to \$703 million; semiconductor manufacturing equipment and robotics, which rose by \$122 million (28 percent) to \$564 million; and pumps for liquids, which advanced by \$92 million (20 percent) to \$562 million.

A significant rise in U.S. imports of machinery from France (up by \$531 million (30 percent) to \$2.3 billion) was an additional contributing factor to the deepening U.S. trade deficit with the EU-15 in the machinery sector. The two leading concentrations of this increase were in farm and garden machinery and equipment, which rose by \$122 million (32 percent) to \$504 million; and textile machinery and parts, which climbed by \$59 million (70 percent) to \$142 million.

The other major trading region that contributed heavily to the U.S. trade deficit in machinery was the Asian Pacific Rim. The deficit with this region (\$9.5 billion) rose more rapidly (151 percent) than with any other U.S. trading area. More than one-half (\$3.0 billion) of the total expansion of the U.S. machinery trade deficit with the Asian Pacific Rim (\$5.7 billion) was accounted for by Korea and China. The rising U.S. trade deficit in machinery with Korea was largely associated with U.S. exports, which declined by \$1.8 billion (56 percent) to \$1.4 billion in 1998. Leading this downturn were semiconductor manufacturing equipment and robotics, which fell by \$365 million (44 percent) to \$473 million; boilers, turbines, and related machinery, which declined by \$162 million (70 percent) to \$71 million; and air-conditioning equipment and parts, which were down by \$141 million (56 percent) to \$113 million. These deep cuts in Korean purchases of U.S. machinery were the result of deferred capital equipment additions and infrastructure improvements resulting from the Asian economic crisis of 1998, as Korean GDP declined by 5.8 percent in 1998. In addition, the declining value of the Korean won relative to the U.S. dollar in 1998 served to discourage U.S. exports to Korea.

The U.S. trade deficit with China in machinery continued to expand during 1998, rising to \$3.3 billion (representing an increase of 39 percent), primarily as a result of the low price of imports from China relative to competing products made in other countries. The products leading the expansion in U.S. imports from China during 1998 were air-conditioning equipment and parts, which rose by \$146 million (29 percent) to \$654 million; insulated electrical wire and cable, which increased by \$134 million (31 percent) to \$569 million; and electrical transformers, static converters and inductors, which were up by \$138 million (24 percent) to \$710 million. This imported equipment is generally at the low end of U.S. markets for these products. The labor-intensive processes required to manufacture these articles gives Chinese producers a competitive advantage in global markets for these goods.

**Table 11-5**  
**Machinery sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>**

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
MT003	Pumps for liquids:				
	Exports .....	2,978	2,896	-82	-2.8
	Imports .....	2,203	2,367	164	7.4
	Trade balance: .....	775	529	-246	-31.7
MT004	Air-conditioning equipment and parts:				
	Exports .....	5,726	5,471	-256	-4.5
	Imports .....	4,433	4,945	513	11.6
	Trade balance: .....	1,294	526	-768	-59.4
MT005	Certain industrial thermal-processing equipment and certain furnaces:				
	Exports .....	2,698	2,321	-377	-14.0
	Imports .....	1,374	1,234	-140	-10.2
	Trade balance: .....	1,324	1,086	-238	-18.0
MT006	Commercial machinery:				
	Exports .....	2,667	2,779	113	4.2
	Imports .....	1,329	1,413	84	6.3
	Trade balance .....	1,338	1,367	29	2.1
MT007	Electrical household appliances and certain heating equipment:				
	Exports .....	2,724	2,681	-42	-1.6
	Imports .....	4,593	5,194	601	13.1
	Trade balance: .....	-1,869	-2,513	-644	-34.4
MT008	Centrifuges and filtering and purifying equipment:				
	Exports .....	2,845	2,452	-393	-13.8
	Imports .....	1,291	1,405	115	8.9
	Trade balance: .....	1,554	1,047	-507	-32.7
MT009	Wrapping, packaging, and can-sealing machinery:				
	Exports .....	871	791	-79	-9.1
	Imports .....	1,104	1,072	-31	-2.8
	Trade balance: .....	-233	-281	-48	-20.6
MT010	Scales and weighing machinery:				
	Exports .....	154	147	-7	-4.6
	Imports .....	228	223	-6	-2.4
	Trade balance .....	-74	-76	-2	-2.0
MT013	Mineral processing machinery:				
	Exports .....	915	764	-151	-16.5
	Imports .....	508	574	67	13.1
	Trade balance .....	407	189	-218	-53.5
MT014	Farm and garden machinery and equipment:				
	Exports .....	5,855	5,558	-296	-5.1
	Imports .....	3,887	4,169	282	7.2
	Trade balance: .....	1,967	1,389	-578	-29.4
MT015	Industrial food-processing and related machinery:				
	Exports .....	697	688	-9	-1.2
	Imports .....	549	619	69	12.6
	Trade balance: .....	147	70	-78	-52.8
MT016	Pulp, paper, and paperboard machinery:				
	Exports .....	990	809	-181	-18.2
	Imports .....	1,105	1,037	-68	-6.1
	Trade balance: .....	-115	-227	-113	-98.6
MT017	Printing, typesetting, and bookbinding machinery and printing plates:				

See footnote(s) at end of table.

Table 11-5--Continued

Machinery sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Exports .....	1,486	1,455	-31	-2.1
	Imports .....	2,048	2,231	184	9.0
	Trade balance: .....	-562	-776	-215	-38.2
MT018	Textile machinery and parts:				
	Exports .....	849	760	-89	-10.5
	Imports .....	1,686	1,958	272	16.1
	Trade balance .....	-837	-1,198	-361	-43.1
MT019	Metal rolling mills and parts thereof:				
	Exports .....	262	252	-10	-3.8
	Imports .....	394	514	120	30.4
	Trade balance: .....	-132	-262	-130	-98.4
MT020	Machine tools for cutting metal and parts; tool holders, work holders; dividing heads and other special attachments for machine tools:				
	Exports .....	2,206	1,985	-221	-10.0
	Imports .....	4,298	4,590	292	6.8
	Trade balance .....	-2,092	-2,605	-513	-24.5
MT021	Machine tools for metal forming and parts thereof:				
	Exports .....	1,054	996	-58	-5.5
	Imports .....	1,355	1,409	55	4.0
	Trade balance: .....	-301	-413	-113	-37.4
MT022	Non-metalworking machine tools and parts thereof:				
	Exports .....	1,610	617	-993	-61.7
	Imports .....	1,464	1,229	-235	-16.0
	Trade balance: .....	146	-612	-758	( <sup>3</sup> )
MT023	Semiconductor manufacturing equipment and robotics:				
	Exports .....	7,270	8,631	1,361	18.7
	Imports .....	3,721	4,134	412	11.1
	Trade balance: .....	3,549	4,497	949	26.7
MT024	Taps, cocks, valves, and similar devices:				
	Exports .....	2,745	2,836	91	3.3
	Imports .....	3,566	3,974	408	11.4
	Trade balance: .....	-821	-1,138	-317	-38.6
MT026	Gear boxes and other speed changers; torque converters; ball screws; flywheels and pulleys; clutches and shaft couplings; universal joints; and parts thereof:				
	Exports .....	1,027	1,011	-15	-1.5
	Imports .....	1,650	1,843	194	11.7
	Trade balance: .....	-623	-832	-209	-33.5
MT027	Boilers, turbines, and related machinery:				
	Exports .....	1,864	1,495	-368	-19.8
	Imports .....	345	370	25	7.4
	Trade balance: .....	1,519	1,125	-394	-25.9
MT028	Electric motors, generators, and related equipment:				
	Exports .....	3,849	3,962	113	2.9
	Imports .....	4,179	4,749	569	13.6
	Trade balance: .....	-330	-787	-457	-138.4
MT029	Electrical transformers, static converters, and inductors:				
	Exports .....	2,480	2,301	-179	-7.2
	Imports .....	4,290	4,481	191	4.4

See footnote(s) at end of table.

Table 11-5--Continued

Machinery sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Trade balance: . . . . .	-1,810	-2,180	-369	-20.4
MT031	Portable electric handtools:				
	Exports . . . . .	443	383	-60	-13.5
	Imports . . . . .	765	834	69	9.1
	Trade balance . . . . .	-322	-451	-129	-40.2
MT032	Nonelectrically powered handtools and parts thereof:				
	Exports . . . . .	579	553	-27	-4.6
	Imports . . . . .	735	782	47	6.4
	Trade balance: . . . . .	-156	-230	-73	-47.0
MT034	Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lamps:				
	Exports . . . . .	955	896	-59	-6.1
	Imports . . . . .	1,215	1,287	72	5.9
	Trade balance: . . . . .	-260	-391	-131	-50.4
MT035	Electric and gas welding and soldering equipment:				
	Exports . . . . .	762	617	-146	-19.1
	Imports . . . . .	810	706	-104	-12.8
	Trade balance: . . . . .	-47	-89	-42	-89.2
MT036	Insulated electrical wire and cable and conduit; glass and ceramic insulators:				
	Exports . . . . .	4,491	4,258	-233	-5.2
	Imports . . . . .	6,819	7,221	403	5.9
	Trade balance: . . . . .	-2,328	-2,963	-636	-27.3
MT045	Miscellaneous machinery:				
	Exports . . . . .	6,131	5,091	-1,040	-17.0
	Imports . . . . .	4,715	5,176	461	9.8
	Trade balance: . . . . .	1,416	-86	-1,501	( <sup>3</sup> )
MT046	Molds and molding machinery:				
	Exports . . . . .	1,681	1,711	30	1.8
	Imports . . . . .	3,227	3,272	45	1.4
	Trade balance . . . . .	-1,546	-1,562	-16	-1.0

<sup>1</sup>Import values 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>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

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## CHAPTER 12

# Transportation Equipment

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In 1998, the U.S. trade deficit in transportation equipment increased by \$5.5 billion (26 percent) to \$26.4 billion (table 12-1). The product groups largely responsible for this increased deficit were motor vehicles, which recorded a trade deficit increase of \$8.7 billion (13 percent) to \$77.3 billion; and internal combustion piston engines, other than for aircraft (engines), which moved from a trade surplus of \$638 million in 1997 to a trade deficit of \$463 million in 1998.

The increase in the transportation equipment trade deficit was a reflection of substantial growth in imports, which increased by \$17.9 billion (12 percent) to \$173.7 billion. Noteworthy increases in four sectoral product categories were largely responsible for the substantial rise in total U.S. imports of transportation equipment (table 12-2). U.S. imports of motor vehicles grew by \$6.8 billion (7 percent) to \$99.8 billion; imports of aircraft increased by \$3.3 billion (35 percent) to \$12.7 billion; imports of aircraft engines and gas turbines rose by \$2.0 billion (24 percent) to \$10.4 billion; and imports of internal combustion piston engines increased by \$1.5 billion (15 percent) to \$11.5 billion.

Canada and Japan were the most significant contributors to the growth in U.S. motor vehicle imports in 1998. Canada accounted for 38 percent of U.S. motor vehicle imports in 1998, while Japan accounted for an additional 29 percent. Strong demand for motor vehicles in the United States and the high level of integration between the U.S. and Canadian auto industries accounted for the increase in imports from Canada. With respect to Japan, weak markets for motor vehicles domestically and within the Asia Pacific region, combined with a healthy U.S. market and sustained popularity of certain Japanese models in the U.S. market contributed to the surge in Japanese exports to the United States.

The growth in U.S. aircraft imports was largely attributable to the modernization of the aging U.S. large civil aircraft (LCA) fleet, the strong demand for regional jet service, and the effect of U.S. noise regulations on the domestic airline fleet. Canada and France were the leading sources of these imports in 1998, accounting for 27 percent and 23 percent, respectively, of all sector imports. Japan and the United Kingdom together account for 22 percent of all sector imports.

The growth in imports of aircraft engines and gas turbines was largely attributable to engines that power LCA. In 1998, LCA were shipped in record numbers, and as more LCA models are increasingly made available with a choice of engines, this trend is likely to continue. France, the United Kingdom, and Germany were the leading suppliers of these engines to the United States.

North America Free Trade Agreement (NAFTA) partners Canada and Mexico accounted for nearly 50 percent of total internal combustion piston engine imports. This trend reflects the increasing integration of the North American automotive industry.

Table 12-1

Transportation equipment: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Canada .....	42,697	43,999	1,301	3.0
Japan .....	8,947	9,244	296	3.3
Mexico .....	10,479	11,221	742	7.1
Germany .....	4,912	6,656	1,744	35.5
United Kingdom .....	8,253	9,880	1,628	19.7
France .....	3,247	4,822	1,575	48.5
Saudi Arabia .....	4,185	6,465	2,280	54.5
Korea .....	3,665	2,504	-1,161	-31.7
Brazil .....	2,591	2,924	332	12.8
China .....	2,957	3,986	1,028	34.8
All Other .....	43,014	45,637	2,622	6.1
Total .....	134,949	147,337	12,388	9.2
<b>Selected country groups:</b>				
EU-15 .....	26,645	32,615	5,970	22.4
OPEC .....	9,082	10,999	1,917	21.1
Latin America .....	20,139	21,963	1,825	9.1
CBERA .....	1,545	1,828	283	18.3
Asian Pacific Rim .....	29,879	29,798	-80	-0.3
ASEAN .....	7,398	6,576	-822	-11.1
Central and Eastern Europe .....	690	446	-244	-35.3
<b>U.S. imports for consumption:</b>				
Canada .....	53,040	57,157	4,117	7.8
Japan .....	40,972	43,292	2,320	5.7
Mexico .....	18,808	20,782	1,974	10.5
Germany .....	13,595	17,554	3,959	29.1
United Kingdom .....	7,661	9,017	1,355	17.7
France .....	5,206	6,859	1,653	31.7
Saudi Arabia .....	4	6	2	42.8
Korea .....	2,687	2,693	6	0.2
Brazil .....	1,359	2,049	690	50.7
China .....	730	940	210	28.8
All Other .....	11,773	13,364	1,591	13.5
Total .....	155,836	173,712	17,876	11.5
<b>Selected country groups:</b>				
EU-15 .....	33,883	42,107	8,224	24.3
OPEC .....	309	318	9	2.9
Latin America .....	20,406	23,104	2,697	13.2
CBERA .....	24	23	( <sup>2</sup> )	-1.8
Asian Pacific Rim .....	46,968	49,568	2,600	5.5
ASEAN .....	789	855	67	8.4
Central and Eastern Europe .....	275	350	75	27.4
<b>U.S. merchandise trade balance:</b>				
Canada .....	-10,343	-13,158	-2,815	-27.2
Japan .....	-32,024	-34,049	-2,024	-6.3
Mexico .....	-8,329	-9,561	-1,232	-14.8
Germany .....	-8,682	-10,897	-2,215	-25.5
United Kingdom .....	591	864	272	46.0
France .....	-1,959	-2,037	-78	-4.0
Saudi Arabia .....	4,181	6,459	2,279	54.5
Korea .....	978	-189	-1,167	( <sup>3</sup> )
Brazil .....	1,232	874	-357	-29.0
China .....	2,228	3,046	818	36.7
All Other .....	31,241	32,273	1,031	3.3
Total .....	-20,887	-26,375	-5,488	-26.3
<b>Selected country groups:</b>				
EU-15 .....	-7,238	-9,492	-2,254	-31.1
OPEC .....	8,772	10,681	1,908	21.8
Latin America .....	-268	-1,140	-873	-325.9
CBERA .....	1,521	1,805	284	18.6
Asian Pacific Rim .....	-17,090	-19,769	-2,680	-15.7
ASEAN .....	6,609	5,721	-888	-13.4
Central and Eastern Europe .....	416	97	-319	-76.8

<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>Less than \$500,000.

<sup>3</sup>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

**Table 12-2**  
**Leading increases in U.S. imports of transportation equipment, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	<i>Million dollars</i>			
Motor vehicles (MT038) . . . . .	92,988	99,828	6,841	7
Aircraft, spacecraft, related equipment (MT042) . . .	9,459	12,748	3,289	35
Aircraft engines and gas turbines (MT001) . . . . .	8,380	10,404	2,023	24
Internal combustion piston engines (MT002) . . . . .	9,987	11,478	1,491	15
All other . . . . .	35,022	39,255	4,230	12
<b>Total</b> . . . . .	<b>155,836</b>	<b>173,712</b>	<b>17,876</b>	<b>12</b>

Note.--Calculations based on unrounded data.

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

U.S. exports of transportation equipment grew by \$12.4 billion (9 percent) to \$147.3 billion in 1998. Most of this growth was attributable to exports of aircraft, spacecraft, and related equipment (aircraft), which increased by \$11.6 billion (30 percent) to \$50.2 billion. Trade statistics for all commodity/industry groups in the transportation equipment sector are presented in table 12-4 at the end of this chapter.

### U.S. BILATERAL TRADE

The principal partners for U.S. trade in the transportation equipment sector during 1998 were Canada, Japan, Mexico, Germany, the United Kingdom, and France (table 12-3). U.S. exports to Canada, the largest export market, accounted for \$44.0 billion (30 percent) of all U.S. transportation equipment exports in 1998, followed by Mexico, which accounted for \$11.2 billion (8 percent), and Japan, which received \$9.2 billion (6 percent) of sector exports. With respect to imports, Canada and Japan were the leading suppliers of transportation equipment to the U.S. market, accounting for \$57.2 billion (33 percent) and \$43.3 billion (25 percent) of U.S. transportation equipment imports, respectively. Collectively, aircraft, certain motor vehicle parts, and motor vehicles (the leading subsectors in terms of total (exports plus imports) trade) represented \$98.8 billion (67 percent) of U.S. transportation equipment exports and \$131.3 billion (76 percent) of U.S. transportation imports in 1998.

In terms of regional trading partners, the Asian Pacific Rim was the largest supplier of transportation equipment imports to the United States in 1998, followed by the European Union (EU) and Latin America. U.S. transportation equipment imports from the Asian Pacific Rim increased by \$2.6 billion (6 percent) to \$50.0 billion, while sector imports from the EU increased by \$8.2 billion (24 percent) to \$42.1 billion and those from Latin America increased by \$2.7 billion (13 percent) to \$23.1 billion. The largest transportation equipment trade deficits for 1998 were with the Asian Pacific Rim (\$19.8 billion) and the EU (\$9.5 billion), while the largest trade surplus in transportation equipment was with the Organization of Petroleum Exporting Countries (OPEC) (\$10.7 billion). The EU was the largest international regional market for U.S. exports of transportation equipment in 1998, followed by the Asian Pacific Rim and Latin America. U.S. exports to the EU increased by \$6.0 billion (22 percent) to \$32.6 billion, and exports to Latin America increased by \$1.8 billion (9 percent) to \$22.0 billion. U.S. exports to the Asian Pacific Rim, however, decreased by \$80 million (less than 1 percent) to \$29.8 billion in 1998.

**Table 12-3**  
**Transportation Equipment: Leading U.S. import and export products, by major partner, 1998**

Partner	Leading imports	Leading exports
Canada . . . . .	Passenger cars Motor vehicle parts Trucks Spark ignition reciprocating or rotary internal combustion piston engines Aircraft, spacecraft, and launch vehicles	Motor vehicle parts Passenger cars Trucks Spark ignition reciprocating or rotary internal combustion piston engines Parts for spark ignition or compression ignition engines
Japan . . . . .	Passenger cars Motor vehicle parts Spark ignition reciprocating or rotary internal combustion piston engines Parts of balloons, dirigibles, gliders, airplanes, other aircraft, spacecraft, & launch vehicles Construction equipment	Aircraft, spacecraft, and launch vehicles Parts of balloons, dirigibles, gliders, airplanes other aircraft, spacecraft, & launch vehicles Motor vehicle parts Passenger cars Turbojets, turbopropellers, and other gas turbines and parts thereof
Mexico . . . . .	Passenger cars Trucks Motor vehicle parts Spark ignition reciprocating or rotary internal combustion piston engines Parts for spark ignition or compression ignition engines	Motor vehicle parts Passenger cars Trucks Parts for spark ignition or compression ignition engines Turbojets, turbopropellers, and other gas turbines and parts thereof
Germany . . . .	Passenger cars Turbojets, turbopropellers, and other gas turbines and parts thereof Motor vehicle parts Aircraft, spacecraft, and launch vehicles Parts for spark ignition or compression ignition engines	Aircraft, spacecraft, and launch vehicles Passenger cars Turbojets, turbopropellers, and other gas turbines and parts thereof Parts of balloons, dirigibles, gliders, airplanes other aircraft, spacecraft, & launch vehicles Motor vehicle parts
United Kingdom . . . . .	Turbojets, turbopropellers, and other gas turbines and parts thereof Passenger cars Parts of balloons, dirigibles, gliders, airplanes, other aircraft, spacecraft, & launch vehicles Motor vehicle parts Fork lift trucks	Aircraft, spacecraft, and launch vehicles Turbojets, turbopropellers, and other gas turbines and parts thereof Parts of balloons, dirigibles, gliders, airplanes other aircraft, spacecraft, & launch vehicles Construction, mining, and materials handling equipment parts Passenger cars
France . . . . .	Turbojets, turbopropellers, and other gas turbines and parts thereof Aircraft, spacecraft, and launch vehicles Motor vehicle parts Parts of balloons, dirigibles, gliders, airplanes, other aircraft, spacecraft, & launch vehicles Construction equipment	Turbojets, turbopropellers, and other gas turbines and parts thereof Parts of balloons, dirigibles, gliders, airplanes, other aircraft, spacecraft, & launch vehicles Aircraft, spacecraft, and launch vehicles Motor vehicle parts Construction, mining, and materials handling equipment parts

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

## COMMODITY ANALYSIS

### Aircraft Engines, Other Gas Turbines, and Parts Thereof

The trade surplus for aircraft engines, other gas turbines, and parts thereof fell by \$500 million (16 percent) to \$2.7 billion in 1998. Though U.S. exports of these products rose by \$1.5 billion, U.S. imports grew by \$2.0 billion. Record levels of U.S. shipments of aircraft, and the increased availability of foreign engines on domestic airframes accounted for this growth. The level of surplus is similar to those the United States experienced in 1994 and 1996 (\$2.6 billion and \$2.7 billion, respectively). After each decline, the U.S. trade surplus increased to \$3.4 billion in 1995 and \$3.2 billion in 1996. The fluctuations are explained by the cyclical nature of the aircraft industry, and the increasing popularity of foreign-built aircraft.

#### U.S. imports

U.S. imports of aircraft engines and gas turbines increased by \$2.0 billion (24 percent) during 1997-98 to \$10.4 billion. Nearly one-half of this rise was accounted for by U.S. imports of turbojets of a thrust exceeding 25 kilonewtons; such engines, typically employed on large civil aircraft (LCA), grew by \$907 million (39 percent) to \$3.2 billion. This rise was a direct result of record U.S. LCA shipments in 1998.<sup>1</sup> As more models of aircraft are made available with a choice of engines, it is likely that imports of foreign-built engines will increase. In 1998, France, the United Kingdom, and Germany were the top three suppliers of these engines, accounting for \$3.0 billion (94 percent) of such imports.

Adding to the overall increase in U.S. imports were noncast iron parts of jet engines, which grew by \$779 million (18 percent) to \$5.0 billion, and aircraft turbopropeller engines of a power exceeding 1,100 kW, which rose by \$85 million (103 percent) to \$167 million. France and the United Kingdom accounted for \$561 million (72 percent) of the increase in U.S. imports of these parts, and \$2.9 billion (57 percent) of total U.S. imports of these particular parts. Canada accounted for \$127 million (76 percent) of total U.S. imports of turbopropeller engines to the United States. These engines typically power regional aircraft. Continued expansion of airline service, coupled with high international demand for passenger service contributed to the increased need for both parts and new turboprop engines.<sup>2</sup>

#### U.S. exports

U.S. exports of aircraft engines, other gas turbines, and parts thereof grew by \$1.5 billion (13 percent) during 1997-98 to \$13.1 billion. The majority of this increase came from U.S. exports of turbojet engines of a thrust exceeding 25 kilonewtons, or those used on LCA. Exports of these engines grew by \$1.0 billion (61 percent) to \$2.6 billion, reflecting the increased demand of foreign aircraft manufacturers for U.S. engines. Record shipments of LCA by Airbus Industrie,<sup>3</sup> the consortium of European aerospace companies, likely accounted for the majority of the increase, as shipments of these engines to France increased by \$504 million (308 percent) to \$667 million in 1998. Large gains were also made in U.S. exports of turbine engine parts, which rose by \$541 million (7 percent) to approximately \$8.2 billion. Parts specifically for aircraft turbine engines rose by \$710 million (12 percent) to \$5.8 billion; these parts accounted for over 70 percent of total U.S. exports of turbine engine parts in 1998. The United Kingdom,

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<sup>1</sup> "Boeing Leads in Supplying World's Jets," Boeing company press release, Jan. 7, 1999, found at [http://www.boeing.com/news/releases/1999/news\\_release\\_990107a.html](http://www.boeing.com/news/releases/1999/news_release_990107a.html)

<sup>2</sup> "Passenger Traffic Experienced Steady Growth in 1998," Air Transport Association press release, Feb. 9, 1999.

<sup>3</sup> Airbus Industrie, G.I.E., press release, Jan. 11, 1999, found at <http://www.airbus.com/>.

France, and Canada were the top three export markets for aircraft engines, other gas turbines, and parts thereof. Each of these nations has a thriving aircraft engine industry, which would be expected to prosper accordingly with the fortunes of the U.S. and European aircraft manufacturing industry. The rise in U.S. exports of these products also reflects the increased usage of existing aircraft engines.

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### **Internal Combustion Piston Engines, Other Than for Aircraft**

The U.S. trade balance in internal combustion piston engines switched from a surplus of \$638 million in 1997 to a deficit of \$463 million in 1998. Although U.S. exports of engines and engine parts increased by \$390 million (4 percent) in 1998 to \$11.0 billion, imports of these products increased by a larger margin, particularly from Germany, Canada, and Mexico. The strength of the U.S. automotive market, which has supported U.S. production in excess of 11.5 million units for 5 consecutive years,<sup>4</sup> has generated comparable demand for engines and components. As part of the larger automotive industry, trade shifts in the engine sector often reflect U.S. and foreign automotive firms' global production/sourcing strategies, intracompany shipments, and increased internationalization of the industry.

#### **U.S. imports**

U.S. imports of engines and engine parts rose by \$1.5 billion (15 percent) to \$11.5 billion in 1998. NAFTA partners Canada and Mexico accounted for 49 percent (\$5.6 billion) of total engine imports, in large part reflecting the integration of the North American automotive industry. Canada emerged as the leading U.S. supplier in 1998, as imports increased by \$548 million (20 percent) to \$3.3 billion. The improved competitiveness of the Canadian auto parts industry and greater outsourcing by automakers have contributed to increased Canadian parts purchases.<sup>5</sup> The leading import category was spark-ignition engines over 2,000 cc, which accounted for 69 percent of engine and parts imports from Canada in 1998. Imports of these engines rose by nearly 18 percent to \$2.3 billion in 1998, in part because of added capacity at Ford's Windsor, Ontario, engine plant to ease a shortage of V-8 engines for certain Ford sport utility, truck, and van models assembled in the United States.<sup>6</sup>

Imports of engines and related parts from Mexico grew by \$361 million (19 percent) to \$2.3 billion. The Mexican engine and engine parts sector has received significant investments from foreign automakers and parts producers, and is considered to be a globally competitive sector.<sup>7</sup> Imports of spark-ignition engines over 2,000 cc, the leading import category, increased by nearly 6 percent to \$1.2 billion and accounted for over one-half of sector imports from Mexico. Mexico is also emerging as a leading source of engine castings, with producers such as Montupet, Nematik SA, Teksid, Castech, and Cifunsa

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<sup>4</sup> U.S. Department of Commerce (USDOC), Office of Automotive Affairs, "Light Vehicle Production (Millions), Plant Capacity Use (PCU), SIC 3711 Total Employment (1,000s)," found at Internet address [http://www.ita.doc.gov/industry/basic/qfac2\\_99.html](http://www.ita.doc.gov/industry/basic/qfac2_99.html), Feb. 22, 1999.

<sup>5</sup> *Canadian Auto Industry - Big Winner Under Free Trade*, Scotiabank Economic Report, Mar. 31, 1998, and Carlos Gomes, "Auto Parts Suppliers--Outsourcing Drives Surge in Canadian Content," *Canadian Auto Report*, Scotia Economics, Feb. 25, 1999.

<sup>6</sup> Mary Connelly, "Ford Scrambles for V-8s for Its Hot Models," *Automotive News*, Mar. 23, 1998, p. 3.

<sup>7</sup> USDOC, *Automotive Original Equipment Manufacturers*, Market Research Reports, Aug. 1, 1997.

manufacturing cylinder blocks and heads.<sup>8</sup> For example, U.S. imports of aluminum cylinder heads from Mexico rose by 128 percent to nearly \$170 billion in 1998. In addition, Mexico is a growing source of engines and engine parts for nonautomotive applications, such as agricultural and off-road equipment and forklift trucks.

Imports from Japan, the second-largest U.S. import source, rose by \$383 million (13 percent) to \$3.3 billion in 1998. Spark-ignition engines over 2,000 cc (up 28 percent to \$527 million) led imports from Japan in 1998, as many U.S.-based automakers purchase Japanese engines of this size for installation in certain motor vehicle models. Engine imports from Germany grew by \$141 million (20 percent) to \$829 million in response to increased production of sport utility vehicles at the Mercedes-Benz facility in Alabama.<sup>9</sup> Imports of engines greater than 2,000 cc rose by 73 percent (\$99 million) to \$235 million.

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### **Construction and Mining Equipment**

Although the United States continued to maintain a surplus in construction and mining equipment, it decreased by \$780 million (13 percent) to \$5.4 billion in 1998. This decline, the first in the U.S. trade surplus in construction and mining equipment since 1994, resulted from a significant increase in U.S. imports in 1998. The sharp rise in U.S. imports was only partially offset by growth in U.S. exports of \$525 million (5 percent) in 1998. Export growth was largely accounted for by increased shipments of parts for boring and sinking machinery, the primary U.S. export product, which grew by \$523 million (12 percent) to \$4.8 billion in 1998 and accounted for 42 percent of the value of total U.S. sector exports. Principal export markets remained Canada and Venezuela; however, as the United States is a leading supplier of construction and mining equipment worldwide,<sup>10</sup> exports to these countries accounted for only 21 percent of all U.S. exports in this product group.

#### **U.S. imports**

U.S. imports of construction and mining equipment increased by \$1.3 billion (27 percent) to \$6.2 billion in 1998. Japan, a global leader in the construction equipment industry, continued to be the principal import source, accounting for 27 percent of total U.S. imports of construction and mining machinery. U.S. imports from the United Kingdom, the second-leading source, accounted for an additional 12 percent of product imports. Germany, Canada, and Italy were other major suppliers of construction and mining equipment in 1998; each country accounted for approximately 8 percent of all U.S. imports of construction and mining equipment. The list of major U.S. suppliers of construction and mining equipment remained unchanged from 1997. Several of the world's largest construction and mining equipment firms are based in these countries, and U.S. producers source parts and machines from their overseas factories in these

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<sup>8</sup> For example, see Al Wrigley, "Mexico Captures Ford Pact," *American Metal Market*, Apr. 6, 1998, p. 1; Al Wrigley, "Mexican Casting Grows Stronger," *American Metal Market*, May 19, 1998; and Al Wrigley, "Ford, Nematik in Castings Deal," *American Metal Market*, Apr. 2, 1998.

<sup>9</sup> Mercedes-Benz imports engines and transmissions for its sport utility vehicle from Germany. Lindsay Chappell, "Suppliers Grow with M-B in U.S.," *Automotive News*, May 4, 1998. Production of this vehicle rose from 19,462 units in 1997 to 72,798 vehicles in 1998. Table entitled "Ward's North American Weekly Vehicle Production Summary," *Ward's Automotive Reports*, Feb. 8, 1999, p. 8.

<sup>10</sup> Industry representative, interview by USITC staff, Feb. 24, 1999.

locations. In 1998, however, the percentage of imports accounted for by Japan increased slightly, while the percentage of imports accounted for by each of the remaining key suppliers declined.

U.S. imports of construction and mining equipment from Japan grew by \$469 million (39 percent) to nearly \$1.7 billion in 1998. This increase almost wholly accounted for the rise in the bilateral deficit with Japan in this product group, which grew by \$505 million (49 percent) to \$1.5 billion in 1998. Over half of total imports from Japan consisted of excavators and backhoes, product segments in which Japanese manufacturers are highly competitive.<sup>11</sup> U.S. imports of these products rose by \$265 million (43 percent) to \$875 million in 1998, accounting for 57 percent of the overall increase in imports of these products from Japan. In 1998, Japanese manufacturers undertook aggressive marketing initiatives to tap the growing U.S. market for mini versions of these products, and as a result, several major Japanese firms reported increases in sales of mini and small construction equipment to U.S. end-users during the year.<sup>12</sup> In addition, U.S. manufacturers increased sourcing of these products from Japan. For example, in 1998, Caterpillar, Inc., introduced a new product line consisting of mini excavators built in Japan by the company's joint venture Shin Caterpillar Mitsubishi.<sup>13</sup> Increased imports from Japan were also attributable to the low value of the yen during much of the year, continued strong demand in the U.S. market, and broad export drives undertaken by Japanese construction equipment manufacturers in response to decreased domestic demand, which resulted in a greater portion of Japanese production exported to the United States during 1998.<sup>14</sup>

Contrary to the significant increase in U.S. imports of construction and mining equipment from Japan, U.S. imports from the United Kingdom, Germany, Canada, and Italy grew modestly in 1998. Growth in U.S. imports of these products from each country ranged from 10 percent to 22 percent in 1998; however, the aggregate increase in U.S. product imports from all four suppliers totaled just \$272 million (up 14 percent) in 1998. The rise in imports from these principal suppliers, as well as Japan, reflected continued growth in the U.S. construction market in 1998 and a corresponding 11-percent increase in domestic consumption of construction and mining machinery.<sup>15</sup> The total current-dollar value of construction put in place in the United States rose by 6 percent to \$656 billion in 1998,<sup>16</sup> and housing starts reached a 10-year high of 1.6 million units.<sup>17</sup> Further, legislation passed in 1998--The Transportation Equity Act for the 21st Century (TEA-21)--approved over \$217 billion in funds for transportation infrastructure construction during 1998-2003. While appropriations under TEA-21 only began in the later

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<sup>11</sup> Japan's Komatsu, for example, is the second leading supplier of excavators to the United States. Industry representative, interview by USITC staff, Feb. 24, 1999; and Charles Yengst, "The Market for Hydraulic Excavators has Come of Age in North America," *Diesel Progress*, Mar. 1999, p. 4

<sup>12</sup> Charles R. Yengst, "Kubota Quietly Finds Success in Both Machinery and Engine Markets in North America," *Diesel Progress*, Feb. 1999, p. 4; "Kobe Steel to Spin-off Kobelco and Other Businesses," *Machinery Outlook*, Sept. 1998, pp. 24-26; "Komatsu 1st Half Revenues Up 2.3%," *Machinery Outlook*, Nov. 1998, pp. 9-10; and "Komatsu Fiscal 1998 Revenues Up 3.2%," *Machinery Outlook*, June 1998, pp. 8-9.

<sup>13</sup> "Caterpillar Targets Small Equipment Markets: Wheel Loaders, Mini-excavators to Debut at BAUMA," *Diesel Progress*, Jan. 1998.

<sup>14</sup> "Japan--Construction Equipment," *Market Research Reports*, USDOC, International Trade Administration, Dec. 1, 1998, found at Internet address <http://www.stat-usa.gov/>, retrieved Mar. 18, 1999.

<sup>15</sup> "1999 Forecast of Equipment Markets--Flat to Slightly Down," *Machinery Outlook*, Dec. 1998, p. 20.

<sup>16</sup> The inflation-adjusted value of new construction put in place reached \$539 billion in 1998, up nearly 4 percent from 1997. USDOC, Construction Statistics, *Value of New Construction Put in Place*, Report C30, Mar. 1, 1999, found at Internet address [http://www.census.gov/pub/const/c30\\_curr.txt](http://www.census.gov/pub/const/c30_curr.txt), retrieved Mar. 15, 1999.

<sup>17</sup> "Housing Starts, 1978-1999," National Association of Home Builders, found at Internet address <http://www.nahb.com/starts.html/>, retrieved Mar. 15, 1999.

part of 1998, annual expenditures provided for under the bill are expected to result in an additional \$3.8 billion in U.S. equipment sales per year.<sup>18</sup>

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### **Automobiles, Trucks, Buses, and Bodies and Chassis of the Foregoing**

The U.S. trade deficit for motor vehicles grew by \$8.7 billion (13 percent) to \$77.3 billion in 1998. This was the largest deficit in the transportation equipment sector. The growth in this deficit was attributable to both an increase in imports and a decrease in exports. The U.S. deficit with Japan and Canada accounted for 36 percent and 31 percent, respectively, of the overall U.S. trade deficit for this product group. These bilateral deficits increased in 1998; the deficit with Japan rose by \$1.4 billion (5 percent), and that with Canada increased by \$2.6 billion (12 percent). The U.S. trade deficit with Mexico increased by \$633 million (6 percent) in 1998, accounting for 14 percent of the annual amount. Despite the fact that the United States maintains a trade deficit in motor vehicles, producers General Motors (GM), Ford, and DaimlerChrysler (DC) are among the five leading producers in the world and account for over 70 percent of the U.S. market. The persistent trade deficit can be attributed to the strategies of GM and Ford to produce in foreign markets instead of relying on exports from the United States; the increasing integration and rationalization of automotive production in the NAFTA region; and the popularity of foreign models that are produced overseas, or whose U.S. production is supplemented by imports.

#### **U.S. imports**

U.S. motor vehicle imports increased by \$6.8 billion (7 percent) to \$99.8 billion in 1998. Canada continued to be the largest import source, accounting for 38 percent of all such U.S. imports, while Japan accounted for 29 percent of these imports, and Mexico for 13 percent. U.S. retail sales of passenger cars and light trucks reached 15.6 million units in 1998, the industry's second-highest level since reaching the 16-million mark in 1986.<sup>19</sup>

U.S. motor vehicle imports from Canada rose by \$1.8 billion (5 percent) to \$37.7 billion in 1998. The U.S.-Canadian auto industry is fully integrated, and GM, Ford, and DC consider the United States and Canada as a single unit for production planning purposes. GM, Ford, and DC dominate Canadian motor vehicle production, with a combined capacity of over 2 million vehicles per year.<sup>20</sup> Other motor vehicle producers with operations in Canada include Honda, Toyota, Volvo,<sup>21</sup> CAMI (GM's joint venture operation with Suzuki), and heavy-truck makers Navistar, Kenworth, Mack, and Freightliner. Due to strong demand in the Canadian and U.S. markets, the Canadian auto industry has been at record production levels for a number of years, with producers adding shifts and announcing production capacity expansions in 1998.<sup>22</sup> The Canadian operations of Ford, Chrysler, Honda, Toyota, and Volvo all recorded increased passenger car production in 1998, with GM and its CAMI joint venture the only two recording production

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<sup>18</sup> "New Highway Legislation--Boon or Boondoggle?" *Machinery Outlook*, June 1998, p. 20.

<sup>19</sup> "Strong Finish Caps 2nd Best U.S. Sales Year," *Ward's Automotive Reports*, Jan. 11, 1999, p. 1.

<sup>20</sup> Max Pemberton and David Puckering, *Ward's/Pembertons World Auto Atlas and Directory* (Southfield, MI: Ward's Communications, 1998), p. 54.

<sup>21</sup> In late 1998, Volvo announced that it is closing its plant in Halifax, Nova Scotia.

<sup>22</sup> Jeff Green, "Rolling Steady: Canada Faces Slowdown at Home, Hope Abroad," *Ward's Auto World*, Dec. 1998, p. 73.

decreases. Production decreases at GM and CAMI can be attributed to a strike at GM and shutdowns at CAMI and GM's Ste. Therese, Quebec, plants.<sup>23</sup>

U.S. motor vehicle imports from Japan increased by \$958 million (3 percent) to \$28.9 billion in 1998. A weak domestic market for motor vehicles combined with a healthy U.S. market and sustained popularity of certain Japanese makes in the U.S. market contributed to the surge in Japanese exports to the United States. Moreover, the drop in Japanese exports to Asia (56 percent) and South America (6 percent) in 1998 because of financial crises in these regions fueled the need to increase exports to other markets. Japanese vehicle exports to the EU increased by 10 percent, exports to the Middle East increased by 32 percent, and exports to Oceania increased by 8 percent in 1998.<sup>24</sup> Motor vehicle production in Japan fell by 8 percent in 1998 to 10.1 million units, the first annual drop in 3 years;<sup>25</sup> one source estimates that Japan's motor vehicle industry suffers from excess capacity of at least 20 percent.<sup>26</sup>

U.S. motor vehicle imports from Mexico increased by \$955 million (8 percent) to \$13.2 billion in 1998. This increase is attributable to the increasing integration, interdependence, and rationalization of the U.S. and Mexican automotive industries; increased motor vehicle production in Mexico, which was up by 8 percent in 1998 to 1.5 million units;<sup>27</sup> and continued strong motor vehicle demand in the U.S. market. Production in Mexico offers certain cost advantages, and Mexico is expected to be the only NAFTA market with significant market expansion in the near future.<sup>28</sup> The rationalization efforts of GM, Ford, and DC have resulted in the building of fewer models in Mexico. This has afforded economies of scale by essentially manufacturing the same vehicles--smaller passenger cars--for both export and domestic consumption, and importing larger, more expensive models.<sup>29</sup> Moreover, the popularity of VW models, particularly the new Beetle, has boosted U.S. imports from Mexico.

## U.S. exports

U.S. motor vehicle exports decreased by \$1.9 billion (8 percent) to \$22.5 billion in 1998. Canada again was the largest market, accounting for 59 percent of all such U.S. exports, up from 58 percent in 1997. Exports to Mexico accounted for 10 percent of motor vehicle exports, up from 8 percent in 1997. U.S. motor vehicle exports to Germany exceeded exports to Japan for the first time in 1998, accounting for 5 percent of these exports. Exports to Japan also accounted for 5 percent of motor vehicle exports, but at \$1.1 billion, they were slightly less than Germany's total of \$1.2 billion.

U.S. motor vehicle exports to Canada declined by \$834 million (6 percent) to \$13.4 billion in 1998. In 1998, retail sales of passenger cars and light trucks in Canada were down just 664 units from 1997, which was the best sales year of the decade,<sup>30</sup> and sales of medium- and heavy-duty trucks were up 6.8 percent for 1998.<sup>31</sup> However, sales of passenger cars and light trucks produced outside North America increased their market share at the expense of those produced within the NAFTA region. Sales of light

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<sup>23</sup> "Civic Wins First Canada Car Crown, Year Flat," *Ward's Automotive Reports*, Jan. 25, 1999, p. 1.

<sup>24</sup> James B. Treece, "Japan's Automakers Plan to Expand Overseas Output," *Automotive News*, Feb. 8, 1999, p. 123.

<sup>25</sup> James B. Treece, "Japan's Vehicle Output Slips 8.4% in 1998," *Automotive News*, Feb. 8, 1999, p. 123.

<sup>26</sup> Mack Chrysler, "Elusive Solution: Japan Looks for a Way Out," *Ward's Auto World*, Nov. 1998, p. 26.

<sup>27</sup> "Mexican Output Up 7.7% in 1998," *Ward's Automotive Reports*, Feb. 1, 1999, p. 5.

<sup>28</sup> "New-Car Tax May Slow Sales in Mexico," *Automotive News*, Feb. 1, 1999, p. 48.

<sup>29</sup> Economist Intelligence Unit, "Chapter 3: Mexico's Automotive Sector: Rapid Recovery Continues," *Motor Business International*, 2nd quarter 1998, p. 47.

<sup>30</sup> Bob English, "Canada's Sales Miss '97 by Just a Whisker," *Automotive News*, Jan. 18, 1999, p. 47.

<sup>31</sup> "Canada's New Truck Sales Founder," *Ward's Automotive Reports*, Jan. 25, 1999, p. 3.

vehicles imported from outside the NAFTA region increased their market share in Canada from 12 percent to 15 percent in 1998, while sales of light vehicles produced within the NAFTA region lost 3 percentage points, accounting for 85 percent of new retail sales in Canada in 1998.<sup>32</sup> Passenger car imports that registered the largest gains include Toyota/Lexus (88 percent gain to 42,569 units) and Honda/Acura (74 percent gain to 26,568 units).<sup>33</sup>

U.S. motor vehicle exports to Mexico increased by \$321 million (17 percent) to \$2.3 billion in 1998. Mexican sales of passenger cars and light trucks increased 32 percent in 1998, the best sales year in Mexico since 1992.<sup>34</sup> Imports benefitted strongly in this healthy market; sales of imported passenger cars from all sources increased 260 percent and sales of imported light trucks increased 38 percent.<sup>35</sup> This was despite a temporary hold up of consumer credit, a peso devaluation, soaring interest rates, and the reimposition of 75 percent of the tax on new motor vehicle purchases (ranging from 2.5 to 17 percent, based on the vehicle purchase price), which was suspended when the market collapsed in 1995. These conditions eased at the end of the year with the appearance of zero-percent financing and other consumer incentives.<sup>36</sup>

U.S. motor vehicle exports to Germany increased by \$71 million (7 percent) to \$1.2 billion in 1998. This is attributable to 'reverse imports' of certain models that German automakers BMW and Mercedes-Benz produced only in the United States in 1998. BMW's Spartanburg, South Carolina, plant is the sole manufacturer of the Z3 roadster, and added the Z3 coupe and M coupe in the fall 1998.<sup>37</sup> Mercedes-Benz's Tuscaloosa, Alabama, plant was the only location in the world for production of the M-class sport-utility vehicle in 1998, and industry sources report that there is a 1-year waiting list for these vehicles in Europe. Mercedes will begin assembling these vehicles in Austria in 1999 to help meet demand.<sup>38</sup> GM also produced the Opel Sintra minivan at its Doraville, Georgia, factory during 1996-98 for export to Germany and other European markets; this model is being discontinued.<sup>39</sup>

U.S. motor vehicle exports to Japan decreased by \$441 million (28 percent) to \$1.1 billion in 1998. The weak Japanese economy and discounts of up to 25 percent on domestically produced cars contributed to the reduction in import sales.<sup>40</sup> Japanese consumers responded to the state of the national economy by putting off purchases of full-sized passenger cars or opted to purchase less expensive 660-cc minicars.<sup>41</sup> Total imported car sales in Japan fell 22 percent in 1998, the lowest level since 1993, with Ford down 50 percent, Chrysler brands off 42 percent, and GM (North American production only) down 11 percent.<sup>42</sup> Significant reductions in reverse imports from Japanese transplants in the United States also contributed to

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<sup>32</sup> *Quarterly Automotive Circular, January to December 1998*, Industry Canada, Automotive and Transportation Branch, Mar. 1999, p. 11.

<sup>33</sup> *Ibid.*, p. 9.

<sup>34</sup> Guillermo Lira, "Light-Vehicle Sales up 32% in Mexico," *Automotive News*, Feb. 1, 1999, p. 48.

<sup>35</sup> *Ibid.*, special insert p. 2.

<sup>36</sup> Lira, "Light-Vehicle Sales up 32% in Mexico," and "New-Car Tax May Slow Sales in Mexico," *Automotive News*.

<sup>37</sup> Stephen Plumb, "BMW's X Factor: New Sport-Activity Vehicle to Bow in 2000," *Ward's Auto World*, Dec. 1998, p. 66.

<sup>38</sup> Stephen Plumb, "What Merger?: It's Full Speed Ahead at MBUSI," *Ward's Auto World*, Dec. 1998, p. 53.

<sup>39</sup> "Opel Increases Zafira Production," *Ward's Automotive International*, Mar. 1999, p. 3.

<sup>40</sup> "Battered in '98, Auto Importers in Japan Face Tough '99," *Ward's Automotive International*, Mar. 1999, p. 4.

<sup>41</sup> "Japanese Import Market Plummet: Overseas Manufacturers Lower Sales Goals," *Japan Auto Trends*, Japan Automobile Manufacturers Association, vol. 2, No. 4, Dec. 1998, p. 1.

<sup>42</sup> "Battered in '98," *Ward's Automotive International*.

the decline; these exports declined by 18,735 units (52 percent) to 17,668 units in 1998.<sup>43</sup> Including the increasingly popular minicars, new vehicle sales in Japan dropped over 12 percent in 1998 to the lowest level since 1986, with sales of standard-sized cars down 15 percent.<sup>44</sup>

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### **Certain Motor-Vehicle Parts<sup>45</sup>**

The U.S. trade surplus in certain motor-vehicle parts fell by \$1.3 billion (15 percent) to \$7.2 billion in 1998. Sustained import growth drove the surplus decline, as exports experienced a slight drop of \$337 million (1 percent) to \$26.0 billion in 1998. The strong U.S. motor vehicle market continued to support automotive components demand, as production of passenger cars and light trucks exceeded 11.5 million units for the fifth consecutive year.<sup>46</sup> As part of the larger automotive industry, trade shifts in the motor-vehicle parts sector generally reflect the global production/sourcing strategies, intracompany shipments, and increased globalization of U.S. and foreign automotive firms.

#### **U.S. imports**

U.S. imports of certain motor-vehicle parts rose by \$962 million (5 percent) to \$18.8 billion in 1998, with 76 percent (\$14.3 billion) of these imports supplied by Canada, Japan, and Mexico. U.S. imports from Canada, the leading U.S. import source of these products, grew by \$241 million (3 percent) to \$7.6 billion in 1998 as the Canadian auto parts industry continued to benefit from consolidation undertaken to improve its responsiveness to automakers' needs.<sup>47</sup> Canadian suppliers' greater emphasis on the production of higher valued parts and modules, as well as increased outsourcing by motor vehicle manufacturers, have contributed to the increase in values of Canadian parts shipments.<sup>48</sup> Leading components imported from Canada include miscellaneous vehicle body parts and accessories, such as truck caps and sunroofs (up 6 percent to \$1.9 billion); brakes and brake parts (up 9 percent to \$806 million); and power train components (up 1 percent to \$719 million).

Japan remained the second-leading source of U.S. automotive parts imports, although imports remained relatively unchanged at \$3.5 billion in 1998. Japanese transplant automakers continued to source components from NAFTA-based suppliers for their North American motor vehicle operations to increase local content and diversify component sourcing.<sup>49</sup> The leading import categories are miscellaneous vehicle

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<sup>43</sup> Japan Automobile Manufacturers Association, *Japan Auto Trends*, Mar. 1999, p. 7.

<sup>44</sup> "Overall Domestic 1998 Vehicle Sales, Fell 12.5% To Lowest Level Since 1986," *The Japan Automotive Digest*, Jan. 18, 1999, p. 5.

<sup>45</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.

<sup>46</sup> USDOC, Office of Automotive Affairs, "Light Vehicle Production (Millions), Plant Capacity Use (PCU), SIC 3711 Total Employment (1000s)."

<sup>47</sup> *Canadian Auto Industry*, Scotiabank Economic Report.

<sup>48</sup> Carlos Gomes, "Auto Parts Suppliers."

<sup>49</sup> For example, see Ayako Doi, "Honda of America To Expand Outsourcing in U.S. and Abroad," *The Japan Automotive Digest*, Nov. 2, 1998, p. 1; "Nissan Begins Building Altima Transaxles in U.S.," *Automotive News*,

(continued...)

parts (e.g., brake hoses, double flanged wheel hub units, and radiator cores), down nearly 15 percent to \$615 million; miscellaneous power train components, up 7 percent to \$454 million; and gearboxes for passenger cars, up 25 percent to \$450 million.

Imports from Mexico, the third-leading import source, increased by \$203 million (7 percent) to \$3.2 billion, in response to its continued integration into the North American motor vehicle community and extensive foreign direct investment in the Mexican industry.<sup>50</sup> The Mexican auto parts industry has traditionally emphasized the production and export of labor-intensive components,<sup>51</sup> whereas the production of higher-valued, high-technology components, such as fuel injection systems and anti-lock braking systems, has been considered an industry weakness.<sup>52</sup> As a result, leading import categories focus on less technology-oriented components, such as miscellaneous vehicle body parts and accessories, such as truck caps and sunroofs (up 33 percent to \$772 million) and safety seat belts (down 14 percent to \$666 million), which accounted for 45 percent of certain U.S. auto parts imports from Mexico in 1998.<sup>53</sup>

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### **Aircraft, Spacecraft, and Related Equipment**

The U.S. trade surplus for aircraft, spacecraft, and related equipment grew by \$8.3 billion (28 percent) to \$37.5 billion in 1998. U.S. exports of these products rose by \$11.6 billion, while U.S. imports grew by \$3.3 billion. The United States remained the world's largest producer of aircraft in 1998; its level of surplus is consistent with those it garnered in each of the preceding 5 years. The global need to replace aging large civil aircraft (LCA), as well as the strong demand for additional passenger service in the United States and Western Europe has driven shipments of LCA to record highs. At the same time, new types of smaller turboprop aircraft have created new market niches and made inroads on routes dominated by turbopropeller aircraft.

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<sup>49</sup> (...continued)

Apr. 13, 1998, p. 22E; and "Toyota Suppliers Boosting North American Capacity to Prepare for Princeton Pickup Plant," *The Japan Automotive Digest*, Aug. 3, 1998, p. 1.

<sup>50</sup> Foreign direct investment in the Mexican automotive sector has been estimated at nearly \$2.6 billion between January 1994 and August 1997. Mike Patten, "Auto Industry Fueling Growth," *Twin Plant News*, Nov. 1998, p. 35.

<sup>51</sup> John Couretas, "Big Mexican Suppliers Glide as Small Parts Makers Slide," *Automotive News*, June 1, 1998, p. 20.

<sup>52</sup> USDOC, *Automotive Original Equipment Manufacturers*, Market Research Reports, Aug. 1, 1997.

<sup>53</sup> Important auto parts classified in other product groups include internal combustion engines (U.S. imports from Mexico of \$2.3 billion in 1998); wiring harnesses (\$4.8 billion); and motor vehicle seats (\$2.3 billion).

## U.S. imports

U.S. imports of aircraft, spacecraft, and related equipment increased by \$3.3 billion (35 percent) during 1997-98 to \$12.7 billion. Significant increases in U.S. imports in three areas accounted for the majority of this growth. These areas included military and nonmilitary aircraft exceeding 15,000 kg (\$1.2 billion or 158 percent);<sup>54</sup> nonmilitary aircraft between 4,356 kg but less than 15,000 kg (\$1.1 billion or 59 percent); and miscellaneous parts for aircraft (\$731 million or 17 percent). The growth in these imports was a direct result of the need to modernize the aging U.S. fleet of LCA, the strong demand for regional jet vs. turboprop aircraft service, and the effect of U.S. noise regulations on the domestic airline fleet.

U.S. airlines deferred purchases of new aircraft in the early 1990s<sup>55</sup> a result of their efforts to minimize record losses.<sup>56</sup> This strategy has worked, as U.S. airlines have had been increasingly profitable since 1993; in 1997, they recorded a new high of \$8.6 billion in operating profits.<sup>57</sup> Accordingly, they began ordering new aircraft in the mid-1990s, and are now able to accept delivery of aircraft ordered in 1996-97 time frame.

The regional jet phenomena is a relatively recent development. Originally conceived by the manufacturers as a marketing tool for the airlines to lure passengers from turboprop aircraft, these aircraft are increasingly being used for new service on “long-thin” routes,<sup>58</sup> or to increase a carriers’ departure frequency between two airports, thus increasing service.<sup>59</sup> Continental Airlines has announced plans to become an “All Jet Regional Operator,” and has placed large orders for regional jets with EMBRAER of Brazil to accomplish this goal. Comair and Atlantic Coast Airlines, each regional airlines with links to U.S. major airlines, have begun using large fleets of these aircraft.

Lastly, U.S. noise standards<sup>60</sup> will preclude the use of Stage 2 aircraft<sup>61</sup> after December 31, 1999. Stage 2 aircraft are primarily in service in the United States, Latin America, and Africa. While it is possible to adapt these aircraft via engine hush kits to meet the Stage 3 noise standards, the cost of such a modification may be prohibitive, given the remaining economic life of the aircraft. The decision whether or

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<sup>54</sup> This category of aircraft includes LCA, which typically have more than 100 seats and are used for passenger transport.

<sup>55</sup> U.S. Department of Transportation (DOT), Federal Aviation Administration, Office of Aviation Policy and Plans, *Aerospace Forecasts: Fiscal Years 1999-2010* (Washington: Mar. 1999), p. I-4.

<sup>56</sup> U.S. airlines lost over \$6 billion between 1990-92; this exceeded their combined profits for the previous 45 years. DOT, Office of Aviation Statistics, various years as published in *Aerospace Facts & Figures 98/99*, Aerospace Industries of America, Inc., 1998.

<sup>57</sup> John F. Walsh, “Aircraft Delivery and Retirement Forecast,” chart presented at 13th Annual Aviation Industry Suppliers Conference, Los Angeles, CA, Mar. 17, 1999.

<sup>58</sup> “Long-thin” routes are those which have a small but consistent customer base separated by a great distance. Such a market will not support the use of large, long-range aircraft, but can be profitable with smaller, long-range aircraft. As these markets are not the predominant ones served by airlines, airframe manufacturers have not given them equal attention with the more established airline markets.

<sup>59</sup> Bombardier Aerospace forecasts in 2007 that 22 percent of the world's regional aircraft fleet of 10,700 aircraft will have more than 61 seats (growing to 35 percent of fleet of 13,900 in 2017) versus 10 percent of fleet of 7,300 aircraft in 1997. John Holding, chart presented at 13th Annual Aviation Industry Suppliers Conference, Los Angeles, CA, Mar. 16, 1999.

<sup>60</sup> Noise standards promulgated by the International Civil Aviation Organization (ICAO) require phase-out of all chapter (stage) 2 aircraft by April 1, 2002. Presentation given by Billie Jones, Pratt & Whitney Aircraft Engines at the 13th Annual Aviation Industry Suppliers Conference, Los Angeles, CA, Mar. 17, 1999.

<sup>61</sup> “Stage 2” aircraft loosely refers to the noise footprint such an aircraft makes. It is quieter than stage 1 and noisier than stage 3, the current international standard.

not to hush kit an aircraft has had a direct effect on the purchase of newer aircraft, and partially explains the high demand for new aircraft.

### **U.S. exports**

U.S. exports of aircraft, spacecraft, and related equipment grew by \$11.6 billion (30 percent) during 1997-98 to \$50.2 billion. The majority of this increase came from U.S. exports of military and nonmilitary aircraft over 15,000 kg, which grew by \$9.2 billion (43 percent) to \$30.7 billion. U.S. exports of LCA grew by \$8.4 billion (44 percent) to \$27.7 billion. The rise in such exports reflected the increased demand of foreign airlines for U.S. aircraft to meet the demands placed on them by governmental noise and pollution regulations, fleet renewal, and increased passenger demand for air transportation service. Notwithstanding the record shipments of LCA by Airbus Industrie,<sup>62</sup> once again Boeing was able to lead the industry in LCA deliveries to the global airline market. Other areas experiencing large export gains were miscellaneous parts of aircraft, rising by \$1.3 billion (11 percent) to \$12.5 billion, and aircraft undercarriages and parts thereof, which rose by \$412 million (74 percent) to \$970 million. These gains came due to increased production of foreign aircraft, and increased use of existing aircraft which led to additional maintenance on these aircraft.

The United Kingdom, Japan, and Saudi Arabia were the top three export markets for aircraft, spacecraft, and related equipment. U.S. exports these countries consisted principally of cargo aircraft over 15,000 kg (United Kingdom), LCA (Japan, Saudi Arabia), and military fighters (Japan).

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<sup>62</sup> Airbus Industrie press release, Jan. 11, 1999.

Table 12-4

Transportation equipment sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
MT001	Aircraft engines and gas turbines:				
	Exports .....	11,594	13,115	1,521	13.1
	Imports .....	8,380	10,404	2,023	24.1
	Trade balance: .....	3,213	2,711	-502	-15.6
MT002	Internal combustion piston engines, other than for aircraft:				
	Exports .....	10,625	11,015	390	3.7
	Imports .....	9,987	11,478	1,491	14.9
	Trade balance: .....	638	-463	-1,101	( <sup>3</sup> )
MT011	Forklift trucks and similar industrial vehicles:				
	Exports .....	1,161	1,188	27	2.3
	Imports .....	1,164	1,456	292	25.1
	Trade balance: .....	-3	-268	-265	-9,735.9
MT012	Construction and mining equipment:				
	Exports .....	11,070	11,595	525	4.7
	Imports .....	4,884	6,188	1,304	26.7
	Trade balance: .....	6,186	5,407	-779	-12.6
MT025	Ball and rollers bearings:				
	Exports .....	1,140	1,141	1	0.1
	Imports .....	1,615	1,719	104	6.4
	Trade balance .....	-475	-578	-103	-21.7
MT030	Primary cells and batteries and electric storage batteries:				
	Exports .....	1,494	1,334	-160	-10.7
	Imports .....	1,896	1,936	39	2.1
	Trade balance: .....	-403	-602	-199	-49.3
MT033	Ignition, starting, lighting, and other electrical equipment:				
	Exports .....	1,579	1,725	147	9.3
	Imports .....	2,170	2,363	193	8.9
	Trade balance: .....	-591	-637	-46	-7.9
MT037	Rail locomotive and rolling stock:				
	Exports .....	1,229	1,694	465	37.9
	Imports .....	1,372	2,156	784	57.1
	Trade balance: .....	-143	-462	-319	-222.4
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing:				
	Exports .....	24,394	22,544	-1,849	-7.6
	Imports .....	92,988	99,828	6,841	7.4
	Trade balance: .....	-68,594	-77,284	-8,690	-12.7
MT039	Certain motor-vehicle parts:				
	Exports .....	26,324	25,988	-337	-1.3
	Imports .....	17,804	18,767	962	5.4
	Trade balance: .....	8,520	7,221	-1,299	-15.2
MT040	Motorcycles, mopeds, and parts:				
	Exports .....	666	626	-40	-6.1
	Imports .....	1,104	1,293	189	17.1
	Trade balance: .....	-438	-667	-229	-52.4
MT041	Miscellaneous vehicles and transportation- related equipment:				
	Exports .....	3,166	2,962	-204	-6.5
	Imports .....	1,522	1,666	144	9.5

Table 12-4--Continued

Transportation equipment sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Trade balance: . . . . .	1,645	1,296	-349	-21.2
MT042	Aircraft, spacecraft, and related equipment:				
	Exports . . . . .	38,698	50,248	11,550	29.8
	Imports . . . . .	9,459	12,748	3,289	34.8
	Trade balance: . . . . .	29,239	37,500	8,261	28.3
MT043	Ships, tugs, pleasure boats, and similar vessels:				
	Exports . . . . .	1,408	1,765	357	25.3
	Imports . . . . .	924	1,090	166	18.0
	Trade balance: . . . . .	485	675	191	39.3
MT044	Motors and engines, except internal combustion, aircraft, or electric:				
	Exports . . . . .	402	397	-4	-1.1
	Imports . . . . .	567	621	53	9.4
	Trade balance: . . . . .	-166	-223	-58	-34.9

<sup>1</sup>Import values 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>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

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# CHAPTER 13

## Electronic Products

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The U.S. trade deficit in electronic products expanded by \$10.8 billion (28 percent) in 1998 to \$49.4 billion, as imports increased but exports decreased (table 13-1). Electronic products continued to be the largest items of U.S. trade in 1998. Sector imports were \$201.1 billion, representing 22 percent of all U.S. merchandise imports, which were \$907.6 billion. Sector exports were \$151.7 billion and accounted for 24 percent of all U.S. merchandise exports which were \$634.7 billion. Within the electronic products sector, the largest items of trade in 1998 were automatic data processing machines and parts (computer hardware) and diodes, transistors, integrated circuits and similar semiconductor solid-state devices (semiconductors). Together, these two product groups accounted for 53 percent of sector imports and 45 percent of sector exports during 1998, levels almost unchanged from 1997. The trade deficit in semiconductors declined significantly in 1998, by \$3.4 billion (43 percent) to \$4.5 billion, owing in part to price declines brought about by global overcapacity. The trade deficit in computer hardware increased by \$5.3 billion (19 percent) to \$33.5 billion as imports increased but exports declined owing to excess inventory, decreasing unit prices, and depressed demand brought about by the Asian economic crisis. The Asian economic downturn also moderated the growth in exports of medical goods and measuring, testing, controlling, and analyzing instruments (certain measuring instruments), causing individual product trade surpluses, which had been increasing for each item, to decline in 1998. For medical goods, the trade surplus fell by \$684 million (13 percent) in 1998 to \$4.6 billion. For certain measuring instruments, the trade surplus fell by \$1.1 billion (19 percent) to \$4.6 billion. In contrast to most other products made by the U.S. electronics industry, the United States maintained a trade surplus in medical goods and certain measuring instruments.

The most significant shifts in U.S. imports of electronic products occurred in semiconductors, which fell by \$3.1 billion (9 percent) to \$33.7 billion, and in computer hardware, which increased by \$2.2 billion (3 percent) to \$72.2 billion. The fall in imports of semiconductors reflects a continuing decline in the prices of major products, such as dynamic random access memories (DRAMs), as well as the impact of the Asian economic downturn. The principal sources of imports of semiconductors in 1998 were Japan, Korea, and Malaysia; imports from all three declined between 1997 and 1998. The increase in imports of computer hardware reflected continuing strong demand for such products in the United States brought on by intense domestic competition and declining prices. Japan, Singapore, and Taiwan accounted for over half of U.S. imports of computer hardware in 1998, but imports from all three sources declined because of falling prices. The movement of production to other lower cost areas also contributed to the decline, as imports from Malaysia and China had the greatest increases.

The largest U.S. export shifts were in computer hardware, which declined by \$3.1 billion (7 percent) to \$38.7 billion, and in radio transmission and reception apparatus, which declined by \$876 million (10 percent) to \$8.3 billion. The principal markets for U.S. exports of computer hardware were Canada, the United Kingdom, and Japan; however, exports to all three markets declined in 1998. The decline in exports of computer hardware resulted from continued price competition and economic

Table 13-1

Electronic products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

1997 Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>U.S. exports of domestic merchandise:</b>				
Japan	16,835	14,846	-1,988	-11.8
Mexico	16,279	17,137	858	5.3
Canada	20,669	20,828	159	0.8
Taiwan	5,158	4,946	-213	-4.1
Singapore	7,106	6,487	-618	-8.7
China	2,109	2,948	839	39.8
Malaysia	5,510	4,982	-527	-9.6
Korea	7,370	5,559	-1,811	-24.6
United Kingdom	10,098	10,172	74	0.7
Germany	7,220	7,428	208	2.9
All Other	57,603	56,345	-1,258	-2.2
Total	155,955	151,678	-4,277	-2.7
<b>Selected country groups:</b>				
EU-15	37,605	39,132	1,527	4.1
OPEC	2,995	2,456	-539	-18.0
Latin America	29,054	29,614	559	1.9
CBERA	1,638	1,977	340	20.8
Asian Pacific Rim	60,145	53,289	-6,856	-11.4
ASEAN	19,925	17,608	-2,318	-11.6
Central and Eastern Europe	698	814	116	16.6
<b>U.S. imports for consumption:</b>				
Japan	43,871	40,836	-3,035	-6.9
Mexico	19,704	23,255	3,551	18.0
Canada	12,420	13,110	690	5.6
Taiwan	17,052	17,009	-43	-0.3
Singapore	16,831	15,404	-1,427	-8.5
China	14,101	17,314	3,214	22.8
Malaysia	13,719	14,515	796	5.8
Korea	12,107	11,155	-952	-7.9
United Kingdom	5,930	5,529	-401	-6.8
Germany	5,467	5,776	308	5.6
All Other	33,344	37,163	3,819	11.5
Total	194,546	201,067	6,520	3.4
<b>Selected country groups:</b>				
EU-15	21,586	22,572	986	4.6
OPEC	1,789	1,950	161	9.0
Latin America	21,192	25,231	4,039	19.1
CBERA	954	1,390	436	45.8
Asian Pacific Rim	134,544	134,332	-212	-0.2
ASEAN	44,096	45,004	909	2.1
Central and Eastern Europe	672	1,066	393	58.5
<b>U.S. merchandise trade balance:</b>				
Japan	-27,036	-25,990	1,047	3.9
Mexico	-3,425	-6,118	-2,693	-78.6
Canada	8,249	7,718	-530	-6.4
Taiwan	-11,893	-12,063	-170	-1.4
Singapore	-9,726	-8,917	809	8.3
China	-11,992	-14,367	-2,375	-19.8
Malaysia	-8,210	-9,533	-1,323	-16.1
Korea	-4,737	-5,596	-859	-18.1
United Kingdom	4,168	4,643	475	11.4
Germany	1,753	1,653	-100	-5.7
All Other	24,259	19,182	-5,077	-20.9
Total	-38,591	-49,389	-10,798	-28.0
<b>Selected country groups:</b>				
EU-15	16,020	16,561	541	3.4
OPEC	1,206	507	-699	-58.0
Latin America	7,862	4,383	-3,479	-44.3
CBERA	684	587	-97	-14.1
Asian Pacific Rim	-74,399	-81,043	-6,644	-8.9
ASEAN	-24,170	-27,397	-3,226	-13.3
Central and Eastern Europe	26	-252	-277	( <sup>2</sup> )

<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.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

downturns in major markets, such as Japan. The principal markets for U.S. exports of radio transmission and reception apparatus were Canada, Japan, and Mexico. Exports to Canada and Mexico were up slightly, while exports to Japan registered a small decline. The decline in exports of radio transmission and reception apparatus resulted from low demand in some Asian countries due to the continuing economic downturn and the establishment of production facilities in Brazil, which reduced the need for U.S. exports to that country. Trade statistics for all commodity/industry groups in the electronic products sector are presented in table 13-3 at the end of this chapter.

## **U.S. BILATERAL TRADE**

The largest sources of U.S. imports of electronic products in 1998 were Japan, Mexico, and China. Together, these three trading partners accounted for 40 percent of sector imports. Canada, Mexico, and Japan were the leading export markets for U.S. electronic products in 1998. These three partners accounted for 35 percent of all sector exports. Among the top 10 trading partners, the largest U.S. trade surplus was with Canada (\$7.7 billion), and the largest U.S. trade deficit was with Japan (\$26.0 billion). The largest shift in trade balance was with Mexico where the trade deficit widened by \$2.7 billion to \$6.1 billion (79 percent). The leading U.S. import and export electronic products for major trading partner countries are presented in table 13-2.

During 1997-98, the U.S. trade deficit with Japan in electronic products improved by \$1.0 billion to \$26.0 billion. Owing, in part, to the weak Japanese economy and competition from other Asian producers, U.S. exports to Japan fell by 12 percent to \$14.8 billion. For similar reasons, imports from Japan fell by 7 percent to \$40.8 billion. Much of the trade with Japan, both imports and exports, was in computer hardware and semiconductors. Both items experienced global oversupply and resulting price declines during 1998. While the value of trade in these items has declined, the quantity has increased.

U.S. exports of sector products to Mexico increased by \$858 million (5 percent) during 1997-98 to \$17.1 billion. U.S. imports from Mexico rose by \$3.6 billion (18 percent) to \$23.3 billion, which contributed to the expansion of the U.S. trade deficit with Mexico to \$6.1 billion. Mexico exported computer hardware and television receivers to the United States, mainly from facilities located in Mexico that are affiliated with producers in the United States. Among the leading U.S. exports to Mexico were computer hardware and semiconductors. These items were assembled into finished products and were returned to the United States, sold in Mexico, or exported to other countries in Latin America. In U.S. bilateral trade with Mexico, a large portion of U.S. exports to Mexico were destined for maquiladora operations where labor-intensive assembly operations were performed. The bulk of finished products were then exported to the United States and other markets in Latin America.

Although U.S. exports of electronic products to China increased significantly in 1998, the trade deficit with China rose by \$2.4 billion (20 percent) to \$14.4 billion. U.S. exports to China increased by \$839 million (40 percent) during 1997-98 to \$2.9 billion, and imports from China grew by \$3.2 billion (23 percent) to \$17.3 billion. Major imports from China included computer hardware and consumer electronics, notably compact disc players with radio receivers. These two product categories, combined, made up nearly half of all electronics product imports from China. The rise in U.S. imports of computer hardware and consumer electronics reflects the increasing movement of production to low-cost producers, such as China, in highly competitive industries.

**Table 13-2**

**Electronics products: Leading U.S. import and export products, by major partner, 1998**

<b>Partner</b>	<b>Leading imports</b>	<b>Leading exports</b>
Japan . . . . .	Computer hardware, excluding parts Electronic integrated circuits, microassemblies, and parts Parts for office machines and computers Transmission apparatus for radiotelephony, radiotelegraphy, radiobroadcasting or television	Electronic integrated circuits, microassemblies, and parts Computer hardware, except parts Parts for office machines and computers Parts for television, radio, and radar apparatus
Mexico . . . . .	Television receivers and video monitors Computer hardware, except parts Parts for office machines and computers Reception apparatus for radiotelephony, radiotelegraphy, or radiobroadcasting	Electronic integrated circuits, microassemblies, and parts Thermionic, cold cathode, or photocathode tubes Parts for office machines and computers Switching, protecting, or connecting apparatus for electrical circuits under 1,000 volts
Canada . . . . .	Parts for office machines and computers Electronic integrated circuits, microassemblies, and parts Telephone and telegraph apparatus Computer hardware, except parts	Computer hardware, except parts Electronic integrated circuits, microassemblies, and parts Telephone and telegraph apparatus Parts for office machines and computers
Taiwan . . . . .	Parts for office machines and computers Computer hardware, except parts Electronic integrated circuits, microassemblies, and parts Transmission apparatus for radiotelephony, radiotelegraphy, radiobroadcasting or television	Electronic integrated circuits, microassemblies, and parts Parts for office machines and computers Computer hardware, except parts Transmission apparatus for radiotelephony, radiotelegraphy, radiobroadcasting or television
Singapore . . . . .	Computer hardware, except parts Parts for office machines and computers Electronic integrated circuits, microassemblies, and parts Medical goods	Electronic integrated circuits, microassemblies, and parts Parts for office machines and computers Prepared unrecorded media Computer hardware, except parts
China . . . . .	Computer hardware, except parts Parts for office machines and computers Reception apparatus for radiotelephony, radiotelegraphy, or radiobroadcasting Telephone and telegraph apparatus	Computer hardware, except parts Electronic integrated circuits, microassemblies, and parts Parts for office machines and computers Telephone and telegraph apparatus

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

During 1997-98, the U.S. trade surplus in electronic products with Canada declined by 6 percent to \$7.7 billion. U.S. exports to Canada were almost flat in 1998, rising only 1 percent to \$20.8 billion, whereas imports from Canada rose by 6 percent to \$13.1 billion. The two leading items of trade, both imports and exports, with Canada in 1998 were computer hardware and semiconductors. These items flow across the border in both directions as parts and components are assembled into larger subassemblies and completed units.

**COMMODITY ANALYSIS**

## Telephone and Telegraph Apparatus

U.S. trade in telephone and telegraph apparatus shifted from a surplus of \$109 million to a deficit of \$726 million during the years 1997-98, as currency devaluations in Asia stimulated U.S. imports from the region while suppressing the growth of U.S. exports.<sup>1</sup> U.S. imports of these products increased by \$1.2 billion (13 percent) to \$10.5 billion while exports increased by \$392 million (4 percent) to \$9.8 billion (table 13-3). The continued growth of the U.S. market for telephone and telegraph apparatus, which increased by approximately 11 percent in 1998,<sup>2</sup> also contributed to the increase in imports of these products.

### U.S. imports

Canada, Japan, China, and Mexico remained the four largest sources of telephone and telegraph apparatus imports for the United States in 1998 and Korea replaced Malaysia as the fifth-largest supplier. U.S. imports from each of these countries increased during 1998 and these five countries together supplied 68 percent of all imports of this equipment. U.S. imports from Canada increased by 8 percent, imports from Mexico, Japan, and China each grew by approximately 17 percent, and imports from Korea increased by 106 percent. The growth of imports from Japan, China, Korea, and Taiwan accounted for 87 percent of the combined increase from all sources. Significant currency devaluations in Asian markets such as Japan, Korea, and Taiwan during 1998 provided the major impetus for this increase by making U.S. products less competitive vis-a-vis the countries with devalued currencies. For example, the significant increase in imports from Korea resulted from a sharp decrease in the value of the Korean won. This, in turn, contributed to a 21-percent reduction in the average value of U.S. cellular telephone imports from Korea prompting a 200 percent increase in the quantity of cellular telephone imports.<sup>3</sup>

U.S. imports consisted mostly of low-end, commodity-type products. Telephone sets, both corded and cordless, comprised 29 percent of telephone and telegraph apparatus imports in 1998. U.S. imports of cordless telephone sets increased by 17 percent while imports of corded telephone sets fell by 8 percent. Other principal import product categories include cellular telephones, printed circuit assemblies for telephone apparatus, facsimile machines, and modems. U.S. imports of each of these products increased during 1998 with the exception of facsimile machines, which decreased by 8 percent. The rapid growth of cellular telephone usage has further spurred the growth of U.S. imports. Total cellular subscribership in the United States increased by 8 million (15 percent) to 60 million in 1998.<sup>4</sup> Cellular telephones and cellular infrastructure equipment comprised a growing share of imports from Canada, Japan, Mexico, and Korea.

Although the relative share of telephone and telegraph apparatus comprised by each type of import changed somewhat during 1998, the composition of products supplied by each of the major trading partners remained relatively stable. U.S. imports from Canada consisted of a wide range of products and parts for telephone and telegraph apparatus although they were relatively concentrated in high-end equipment such

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<sup>1</sup> MultiMedia Telecommunications Association (MMTA), *1999 MultiMedia Telecommunications Market Review and Forecast* (Arlington, VA: MMTA, 1999), p. 272.

<sup>2</sup> *Ibid.*, p. 8.

<sup>3</sup> Compiled from official statistics of the U.S. Department of Commerce (USDOC).

<sup>4</sup> *The Wireless Communications Industry* (New York: Donaldson, Lufkin, and Jenrette, Winter 1998/1999), p. 61.

as private branch exchanges<sup>5</sup> and cellular telephones. Printed circuit assemblies, facsimile machines, and cellular telephone sets together comprised 67 percent of U.S. imports of these products from Japan in 1998. Mexico has supplied an increasingly large share of low-end equipment such as telephone sets, pagers, and answering machines to the United States in recent years and the trend continued in 1998. China remained the largest source of telephone sets for the U.S. market and the value of these imports increased by \$328 million (36 percent) to \$1.2 billion in 1998.

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### **Radio Transmission and Reception Apparatus**

The U.S. trade balance for radio transmission and reception apparatus declined from a \$156-million surplus in 1997 to a \$1.9-billion deficit in 1998, reflecting both an increase in imports and a decrease in exports. The surplus in 1997 was an anomaly, as otherwise the trade deficit had ranged from \$1.6 billion to \$2.6 billion during the period 1994-98. The increase in U.S. imports reflected the continuing expansion of cellular telephone networks in the United States and growing sales of consumer electronic products incorporating compact disc (CD) players. The decrease in exports was likely the result of the continuing economic crises in Asia.

#### **U.S. imports**

Imports of goods within this product group increased for the second consecutive year from \$9.1 billion in 1997 to \$10.2 billion in 1998, or by 13 percent (table 13-3). U.S. imports from China (up 22 percent to \$2.5 billion), Canada (up 29 percent to \$995 million), Mexico (up 12 percent to \$2.0 billion), and Japan (up 17 percent to \$1.2 billion) led the increase in imports. Most of the growth in imports from China was the result of continued demand for consumer electronic products, notably CD players in combination with radio receivers, either portable or for use in motor vehicles, and the increasing movement of production to low-cost producers. U.S. imports of CD player combinations increased by \$353 million (35 percent) to \$1.4 billion.

Imports from Canada and Japan increased as a result of the continuing expansion of cellular telecommunications infrastructure in the United States, which stimulated demand for transmission apparatus incorporating reception apparatus. Imports of this equipment from the two countries increased by \$201 million (43 percent) to \$673 million and \$100 million (200 percent) to \$150 million, respectively. Both Canada and Japan are globally competitive producers of this equipment. The U.S. and Canadian industries are well integrated, leading to increased bilateral trade. The weak yen contributed to increased imports from Japan. Imports from Mexico reflected growing trade in pagers and in printed circuits and parts of printed circuits, increasing by 127 percent to \$417 million, supporting the continuing spread of wireless communications in the United States.

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<sup>5</sup> Private branch exchanges are switches located on the customer's premises that operate as a private local exchange, typically providing reduced-digit dialing for internal calls.

## **U.S. exports**

U.S. exports decreased by \$876 million (10 percent) to \$8.3 billion, reflecting a decline in exports to Brazil (down 19 percent to \$586 million), French Guiana (down 52 percent to \$229 million), and Korea (down 60 percent to \$168 million). Exports to Brazil of pagers declined as Motorola opened a pager factory in Brazil, thus being able to supply Brazil with domestic product rather than with imported pagers.<sup>6</sup> Also, Brazil's printed circuit production capacity has increased and is better able to supply its own demand for printed circuit boards and other parts of radio transmission and reception apparatus.<sup>7</sup> U.S. exports to French Guiana declined as a result of fewer satellite launches from the European Space Agency launch facility at Kourou. Decreased exports to Korea reflect the low demand for imports brought about by the continuing economic crisis in Asia. The United States is a major supplier of cellular telecommunications equipment, and exports of this equipment to Korea declined significantly from 1997 to 1998.

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## **Television Receivers, Video Monitors, and Combinations Including Television Receivers**

Imports of goods within this product group increased by \$916 million (21 percent) to \$5.3 billion in 1998, while exports grew by \$726 million (47 percent) to \$2.3 billion. The merchandise trade deficit grew by \$190 million (7 percent) to \$3.1 billion. Mexico maintained its position as the most significant trading partner in this product group, and increased its shipments to the United States by 23 percent as a result of Thomson Consumer Electronics (TCE), a significant television receiver producer, closing its factory in the United States and expanding production in Mexico. Exports to Japan almost equaled exports to Mexico for the first time as each accounted for 18 percent of U.S. exports of these goods in 1998.

## **U.S. imports**

Imports rose as a result of increased shipments from Mexico, which grew by \$763 million (23 percent) to \$4.1 billion. Imports from Mexico were led by color televisions with screen sizes greater than 35.56 cm (14 inches), which grew by \$722 million (33 percent) to \$2.9 billion. TCE closed its television assembly plant in Indiana in early 1998 and moved assembly operations to Thomson's plants in Mexico, primarily to cut labor costs. The shift of production to Mexico was responsible for much of the increase in imports. RCA-brand television receivers, produced by Thomson, have the largest share of the U.S. market, and demand for RCA televisions continues regardless of the country of origin. At the time, the U.S. Thomson plant was the largest television assembly plant in the world. In addition to Thomson, a number of foreign companies have invested in the consumer electronics industry in Mexico

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<sup>6</sup> Neide Lamanna, "Motorola Inaugurates Pagers' Plant in Brazil," found at Internet address <http://www.advanstar.com.br/english/numant/tla49/motorola.htm>, retrieved Mar. 16, 1999.

<sup>7</sup> Intercircuit, found at Internet address <http://www.intercircuit.com.br/itc/e-index.html>, retrieved Mar. 16, 1999.

with the intent to export to the United States. The benefit of locating to Mexico include North American Free Trade Agreement (NAFTA) eligibility, especially low duty preferences for NAFTA products.

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### **Television Apparatus (Except Receivers, and Monitors), Including Cameras, Camcorders, and Cable Apparatus**

The trade deficit for television apparatus grew by \$1.3 billion (42 percent) to \$4.4 billion, as a result of increasing imports, which grew by \$1.1 billion (27 percent) to \$5.1 billion in 1998. While imports increased, exports decreased by \$217 million (22 percent) to \$752 million. The growth in U.S. imports was primarily due to increased shipments from Mexico.

#### **U.S. imports**

Imports reflected increased shipments from Mexico, Japan, and Taiwan. Increased imports from Mexico were primarily of cable television decoders and direct broadcast satellite television decoders, imports of which increased by \$334 million (122 percent) to \$608 million and \$288 million (1,168 percent) to \$313 million, respectively. Mexico is the source for many of the direct-broadcast-satellite dishes and set-top boxes purchased in the United States.

Increased U.S. imports from Japan reflected increased shipments of still image video cameras and camcorders, which grew by \$233 million (87 percent) to \$503 million and \$73 million (5 percent) to \$1.4 billion, respectively, to fill increasing demand for still image video cameras and continuing demand for camcorders. The increasing consumption by U.S. households of personal computers and the ability of digital cameras to capture images electronically, manipulate them, and store or send them via the Internet, have led to increased demand for still image video cameras. Japan's strength in optics and consumer electronics has led to its prominence as a source of still image video cameras, and its continuing prominence as a source of camcorders. Increased imports from Taiwan reflected continuing demand in the United States for cable television converters, which grew by \$418 million (436 percent) to \$513 million.

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### **Diodes, Transistors, Integrated Circuits, and Similar Semiconductor Solid-State Devices**

During 1997-98, the U.S. trade deficit in semiconductors narrowed by \$3.4 billion (43 percent) to \$4.5 billion. In 1998, for the third straight year, the deficit narrowed in these products following 5 consecutive years of expansion. The reduction in the trade deficit was the result of decreased U.S. imports and a slight increase in the level of exports. The drop in imports is indicative of a continued decline in the value of the global semiconductor market during 1997-98 that was brought on by overproduction and excess capacity, especially in memory chips. The slight increase in exports reflects the

sustained demand for certain specialized semiconductor products of which U.S. companies are leaders in production, such as logic devices and microcomponents.<sup>8</sup>

### **U.S. imports**

The value of U.S. semiconductor imports dropped by \$3.2 billion (9 percent) to \$33.7 billion during 1997-98. As in previous years, much of the decrease is related to the decline in the value of global sales for memory devices, particularly dynamic random access memories (DRAMs). The dollar value of global DRAM sales, the principal memory devices in automatic data processing machines, declined by as much as 35 percent during 1997-98.<sup>9</sup> Although the value of sales declined, the quantity of chips increased, indicating a substantial price drop.<sup>10</sup> This price decline is primarily due to excess manufacturing capacity which has led to an oversupply of memory chips during the past 3 years. As a result of price erosion, the value of U.S. imports of DRAMs dropped by \$1.8 billion (28 percent) to \$4.6 billion during 1997-98. Korea and Japan, the two leading sources of U.S. DRAM imports, absorbed most of this decline. U.S. DRAM imports from these two countries dropped by a combined \$1.3 billion (17 percent) to \$2.5 billion during 1997-98.

Although U.S. imports from most major trading partners fell during 1997-98, imports from the Philippines increased significantly. Imports from the Philippines grew by \$572 million (17 percent) during 1997-98 to \$3.9 billion. Most of this increase was the result of co-production operations between the Philippines and the United States, whereby devices fabricated in the United States are shipped to the Philippines for final assembly and testing and then returned to the U.S. market.

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### **Automatic Data Processing Machines<sup>11</sup>**

The U.S. trade deficit in computer hardware rose by \$5.3 billion (19 percent) to \$33.5 billion during 1997-98, continuing a consistent trend of rising trade deficits. As in previous years, U.S. imports of computer hardware rose as U.S. consumers demanded price-competitive personal computers (PCs) and peripherals supplied primarily by Asian producers. U.S. exports of computer hardware fell during 1997-98, the first year that exports did not increase during the past 5 years. Worldwide inventory and oversupply problems, decreasing unit prices, and the economic downturn in Asia all contributed to this decline.<sup>12</sup>

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<sup>8</sup> Semiconductor Industry Association (SIA), "Global Semiconductor Sales to Decline 1.8 Percent in 1998," June 3, 1998, found at Internet address <http://www.semichips.org>, retrieved Mar. 11, 1999.

<sup>9</sup> Daryl Delano, "The Perils of Predicting Semiconductors," *Electronic Business*, Jan. 1999.

<sup>10</sup> Ibid.; and SIA, "Global Semiconductor Sales to Decline 1.8 Percent in 1998."

<sup>11</sup> This industry/commodity group, also referred to as computer hardware, is composed of finished (computers and computer peripherals) and unfinished (parts for computers and computer peripherals, such as motherboards) products.

<sup>12</sup> Michael Kanellos and Brooke Crothers, "Price Drops, Net Transforming PC Industry," *CNET News.com*, Mar. 15, 1999, found at Internet address <http://www.news.com/News/Item/0,4,33376,00.html>, retrieved Mar. 9, 1999; Reuters, "PC Profits Look Mixed," July 10, 1998, found at Internet address

[http://www.wired.com/news/print\\_version/business/story](http://www.wired.com/news/print_version/business/story), retrieved Mar. 11, 1999; and Karsten Lemm, "IDC: PC (continued...)

## U.S. imports

U.S. imports of computer hardware rose by \$2.2 billion (3 percent) to \$72.2 billion during 1997-98. As in previous years, this increase occurred because of intense competition among U.S. computer hardware vendors that led to continued lowering of prices of computers and peripherals, thus fueling demand and increasing the total value of imports. For instance, during 1997-98, the introduction of low-cost PC systems (under \$500) into the U.S. market further intensified competition, spurring other firms to offer machines at similar prices or higher-priced machines that offered more performance for the price.<sup>13</sup> Other factors that have spurred demand include the continued growth in Internet use, electronic commerce, and corporate investment in computer infrastructure to implement Internet or Internet-like technologies (intranets, extranets).<sup>14</sup>

During 1997-98, the United States continued importing computer hardware principally from Japan, Singapore, and Taiwan, the three leading import sources since 1993. These producers supplied about half of imports from all sources. However, U.S. imports of computer hardware from these three economies all fell during 1997-98. Of the three import sources, the value of Japan's shipments to the United States endured the largest decline, or \$1.6 billion (11 percent). Singapore followed with a decrease of \$1.1 billion (8 percent). U.S. imports from Taiwan declined only slightly, or by \$243 million (2 percent). Essentially, the decline in imports from these producers was the result of excess inventory and oversupply of computer equipment worldwide,<sup>15</sup> a decline in prices,<sup>16</sup> and the continued location of production facilities in lower cost areas in Asia and Latin America.<sup>17</sup> For instance, U.S. imports from the Philippines, Malaysia, China, and Mexico all significantly increased during 1997-98 at the expense of producers located in Japan, Singapore, and Taiwan. U.S. imports from the Philippines and Malaysia, in particular, also may have increased as a result of significant changes in currency exchange rates. During 1997-98, the purchasing power of the dollar against both currencies rose by 39 percent.<sup>18</sup> One U.S. dollar was equivalent to 29.5 Philippine pesos or 2.8 Malaysian ringgits in 1997, compared with 40.9 pesos or 3.9 ringgits in 1998.

## U.S. exports

Globally, U.S. exports of computer hardware fell by \$3.1 billion (7 percent) to \$38.7 billion in 1998, the first year that exports decreased since at least 1992. This decrease in U.S. exports worldwide was due to excess inventory and oversupply of computers, continued price competition, and economic downturns in major markets such as Japan.

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<sup>12</sup> (...continued)

Sales Recovering," *Wired News*, Sept. 9, 1998, found at Internet address [http://www.wired.com/news/print\\_version/business/story](http://www.wired.com/news/print_version/business/story), retrieved Mar. 11, 1999.

<sup>13</sup> Robert Lemos, "Large Computer Makers Worry Over Low-cost PC," *ZDNET News*, Nov. 17, 1998, found at Internet address <http://www.zdnetm.com/zdnn/stories/news>, retrieved Mar. 11, 1999; and Brooke Crothers, "Low-Cost PCs Forge New Mainstream," *CNET News.com*, Jan. 21, 1999, found at Internet address <http://www.news.com/News/Item/>, retrieved Mar. 11, 1999.

<sup>14</sup> USDOC, International Trade Administration (ITA), "Computer Equipment," *U.S. Industry & Trade Outlook '99* (New York: McGraw Hill Companies, 1999), pp. 27-1 to 27-2.

<sup>15</sup> Reuters, "PC Profits Look Mixed;" and Lemm, "IDC: PC Sales Recovering."

<sup>16</sup> Lemos, "Large Computer Makers Worry Over Low-Cost PC;" and Crothers, "Low-cost PCS Forge New Mainstream."

<sup>17</sup> Robert Ristelhueber, "HG Singapore," *Electronic Business*, Mar. 1998, pp. 85-86; and USDOC, ITA, "Computer Equipment," pp. 27-1 to 27-2.

<sup>18</sup> International Monetary Fund, *International Financial Statistics*, Mar. 1999.

U.S. exports of computer hardware to almost all of the top 10 major export markets declined during 1997-98. Japan had the largest drop in U.S. exports of these products. U.S. exports to Japan fell by \$1.2 billion (23 percent) in 1998 to \$3.8 billion. This decrease is primarily due to the contraction of the Japanese computer market in 1998.<sup>19</sup>

In comparison, among the top 10 export markets, only U.S. exports to Ireland and the Netherlands increased in 1998. U.S. exports of computer hardware to Ireland increased by \$318 million (35 percent) to \$1.2 billion, primarily due to the export of parts to production facilities owned by U.S. firms. In 1998, parts comprised 60 percent of total U.S. computer hardware exports to Ireland. For instance, IBM's Systems Storage Division established a plant near Dublin for the manufacture of hard disk drive platters in 1997 which became operational in 1998.<sup>20</sup> Apple Computer and Dell Computer Corp., two companies with increased Western Europe market share during the period, also had manufacturing facilities located in Ireland in 1998.<sup>21</sup> The slight increase in U.S. exports, \$50 million (2 percent), to the Netherlands in 1998 is the result of that country's importance as a regional distribution center for multinational computer firms.<sup>22</sup> U.S. companies that export finished and unfinished computer hardware to the Netherlands for assembly and/or distribution to other areas in Europe include Hewlett-Packard and Compaq Computer Corp.<sup>23</sup>

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### **Medical Goods**

The U.S. trade surplus in medical goods decreased during 1997-98 by \$684 million (13 percent) to \$4.6 billion, the first decline in the surplus in more than over 10 years. U.S. exports grew slightly by \$356 million (3 percent) to \$11.6 billion, while U.S. imports increased by \$1.0 billion (18 percent) to \$6.9 billion. The slight increase in exports reflects continued demand for U.S. produced advanced-technology medical devices such as magnetic-resonance-imaging (MRI), computed tomographic (CT), ultrasound, and x-ray equipment to markets such as Europe, Canada, and Latin America. Other high-technology medical goods manufactured in the United States that are in demand globally include pacemakers, cardioverter defibrillators, cardiac stents, and electrosurgical equipment. However, a decline in U.S. exports to Asia, as a consequence of that region's financial crisis,<sup>24</sup> moderated total U.S. export growth. The increase in imports is indicative of continued U.S. market demand for medical imaging and other electronic equipment produced by companies in Japan and Germany.

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<sup>19</sup> Martyn Williams, "Japan Computer Shipments to Recover in 1999 Says JEIDA (Japan Electronics Industry Development Association)," *Newsbytes News Network*, Nov. 25, 1998, found at Internet address <http://www.cnnfn.com/digitaljam/newsbytes>, retrieved Mar. 11, 1999.

<sup>20</sup> Company reports and press releases.

<sup>21</sup> "Apple Cutting Irish Workforce, Outsourcing iMacs," *Newsbytes News Network*, Feb. 2, 1999.

<sup>22</sup> Alberto Socolovsky, "The Hub of Europe," *Electronic Business*, Nov. 1998.

<sup>23</sup> *Ibid.*; and company reports.

<sup>24</sup> USDOC, ITA, "Medical and Dental Instruments and Supplies," *U.S. Industry and Trade Outlook '99* (New York: McGraw-Hill Companies, 1999), pp. 45-2 and 45-6 to 45-7.

## U.S. imports

As in previous years, Japan and Germany continued to be the largest suppliers of medical goods to the United States during 1997-98. These two countries accounted for a combined \$2.3 billion or 34 percent of all U.S. imports of such goods. U.S. imports from Japan increased by \$93 million (9 percent) to \$1.1 billion. Most of these imports consisted of medical imaging products, such as ultrasound scanning devices, and optical medical goods, such as endoscopes and patient monitoring equipment. Japanese producers are strong in the manufacture of small-size medical imaging products which are ideal for use by community hospital centers or mobile imaging units in the United States. U.S. imports from Germany also rose during 1997-98 by \$168 million (17 percent) to \$1.2 billion. Medical equipment producers in Germany are leading manufacturers of medical and surgical instruments and their exports to the United States were strengthened due to a favorable exchange rate during 1997-98 and declining demand in their domestic market which led to a diversion of product to overseas markets.<sup>25</sup>

Other countries that have significantly increased their supply of medical equipment to the United States include Israel and Singapore. U.S. medical equipment imports from Israel increased by \$228 million (163 percent) to \$368 million during 1997-98. Although imports from Israel rose from a low base, Israel's medical devices industry is a leader in medical imaging equipment, electronic cardiology and blood pressure monitoring systems, and other advanced technology medical products.<sup>26</sup> Further, the Israeli industry exports much of its production, especially to the United States.<sup>27</sup> One reason for the increase in U.S. imports from Israel in 1998 is that major U.S. companies have partnered with Israeli companies for the production of advanced technology products. For instance, GE Medical Systems formed a joint venture with the Israeli company Elscint Ltd., to manufacture medical imaging equipment, leading to a subsequent buy-out of the partnership by GE in 1998.<sup>28</sup>

U.S. imports from Singapore rose by \$93 million (46 percent) during 1997-98 to \$295 million. Many of the medical equipment production facilities in Singapore are foreign-owned and are geared predominately for export.<sup>29</sup> Much of the increase in U.S. medical equipment imports from Singapore was a result of acquisitions of production facilities by U.S. headquartered companies,<sup>30</sup> as well as Singapore government promotion of the economy as a base for original equipment and original design manufacturing capabilities for the global medical devices industry.<sup>31</sup>

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<sup>25</sup> USDOC, *Market Research Report: Germany--Electro-Medical Equipment*, July 1998, found at Internet address <http://www.ita.doc.gov/mdequip/germany.html>, retrieved Mar. 11, 1999.

<sup>26</sup> USDOC, *Market Research Report: Israel--Development of Telemedicine*, July 1998, found at Internet address <http://www.stat-usa.gov>, retrieved Mar. 11, 1999.

<sup>27</sup> USDOC, *Market Research Report: Israel--Medical Equipment and Supplies*, June 1997, found at Internet address <http://www.stat-usa.gov>, retrieved Mar. 11, 1999

<sup>28</sup> Company reports and press releases.

<sup>29</sup> USDOC, *Market Research Report: Singapore--Medical Devices*, Apr. 1998, found at Internet address <http://www.stat-usa.gov>, retrieved Mar. 11, 1999.

<sup>30</sup> Company reports and press releases.

<sup>31</sup> USDOC, *Market Research Report: Singapore--Medical Devices*.

## **Measuring, Testing, Controlling, and Analyzing Instruments**

After several years of continuous improvement, the U.S. trade surplus in measuring, testing, controlling, and analyzing instruments (certain measuring instruments) declined during 1997-98, falling by \$1.1 billion (19 percent) to \$4.6 billion. The decline in the trade balance was attributed to a decline in U.S. exports, which fell by \$500 million (4 percent) to \$12.9 billion, and a moderate increase in U.S. imports, which rose by \$604 million (8 percent) to \$8.3 billion. The decline in exports basically reflected smaller purchases of U.S.-made measuring instruments by Asian builders and other consumers in response to unstable economic conditions in their home markets. The prevailing economic conditions in those markets also precipitated reduced foreign investment and the closing of several U.S.-affiliated Asian operations which had relied upon U.S. exports of measuring instruments and/or component parts to supplement production.

Although U.S. exports to principal Asian markets declined in 1998, consumers in Canada and the European Union (EU) maintained a relatively high degree of demand for these U.S.-made, high-quality products to meet increasing industrial activity. The U.S. trade surplus with Canada rose by \$97 million (6 percent) to \$1.7 billion in 1998, while the trade surplus with the EU increased by \$170 million (22 percent) to \$928 million, reflecting the relative competitiveness of U.S. producers in the global market. A significant portion of measuring instruments exported to Canada and the EU during 1997-98 consisted of instruments and apparatus specially designed for use in telecommunications; instruments and apparatus for measuring, checking, or detecting electrical quantities; and electrical instruments and apparatus used for physical or chemical analysis.

Mexico replaced Japan as the largest foreign supplier of certain measuring instruments to the United States during 1997-98, increasing its share of imports to 24 percent. Improved economic conditions in the United States during the period stimulated demand for certain automotive, aerospace, and industrial products (such as speedometers, tachometers, and process control instruments) from U.S.-affiliated operations in Mexico.

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**Table 13-3**  
**Electronic products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>**

USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from 1997	
				Absolute	Percentage
<i>Million Dollars</i>					
ST001	Office machines:				
	Exports . . . . .	2,307	2,470	163	7.1
	Imports . . . . .	6,688	6,208	-480	-7.2
	Trade balance: . . . . .	-4,381	-3,738	643	14.7
ST002	Telephone and telegraph apparatus:				
	Exports . . . . .	9,370	9,762	392	4.2
	Imports . . . . .	9,261	10,488	1,227	13.3
	Trade balance: . . . . .	109	-726	-836	( <sup>3</sup> )
ST003	Microphones, loudspeakers, audio amplifiers, and combinations thereof:				
	Exports . . . . .	1,228	1,095	-133	-10.8
	Imports . . . . .	2,168	2,312	144	6.6
	Trade balance: . . . . .	-940	-1,217	-277	-29.4
ST004	Tape recorders, tape players, video cassette recorders, turntables, and compact disc players:				
	Exports . . . . .	1,058	888	-170	-16.1
	Imports . . . . .	6,128	6,426	297	4.9
	Trade balance: . . . . .	-5,071	-5,538	-468	-9.2
ST005	Unrecorded magnetic tapes, discs, and other media:				
	Exports . . . . .	2,603	2,042	-561	-21.6
	Imports . . . . .	2,090	2,103	13	0.6
	Trade balance: . . . . .	513	-62	-574	( <sup>3</sup> )
ST006	Records, tapes, compact discs, computer software, and other recorded media:				
	Exports . . . . .	3,785	3,619	-166	-4.4
	Imports . . . . .	981	1,135	153	15.6
	Trade balance: . . . . .	2,804	2,485	-319	-11.4
ST007	Radio transmission and reception apparatus, and combinations thereof:				
	Exports . . . . .	9,217	8,341	-876	-9.5
	Imports . . . . .	9,060	10,249	1,188	13.1
	Trade balance: . . . . .	156	-1,908	-2,064	( <sup>3</sup> )
ST008	Radio navigational aid, radar, and remote control apparatus:				
	Exports . . . . .	1,570	1,607	38	2.4
	Imports . . . . .	691	724	33	4.7
	Trade balance: . . . . .	879	884	5	0.5
ST009	Television receivers, video monitors, and combinations including television receivers:				
	Exports . . . . .	1,542	2,268	726	47.1
	Imports . . . . .	4,403	5,319	916	20.8
	Trade balance: . . . . .	-2,861	-3,051	-190	-6.6
ST010	Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus:				
	Exports . . . . .	969	752	-217	-22.4
	Imports . . . . .	4,039	5,110	1,071	26.5
	Trade balance: . . . . .	-3,070	-4,358	-1,288	-41.9
ST011	Electric sound and visual signaling apparatus:				
	Exports . . . . .	903	950	47	5.2

See footnote(s) at end of table.

Table 13-3--Continued

Electronic products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
	Imports .....	2,053	2,100	47	2.3
	Trade balance: .....	-1,150	-1,150	( <sup>4</sup> )	( <sup>5</sup> )
ST012	Electrical capacitors and resistors:				
	Exports .....	2,194	2,021	-173	-7.9
	Imports .....	1,950	2,001	51	2.6
	Trade balance: .....	244	20	-224	-91.8
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits:				
	Exports .....	9,268	9,528	260	2.8
	Imports .....	9,965	10,120	155	1.6
	Trade balance: .....	-697	-592	105	15.1
ST014	Television picture tubes and other cathode-ray tubes:				
	Exports .....	2,085	2,314	229	11.0
	Imports .....	876	798	-78	-8.9
	Trade balance: .....	1,209	1,516	308	25.5
ST015	Special-purpose tubes:				
	Exports .....	174	157	-16	-9.5
	Imports .....	247	200	-47	-18.9
	Trade balance: .....	-74	-43	30	41.1
ST016	Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices:				
	Exports .....	29,037	29,222	185	0.6
	Imports .....	36,878	33,696	-3,182	-8.6
	Trade balance: .....	-7,841	-4,474	3,367	42.9
ST017	Electrical and electronic articles, apparatus, and parts not elsewhere provided for:				
	Exports .....	3,064	2,554	-510	-16.6
	Imports .....	1,597	1,779	181	11.3
	Trade balance: .....	1,467	776	-691	-47.1
ST018	Automatic data processing machines:				
	Exports .....	41,792	38,707	-3,086	-7.4
	Imports .....	69,953	72,157	2,204	3.2
	Trade balance: .....	-28,161	-33,451	-5,290	-18.8
ST019	Photographic supplies:				
	Exports .....	2,302	1,987	-315	-13.7
	Imports .....	1,766	1,709	-57	-3.2
	Trade balance .....	536	278	-258	-48.1
ST020	Exposed photographic plates, film, and paper:				
	Exports .....	99	120	21	21.1
	Imports .....	147	152	4	3.1
	Trade balance: .....	-48	-31	16	34.4
ST021	Optical fibers, optical fiber bundles and cables:				
	Exports .....	806	807	1	0.1
	Imports .....	272	398	126	46.5
	Trade balance: .....	534	409	-126	-23.5
ST022	Optical goods, including ophthalmic goods:				
	Exports .....	2,380	2,438	58	2.4
	Imports .....	3,397	3,683	286	8.4
	Trade balance: .....	-1,017	-1,244	-228	-22.4
ST023	Photographic cameras and equipment:				
	Exports .....	999	906	-93	-9.3
	Imports .....	2,334	2,549	215	9.2

See footnote(s) at end of table.

Table 13-3--Continued

Electronic products sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
ST024	Trade balance: . . . . .	-1,335	-1,643	-308	-23.1
	Medical goods:				
	Exports . . . . .	11,226	11,582	356	3.2
	Imports . . . . .	5,895	6,934	1,039	17.6
	Trade balance . . . . .	5,331	4,648	-684	-12.8
ST025	Surveying and navigational instruments:				
	Exports . . . . .	1,809	1,851	42	2.3
	Imports . . . . .	757	826	69	9.2
	Trade balance: . . . . .	1,052	1,025	-28	-2.6
ST026	Watches:				
	Exports . . . . .	190	188	-2	-1.2
	Imports . . . . .	2,311	2,548	237	10.3
	Trade balance: . . . . .	-2,120	-2,360	-240	-11.3
ST027	Clocks and timing devices:				
	Exports . . . . .	119	123	4	3.6
	Imports . . . . .	447	552	105	23.4
	Trade balance: . . . . .	-328	-429	-100	-30.5
ST028	Balances of a sensitivity of 5 cgs or better:				
	Exports . . . . .	23	16	-7	-29.4
	Imports . . . . .	41	38	-2	-6.1
	Trade balance . . . . .	-18	-22	-4	-22.6
ST029	Drawing and mathematical calculating and measuring instruments:				
	Exports . . . . .	400	425	25	6.2
	Imports . . . . .	428	427	-1	-0.3
	Trade balance: . . . . .	-28	-2	26	92.4
ST030	Measuring, testing, controlling, and analyzing instruments:				
	Exports . . . . .	13,435	12,935	-500	-3.7
	Imports . . . . .	7,719	8,323	604	7.8
	Trade balance: . . . . .	5,716	4,611	-1,104	-19.3

<sup>1</sup>Import values 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>Not meaningful for purposes of comparison.

<sup>4</sup>Less than \$500,000.

<sup>5</sup>Less than 0.05 percent.

Note.--Calculations based on unrounded data.

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

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# CHAPTER 14

## Miscellaneous Manufactures

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Led by continued expansion in U.S. imports of furniture, Christmas decorations, paintings, toys, and jewelry, the U.S. trade deficit in the miscellaneous manufactures sector<sup>1</sup> expanded by \$5.9 billion (18 percent) during the years 1997-98, to \$39.2 billion (table 14-1). U.S. imports of miscellaneous manufactures, grew by \$5.7 billion (12 percent) during 1997-98 to \$54.6 billion, while exports fell by \$206 million (1 percent) to \$15.5 billion.

Production processes for goods classified in the miscellaneous manufactures sector tend to be labor-intensive, and production technology is easily transferred to developing or newly industrialized countries. In several sector categories, the imported products are produced in Asia under license from the U.S. companies.<sup>2</sup> Imports in the miscellaneous manufactures sector tend to be concentrated in products (table 14-2) that require sewing (luggage, automobile seat covers, and baseballs), semiskilled assembly (wood furniture and bicycles), and low-technology injection molding (toys and dolls), or products for which there is no competing U.S. industry (home video games, umbrella frames, certain Christmas decorations, and works of art). The remaining less import-sensitive U.S. industry is characterized by products with high transport costs (upholstered furniture and fairground amusement rides), products with low raw material costs in the United States relative to those of foreign producers (baseball bats and silverware), and products for which U.S. manufacturers have superior design and production technology or copyright protection (water skis and board games).

Furniture and selected furnishings, and toys and models, accounted for 52 percent (\$3.0 billion) of the increase in sector imports (table 14-2) in 1998 and 44 percent (\$2.6 billion) of the expansion in the U.S. trade deficit in sector products. Consumer confidence in the U.S. economy and relatively low interest rates perpetuated the growth in housing construction in the United States in 1998, boosting U.S. sales of both domestically produced and imported furniture and lamps. Imports of lamps and lighting fittings, chiefly from China, grew by \$438 million (16 percent) in 1998 to \$3.2 billion (table 14.2) Imports of precious jewelry and related articles (precious jewelry), and works of art and antiques, also rose sharply in 1998, reflecting a strong U.S. economy. Imports of precious jewelry, chiefly from Italy, India, and Thailand, climbed by \$571 million (14 percent) to \$4.6 billion. U.S. imports of works of art and antiques increased by \$395 million (11 percent) during 1997-98 to \$4.0 billion, while exports rose by \$35 million (3 percent), resulting in a \$360 million (15 percent) growth in the trade deficit in this category. A large portion of U.S. imports of works of art and antiques consists of items purchased at

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<sup>1</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, works of art, and antiques.

<sup>2</sup> Asian Pacific Rim countries accounted for 58 percent of sector imports in 1998.

Table 14-1

Miscellaneous manufactures: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1997 and 1998<sup>1</sup>

Item	1997	1998	Change, 1998 from	
			Absolute	Percentage
<i>Million dollars</i>				
<b>U.S. exports of domestic merchandise:</b>				
China	179	106	-73	-40.8
Canada	3,433	3,688	255	7.4
Mexico	1,650	1,852	202	12.2
Japan	1,826	1,743	-82	-4.5
Italy	227	182	-46	-20.0
Taiwan	402	335	-67	-16.7
United Kingdom	1,107	1,219	111	10.1
France	356	318	-38	-10.7
Germany	586	558	-28	-4.9
Hong Kong	361	292	-69	-19.1
All Other	5,531	5,160	-371	-6.7
Total	15,658	15,452	-206	-1.3
<b>Selected country groups:</b>				
EU-15	3,168	3,262	94	3.0
OPEC	718	605	-113	-15.8
Latin America	2,953	3,195	242	8.2
CBERA	413	522	109	26.3
Asian Pacific Rim	3,938	3,380	-558	-14.2
ASEAN	473	287	-186	-39.3
Central and Eastern Europe	88	58	-30	-33.7
<b>U.S. imports for consumption:</b>				
China	16,694	19,209	2,515	15.1
Canada	4,555	5,271	717	15.7
Mexico	3,628	4,260	632	17.4
Japan	3,938	4,031	93	2.4
Italy	3,029	3,379	350	11.6
Taiwan	3,178	3,110	-69	-2.2
United Kingdom	1,455	1,600	145	10.0
France	1,894	2,121	227	12.0
Germany	912	1,011	99	10.9
Hong Kong	904	980	76	8.4
All Other	8,768	9,649	880	10.0
Total	48,954	54,620	5,666	11.6
<b>Selected country groups:</b>				
EU-15	8,569	9,555	986	11.5
OPEC	651	804	153	23.5
Latin America	4,663	5,464	801	17.2
CBERA	411	440	29	7.1
Asian Pacific Rim	28,882	31,702	2,820	9.8
ASEAN	3,163	3,367	205	6.5
Central and Eastern Europe	263	298	35	13.5
<b>U.S. merchandise trade balance:</b>				
China	-16,515	-19,103	-2,588	-15.7
Canada	-1,122	-1,583	-461	-41.1
Mexico	-1,978	-2,408	-430	-21.7
Japan	-2,112	-2,288	-176	-8.3
Italy	-2,801	-3,197	-396	-14.1
Taiwan	-2,777	-2,775	1	0.1
United Kingdom	-347	-381	-34	-9.7
France	-1,538	-1,803	-266	-17.3
Germany	-325	-453	-128	-39.3
Hong Kong	-543	-688	-145	-26.7
All Other	-3,237	-4,489	-1,251	-38.7
Total	-33,296	-39,168	-5,872	-17.6
<b>Selected country groups:</b>				
EU-15	-5,401	-6,293	-891	-16.5
OPEC	67	-200	-266	( <sup>2</sup> )
Latin America	-1,710	-2,270	-560	-32.7
CBERA	2	82	80	3,247.6
Asian Pacific Rim	-24,945	-28,322	-3,378	-13.5
ASEAN	-2,690	-3,081	-391	-14.5
Central and Eastern Europe	-175	-240	-65	-37.2

<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.--Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in these products in 1998.

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

**Table 14-2**  
**Leading increases in U.S. imports of miscellaneous manufactures, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	<i>Million dollars</i>			
Furniture and selected furnishings (MM054) . . . . .	11,224	13,428	2,204	20
Toys and models (MM060) . . . . .	6,728	7,494	766	11
Precious jewelry and related articles (MM051) . . .	4,021	4,592	571	14
Lamps and lighting fittings (MM056) . . . . .	2,729	3,167	438	16
Works of art and antiques (HTS 97) . . . . .	3,568	3,963	395	11
Games and fairground amusements (MM061) . . .	4,033	4,338	305	8
All other . . . . .	16,651	17,638	987	6
<b>Total</b> . . . . .	<b>48,954</b>	<b>54,620</b>	<b>5,666</b>	<b>12</b>

Note.--Calculations based on unrounded data.

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

overseas auctions. In addition, works of art on tour, such as the Van Gogh exhibit, are considered to be an import while on tour and an export when returned to their home museum or other residence.

Weak markets in Asia because of the regional financial crisis were responsible for the overall decrease in sector exports, as exports to the Asia Pacific Rim dropped by \$558 million (14 percent) to \$3.4 billion. Leading the decline were reduced exports of golf equipment to Japan and bowling equipment to Korea. Overall, exports of sporting goods fell by \$245 million (13 percent) to \$1.7 billion (table 14-3). Trade statistics for all commodity/industry groups in the miscellaneous manufactures sector are presented in table 14-5 at the end of this chapter.

**Table 14-3**  
**Leading changes in U.S. exports of miscellaneous manufactures, 1997-98**

Sector/commodity	1997	1998	Change, 1998 from 1997	
			Absolute	Percentage
	<i>Million dollars</i>			
<b>Increases:</b>				
Furniture and selected furnishings (MM054) . . . . .	4,158	4,616	458	11
<b>Decreases:</b>				
Sporting goods (MM062) . . . . .	1,934	1,688	-245	-13
Games and fairground amusements (MM061) . . .	1,144	988	-155	-14
<b>All other</b> . . . . .	<b>8,422</b>	<b>8,160</b>	<b>-262</b>	<b>-3</b>
<b>Total</b> . . . . .	<b>15,658</b>	<b>15,452</b>	<b>-206</b>	<b>-1</b>

Note.--Calculations based on unrounded data.

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

## U.S. BILATERAL TRADE

Five factors characterized bilateral trade in the miscellaneous manufactures sector: the dominance of imports of labor-intensive articles from China, Taiwan, and Korea; the consistently high level of imports of video games from Japan; rationalized production and intercompany trade between the United States and Canada; the presence of two-way trade in high-end manufactured goods and trade in works of art between the United States and the EU; and the increased use of assembly plants in Mexico by foreign manufacturers. Table 14-4 summarizes the leading products traded between the United States and its major partners. Of these five factors, the most significant development in 1998 was a \$2.5 billion (15 percent) increase in U.S. imports from China to \$19.2 billion (table 14-1). U.S. imports of toys and models from China rose by \$749 million (14 percent) during 1997-98 to \$6.1 billion, while imports from China in furniture and selected furnishings rose by \$639 million (41 percent) to \$2.2 billion. Miscellaneous articles, principally Christmas decorations, accounted for the next largest increase in U.S. imports from China in 1998, with imports rising by \$339 million (20 percent) to \$2.1 billion. U.S. exports to China in the miscellaneous manufactures sector fell by \$73 million (41 percent) during 1997-98 to \$106 million.

U.S. imports from Canada of sector products rose by \$717 million (16 percent) during 1997-98, to \$5.3 billion. Furniture and selected furnishing accounted for the bulk of the increase in U.S. imports, rising by \$568 million (16 percent) during 1997-98 to \$4.0 billion. Furniture (chiefly seats for motor vehicles) also accounted for most of the increase in U.S. imports from Mexico. U.S. imports of furniture and selected furnishings from Mexico rose by \$404 million (21 percent) during 1997-98 to \$2.3 billion.

## COMMODITY ANALYSIS

### Furniture and Selected Furnishings

The U.S. trade deficit in furniture and selected furnishings (furniture) expanded by \$1.7 billion (25 percent) during the years 1997-98 to \$8.8 billion as growth in U.S. imports outpaced that for exports, which started from a significantly smaller base. U.S. exports of furniture rose by \$458 million (11 percent) during 1997-98 to \$4.6 billion. The bulk of the increase in U.S. exports was accounted for by motor vehicle seats and parts which rose by \$296 million (20 percent) during 1997-98 to \$1.7 billion.<sup>3</sup> U.S. exports of motor vehicle seats were principally to Canada and Mexico. The U.S.-Canadian auto industry is fully integrated, as U.S. automakers consider the United States and Canada to be a single unit for production planning purposes. Trade in furniture accounted for both the largest absolute deficit and the largest decline in trade position among industry/commodity groups in the miscellaneous manufacturers sector in 1998.

### U.S. imports

U.S. imports of furniture rose by \$2.2 billion (20 percent) during 1997-98 to \$13.4 billion. Among various segments of the furniture industry, household furniture, which rose by \$1.0 billion (20 percent) during 1997-98 to \$6.5 billion, accounted for the largest increase in U.S. imports of furniture in this year. China, Canada, and Italy were the principal sources of U.S. imports of household furniture

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<sup>3</sup> For the purposes of tariff and trade classification, furniture used in motor vehicles--principally seating for automobiles and trucks, but also seating and other furniture for cruise ships, aircraft, and the like--are classified along with traditional household and office furniture. See World Customs Organization, *Explanatory Notes of the Harmonized Commodity Description and Coding System*, Section XX, Chapter 94--Miscellaneous Manufactured Articles, Furniture, Volume V, p. 1697.

**Table 14-4**  
**Miscellaneous manufacturers: Leading U.S. import and export products, by major partner, 1998**

Partner	Leading imports	Leading exports
China . . . . .	Stuffed animals, model toys, dolls, and robots Luggage, handbags, and backpacks Lamps and lighting fittings Christmas ornaments and other festive articles Furniture Video and game machines Sporting goods	Bowling alley equipment and other sporting goods equipment <sup>1</sup> Furniture <sup>1</sup> Prefabricated buildings of metal <sup>1</sup>
Canada . . . . .	Furniture Motor vehicle seats Sporting goods Lamps and lighting fittings Prefabricated buildings	Furniture Sporting goods Video and arcade games Construction and other toys Chandeliers and other lamps
Mexico . . . . .	Motor vehicle seats Furniture Lamps and lighting fittings Golf club heads Toys and models	Automobile seats and parts Sporting goods Writing instruments Lamps Toys and games
Japan . . . . .	Game station and other video games Ball point pens and other writing instruments Typewriter ribbons Electric keyboard pianos and grand pianos Parts of motor vehicle seats	Golf clubs and other sporting goods Motor vehicle seat covers of leather Guided missiles and other military weapons Furniture other than seats Prefabricated buildings
Italy . . . . .	Precious metal jewelry Upholstered leather sofas and other furniture Luggage, handbags, and backpacks Paintings, drawings, and antiques Sporting goods	( <sup>2</sup> )
Taiwan . . . . .	Furniture Sporting goods Bicycles Lamps and lighting fittings Luggage, handbags, and backpacks	Parts for guided missiles and bombs Sporting goods

<sup>1</sup>Emerging market for these products.

<sup>2</sup>Not a significant export market.

Note.--Categories are 4-digit HTS headings/subheadings (or groups of 4-digit HTS headings/subheadings) and corresponding export categories. The countries shown are those with the largest total U.S. trade (U.S. imports plus exports) in 1998. Products are ranked in decreasing order based on 1998 trade.

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

during 1997-98, with products from China rising by \$437 million (42 percent) to \$1.5 billion. Taiwan, Malaysia, Indonesia, the Philippines, and Thailand were additional East Asian sources of U.S. imports of household furniture, which combined, rose by \$115 million (8 percent) during 1997-98 to \$1.6 billion. A significant portion of the increase in U.S. imports of household furniture from China and other East Asian countries is accounted for by bedroom furniture. Producers in East Asia either ship fully assembled bedroom suites to the United States or establish U.S. assembly operations in order to reduce shipping costs.<sup>4</sup> Access to an abundant, low-cost labor force allows East Asian producers to manufacture furniture components at a lower cost than U.S.-based manufacturers. In recent years, East Asian producers of bedroom furniture have gained an increasing share of the U.S. market by significantly improving their woodworking and finishing techniques.<sup>5</sup> In response to China's and other East Asian producers' entrance into the U.S. bedroom furniture market, U.S. manufacturers are beginning to use components made in Asia in their assembly of furniture as well as import finished articles of bedroom furniture to supplement their U.S.-made lines.<sup>6</sup>

Canadian producers of household furniture are particularly efficient in the manufacture of a modified European contemporary furniture that they offer to the U.S. market at a lower price than EU competitors because of lower transportation costs. U.S. imports of household furniture from Canada rose by \$213 million (20 percent) during 1997-98 to \$1.3 billion.

U.S. imports of household furniture from Italy rose by \$105 million (17 percent) during 1997-98 to \$736 million, based on the competitive strength of its high-quality leather upholstered furniture and stylish wood furniture. The Italian furniture industry is structured to encourage communication between producers in order to effectively respond to changes in both domestic and international market trends. Representatives of Italian furniture production cooperatives meet regularly to discuss market trends, furniture designs, use of materials, and technological innovations. Many moderate-sized Italian furniture producers (50-250 employees) do not manufacture any of the components that make up finished furniture, but concentrate instead on the assembly and finishing of furniture.<sup>7</sup> This structure allows the Italian industry to introduce new styles and respond to changes in fashion quickly, offering customers new products with short lead times.

U.S. imports of household furniture from Mexico are principally of rustic style, with slightly uneven surfaces and a transparent finish that shows the wood grain. By focusing on this market niche, Mexican exporters avoid the highly finished and polished segment of the U.S. wood furniture market where U.S. producers dominate. Rustic furniture is usually large and heavy, with high transportation costs, giving Mexican exporters an advantage over potential Asian competitors. Mexican rustic furniture also tends to consist of low-to-mid priced, labor-intensive items such as cabinets with drawers, dining room tables with matching chairs, and storage chests. U.S. and Canadian furniture manufacturers have difficulty competing in this market because of high labor costs. U.S. imports of household furniture from Mexico rose by \$86 million (18 percent) during 1997-98 to \$572 million.

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<sup>4</sup> Kiani of Indonesia and Hyundai of Korea have furniture assembly operations in the United States. Universal, originally a Singapore based subsidiary of Hong Kong Teak Works and currently a division of Lifestyle Furnishings, has three U.S. production facilities.

<sup>5</sup> Brian Carroll, "Import Bedroom Booms, Asian Changing Value Equation," *Furniture Today*, Feb. 22, 1999, p. 20.

<sup>6</sup> These U.S. producers include Ashley Furniture Industries Inc., Bassett Furniture Industries Inc., Furniture Brands International, Bernhardt, and Century Furniture.

<sup>7</sup> Italian furniture producing firms with over 250 employees that compete successfully in world markets (and market niches) include Natuzzi SpA (upholstered leather seating including chairs and sofas), Kartell (modern-style wood furniture), and Calligaris (high-production volume chairs such as folding chairs and stacking chairs).

Office furniture accounted for the next-largest increase, as U.S. imports rose by \$296 million (24 percent) during 1997-98 to \$1.5 billion. Canada was by far the leading source of U.S. office furniture imports, which rose by \$200 million (23 percent) during this period to \$1.0 billion. The principal office furniture manufacturers in Canada include the privately owned Canadian companies The Global Group and Techneon; and U.S. subsidiaries Steelcase Canada and Knoll N.S. Corp.

U.S. imports of motor vehicle seats and parts rose by \$266 million (12 percent) during 1997-98 to \$2.5 billion. Mexico accounted for virtually all of this increase as its exports to the United States rose by \$268 million (23 percent) during 1997-98 to \$1.4 billion. Suppliers of seats to the North American vehicle industry have established assembly operations in Mexico because of the relatively high amount of labor required to sew seat covers.

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### **Toys and Models**

Driven by increased U.S. imports from China, the 1998 U.S. trade deficit in toys and models (toys) continued a long trend of rising deficits, up by \$854 million (14 percent) to \$7.0 billion. The growing trade deficit was attributed both to a significant absolute increase in U.S. imports, up by \$766 million (11 percent) to \$7.5 billion and to a moderate decrease in U.S. exports, down by \$88 million (14 percent) to \$538 million. Economic and demographic conditions were favorable for an expansion in the U.S. toy market in 1998, another year of strong U.S. economic growth accompanied by a similar increase in consumer expenditures. Nevertheless, retailers realized a flat market for toys in 1998 with a much weaker-than-expected Christmas selling season.<sup>8</sup> Since the leading U.S. toy companies rely heavily on foreign production (imports supplied approximately four-fifths of the market in 1998), the rise in imports and expansion of the trade deficit may be indicative of a build up in inventories because of the soft market. U.S. toy companies place orders to their subsidiaries and contract manufacturers in Asia 4 to 6 months prior to Christmas, making accurate prediction regarding market size and tastes difficult.

U.S. exports decreased because economic growth slowed (Canada, Mexico, United Kingdom, and Brazil) or decreased (Japan, Hong Kong, and Korea) in major markets<sup>9</sup> for toys, causing fewer purchases of these discretionary articles. A significant portion of U.S. exports are copyrighted toys based on hit children's movies of the season. More hit movies were released in 1997 than in 1998, contributing to the decline in exports in 1998.

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<sup>8</sup> Industry representatives reported that children are switching from traditional toys to such computer-related activities as the Internet, interactive software, and electronic games, contributing to flat demand for toys in 1998. Toy companies have responded by developing software related to some traditional toys, hoping for a synergy to increase demand in both. Dana Canedy, "Toy Shipments Unexpectedly Flat for Year," *New York Times*, Feb. 3, 1999, p. C2; and Dana Canedy, "Beyond Barbie's Midlife Crisis," *New York Times*, Apr. 6, 1999, p. C1. Children may also have less time for playing with traditional toys because they are reportedly spending more time in such organized activities as soccer and in such institutional settings as after-school day care, in part because of working parents. U.S. Department of Commerce (USDOC), International Trade Administration (ITA), "Dolls, Toys, Games, and Children's Vehicles," *U.S. Industry and Trade Outlook '99* (New York: McGraw Hill Companies, 1999), p. 39-10.

<sup>9</sup> International Monetary Fund (IMF), *World Economic Outlook* (Washington, DC: IMF, Apr. 1999), pp. 10 and 17.

China accounted for 87 percent of the overall increase in the toy trade deficit in 1998. The U.S. trade deficit with China in toys rose by \$747 million (14 percent) to \$6.1 billion. China accounted for 98 percent of the overall U.S. import increase; imports from China grew by \$749 million (14 percent) to \$6.1 billion. China supplied 82 percent of sector imports in 1998. Mexico, the next-largest source, supplied only 4 percent. Chinese producers/assemblers, who specialize in smaller, less bulky toys, provide low-cost labor, excellent facilities and equipment, and high-quality products while U.S.-based companies supply them with designs, knowledge of the U.S. market, and marketing and sales support. U.S.-based firms retain a small amount of U.S. production as well as assembly plants in Mexico focused on making larger toys, high-end specialty toys, and those toys in greatest demand in order to profit from lower transportation costs and to respond quickly to the latest trends in sales.<sup>10</sup> The categories of toys that experienced the greatest growth in U.S. imports from China in 1998 were (1) stuffed toys, representing animals or nonhuman creatures, up by \$370 million (23 percent) to \$2.0 billion; (2) other toys and models, up by \$161 million (9 percent) to \$2.0 billion; (3) toys (except stuffed) representing animals and nonhuman creatures, up by \$144 million (23 percent) to \$766 million; and festive (except Christmas), carnival, or other entertainment articles, up by \$72 million (44 percent) to \$233 million.

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<sup>10</sup> USDOC, ITA, "Dolls, Toys, Games, and Children's Vehicles," pp. 39-9 to 39-10.

**Table 14-5**  
**Miscellaneous manufactures sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>**

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
<i>Million Dollars</i>					
MM046	Luggage, handbags, and flat goods:				
	Exports .....	331	304	-27	-8.1
	Imports .....	3,779	3,912	133	3.5
	Trade balance: .....	-3,448	-3,608	-159	-4.6
MM047	Certain other leather goods:				
	Exports .....	103	106	3	2.9
	Imports .....	198	195	-3	-1.3
	Trade balance: .....	-95	-89	6	6.0
MM048	Musical instruments and accessories:				
	Exports .....	425	392	-33	-7.8
	Imports .....	1,063	1,188	125	11.7
	Trade balance: .....	-638	-796	-158	-24.7
MM049	Umbrellas, whips, riding crops, and canes:				
	Exports .....	11	11	-1	-5.5
	Imports .....	233	250	18	7.6
	Trade balance: .....	-221	-240	-18	-8.2
MM050	Silverware and certain other articles of precious metal:				
	Exports .....	109	114	5	5.0
	Imports .....	78	158	80	102.9
	Trade balance: .....	31	-44	-75	( <sup>3</sup> )
MM051	Precious jewelry and related articles:				
	Exports .....	486	518	33	6.7
	Imports .....	4,021	4,592	571	14.2
	Trade balance: .....	-3,536	-4,073	-538	-15.2
MM052	Costume jewelry and related articles:				
	Exports .....	136	128	-8	-5.6
	Imports .....	464	493	29	6.3
	Trade balance .....	-328	-364	-37	-11.2
MM053	Bicycles and certain parts:				
	Exports .....	310	292	-18	-5.7
	Imports .....	979	1,115	136	13.9
	Trade balance .....	-669	-823	-154	-23.0
MM054	Furniture and selected furnishings:				
	Exports .....	4,158	4,616	458	11.0
	Imports .....	11,224	13,428	2,204	19.6
	Trade balance: .....	-7,066	-8,812	-1,746	-24.7
MM055	Writing instruments and related articles:				
	Exports .....	400	373	-27	-6.8
	Imports .....	800	842	41	5.2
	Trade balance: .....	-400	-468	-68	-17.1
MM056	Lamps and lighting fittings:				
	Exports .....	655	619	-36	-5.5
	Imports .....	2,729	3,167	438	16.0
	Trade balance .....	-2,074	-2,548	-474	-22.8
MM057	Prefabricated buildings:				
	Exports .....	463	385	-78	-16.8
	Imports .....	129	160	32	24.5
	Trade balance: .....	334	224	-109	-32.8
MM058	Children's vehicles:				

See footnote(s) at end of table.

Table 14-5--Continued

Miscellaneous manufactures sector: U.S. trade for selected industry/commodity groups, 1997 and 1998<sup>1</sup>

1997 USITC code <sup>2</sup>	Industry/commodity group	1997	1998	Change, 1998 from	
				Absolute	Percentage
		<i>Million Dollars</i>			
	Exports .....	46	47	1	2.0
	Imports .....	300	315	15	5.1
	Trade balance: .....	-253	-268	-14	-5.7
MM059	Dolls:				
	Exports .....	30	28	-2	-6.2
	Imports .....	1,516	1,484	-32	-2.1
	Trade balance: .....	-1,486	-1,455	30	2.0
MM060	Toys and models:				
	Exports .....	627	538	-88	-14.1
	Imports .....	6,728	7,494	766	11.4
	Trade balance: .....	-6,102	-6,956	-854	-14.0
MM061	Games and fairground amusements:				
	Exports .....	1,144	988	-155	-13.6
	Imports .....	4,033	4,338	305	7.6
	Trade balance: .....	-2,889	-3,350	-460	-15.9
MM062	Sporting goods:				
	Exports .....	1,934	1,688	-245	-12.7
	Imports .....	3,070	3,041	-29	-1.0
	Trade balance .....	-1,137	-1,353	-216	-19.0
MM063	Smokers' articles:				
	Exports .....	88	71	-17	-19.0
	Imports .....	139	145	6	4.6
	Trade balance: .....	-51	-74	-23	-45.5
MM064	Brooms, brushes, and hair grooming articles:				
	Exports .....	176	184	8	4.3
	Imports .....	655	698	43	6.5
	Trade balance: .....	-479	-514	-35	-7.3
MM065	Miscellaneous articles:				
	Exports .....	1,513	1,564	51	3.4
	Imports .....	6,079	6,853	774	12.7
	Trade balance .....	-4,566	-5,289	-723	-15.8
MM066	Apparel fasteners:				
	Exports .....	119	136	17	14.6
	Imports .....	126	103	-23	-18.3
	Trade balance: .....	-7	33	40	( <sup>3</sup> )
MM067	Arms and ammunition:				
	Exports .....	2,395	2,348	-48	-2.0
	Imports .....	611	649	38	6.3
	Trade balance .....	1,784	1,698	-86	-4.8

<sup>1</sup>Import values 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>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

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**APPENDIX A**  
**Industry/Commodity Groups**  
**in this Report**



**Agricultural products sector**<sup>1</sup>(HTS chapters<sup>2</sup> 1-24, 35, 41, 43, 51, 52)

AG001 Certain miscellaneous animals and meats  
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 Canned fish and other fish  
AG009 Shellfish  
AG010 Dairy produce  
AG011 Eggs  
AG012 Sugar and other sweeteners  
AG013 Animal feeds  
AG014 Live plants  
AG015 Seeds  
AG016 Cut flowers  
AG017 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 confectionary  
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  
AG062 Ethyl alcohol for nonbeverage purposes  
AG063 Wool and other animal hair  
AG064 Cotton, not carded or combed

**Forest products sector**

(HTS chapters 14, 44-49)

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

**Chemicals and related products sector**

(HTS chapters 13-15, 22, 25, 27-40)

CH007 Major primary olefins  
CH008 Other olefins  
CH009 Primary aromatics  
CH010 Benzenoid commodity chemicals  
CH011 Benzenoid specialty chemicals  
CH012 Miscellaneous organic chemicals  
CH013 Miscellaneous inorganic chemicals  
CH014 Inorganic acids  
CH015 Chlor-alkali chemicals  
CH016 Industrial gases  
CH017 Fertilizers  
CH018 Paints, inks, and related items, and certain components thereof  
CH019 Synthetic organic pigments  
CH020 Synthetic dyes and azoic couplers  
CH021 Synthetic tanning agents

**Chemicals and related products**

**sector--Continued**

- CH022 Natural tanning and dyeing materials
- CH023 Photographic chemicals and preparations
- CH024 Pesticide products and formulations
- CH025 Adhesives and glues
- CH026 Medicinal chemicals
- CH027 Essential oils and other flavoring materials
- CH028 Perfumes, cosmetics, and toiletries
- CH029 Soaps, detergents, and surface-active agents
- CH030 Miscellaneous chemicals and specialties
- CH031 Explosives, propellant powders, and related items
- CH032 Polyethylene resins in primary forms
- CH033 Polypropylene resins in primary forms
- CH034 Polyvinyl chloride resins in primary forms
- CH035 Styrene polymers in primary forms
- CH036 Saturated polyester resins
- CH037 Other plastics in primary forms
- CH038 Styrene-butadiene rubber in primary forms
- CH039 Other synthetic rubber
- CH040 Pneumatic tires and tubes (new)
- CH041 Other tires
- CH042 Plastic or rubber semifabricated forms
- CH043 Plastic containers and closures
- CH044 Hose, belting, and plastic pipe
- CH045 Miscellaneous rubber or plastic products
- CH046 Gelatin
- CH047 Natural rubber

**Energy-related products sector**

(HTS chapters 27-29, 34, 36, 38)

- CH001 Electrical energy
- CH002 Nuclear material
- CH003 Coal, coke, and related chemical products
- CH004 Crude petroleum
- CH005 Petroleum products
- CH006 Natural gas and components

**Textiles and apparel, and footwear sectors**

(HTS chapters 39, 40, 42, 43, 50-65)

- CH048 Manmade fibers and filament yarns
- CH049 Spun yarns and miscellaneous yarns
- CH050 Broadwoven fabrics
- CH051 Knit fabrics
- CH052 Miscellaneous fabrics
- CH053 Coated, covered, impregnated, or laminated textile fabrics
- CH054 Cordage, nets, and netting
- CH055 Certain textile articles and fabrics suitable for industrial use
- CH056 Miscellaneous textiles and articles
- CH057 Sacks and bags of textile materials
- CH058 Carpets and rugs
- CH059 Home furnishings
- CH060 Men's and boys' suits and sports coats
- CH061 Men's and boys' coats and jackets
- CH062 Men's and boys' trousers
- CH063 Women's and girls' trousers
- CH064 Shirts and blouses
- CH065 Sweaters
- CH066 Women's and girls' suits, skirts, and coats
- CH067 Women's and girls' dresses
- CH068 Robes, nightwear, and underwear
- CH069 Hosiery
- CH070 Body-supporting garments
- CH071 Neckwear, handkerchiefs, and scarves
- CH072 Gloves, including gloves for sports
- CH073 Headwear
- CH074 Leather apparel and accessories
- CH075 Fur apparel and other fur articles
- CH076 Rubber, plastic, and coated-fabric apparel
- CH077 Nonwoven and related products
- CH078 Other wearing apparel
- CH079 Footwear and footwear parts

**Minerals and metals sector**

(HTS chapters 25, 26, 68-76, 78-84)

- MM001 Clays and nonmetallic minerals, not elsewhere specified or included
- MM002 Certain miscellaneous mineral substances
- MM003 Iron ores and concentrates

**Minerals and metals sector--Continued**

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 Fiberglass 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 and miscellaneous products of base metal  
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  
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 handtools

MM043 Cutlery other than tableware, certain sewing implements and related products  
MM044 Table flatware and related products  
MM045 Certain builders' hardware

### **Machinery sector**

(TS chapters 84, 85, 87)

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  
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 manufacturing equipment and robotics  
MT024 Taps, cocks, valves, and similar devices  
MT026 Gear boxes and other speed changers; torque converters; ball screws; flywheels and pulleys; clutches and shaft couplings; universal joints; and parts thereof

### **Machinery sector--Continued**

- MT027 Boilers, turbines, and related machinery
- MT028 Electric motors, generators, and related machinery
- MT029 Electrical transformers, static converters, and inductors
- MT031 Portable electric handtools
- MT032 Nonelectrically powered handtools and parts thereof
- MT034 Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lamps
- MT035 Electric and glass welding and soldering equipment
- MT036 Insulated electrical wire and cable and conduit; glass and ceramic insulators
- MT045 Miscellaneous machinery
- MT046 Molds and molding machinery

**Transportation equipment sector**  
(HTS chapters 84-89)

- MT001 Aircraft engines and gas turbines
- MT002 Internal combustion piston engines, other than for aircraft
- MT011 Forklift trucks and similar industrial vehicles
- MT012 Construction and mining equipment
- MT025 Ball and roller bearings
- MT030 Primary cells and batteries and electric storage batteries
- MT033 Ignition, starting, lighting, and other electrical equipment
- MT037 Rail locomotive and rolling stock
- MT038 Automobiles, trucks, buses, and bodies and chassis of the foregoing
- MT039 Certain motor-vehicle parts
- MT040 Motorcycles, mopeds, and parts
- MT041 Miscellaneous vehicles and transportation-related equipment
- MT042 Aircraft, spacecraft, and related equipment
- MT043 Ships, tugs, pleasure boats, and similar vessels
- MT044 Motors and engines, except internal combustion, aircraft or electric

**Electronic products sector**  
(HTS chapters 37, 84, 85, 88, 90, 91)

- 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 Records, tapes, compact discs, computer software, and other recorded media
- ST007 Radio transmission and reception apparatus, and combinations thereof
- ST008 Radio navigation aid, radar, and remote control apparatus
- ST009 Television receivers, 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
- Electronic products sector--Continued**
- ST025 Surveying and navigational instruments

- ST026 Watches
- ST027 Clocks and timing devices
- ST028 Balances of a sensitivity of 5 cgs or better
- ST029 Drawing and mathematical calculating and measuring instruments
- ST030 Measuring, testing, controlling, and analyzing instruments

**Miscellaneous manufactures sector**

(HTS chapters 42, 66, 67, 71, 87, 92-97)

- MM046 Luggage, handbags, and flat goods
- MM047 Certain other leather goods
- MM048 Musical instruments and accessories
- MM049 Umbrellas, whips, riding crops, and canes
- MM050 Silverware and certain other articles of precious metals
- MM051 Precious jewelry and related articles
- MM052 Costume jewelry and related articles
- MM053 Bicycles and certain parts
- MM054 Furniture and selected furnishings
- MM055 Writing instruments and related articles
- MM056 Lamps and lighting fittings
- MM057 Prefabricated buildings
- MM058 Children's vehicles
- MM059 Dolls
- MM060 Toys and models
- MM061 Games and fairground amusements
- MM062 Sporting goods
- MM063 Smokers' articles
- MM064 Brooms, brushes, and hair grooming articles
- MM065 Miscellaneous articles
- MM066 Apparel fasteners
- MM067 Arms and ammunition

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<sup>1</sup> This coding system (e.g., AG001) is used by the USITC to identify major groupings of the U.S. Harmonized Tariff Schedule (HTS) headings/subheadings and corresponding export categories for trade monitoring purposes. See app. B for industry and trade data for each grouping.

<sup>2</sup> Products in some HTS chapters are divided between sectors monitored by the Commission; however, no products are in more than one sector. Chapter 77 of the HTS is not used and is reserved for possible future use. Chapters 98-99 of the HTS are for special classification provisions.

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## **APPENDIX B**

# **Profile of U.S. Industry and Market, by Industry/Commodity Groups, 1994-98**

Note--These data have been estimated by the Commission's international trade analysts on the basis of primary and secondary data sources including discussion with various Government and industry contacts. These estimated data are subject to change either from secondary sources or from detailed surveys the Commission often conducts in the course of statutory investigation or other work. Furthermore, these data may undergo adjustments based on revisions in tariff nomenclature, classification practices, or redefinitions of industry classes.

Table B-1

**Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG001	Certain miscellaneous animals and meats:					
	Number of establishments . . . . .	145,000	132,800	136,300	130,700	126,800
	Employees (thousands) . . . . .	148	149	140	135	141
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	6,800	6,700	7,450	7,600	7,150
	U.S. exports (million dollars) . . . . .	1,521	1,783	1,895	1,848	1,859
	U.S. imports (million dollars) . . . . .	1,010	1,071	1,146	1,262	1,375
	Apparent U.S. consumption (million dollars) . .	6,288	5,987	6,702	7,014	6,666
	Trade balance (million dollars) . . . . .	512	713	748	586	484
	Ratio of imports to consumption (percent) . . .	16.1	17.9	17.1	18.0	20.6
	Ratio of exports to production (percent) . . . .	22.4	26.6	25.4	24.3	26.0
AG002	Cattle and beef:					
	Number of establishments . . . . .	1,152,431	1,182,394	1,195,200	1,169,100	1,149,200
	Employees (thousands) . . . . .	1,259	1,292	1,269	1,152	1,238
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	41,140	41,878	40,768	40,670	35,859
	U.S. exports (million dollars) . . . . .	2,361	2,648	2,447	2,573	2,382
	U.S. imports (million dollars) . . . . .	2,716	2,627	2,248	2,534	2,752
	Apparent U.S. consumption (million dollars) . .	41,495	41,857	40,569	40,631	36,229
	Trade balance (million dollars) . . . . .	-355	21	199	39	-370
	Ratio of imports to consumption (percent) . . .	6.5	6.3	5.5	6.2	7.6
	Ratio of exports to production (percent) . . . .	5.7	6.3	6.0	6.3	6.6
AG003	Swine and pork:					
	Number of establishments . . . . .	234,190	206,087	158,250	138,700	115,137
	Employees (thousands) . . . . .	315	277	216	201	179
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	18,198	17,911	21,049	21,227	18,479
	U.S. exports (million dollars) . . . . .	486	748	918	943	937
	U.S. imports (million dollars) . . . . .	503	566	742	792	922
	Apparent U.S. consumption (million dollars) . .	18,216	17,730	20,873	21,075	18,464
	Trade balance (million dollars) . . . . .	-18	181	176	152	15
	Ratio of imports to consumption (percent) . . .	2.8	3.2	3.6	3.8	5.0
	Ratio of exports to production (percent) . . . .	2.7	4.2	4.4	4.4	5.1
AG004	Sheep and meat of sheep:					
	Number of establishments . . . . .	87,150	81,070	77,010	74,710	70,020
	Employees (thousands) . . . . .	89	83	77	76	70
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	460	478	477	462	373
	U.S. exports (million dollars) . . . . .	37	19	21	65	35
	U.S. imports (million dollars) . . . . .	59	85	119	144	166
	Apparent U.S. consumption (million dollars) . .	482	544	575	540	504
	Trade balance (million dollars) . . . . .	-22	-66	-98	-78	-131
	Ratio of imports to consumption (percent) . . .	12.2	15.6	20.6	26.6	32.9
	Ratio of exports to shipments (percent) . . . .	8.0	4.1	4.4	14.2	9.4
AG005	Poultry:					
	Number of establishments . . . . .	300	300	290	290	280
	Employees (thousands) . . . . .	195	195	190	190	185
	Capacity utilization (percent) . . . . .	90	90	90	90	90
	U.S. production (million dollars) . . . . .	25,786	27,050	28,750	30,560	32,700
	U.S. exports (million dollars) . . . . .	1,691	2,149	2,589	2,515	2,255
	U.S. imports (million dollars) . . . . .	23	31	35	43	46
	Apparent U.S. consumption (million dollars) . .	24,118	24,932	26,196	28,088	30,490
	Trade balance (million dollars) . . . . .	1,668	2,118	2,554	2,472	2,210
	Ratio of imports to consumption (percent) . . .	0.1	0.1	0.1	0.2	0.1
	Ratio of exports to production (percent) . . . .	6.6	7.9	9.0	8.2	6.9

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG006	Fresh or chilled fish:					
	Number of establishments . . . . .	( <sup>2</sup> )	904	857	861	850
	Employees (thousands) . . . . .	( <sup>2</sup> )	21	19	20	19
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	1,984	1,312	1,335	1,517	1,500
	U.S. exports (million dollars) . . . . .	217	244	263	238	215
	U.S. imports (million dollars) . . . . .	744	808	885	1,025	902
	Apparent U.S. consumption (million dollars) . .	2,511	1,876	1,958	2,304	2,186
	Trade balance (million dollars) . . . . .	-527	-564	-623	-787	-686
	Ratio of imports to consumption (percent) . . .	29.6	43.1	45.2	44.5	41.2
	Ratio of exports to shipments (percent) . . . .	10.9	18.6	19.7	15.7	14.4
AG007	Frozen fish:					
	Number of establishments . . . . .	( <sup>2</sup> )	552	537	560	550
	Employees (thousands) . . . . .	( <sup>2</sup> )	20	20	20	20
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )	63	62	56	56
	U.S. shipments (million dollars) . . . . .	( <sup>2</sup> )	4,670	4,433	4,500	4,500
	U.S. exports (million dollars) . . . . .	1,556	1,754	1,557	1,371	1,071
	U.S. imports (million dollars) . . . . .	1,267	1,384	1,344	1,446	1,531
	Apparent U.S. consumption (million dollars) . .	( <sup>2</sup> )	4,300	4,220	4,575	4,961
	Trade balance (million dollars) . . . . .	288	370	213	-75	-461
	Ratio of imports to consumption (percent) . . .	( <sup>2</sup> )	32.2	31.8	31.6	30.9
	Ratio of exports to shipments (percent) . . . .	( <sup>2</sup> )	37.6	35.1	30.5	23.8
AG008	Canned fish and other fish:					
	Number of establishments . . . . .	550	168	154	152	150
	Employees (thousands) . . . . .	17	16	18	16	16
	Capacity utilization (percent) . . . . .	70	81	69	62	62
	U.S. shipments (million dollars) . . . . .	1,502	2,050	1,992	1,775	1,800
	U.S. exports (million dollars) . . . . .	373	429	426	326	317
	U.S. imports (million dollars) . . . . .	685	671	694	736	783
	Apparent U.S. consumption (million dollars) . .	1,814	2,292	2,260	2,186	2,267
	Trade balance (million dollars) . . . . .	-312	-242	-268	-411	-467
	Ratio of imports to consumption (percent) . . .	37.8	29.3	30.7	33.7	34.6
	Ratio of exports to shipments (percent) . . . .	24.9	20.9	21.4	18.4	17.6
AG009	Shellfish:					
	Number of establishments . . . . .	800	800	750	750	725
	Employees (thousands) . . . . .	60	60	58	59	60
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	1,600	1,800	1,800	1,900	2,000
	U.S. exports (million dollars) . . . . .	904	788	739	720	589
	U.S. imports (million dollars) . . . . .	3,896	3,884	3,741	4,472	4,653
	Apparent U.S. consumption (million dollars) . .	4,592	4,896	4,803	5,652	6,064
	Trade balance (million dollars) . . . . .	-2,992	-3,096	-3,003	-3,752	-4,064
	Ratio of imports to consumption (percent) . . .	84.9	79.3	77.9	79.1	76.7
	Ratio of exports to production (percent) . . . .	56.5	43.8	41.0	37.9	29.5
AG010	Dairy produce:					
	Number of establishments . . . . .	152,000	143,000	135,000	130,000	140,000
	Employees (thousands) . . . . .	695	662	650	640	630
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	53,900	55,800	58,100	60,500	62,000
	U.S. exports (million dollars) . . . . .	572	636	506	618	592
	U.S. imports (million dollars) . . . . .	922	1,052	1,198	1,109	1,325
	Apparent U.S. consumption (million dollars) . .	54,250	56,216	58,793	60,992	62,733
	Trade balance (million dollars) . . . . .	-350	-416	-693	-492	-733
	Ratio of imports to consumption (percent) . . .	1.7	1.9	2.0	1.8	2.1
	Ratio of exports to shipments (percent) . . . .	1.1	1.1	0.9	1.0	1.0

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG011	Eggs:					
	Number of establishments . . . . .	70	70	68	68	67
	Employees (thousands) . . . . .	8	8	8	8	8
	Capacity utilization (percent) . . . . .	85	85	86	85	85
	U.S. production (million dollars) . . . . .	4,833	5,365	5,650	5,950	6,100
	U.S. exports (million dollars) . . . . .	158	164	207	207	207
	U.S. imports (million dollars) . . . . .	30	20	24	19	14
	Apparent U.S. consumption (million dollars) . .	4,705	5,221	5,467	5,762	5,907
	Trade balance (million dollars) . . . . .	128	144	183	188	193
	Ratio of imports to consumption (percent) . . .	0.6	0.4	0.4	0.3	0.2
	Ratio of exports to production (percent) . . . .	3.3	3.1	3.7	3.5	3.4
AG012	Sugar and other sweeteners:					
	Number of establishments . . . . .	97	95	95	95	95
	Employees (thousands) . . . . .	30	30	30	29	28
	Capacity utilization (percent) . . . . .	90	90	90	88	86
	U.S. shipments (million dollars) . . . . .	8,300	8,666	10,000	10,010	10,020
	U.S. exports (million dollars) . . . . .	303	354	381	359	381
	U.S. imports (million dollars) . . . . .	844	885	1,407	1,321	1,068
	Apparent U.S. consumption (million dollars) . .	8,841	9,197	11,027	10,971	10,707
	Trade balance (million dollars) . . . . .	-541	-531	-1,027	-961	-687
	Ratio of imports to consumption (percent) . . .	9.5	9.6	12.8	12.0	10.0
	Ratio of exports to shipments (percent) . . . .	3.7	4.1	3.8	3.6	3.8
AG013	Animal feeds:					
	Number of establishments . . . . .	1,800	1,800	1,800	1,850	1,850
	Employees (thousands) . . . . .	47	48	46	45	45
	Capacity utilization (percent) . . . . .	76	73	74	72	72
	U.S. production (million dollars) . . . . .	20,002	23,413	25,647	26,485	27,364
	U.S. exports (million dollars) . . . . .	3,482	3,822	4,375	4,837	4,317
	U.S. imports (million dollars) . . . . .	613	580	779	783	759
	Apparent U.S. consumption (million dollars) . .	17,132	20,171	22,052	22,431	23,807
	Trade balance (million dollars) . . . . .	2,870	3,242	3,595	4,054	3,557
	Ratio of imports to consumption (percent) . . .	3.6	2.9	3.5	3.5	3.2
	Ratio of exports to production (percent) . . . .	17.4	16.3	17.1	18.3	15.8
AG014	Live plants:					
	Number of establishments . . . . .	24,000	24,000	24,000	23,000	23,000
	Employees (thousands) . . . . .	120	120	120	120	120
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	9,407	9,676	9,995	10,572	( <sup>2</sup> )
	U.S. exports (million dollars) . . . . .	99	96	92	117	142
	U.S. imports (million dollars) . . . . .	238	283	312	336	387
	Apparent U.S. consumption (million dollars) . .	9,546	9,863	10,215	10,791	( <sup>2</sup> )
	Trade balance (million dollars) . . . . .	-139	-187	-220	-219	-245
	Ratio of imports to consumption (percent) . . .	2.5	2.9	3.1	3.1	( <sup>2</sup> )
	Ratio of exports to shipments (percent) . . . .	1.1	1.0	0.9	1.1	( <sup>2</sup> )
AG015	Seeds:					
	Number of establishments . . . . .	9,000	9,000	9,000	9,000	( <sup>2</sup> )
	Employees (thousands) . . . . .	138	138	138	138	( <sup>2</sup> )
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	2,000	2,000	2,000	2,000	( <sup>2</sup> )
	U.S. exports (million dollars) . . . . .	616	610	648	776	737
	U.S. imports (million dollars) . . . . .	227	236	298	361	406
	Apparent U.S. consumption (million dollars) . .	1,610	1,626	1,650	1,586	( <sup>2</sup> )
	Trade balance (million dollars) . . . . .	390	374	350	414	330
	Ratio of imports to consumption (percent) . . .	14.1	14.5	18.1	22.8	( <sup>2</sup> )
	Ratio of exports to shipments (percent) . . . .	30.8	30.5	32.4	38.8	( <sup>2</sup> )

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG016	Cut flowers:					
	Number of establishments . . . . .	2,900	2,500	2,400	2,400	2,400
	Employees (thousands) . . . . .	36	35	34	34	34
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	470	409	447	462	( <sup>2</sup> )
	U.S. exports (million dollars) . . . . .	38	40	48	49	45
	U.S. imports (million dollars) . . . . .	420	512	573	595	614
	Apparent U.S. consumption (million dollars) . .	852	880	972	1,008	( <sup>2</sup> )
	Trade balance (million dollars) . . . . .	-382	-471	-525	-546	-570
	Ratio of imports to consumption (percent) . . .	49.3	58.1	58.9	59.0	( <sup>2</sup> )
	Ratio of exports to shipments (percent) . . . . .	8.1	9.9	10.6	10.6	( <sup>2</sup> )
AG017	Miscellaneous vegetable substances:					
	Number of establishments . . . . .	90	80	80	80	80
	Employees (thousands) . . . . .	2	2	2	2	2
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	813	800	800	800	800
	U.S. exports (million dollars) . . . . .	433	458	449	470	462
	U.S. imports (million dollars) . . . . .	623	762	792	855	993
	Apparent U.S. consumption (million dollars) . .	1,003	1,105	1,144	1,186	1,331
	Trade balance (million dollars) . . . . .	-190	-305	-344	-386	-531
	Ratio of imports to consumption (percent) . . .	62.1	69.0	69.3	72.2	74.6
	Ratio of exports to production (percent) . . . . .	53.3	57.2	56.1	58.7	57.8
AG018	Fresh, chilled, or frozen vegetables:					
	Number of establishments . . . . .	36,400	36,100	36,000	35,500	33,500
	Employees (thousands) . . . . .	50	45	46	44	43
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	4,300	4,400	4,530	4,100	4,200
	U.S. exports (million dollars) . . . . .	1,122	1,148	1,070	1,178	1,199
	U.S. imports (million dollars) . . . . .	1,364	1,586	1,840	1,857	2,313
	Apparent U.S. consumption (million dollars) . .	4,542	4,838	5,300	4,778	5,314
	Trade balance (million dollars) . . . . .	-242	-438	-770	-678	-1,114
	Ratio of imports to consumption (percent) . . .	30.0	32.8	34.7	38.9	43.5
	Ratio of exports to production (percent) . . . . .	26.1	26.1	23.6	28.7	28.6
AG019	Prepared or preserved vegetables, mushrooms, and olives:					
	Number of establishments . . . . .	1,700	1,690	1,700	1,680	1,620
	Employees (thousands) . . . . .	4	4	4	4	4
	Capacity utilization (percent) . . . . .	85	87	88	85	87
	U.S. production (million dollars) . . . . .	8,400	8,200	8,500	8,200	8,350
	U.S. exports (million dollars) . . . . .	1,217	1,293	1,332	1,433	1,586
	U.S. imports (million dollars) . . . . .	889	982	981	1,074	1,210
	Apparent U.S. consumption (million dollars) . .	8,072	7,889	8,149	7,841	7,973
	Trade balance (million dollars) . . . . .	328	311	351	359	377
	Ratio of imports to consumption (percent) . . .	11.0	12.4	12.0	13.7	15.2
	Ratio of exports to production (percent) . . . . .	14.5	15.8	15.7	17.5	19.0
AG020	Edible nuts:					
	Number of establishments . . . . .	68,000	68,000	68,000	68,000	68,000
	Employees (thousands) . . . . .	380	380	380	380	380
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	2,756	2,765	2,679	3,095	2,616
	U.S. exports (million dollars) . . . . .	1,318	1,462	1,666	1,491	1,392
	U.S. imports (million dollars) . . . . .	497	509	570	630	660
	Apparent U.S. consumption (million dollars) . .	1,934	1,812	1,583	2,234	1,884
	Trade balance (million dollars) . . . . .	822	953	1,096	861	732
	Ratio of imports to consumption (percent) . . .	25.7	28.1	36.0	28.2	35.0
	Ratio of exports to shipments (percent) . . . . .	47.8	52.9	62.2	48.2	53.2

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG021	Tropical fruit:					
	Number of establishments . . . . .	9,000	9,000	9,000	9,000	9,000
	Employees (thousands) . . . . .	25	25	25	25	25
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	348	355	403	376	387
	U.S. exports (million dollars) . . . . .	70	76	79	70	60
	U.S. imports (million dollars) . . . . .	1,253	1,337	1,391	1,466	1,495
	Apparent U.S. consumption (million dollars) . .	1,530	1,617	1,715	1,772	1,821
	Trade balance (million dollars) . . . . .	-1,182	-1,262	-1,312	-1,396	-1,434
	Ratio of imports to consumption (percent) . . .	81.9	82.7	81.1	82.7	82.1
	Ratio of exports to shipments (percent) . . . . .	20.2	21.3	19.5	18.7	15.6
AG022	Citrus fruit:					
	Number of establishments . . . . .	17,938	17,865	17,755	17,650	17,562
	Employees (thousands) . . . . .	95	94	93	93	92
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	2,245	2,329	2,516	2,574	2,600
	U.S. exports (million dollars) . . . . .	674	740	700	735	672
	U.S. imports (million dollars) . . . . .	129	132	177	201	211
	Apparent U.S. consumption (million dollars) . .	1,701	1,721	1,992	2,039	2,139
	Trade balance (million dollars) . . . . .	544	608	524	535	461
	Ratio of imports to consumption (percent) . . .	7.6	7.7	8.9	9.8	9.9
	Ratio of exports to production (percent) . . . . .	30.0	31.8	27.8	28.6	25.9
AG023	Deciduous fruit:					
	Number of establishments . . . . .	82,000	82,000	82,000	82,000	82,000
	Employees (thousands) . . . . .	160	160	160	160	160
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	1,790	2,305	3,003	2,215	1,886
	U.S. exports (million dollars) . . . . .	774	718	731	780	665
	U.S. imports (million dollars) . . . . .	157	181	197	187	177
	Apparent U.S. consumption (million dollars) . .	1,173	1,767	2,469	1,623	1,398
	Trade balance (million dollars) . . . . .	617	538	534	592	488
	Ratio of imports to consumption (percent) . . .	13.4	10.2	8.0	11.6	12.7
	Ratio of exports to shipments (percent) . . . . .	43.3	31.2	24.3	35.2	35.3
AG024	Other fresh fruit:					
	Number of establishments . . . . .	60,000	60,000	60,000	60,000	60,000
	Employees (thousands) . . . . .	120	120	120	120	120
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	1,915	1,859	2,380	2,309	2,222
	U.S. exports (million dollars) . . . . .	482	488	507	557	484
	U.S. imports (million dollars) . . . . .	528	615	744	717	890
	Apparent U.S. consumption (million dollars) . .	1,961	1,986	2,617	2,469	2,628
	Trade balance (million dollars) . . . . .	-46	-127	-237	-160	-406
	Ratio of imports to consumption (percent) . . .	26.9	31.0	28.4	29.0	33.9
	Ratio of exports to shipments (percent) . . . . .	25.2	26.3	21.3	24.1	21.8
AG025	Dried fruit other than tropical:					
	Number of establishments . . . . .	40	40	40	40	40
	Employees (thousands) . . . . .	9	9	9	9	9
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	754	748	861	806	665
	U.S. exports (million dollars) . . . . .	369	382	388	386	385
	U.S. imports (million dollars) . . . . .	46	47	58	61	60
	Apparent U.S. consumption (million dollars) . .	431	414	531	481	340
	Trade balance (million dollars) . . . . .	323	334	330	325	325
	Ratio of imports to consumption (percent) . . .	10.8	11.4	11.0	12.7	17.7
	Ratio of exports to shipments (percent) . . . . .	49.0	51.0	45.1	47.8	57.9

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG026	Frozen fruit:					
	Number of establishments . . . . .	40	40	40	40	40
	Employees (thousands) . . . . .	6	6	6	6	6
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	650	650	648	568	664
	U.S. exports (million dollars) . . . . .	71	77	79	79	92
	U.S. imports (million dollars) . . . . .	64	68	82	88	89
	Apparent U.S. consumption (million dollars) . .	642	641	651	577	661
	Trade balance (million dollars) . . . . .	8	9	-3	-9	3
	Ratio of imports to consumption (percent) . . .	9.9	10.7	12.6	15.3	13.4
	Ratio of exports to shipments (percent) . . . . .	11.0	11.9	12.2	14.0	13.8
AG027	Prepared or preserved fruit:					
	Number of establishments . . . . .	200	200	200	200	200
	Employees (thousands) . . . . .	20	20	20	20	20
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	3,170	3,946	3,882	4,262	4,411
	U.S. exports (million dollars) . . . . .	157	179	173	182	185
	U.S. imports (million dollars) . . . . .	414	415	484	545	484
	Apparent U.S. consumption (million dollars) . .	3,426	4,182	4,193	4,625	4,710
	Trade balance (million dollars) . . . . .	-256	-236	-311	-363	-299
	Ratio of imports to consumption (percent) . . .	12.1	9.9	11.5	11.8	10.3
	Ratio of exports to shipments (percent) . . . . .	5.0	4.5	4.5	4.3	4.2
AG028	Coffee and tea:					
	Number of establishments . . . . .	( <sup>2</sup> )				
	Employees (thousands) . . . . .	( <sup>2</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	( <sup>2</sup> )				
	U.S. exports (million dollars) . . . . .	231	229	237	254	263
	U.S. imports (million dollars) . . . . .	2,655	3,427	2,958	4,071	3,656
	Apparent U.S. consumption (million dollars) . .	( <sup>2</sup> )				
	Trade balance (million dollars) . . . . .	-2,424	-3,198	-2,721	-3,816	-3,393
	Ratio of imports to consumption (percent) . . .	( <sup>2</sup> )				
	Ratio of exports to shipments (percent) . . . . .	( <sup>2</sup> )				
AG029	Spices:					
	Number of establishments . . . . .	74	74	74	74	74
	Employees (thousands) . . . . .	8	8	8	8	8
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	1,375	1,436	1,509	1,510	1,510
	U.S. exports (million dollars) . . . . .	52	46	55	58	66
	U.S. imports (million dollars) . . . . .	272	290	349	416	455
	Apparent U.S. consumption (million dollars) . .	1,595	1,679	1,803	1,868	1,899
	Trade balance (million dollars) . . . . .	-220	-243	-294	-358	-389
	Ratio of imports to consumption (percent) . . .	17.0	17.2	19.3	22.3	24.0
	Ratio of exports to shipments (percent) . . . . .	3.8	3.2	3.6	3.9	4.4
AG030	Cereals:					
	Number of establishments . . . . .	383,000	372,000	361,000	350,000	340,000
	Employees (thousands) . . . . .	( <sup>2</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	27,300	34,700	37,700	39,900	35,600
	U.S. exports (million dollars) . . . . .	9,884	14,674	16,751	11,106	9,991
	U.S. imports (million dollars) . . . . .	809	684	791	984	773
	Apparent U.S. consumption (million dollars) . .	18,224	20,710	21,739	29,778	26,382
	Trade balance (million dollars) . . . . .	9,076	13,990	15,961	10,122	9,218
	Ratio of imports to consumption (percent) . . .	4.4	3.3	3.6	3.3	2.9
	Ratio of exports to production (percent) . . . . .	36.2	42.3	44.4	27.8	28.1

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG031	Milled grains, malts, and starches:					
	Number of establishments . . . . .	210	210	210	200	200
	Employees (thousands) . . . . .	27	27	26	26	26
	Capacity utilization (percent) . . . . .	96	91	91	( <sup>1</sup> )	89
	U.S. production (million dollars) . . . . .	17,306	18,402	19,661	20,011	20,351
	U.S. exports (million dollars) . . . . .	464	491	425	429	407
	U.S. imports (million dollars) . . . . .	132	151	175	167	160
	Apparent U.S. consumption (million dollars) . .	16,974	18,062	19,411	19,749	20,104
	Trade balance (million dollars) . . . . .	332	340	250	262	247
	Ratio of imports to consumption (percent) . . .	0.8	0.8	0.9	0.8	0.8
	Ratio of exports to production (percent) . . . .	2.7	2.7	2.2	2.1	2.0
AG032	Oilseeds:					
	Number of establishments . . . . .	383,800	372,000	361,000	350,000	340,000
	Employees (thousands) . . . . .	( <sup>2</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	13,100	15,030	16,000	19,100	18,900
	U.S. exports (million dollars) . . . . .	4,537	5,661	7,638	7,700	5,166
	U.S. imports (million dollars) . . . . .	268	221	279	335	315
	Apparent U.S. consumption (million dollars) . .	8,831	9,591	8,642	11,735	14,049
	Trade balance (million dollars) . . . . .	4,269	5,439	7,358	7,365	4,851
	Ratio of imports to consumption (percent) . . .	3.0	2.3	3.2	2.9	2.2
	Ratio of exports to production (percent) . . . .	34.6	37.7	47.7	40.3	27.3
AG033	Animal or vegetable fats and oils:					
	Number of establishments . . . . .	520	510	500	490	480
	Employees (thousands) . . . . .	34	34	31	33	36
	Capacity utilization (percent) . . . . .	74	76	75	76	80
	U.S. shipments (million dollars) . . . . .	6,650	7,000	7,100	6,700	7,600
	U.S. exports (million dollars) . . . . .	1,851	2,529	1,826	2,173	2,763
	U.S. imports (million dollars) . . . . .	1,046	1,265	1,480	1,517	1,475
	Apparent U.S. consumption (million dollars) . .	5,845	5,736	6,754	6,044	6,311
	Trade balance (million dollars) . . . . .	805	1,264	346	656	1,289
	Ratio of imports to consumption (percent) . . .	17.9	22.1	21.9	25.1	23.4
	Ratio of exports to shipments (percent) . . . .	27.8	36.1	25.7	32.4	36.4
AG034	Edible preparations:					
	Number of establishments . . . . .	5,100	5,100	5,200	5,300	5,300
	Employees (thousands) . . . . .	396	379	429	429	429
	Capacity utilization (percent) . . . . .	80	74	75	76	76
	U.S. production (million dollars) . . . . .	86,633	91,990	78,262	80,610	82,625
	U.S. exports (million dollars) . . . . .	3,062	2,871	3,353	4,029	3,677
	U.S. imports (million dollars) . . . . .	1,561	1,746	1,943	2,139	2,418
	Apparent U.S. consumption (million dollars) . .	85,132	90,864	76,852	78,720	81,365
	Trade balance (million dollars) . . . . .	1,501	1,126	1,410	1,890	1,260
	Ratio of imports to consumption (percent) . . .	1.8	1.9	2.5	2.7	3.0
	Ratio of exports to production (percent) . . . .	3.5	3.1	4.3	5.0	4.5
AG035	Cocoa, chocolate, and confectionery:					
	Number of establishments . . . . .	950	970	1,000	1,000	1,010
	Employees (thousands) . . . . .	65	68	72	73	74
	Capacity utilization (percent) . . . . .	70	80	85	87	87
	U.S. shipments (million dollars) . . . . .	11,076	11,700	12,500	12,700	12,800
	U.S. exports (million dollars) . . . . .	545	524	586	662	602
	U.S. imports (million dollars) . . . . .	1,299	1,478	1,806	1,910	2,183
	Apparent U.S. consumption (million dollars) . .	11,831	12,654	13,720	13,948	14,381
	Trade balance (million dollars) . . . . .	-755	-954	-1,220	-1,248	-1,581
	Ratio of imports to consumption (percent) . . .	11.0	11.7	13.2	13.7	15.2
	Ratio of exports to shipments (percent) . . . .	4.9	4.5	4.7	5.2	4.7

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG036	Fruit and vegetable juices:					
	Number of establishments . . . . .	100	98	98	98	97
	Employees (thousands) . . . . .	150	149	149	148	147
	Capacity utilization (percent) . . . . .	92	90	89	83	( <sup>2</sup> )
	U.S. shipments (million dollars) . . . . .	2,200	2,276	2,500	2,700	2,750
	U.S. exports (million dollars) . . . . .	539	652	642	677	668
	U.S. imports (million dollars) . . . . .	663	635	929	856	677
	Apparent U.S. consumption (million dollars) . .	2,324	2,258	2,787	2,878	2,759
	Trade balance (million dollars) . . . . .	-124	18	-287	-178	-9
	Ratio of imports to consumption (percent) . . .	28.5	28.1	33.3	29.7	24.5
	Ratio of exports to shipments (percent) . . . .	24.5	28.7	25.7	25.1	24.3
AG037	Nonalcoholic beverages, excluding fruit and vegetable juices:					
	Number of establishments . . . . .	3,300	3,200	3,200	3,200	3,200
	Employees (thousands) . . . . .	112	110	110	110	110
	Capacity utilization (percent) . . . . .	74	70	71	67	( <sup>2</sup> )
	U.S. shipments (million dollars) . . . . .	53,922	57,197	58,505	59,853	61,000
	U.S. exports (million dollars) . . . . .	344	332	244	299	302
	U.S. imports (million dollars) . . . . .	349	353	430	524	568
	Apparent U.S. consumption (million dollars) . .	53,927	57,219	58,691	60,079	61,266
	Trade balance (million dollars) . . . . .	-5	-22	-186	-226	-266
	Ratio of imports to consumption (percent) . . .	0.6	0.6	0.7	0.9	0.9
	Ratio of exports to shipments (percent) . . . .	0.6	0.6	0.4	0.5	0.5
AG038	Malt beverages:					
	Number of establishments . . . . .	619	879	1,504	1,504	1,504
	Employees (thousands) . . . . .	37	36	36	35	34
	Capacity utilization (percent) . . . . .	79	76	76	75	75
	U.S. shipments (million dollars) . . . . .	16,713	17,108	18,195	19,287	19,287
	U.S. exports (million dollars) . . . . .	341	413	362	319	254
	U.S. imports (million dollars) . . . . .	1,038	1,151	1,301	1,480	1,699
	Apparent U.S. consumption (million dollars) . .	17,410	17,846	19,134	20,449	20,732
	Trade balance (million dollars) . . . . .	-697	-738	-939	-1,162	-1,445
	Ratio of imports to consumption (percent) . . .	6.0	6.4	6.8	7.2	8.2
	Ratio of exports to shipments (percent) . . . .	2.0	2.4	2.0	1.7	1.3
AG039	Wine and certain other fermented beverages:					
	Number of establishments . . . . .	1,772	1,820	1,994	1,994	1,994
	Employees (thousands) . . . . .	14	14	14	15	15
	Capacity utilization (percent) . . . . .	57	75	73	80	80
	U.S. shipments (million dollars) . . . . .	4,400	4,674	5,410	5,843	5,843
	U.S. exports (million dollars) . . . . .	192	236	320	415	532
	U.S. imports (million dollars) . . . . .	1,044	1,159	1,435	1,716	1,881
	Apparent U.S. consumption (million dollars) . .	5,251	5,597	6,525	7,144	7,192
	Trade balance (million dollars) . . . . .	-851	-923	-1,115	-1,301	-1,349
	Ratio of imports to consumption (percent) . . .	19.9	20.7	22.0	24.0	26.2
	Ratio of exports to shipments (percent) . . . .	4.4	5.0	5.9	7.1	9.1
AG040	Distilled spirits:					
	Number of establishments . . . . .	297	278	334	334	334
	Employees (thousands) . . . . .	7	7	4	4	4
	Capacity utilization (percent) . . . . .	76	66	65	65	65
	U.S. shipments (million dollars) . . . . .	3,460	3,371	3,187	3,187	3,187
	U.S. exports (million dollars) . . . . .	356	390	392	390	395
	U.S. imports (million dollars) . . . . .	1,552	1,629	1,843	1,966	2,084
	Apparent U.S. consumption (million dollars) . .	4,656	4,610	4,638	4,763	4,876
	Trade balance (million dollars) . . . . .	-1,196	-1,239	-1,451	-1,576	-1,689
	Ratio of imports to consumption (percent) . . .	33.3	35.3	39.7	41.3	42.7
	Ratio of exports to shipments (percent) . . . .	10.3	11.6	12.3	12.2	12.4

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG041	Unmanufactured tobacco:					
	Number of establishments . . . . .	119,750	117,491	115,232	112,973	110,000
	Employees (thousands) . . . . .	( <sup>2</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	2,980	3,084	3,140	3,328	3,328
	U.S. exports (million dollars) . . . . .	1,303	1,400	1,390	1,553	1,459
	U.S. imports (million dollars) . . . . .	613	550	923	1,089	771
	Apparent U.S. consumption (million dollars) . .	2,290	2,234	2,672	2,864	2,640
	Trade balance (million dollars) . . . . .	690	850	468	464	688
	Ratio of imports to consumption (percent) . . .	26.8	24.6	34.5	38.0	29.2
	Ratio of exports to production (percent) . . . .	43.7	45.4	44.3	46.7	43.8
AG042	Cigars and certain other manufactured tobacco:					
	Number of establishments . . . . .	57	57	57	57	57
	Employees (thousands) . . . . .	6	6	5	5	5
	Capacity utilization (percent) . . . . .	73	87	86	86	86
	U.S. shipments (million dollars) . . . . .	2,114	2,264	2,130	2,130	2,130
	U.S. exports (million dollars) . . . . .	402	452	503	547	661
	U.S. imports (million dollars) . . . . .	90	117	207	419	377
	Apparent U.S. consumption (million dollars) . .	1,802	1,930	1,835	2,002	1,846
	Trade balance (million dollars) . . . . .	312	334	295	128	284
	Ratio of imports to consumption (percent) . . .	5.0	6.1	11.3	20.9	20.4
	Ratio of exports to shipments (percent) . . . .	19.0	19.9	23.6	25.7	31.0
AG043	Cigarettes:					
	Number of establishments . . . . .	11	11	11	11	11
	Employees (thousands) . . . . .	23	25	28	28	28
	Capacity utilization (percent) . . . . .	87	80	77	72	72
	U.S. shipments (million dollars) . . . . .	24,200	26,967	28,247	28,247	28,247
	U.S. exports (million dollars) . . . . .	4,965	4,770	4,736	4,409	4,166
	U.S. imports (million dollars) . . . . .	73	51	38	44	59
	Apparent U.S. consumption (million dollars) . .	19,308	22,248	23,549	23,882	24,141
	Trade balance (million dollars) . . . . .	4,892	4,719	4,698	4,365	4,106
	Ratio of imports to consumption (percent) . . .	0.4	0.2	0.2	0.2	0.2
	Ratio of exports to shipments (percent) . . . .	20.5	17.7	16.8	15.6	14.7
AG044	Hides, skins, and leather:					
	Number of establishments . . . . .	1,220	1,220	1,220	1,220	1,220
	Employees (thousands) . . . . .	18	18	18	18	18
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	4,755	5,170	5,573	5,187	5,041
	U.S. exports (million dollars) . . . . .	2,108	2,319	2,216	2,310	1,934
	U.S. imports (million dollars) . . . . .	995	1,095	1,054	1,133	1,124
	Apparent U.S. consumption (million dollars) . .	3,642	3,946	4,411	4,010	4,232
	Trade balance (million dollars) . . . . .	1,113	1,224	1,162	1,177	809
	Ratio of imports to consumption (percent) . . .	27.3	27.7	23.9	28.2	26.6
	Ratio of exports to shipments (percent) . . . .	44.3	44.9	39.8	44.5	38.4
AG045	Furskins:					
	Number of establishments . . . . .	457	446	415	401	389
	Employees (thousands) . . . . .	3	3	3	3	3
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	185	153	180	237	231
	U.S. exports (million dollars) . . . . .	167	157	224	222	196
	U.S. imports (million dollars) . . . . .	109	87	107	115	86
	Apparent U.S. consumption (million dollars) . .	126	83	63	130	122
	Trade balance (million dollars) . . . . .	59	70	117	107	109
	Ratio of imports to consumption (percent) . . .	85.9	105.3	169.8	88.2	70.9
	Ratio of exports to shipments (percent) . . . .	90.4	102.9	124.4	93.5	84.7

See footnote(s) at end of table.

Table B-1--Continued

## Agricultural products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG062	Ethyl alcohol for nonbeverage purposes:					
	Number of establishments . . . . .	35	42	45	45	47
	Employees (thousands) . . . . .	7	7	7	7	7
	Capacity utilization (percent) . . . . .	90	80	78	80	80
	U.S. production (million dollars) . . . . .	1,594	1,408	1,500	1,550	1,600
	U.S. exports (million dollars) . . . . .	215	265	128	123	58
	U.S. imports (million dollars) . . . . .	146	164	160	119	124
	Apparent U.S. consumption (million dollars) . .	1,525	1,306	1,532	1,546	1,666
	Trade balance (million dollars) . . . . .	69	102	-32	4	-66
	Ratio of imports to consumption (percent) . . .	9.6	12.5	10.5	7.7	7.4
	Ratio of exports to production (percent) . . . .	13.5	18.8	8.5	7.9	3.6
AG063	Wool and other animal hair:					
	Number of establishments <sup>3</sup> . . . . .	87,150	81,070	77,010	74,710	70,020
	Employees (thousands) . . . . .	( <sup>2</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) <sup>4</sup> . . . . .	78	86	55	60	42
	U.S. exports (million dollars) . . . . .	36	35	20	17	13
	U.S. imports (million dollars) . . . . .	173	214	173	179	141
	Apparent U.S. consumption (million dollars) . .	215	265	209	223	170
	Trade balance (million dollars) . . . . .	-137	-179	-154	-163	-128
	Ratio of imports to consumption (percent) . . .	80.4	80.7	83.1	80.5	82.7
	Ratio of exports to production (percent) . . . .	46.1	40.5	35.8	27.6	30.0
AG064	Cotton, not carded or combed:					
	Number of establishments . . . . .	13,720	16,931	14,634	13,808	12,866
	Employees (thousands) . . . . .	( <sup>2</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	6,795	6,573	6,410	5,981	4,141
	U.S. exports (million dollars) . . . . .	2,653	3,681	2,715	2,682	2,545
	U.S. imports (million dollars) . . . . .	7	10	283	3	14
	Apparent U.S. consumption (million dollars) . .	4,149	2,902	3,978	3,302	1,609
	Trade balance (million dollars) . . . . .	2,646	3,671	2,432	2,679	2,532
	Ratio of imports to consumption (percent) . . .	0.2	0.4	7.1	0.1	0.8
	Ratio of exports to production (percent) . . . .	39.0	56.0	42.4	44.8	61.5

<sup>1</sup> Capacity utilization could not be meaningfully calculated for this industry.

<sup>2</sup> Not available.

<sup>3</sup> Figures represent the number of operations with sheep.

<sup>4</sup> Figures represent value of shorn wool production (greasy basis) and mohair production.

Note.--Calculations based on unrounded data.

Table B-2

## Forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG046	Logs and rough wood products:					
	Number of establishments . . . . .	13,000	13,000	12,000	12,500	13,000
	Employees (thousands) . . . . .	85	85	83	85	85
	Capacity utilization (percent) . . . . .	92	90	92	92	92
	U.S. shipments (million dollars) . . . . .	16,000	16,500	16,000	16,250	16,500
	U.S. exports (million dollars) . . . . .	2,963	3,063	2,909	2,420	1,970
	U.S. imports (million dollars) . . . . .	366	404	419	427	436
	Apparent U.S. consumption (million dollars) . .	13,403	13,841	13,510	14,257	14,967
	Trade balance (million dollars) . . . . .	2,597	2,659	2,490	1,993	1,533
	Ratio of imports to consumption (percent) . . .	2.7	2.9	3.1	3.0	2.9
	Ratio of exports to shipments (percent) . . . . .	18.5	18.6	18.2	14.9	11.9
AG047	Lumber:					
	Number of establishments . . . . .	7,000	6,900	6,850	6,800	6,800
	Employees (thousands) . . . . .	170	180	180	175	170
	Capacity utilization (percent) . . . . .	90	90	90	90	90
	U.S. shipments (million dollars) . . . . .	30,000	23,000	29,600	29,800	30,000
	U.S. exports (million dollars) . . . . .	2,458	2,447	2,430	2,532	1,959
	U.S. imports (million dollars) . . . . .	6,059	5,515	6,829	7,360	6,730
	Apparent U.S. consumption (million dollars) . .	33,601	26,067	33,999	34,628	34,771
	Trade balance (million dollars) . . . . .	-3,601	-3,067	-4,399	-4,828	-4,771
	Ratio of imports to consumption (percent) . . .	18.0	21.2	20.1	21.3	19.4
	Ratio of exports to shipments (percent) . . . . .	8.2	10.6	8.2	8.5	6.5
AG048	Moldings, millwork, and joinery:					
	Number of establishments . . . . .	3,000	3,500	3,500	3,500	3,500
	Employees (thousands) . . . . .	110	110	114	118	123
	Capacity utilization (percent) . . . . .	71	69	74	61	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	10,735	10,455	11,058	11,500	11,949
	U.S. exports (million dollars) . . . . .	443	456	563	642	548
	U.S. imports (million dollars) . . . . .	959	969	1,171	1,594	1,924
	Apparent U.S. consumption (million dollars) . .	11,250	10,968	11,665	12,452	13,325
	Trade balance (million dollars) . . . . .	-515	-513	-607	-952	-1,376
	Ratio of imports to consumption (percent) . . .	8.5	8.8	10.0	12.8	14.4
	Ratio of exports to shipments (percent) . . . . .	4.1	4.4	5.1	5.6	4.6
AG049	Structural panel products:					
	Number of establishments . . . . .	600	625	620	615	615
	Employees (thousands) . . . . .	75	75	79	80	80
	Capacity utilization (percent) . . . . .	85	85	90	85	87
	U.S. production (million dollars) . . . . .	13,500	14,500	14,000	13,900	14,000
	U.S. exports (million dollars) . . . . .	962	1,018	994	1,166	929
	U.S. imports (million dollars) . . . . .	1,820	1,986	2,152	2,249	2,767
	Apparent U.S. consumption (million dollars) . .	14,358	15,468	15,158	14,983	15,838
	Trade balance (million dollars) . . . . .	-858	-968	-1,158	-1,083	-1,838
	Ratio of imports to consumption (percent) . . .	12.7	12.8	14.2	15.0	17.5
	Ratio of exports to production (percent) . . . . .	7.1	7.0	7.1	8.4	6.6
AG050	Wooden containers:					
	Number of establishments . . . . .	2,500	2,600	2,600	2,600	2,600
	Employees (thousands) . . . . .	35	42	51	50	55
	Capacity utilization (percent) . . . . .	75	80	80	80	82
	U.S. production (million dollars) . . . . .	3,600	3,680	4,000	4,000	4,200
	U.S. exports (million dollars) . . . . .	76	77	85	112	138
	U.S. imports (million dollars) . . . . .	197	224	253	348	419
	Apparent U.S. consumption (million dollars) . .	3,721	3,827	4,168	4,236	4,481
	Trade balance (million dollars) . . . . .	-121	-147	-168	-236	-281
	Ratio of imports to consumption (percent) . . .	5.3	5.9	6.1	8.2	9.4
	Ratio of exports to production (percent) . . . . .	2.1	2.1	2.1	2.8	3.3

See footnote(s) at end of table.

Table B-2--Continued

## Forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG051	Tools and tool handles of wood:					
	Number of establishments . . . . .	135	130	128	125	125
	Employees (thousands) . . . . .	3	3	3	3	3
	Capacity utilization (percent) . . . . .	70	75	75	75	78
	U.S. production (million dollars) . . . . .	170	170	165	166	168
	U.S. exports (million dollars) . . . . .	16	18	24	37	36
	U.S. imports (million dollars) . . . . .	109	130	114	117	117
	Apparent U.S. consumption (million dollars) . .	262	282	255	246	249
	Trade balance (million dollars) . . . . .	-92	-112	-90	-80	-81
	Ratio of imports to consumption (percent) . . .	41.4	46.1	44.6	47.5	47.1
	Ratio of exports to production (percent) . . . .	9.6	10.8	14.4	22.2	21.7
AG052	Miscellaneous articles of wood:					
	Number of establishments . . . . .	650	700	700	680	690
	Employees (thousands) . . . . .	50	58	58	57	60
	Capacity utilization (percent) . . . . .	75	75	80	80	80
	U.S. production (million dollars) . . . . .	2,800	2,800	3,000	3,200	3,500
	U.S. exports (million dollars) . . . . .	177	178	179	185	202
	U.S. imports (million dollars) . . . . .	540	615	617	733	846
	Apparent U.S. consumption (million dollars) . .	3,162	3,238	3,438	3,747	4,144
	Trade balance (million dollars) . . . . .	-362	-438	-438	-547	-644
	Ratio of imports to consumption (percent) . . .	17.1	19.0	17.9	19.6	20.4
	Ratio of exports to production (percent) . . . .	6.3	6.3	6.0	5.8	5.8
AG053	Cork and rattan:					
	Number of establishments . . . . .	30	35	35	30	30
	Employees (thousands) . . . . .	2	2	2	2	2
	Capacity utilization (percent) . . . . .	75	75	80	80	80
	U.S. production (million dollars) . . . . .	78	85	95	97	100
	U.S. exports (million dollars) . . . . .	50	65	82	76	85
	U.S. imports (million dollars) . . . . .	360	408	407	407	447
	Apparent U.S. consumption (million dollars) . .	388	428	420	429	462
	Trade balance (million dollars) . . . . .	-310	-343	-325	-332	-362
	Ratio of imports to consumption (percent) . . .	92.9	95.3	96.8	95.1	96.7
	Ratio of exports to production (percent) . . . .	64.7	76.2	86.1	78.2	84.7
AG054	Wood pulp and wastepaper:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	14	14	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	8,000	8,300	8,100	8,200	8,300
	U.S. exports (million dollars) . . . . .	3,816	6,241	4,059	3,893	3,452
	U.S. imports (million dollars) . . . . .	2,329	3,845	2,665	2,656	2,447
	Apparent U.S. consumption (million dollars) . .	6,513	5,904	6,706	6,963	7,295
	Trade balance (million dollars) . . . . .	1,487	2,396	1,394	1,237	1,005
	Ratio of imports to consumption (percent) . . .	35.8	65.1	39.7	38.1	33.5
	Ratio of exports to production (percent) . . . .	47.7	75.2	50.1	47.5	41.6
AG055	Paper boxes and bags:					
	Number of establishments . . . . .	2,600	2,600	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
	Employees (thousands) . . . . .	182	182	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	37,000	37,900	37,100	37,400	38,200
	U.S. exports (million dollars) . . . . .	871	1,083	1,204	1,296	1,345
	U.S. imports (million dollars) . . . . .	451	596	658	674	745
	Apparent U.S. consumption (million dollars) . .	36,580	37,413	36,554	36,778	37,600
	Trade balance (million dollars) . . . . .	420	487	546	622	600
	Ratio of imports to consumption (percent) . . .	1.2	1.6	1.8	1.8	2.0
	Ratio of exports to production (percent) . . . .	2.4	2.9	3.2	3.5	3.5

See footnote(s) at end of table.

Table B-2--Continued

## Forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG056	Industrial papers and paperboards:					
	Number of establishments . . . . .	704	704	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. production (million dollars) . . . . .	39,000	45,000	42,900	43,500	45,800
	U.S. exports (million dollars) . . . . .	3,827	5,085	5,064	5,407	5,185
	U.S. imports (million dollars) . . . . .	1,388	1,884	1,830	2,044	2,267
	Apparent U.S. consumption (million dollars) . .	36,561	41,799	39,666	40,137	42,882
	Trade balance (million dollars) . . . . .	2,439	3,201	3,234	3,363	2,918
	Ratio of imports to consumption (percent) . . .	3.8	4.5	4.6	5.1	5.3
	Ratio of exports to production (percent) . . . .	9.8	11.3	11.8	12.4	11.3
AG057	Newsprint:					
	Number of establishments . . . . .	26	26	26	25	25
	Employees (thousands) . . . . .	9	9	9	9	9
	Capacity utilization (percent) . . . . .	98	96	96	99	99
	U.S. shipments (million dollars) . . . . .	3,036	4,488	4,201	3,575	3,937
	U.S. exports (million dollars) . . . . .	481	591	652	522	460
	U.S. imports (million dollars) . . . . .	3,333	4,418	4,063	3,590	3,766
	Apparent U.S. consumption (million dollars) . .	5,888	8,315	7,612	6,643	7,242
	Trade balance (million dollars) . . . . .	-2,852	-3,827	-3,411	-3,068	-3,305
	Ratio of imports to consumption (percent) . . .	56.6	53.1	53.4	54.0	52.0
	Ratio of exports to shipments (percent) . . . .	15.8	13.2	15.5	14.6	11.7
AG058	Printing and writing papers:					
	Number of establishments . . . . .	132	132	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
	Employees (thousands) . . . . .	134	133	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
	Capacity utilization (percent) . . . . .	98	92	91	94	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	20,280	27,317	23,861	24,800	25,767
	U.S. exports (million dollars) . . . . .	1,146	1,421	1,394	1,431	1,350
	U.S. imports (million dollars) . . . . .	2,831	4,192	3,565	3,773	4,289
	Apparent U.S. consumption (million dollars) . .	21,965	30,089	26,032	27,141	28,706
	Trade balance (million dollars) . . . . .	-1,685	-2,772	-2,171	-2,341	-2,939
	Ratio of imports to consumption (percent) . . .	12.9	13.9	13.7	13.9	14.9
	Ratio of exports to shipments (percent) . . . .	5.6	5.2	5.8	5.8	5.2
AG059	Certain specialty papers:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	4,950	5,010	4,700	4,900	5,091
	U.S. exports (million dollars) . . . . .	530	718	773	760	701
	U.S. imports (million dollars) . . . . .	568	742	774	808	845
	Apparent U.S. consumption (million dollars) . .	4,988	5,034	4,701	4,948	5,235
	Trade balance (million dollars) . . . . .	-38	-24	-1	-48	-144
	Ratio of imports to consumption (percent) . . .	11.4	14.7	16.5	16.3	16.1
	Ratio of exports to shipments (percent) . . . .	10.7	14.3	16.4	15.5	13.8
AG060	Miscellaneous paper products:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	21,000	22,255	23,100	24,000	24,936
	U.S. exports (million dollars) . . . . .	781	888	987	1,196	1,234
	U.S. imports (million dollars) . . . . .	583	758	875	956	1,029
	Apparent U.S. consumption (million dollars) . .	20,803	22,125	22,988	23,761	24,732
	Trade balance (million dollars) . . . . .	197	130	112	239	204
	Ratio of imports to consumption (percent) . . .	2.8	3.4	3.8	4.0	4.2
	Ratio of exports to shipments (percent) . . . .	3.7	4.0	4.3	5.0	4.9

See footnote(s) at end of table.

Table B-2--Continued

## Forest products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
AG061	Printed matter:					
	Number of establishments . . . . .	60,000	60,000	60,000	60,000	70,000
	Employees (thousands) . . . . .	1,500	1,500	1,500	1,500	1,500
	Capacity utilization (percent) . . . . .	83	81	81	77	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	170,000	180,000	187,000	196,000	204,000
	U.S. exports (million dollars) . . . . .	3,788	4,113	4,109	4,287	4,308
	U.S. imports (million dollars) . . . . .	2,146	2,468	2,564	2,719	2,923
	Apparent U.S. consumption (million dollars) . .	168,357	178,355	185,455	194,431	202,615
	Trade balance (million dollars) . . . . .	1,643	1,645	1,545	1,569	1,385
	Ratio of imports to consumption (percent) . . .	1.3	1.4	1.4	1.4	1.4
	Ratio of exports to shipments (percent) . . . . .	2.2	2.3	2.2	2.2	2.1

<sup>1</sup> Not available.

Note.--Calculations based on unrounded data.

**Table B-3**  
**Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
CH007	Major primary olefins:					
	Number of establishments . . . . .	37	37	37	37	37
	Employees (thousands) . . . . .	5	5	5	5	5
	Capacity utilization (percent) . . . . .	97	98	98	95	97
	U.S. shipments (million dollars) . . . . .	13,200	13,300	13,700	14,700	15,500
	U.S. exports (million dollars) . . . . .	123	145	199	306	169
	U.S. imports (million dollars) . . . . .	289	496	897	1,520	1,360
	Apparent U.S. consumption (million dollars) . .	13,366	13,652	14,398	15,914	16,691
	Trade balance (million dollars) . . . . .	-166	-352	-698	-1,214	-1,191
	Ratio of imports to consumption (percent) . . .	2.2	3.6	6.2	9.5	8.1
	Ratio of exports to shipments (percent) . . . . .	0.9	1.1	1.5	2.1	1.1
CH008	Other olefins:					
	Number of establishments . . . . .	23	23	23	23	23
	Employees (thousands) . . . . .	1	1	1	1	1
	Capacity utilization (percent) . . . . .	90	95	95	95	97
	U.S. shipments (million dollars) . . . . .	980	1,050	1,080	1,150	1,220
	U.S. exports (million dollars) . . . . .	190	242	192	175	211
	U.S. imports (million dollars) . . . . .	38	53	48	62	82
	Apparent U.S. consumption (million dollars) . .	827	861	936	1,037	1,091
	Trade balance (million dollars) . . . . .	153	189	144	113	129
	Ratio of imports to consumption (percent) . . .	4.6	6.1	5.1	6.0	7.5
	Ratio of exports to shipments (percent) . . . . .	19.4	23.0	17.8	15.2	17.3
CH009	Primary aromatics:					
	Number of establishments . . . . .	31	31	31	31	31
	Employees (thousands) . . . . .	2	2	2	2	2
	Capacity utilization (percent) . . . . .	78	80	80	80	80
	U.S. shipments (million dollars) . . . . .	4,200	4,250	4,350	4,400	4,000
	U.S. exports (million dollars) . . . . .	138	208	214	255	56
	U.S. imports (million dollars) . . . . .	158	246	588	856	704
	Apparent U.S. consumption (million dollars) . .	4,219	4,288	4,723	5,001	4,647
	Trade balance (million dollars) . . . . .	-19	-38	-373	-601	-647
	Ratio of imports to consumption (percent) . . .	3.7	5.7	12.4	17.1	15.1
	Ratio of exports to shipments (percent) . . . . .	3.3	4.9	4.9	5.8	1.4
CH010	Benzenoid commodity chemicals:					
	Number of establishments . . . . .	53	53	53	53	53
	Employees (thousands) . . . . .	15	15	15	15	15
	Capacity utilization (percent) . . . . .	82	90	90	90	88
	U.S. shipments (million dollars) . . . . .	13,900	15,581	15,815	16,450	16,240
	U.S. exports (million dollars) . . . . .	1,555	2,258	1,487	1,283	1,266
	U.S. imports (million dollars) . . . . .	392	813	808	923	741
	Apparent U.S. consumption (million dollars) . .	12,737	14,136	15,136	16,089	15,714
	Trade balance (million dollars) . . . . .	1,163	1,445	679	361	526
	Ratio of imports to consumption (percent) . . .	3.1	5.8	5.3	5.7	4.7
	Ratio of exports to shipments (percent) . . . . .	11.2	14.5	9.4	7.8	7.8
CH011	Benzenoid specialty chemicals:					
	Number of establishments . . . . .	250	250	250	250	250
	Employees (thousands) . . . . .	95	95	95	95	95
	Capacity utilization (percent) . . . . .	85	85	86	85	83
	U.S. shipments (million dollars) . . . . .	8,000	8,900	9,078	9,450	9,260
	U.S. exports (million dollars) . . . . .	4,109	4,625	4,827	5,587	5,476
	U.S. imports (million dollars) . . . . .	2,355	3,201	3,664	4,136	4,201
	Apparent U.S. consumption (million dollars) . .	6,246	7,476	7,915	7,999	7,985
	Trade balance (million dollars) . . . . .	1,754	1,424	1,163	1,451	1,275
	Ratio of imports to consumption (percent) . . .	37.7	42.8	46.3	51.7	52.6
	Ratio of exports to shipments (percent) . . . . .	51.4	52.0	53.2	59.1	59.1

See footnote(s) at end of table.

Table B-3--Continued

## Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH012	Miscellaneous organic chemicals:					
	Number of establishments . . . . .	250	259	262	265	265
	Employees (thousands) . . . . .	75	75	75	75	75
	Capacity utilization (percent) . . . . .	85	89	86	87	87
	U.S. shipments (million dollars) . . . . .	51,000	57,500	57,000	58,000	60,000
	U.S. exports (million dollars) . . . . .	5,642	7,697	7,031	7,780	6,804
	U.S. imports (million dollars) . . . . .	4,327	4,903	4,970	5,493	5,316
	Apparent U.S. consumption (million dollars) . .	49,685	54,706	54,939	55,714	58,512
	Trade balance (million dollars) . . . . .	1,315	2,794	2,061	2,286	1,488
	Ratio of imports to consumption (percent) . . .	8.7	9.0	9.0	9.9	9.1
	Ratio of exports to shipments (percent) . . . . .	11.1	13.4	12.3	13.4	11.3
CH013	Miscellaneous inorganic chemicals:					
	Number of establishments . . . . .	640	640	640	( <sup>1</sup> )	( <sup>1</sup> )
	Employees (thousands) . . . . .	59	54	53	( <sup>1</sup> )	( <sup>1</sup> )
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	7,773	8,694	8,863	8,860	( <sup>1</sup> )
	U.S. exports (million dollars) . . . . .	3,278	4,116	4,230	4,859	4,418
	U.S. imports (million dollars) . . . . .	3,400	4,194	4,823	5,118	4,752
	Apparent U.S. consumption (million dollars) . .	7,896	8,772	9,456	9,119	( <sup>1</sup> )
	Trade balance (million dollars) . . . . .	-123	-78	-593	-259	-334
	Ratio of imports to consumption (percent) . . .	43.1	47.8	51.0	56.1	( <sup>1</sup> )
	Ratio of exports to shipments (percent) . . . . .	42.2	47.3	47.7	54.8	( <sup>1</sup> )
CH014	Inorganic acids:					
	Number of establishments . . . . .	145	143	143	143	143
	Employees (thousands) . . . . .	9	9	9	9	9
	Capacity utilization (percent) . . . . .	80	80	80	80	82
	U.S. shipments (million dollars) . . . . .	2,601	2,653	2,710	2,765	2,820
	U.S. exports (million dollars) . . . . .	160	166	142	192	186
	U.S. imports (million dollars) . . . . .	199	209	234	262	282
	Apparent U.S. consumption (million dollars) . .	2,640	2,696	2,802	2,835	2,915
	Trade balance (million dollars) . . . . .	-39	-43	-92	-70	-95
	Ratio of imports to consumption (percent) . . .	7.5	7.8	8.4	9.2	9.7
	Ratio of exports to shipments (percent) . . . . .	6.2	6.3	5.2	7.0	6.6
CH015	Chlor-alkali chemicals:					
	Number of establishments . . . . .	60	60	60	60	65
	Employees (thousands) . . . . .	7	7	7	7	7
	Capacity utilization (percent) . . . . .	95	95	95	95	95
	U.S. shipments (million dollars) . . . . .	2,999	3,973	( <sup>1</sup> )	4,000	6,000
	U.S. exports (million dollars) . . . . .	594	899	967	824	834
	U.S. imports (million dollars) . . . . .	149	210	188	184	191
	Apparent U.S. consumption (million dollars) . .	2,554	3,284	( <sup>1</sup> )	3,359	5,358
	Trade balance (million dollars) . . . . .	445	689	779	641	642
	Ratio of imports to consumption (percent) . . .	5.8	6.4	( <sup>1</sup> )	5.5	3.6
	Ratio of exports to shipments (percent) . . . . .	19.8	22.6	( <sup>1</sup> )	20.6	13.9
CH016	Industrial gases:					
	Number of establishments . . . . .	600	600	600	600	600
	Employees (thousands) . . . . .	8	8	9	9	9
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	3,412	3,608	3,709	3,800	3,900
	U.S. exports (million dollars) . . . . .	105	114	115	148	147
	U.S. imports (million dollars) . . . . .	42	47	53	57	63
	Apparent U.S. consumption (million dollars) . .	3,350	3,541	3,648	3,709	3,816
	Trade balance (million dollars) . . . . .	62	67	61	91	84
	Ratio of imports to consumption (percent) . . .	1.3	1.3	1.5	1.5	1.7
	Ratio of exports to shipments (percent) . . . . .	3.1	3.2	3.1	3.9	3.8

See footnote(s) at end of table.

Table B-3--Continued

## Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH017	Fertilizers:					
	Number of establishments . . . . .	350	350	350	350	350
	Employees (thousands) . . . . .	37	37	37	37	37
	Capacity utilization (percent) . . . . .	85	83	85	85	84
	U.S. shipments (million dollars) . . . . .	8,737	9,480	9,670	9,865	9,900
	U.S. exports (million dollars) . . . . .	2,780	3,319	3,151	3,138	3,339
	U.S. imports (million dollars) . . . . .	2,040	2,357	2,489	2,492	2,472
	Apparent U.S. consumption (million dollars) . .	7,997	8,518	9,008	9,219	9,033
	Trade balance (million dollars) . . . . .	740	962	662	646	867
	Ratio of imports to consumption (percent) . . .	25.5	27.7	27.6	27.0	27.4
	Ratio of exports to shipments (percent) . . . . .	31.8	35.0	32.6	31.8	33.7
CH018	Paints, inks, and related items, and certain components thereof:					
	Number of establishments . . . . .	1,580	1,580	1,500	1,500	1,500
	Employees (thousands) . . . . .	15	15	15	15	15
	Capacity utilization (percent) . . . . .	85	84	85	85	85
	U.S. shipments (million dollars) . . . . .	18,956	19,673	20,100	21,500	22,800
	U.S. exports (million dollars) . . . . .	2,057	2,340	2,461	2,935	3,112
	U.S. imports (million dollars) . . . . .	1,148	1,425	1,504	1,726	1,755
	Apparent U.S. consumption (million dollars) . .	18,047	18,757	19,144	20,292	21,443
	Trade balance (million dollars) . . . . .	909	916	956	1,208	1,357
	Ratio of imports to consumption (percent) . . .	6.4	7.6	7.9	8.5	8.2
	Ratio of exports to shipments (percent) . . . . .	10.9	11.9	12.2	13.6	13.7
CH019	Synthetic organic pigments:					
	Number of establishments . . . . .	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) . . . . .	793	870	913	920	959
	U.S. exports (million dollars) . . . . .	299	283	295	337	349
	U.S. imports (million dollars) . . . . .	339	341	356	401	402
	Apparent U.S. consumption (million dollars) . .	833	928	974	983	1,012
	Trade balance (million dollars) . . . . .	-40	-58	-61	-63	-53
	Ratio of imports to consumption (percent) . . .	40.7	36.8	36.6	40.8	39.7
	Ratio of exports to shipments (percent) . . . . .	37.8	32.5	32.4	36.7	36.4
CH020	Synthetic dyes and azoic couplers:					
	Number of establishments . . . . .	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) . . . . .	991	1,040	1,095	1,100	1,122
	U.S. exports (million dollars) . . . . .	227	267	385	479	439
	U.S. imports (million dollars) . . . . .	595	569	572	628	555
	Apparent U.S. consumption (million dollars) . .	1,358	1,341	1,282	1,249	1,238
	Trade balance (million dollars) . . . . .	-367	-301	-187	-149	-116
	Ratio of imports to consumption (percent) . . .	43.8	42.4	44.6	50.3	44.8
	Ratio of exports to shipments (percent) . . . . .	23.0	25.7	35.2	43.6	39.1
CH021	Synthetic tanning agents:					
	Number of establishments . . . . .	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	20
	U.S. exports (million dollars) . . . . .	11	14	17	17	19
	U.S. imports (million dollars) . . . . .	6	6	7	8	6
	Apparent U.S. consumption (million dollars) . .	15	12	11	11	7
	Trade balance (million dollars) . . . . .	5	8	9	9	13
	Ratio of imports to consumption (percent) . . .	40.8	48.6	70.5	71.6	81.6
	Ratio of exports to shipments (percent) . . . . .	54.8	68.5	84.3	84.6	93.1
CH022	Natural tanning and dyeing materials:					

See footnote(s) at end of table.

Table B-3--Continued

## Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Number of establishments . . . . .	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) . . . . .	19	17	19	21	21
	U.S. imports (million dollars) . . . . .	58	52	57	62	66
	Apparent U.S. consumption (million dollars) . .	49	45	48	52	55
	Trade balance (million dollars) . . . . .	-39	-35	-38	-42	-45
	Ratio of imports to consumption (percent) . . .	118.4	114.5	119.3	120.8	119.8
	Ratio of exports to shipments (percent) . . . .	190.3	166.0	191.7	207.5	208.7
CH023	Photographic chemicals and preparations:					
	Number of establishments . . . . .	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) . . . . .	( <sup>1</sup> )				
	U.S. exports (million dollars) . . . . .	383	506	496	501	449
	U.S. imports (million dollars) . . . . .	650	749	701	733	633
	Apparent U.S. consumption (million dollars) . .	( <sup>1</sup> )				
	Trade balance (million dollars) . . . . .	-267	-244	-206	-231	-184
	Ratio of imports to consumption (percent) . . .	( <sup>1</sup> )				
	Ratio of exports to shipments (percent) . . . .	( <sup>1</sup> )				
CH024	Pesticide products and formulations:					
	Number of establishments . . . . .	59	55	55	55	55
	Employees (thousands) . . . . .	22	20	20	20	20
	Capacity utilization (percent) . . . . .	85	85	85	85	88
	U.S. shipments (million dollars) . . . . .	4,580	4,580	4,900	5,000	5,030
	U.S. exports (million dollars) . . . . .	1,736	1,968	2,013	2,276	2,392
	U.S. imports (million dollars) . . . . .	852	1,017	1,153	1,188	1,286
	Apparent U.S. consumption (million dollars) . .	3,696	3,629	4,040	3,912	3,924
	Trade balance (million dollars) . . . . .	884	951	860	1,088	1,106
	Ratio of imports to consumption (percent) . . .	23.0	28.0	28.5	30.4	32.8
	Ratio of exports to shipments (percent) . . . .	37.9	43.0	41.1	45.5	47.5
CH025	Adhesives and glues:					
	Number of establishments . . . . .	482	490	500	500	500
	Employees (thousands) . . . . .	10	10	10	10	10
	Capacity utilization (percent) . . . . .	85	84	85	86	85
	U.S. shipments (million dollars) . . . . .	4,340	4,500	4,700	4,800	4,888
	U.S. exports (million dollars) . . . . .	308	348	394	457	477
	U.S. imports (million dollars) . . . . .	134	138	141	150	159
	Apparent U.S. consumption (million dollars) . .	4,166	4,289	4,447	4,493	4,570
	Trade balance (million dollars) . . . . .	174	211	253	307	318
	Ratio of imports to consumption (percent) . . .	3.2	3.2	3.2	3.3	3.5
	Ratio of exports to shipments (percent) . . . .	7.1	7.7	8.4	9.5	9.7
CH026	Medicinal chemicals:					
	Number of establishments . . . . .	718	717	720	720	718
	Employees (thousands) . . . . .	184	174	203	205	208
	Capacity utilization (percent) . . . . .	85	85	85	85	85
	U.S. shipments (million dollars) . . . . .	59,600	60,300	63,000	67,400	74,140
	U.S. exports (million dollars) . . . . .	7,615	8,090	8,546	10,344	11,955
	U.S. imports (million dollars) . . . . .	6,971	8,654	11,189	14,184	17,941
	Apparent U.S. consumption (million dollars) . .	58,956	60,864	65,643	71,240	80,127
	Trade balance (million dollars) . . . . .	644	-564	-2,643	-3,840	-5,987
	Ratio of imports to consumption (percent) . . .	11.8	14.2	17.0	19.9	22.4
	Ratio of exports to shipments (percent) . . . .	12.8	13.4	13.6	15.3	16.1

See footnote(s) at end of table.

Table B-3--Continued

## Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH027	Essential oils and other flavoring materials:					
	Number of establishments . . . . .	57	55	53	53	53
	Employees (thousands) . . . . .	51	52	50	50	50
	Capacity utilization (percent) . . . . .	80	80	80	80	80
	U.S. shipments (million dollars) . . . . .	2,900	3,000	3,000	3,100	3,200
	U.S. exports (million dollars) . . . . .	848	910	981	1,014	914
	U.S. imports (million dollars) . . . . .	624	810	780	809	833
	Apparent U.S. consumption (million dollars) . .	2,676	2,900	2,799	2,895	3,119
	Trade balance (million dollars) . . . . .	224	100	201	205	81
	Ratio of imports to consumption (percent) . . .	23.3	27.9	27.9	28.0	26.7
	Ratio of exports to shipments (percent) . . . . .	29.2	30.3	32.7	32.7	28.6
CH028	Perfumes, cosmetics, and toiletries:					
	Number of establishments . . . . .	650	650	650	650	650
	Employees (thousands) . . . . .	57	58	58	57	58
	Capacity utilization (percent) . . . . .	87	88	85	85	87
	U.S. shipments (million dollars) . . . . .	18,500	19,000	19,300	19,350	20,000
	U.S. exports (million dollars) . . . . .	1,715	1,875	2,537	2,607	2,572
	U.S. imports (million dollars) . . . . .	1,055	1,168	1,276	1,428	1,629
	Apparent U.S. consumption (million dollars) . .	17,840	18,293	18,039	18,171	19,057
	Trade balance (million dollars) . . . . .	660	707	1,261	1,179	943
	Ratio of imports to consumption (percent) . . .	5.9	6.4	7.1	7.9	8.6
	Ratio of exports to shipments (percent) . . . . .	9.3	9.9	13.1	13.5	12.9
CH029	Soaps, detergents, and surface-active agents:					
	Number of establishments . . . . .	950	950	950	950	950
	Employees (thousands) . . . . .	47	48	48	50	50
	Capacity utilization (percent) . . . . .	87	88	85	87	87
	U.S. shipments (million dollars) . . . . .	16,000	16,500	16,500	16,600	17,000
	U.S. exports (million dollars) . . . . .	1,454	1,644	1,814	2,029	1,962
	U.S. imports (million dollars) . . . . .	556	653	760	854	883
	Apparent U.S. consumption (million dollars) . .	15,102	15,508	15,447	15,425	15,921
	Trade balance (million dollars) . . . . .	898	992	1,053	1,175	1,079
	Ratio of imports to consumption (percent) . . .	3.7	4.2	4.9	5.5	5.5
	Ratio of exports to shipments (percent) . . . . .	9.1	10.0	11.0	12.2	11.5
CH030	Miscellaneous chemicals and specialties:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	( <sup>1</sup> )				
	U.S. exports (million dollars) . . . . .	1,584	1,814	1,987	2,183	2,147
	U.S. imports (million dollars) . . . . .	774	944	1,030	1,200	1,421
	Apparent U.S. consumption (million dollars) . .	( <sup>1</sup> )				
	Trade balance (million dollars) . . . . .	810	869	957	982	726
	Ratio of imports to consumption (percent) . . .	( <sup>1</sup> )				
	Ratio of exports to shipments (percent) . . . . .	( <sup>1</sup> )				
CH031	Explosives, propellant powders, and related items:					
	Number of establishments . . . . .	135	135	130	130	127
	Employees (thousands) . . . . .	13	13	13	13	13
	Capacity utilization (percent) . . . . .	90	89	90	90	88
	U.S. shipments (million dollars) . . . . .	1,650	1,620	1,765	1,850	1,930
	U.S. exports (million dollars) . . . . .	252	250	328	291	292
	U.S. imports (million dollars) . . . . .	196	187	208	237	248
	Apparent U.S. consumption (million dollars) . .	1,594	1,557	1,645	1,796	1,886
	Trade balance (million dollars) . . . . .	56	63	120	54	44
	Ratio of imports to consumption (percent) . . .	12.3	12.0	12.6	13.2	13.2
	Ratio of exports to shipments (percent) . . . . .	15.3	15.4	18.6	15.7	15.2

See footnote(s) at end of table.

Table B-3--Continued

## Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH032	Polyethylene resins in primary forms:					
	Number of establishments	40	41	42	43	43
	Employees (thousands)	21	20	20	20	20
	Capacity utilization (percent)	88	88	90	90	89
	U.S. shipments (million dollars)	7,493	7,671	8,400	8,600	8,600
	U.S. exports (million dollars)	1,459	1,988	2,134	2,455	2,134
	U.S. imports (million dollars)	783	1,192	1,086	1,261	1,150
	Apparent U.S. consumption (million dollars)	6,817	6,875	7,353	7,406	7,616
	Trade balance (million dollars)	676	796	1,047	1,194	984
	Ratio of imports to consumption (percent)	11.5	17.3	14.8	17.0	15.1
	Ratio of exports to shipments (percent)	19.5	25.9	25.4	28.5	24.8
CH033	Polypropylene resins in primary forms:					
	Number of establishments	23	23	24	25	25
	Employees (thousands)	5	5	5	5	5
	Capacity utilization (percent)	88	87	91	94	92
	U.S. shipments (million dollars)	3,065	3,119	3,550	4,400	3,800
	U.S. exports (million dollars)	449	660	742	844	760
	U.S. imports (million dollars)	155	190	210	212	220
	Apparent U.S. consumption (million dollars)	2,771	2,649	3,018	3,768	3,260
	Trade balance (million dollars)	294	470	532	632	540
	Ratio of imports to consumption (percent)	5.6	7.2	7.0	5.6	6.8
	Ratio of exports to shipments (percent)	14.7	21.2	20.9	19.2	20.0
CH034	Polyvinyl chloride resins in primary forms:					
	Number of establishments	27	27	27	28	28
	Employees (thousands)	7	7	7	7	7
	Capacity utilization (percent)	100	97	94	95	94
	U.S. shipments (million dollars)	3,475	3,519	3,600	3,800	3,700
	U.S. exports (million dollars)	671	856	680	858	767
	U.S. imports (million dollars)	182	192	203	271	247
	Apparent U.S. consumption (million dollars)	2,986	2,855	3,124	3,213	3,180
	Trade balance (million dollars)	489	664	476	587	520
	Ratio of imports to consumption (percent)	6.1	6.7	6.5	8.4	7.8
	Ratio of exports to shipments (percent)	19.3	24.3	18.9	22.6	20.7
CH035	Styrene polymers in primary forms:					
	Number of establishments	68	68	68	69	69
	Employees (thousands)	11	11	11	11	11
	Capacity utilization (percent)	94	94	93	92	91
	U.S. shipments (million dollars)	4,999	5,013	5,240	5,600	5,200
	U.S. exports (million dollars)	662	790	799	824	779
	U.S. imports (million dollars)	300	351	335	353	418
	Apparent U.S. consumption (million dollars)	4,638	4,574	4,776	5,129	4,839
	Trade balance (million dollars)	361	439	464	471	361
	Ratio of imports to consumption (percent)	6.5	7.7	7.0	6.9	8.6
	Ratio of exports to shipments (percent)	13.2	15.7	15.2	14.7	15.0
CH036	Saturated polyester resins:					
	Number of establishments	49	50	50	50	50
	Employees (thousands)	6	6	6	6	6
	Capacity utilization (percent)	83	86	85	83	80
	U.S. shipments (million dollars)	3,925	4,216	4,500	4,700	4,600
	U.S. exports (million dollars)	491	640	623	696	626
	U.S. imports (million dollars)	197	242	230	355	451
	Apparent U.S. consumption (million dollars)	3,632	3,818	4,108	4,359	4,425
	Trade balance (million dollars)	293	398	392	341	175
	Ratio of imports to consumption (percent)	5.4	6.3	5.6	8.1	10.2
	Ratio of exports to shipments (percent)	12.5	15.2	13.8	14.8	13.6

See footnote(s) at end of table.

Table B-3--Continued

## Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH037	Other plastics in primary forms:					
	Number of establishments . . . . .	279	278	278	280	280
	Employees (thousands) . . . . .	32	32	32	32	32
	Capacity utilization (percent) . . . . .	93	92	92	90	89
	U.S. shipments (million dollars) . . . . .	14,900	14,958	15,700	16,000	15,700
	U.S. exports (million dollars) . . . . .	4,670	5,398	5,598	6,064	6,099
	U.S. imports (million dollars) . . . . .	1,684	1,937	2,127	2,204	2,286
	Apparent U.S. consumption (million dollars) . .	11,914	11,496	12,228	12,140	11,887
	Trade balance (million dollars) . . . . .	2,986	3,462	3,472	3,860	3,813
	Ratio of imports to consumption (percent) . . .	14.1	16.8	17.4	18.2	19.2
	Ratio of exports to shipments (percent) . . . . .	31.3	36.1	35.7	37.9	38.8
CH038	Styrene-butadiene rubber in primary forms:					
	Number of establishments . . . . .	11	11	11	11	11
	Employees (thousands) . . . . .	5	5	5	5	5
	Capacity utilization (percent) . . . . .	90	91	90	90	90
	U.S. shipments (million dollars) . . . . .	1,025	1,187	1,150	1,150	1,200
	U.S. exports (million dollars) . . . . .	298	353	361	348	322
	U.S. imports (million dollars) . . . . .	137	159	143	163	175
	Apparent U.S. consumption (million dollars) . .	865	992	932	966	1,054
	Trade balance (million dollars) . . . . .	160	195	218	184	146
	Ratio of imports to consumption (percent) . . .	15.9	16.0	15.4	16.9	16.6
	Ratio of exports to shipments (percent) . . . . .	29.0	29.8	31.4	30.2	26.8
CH039	Other synthetic rubber:					
	Number of establishments . . . . .	34	34	34	34	34
	Employees (thousands) . . . . .	11	11	11	11	11
	Capacity utilization (percent) . . . . .	80	81	80	80	80
	U.S. shipments (million dollars) . . . . .	3,070	3,111	3,100	3,100	3,200
	U.S. exports (million dollars) . . . . .	874	1,011	1,090	1,111	1,064
	U.S. imports (million dollars) . . . . .	491	557	565	614	669
	Apparent U.S. consumption (million dollars) . .	2,687	2,657	2,575	2,604	2,805
	Trade balance (million dollars) . . . . .	383	454	525	496	395
	Ratio of imports to consumption (percent) . . .	18.3	21.0	21.9	23.6	23.9
	Ratio of exports to shipments (percent) . . . . .	28.5	32.5	35.1	35.8	33.2
CH040	Pneumatic tires and tubes (new):					
	Number of establishments . . . . .	37	40	40	42	42
	Employees (thousands) . . . . .	63	62	62	62	62
	Capacity utilization (percent) . . . . .	97	98	95	92	95
	U.S. shipments (million dollars) . . . . .	10,900	11,000	11,400	11,800	12,100
	U.S. exports (million dollars) . . . . .	1,614	1,869	1,960	2,403	2,532
	U.S. imports (million dollars) . . . . .	2,960	3,073	3,011	3,343	4,011
	Apparent U.S. consumption (million dollars) . .	12,245	12,204	12,451	12,739	13,579
	Trade balance (million dollars) . . . . .	-1,345	-1,204	-1,051	-939	-1,479
	Ratio of imports to consumption (percent) . . .	24.2	25.2	24.2	26.2	29.5
	Ratio of exports to shipments (percent) . . . . .	14.8	17.0	17.2	20.4	20.9
CH041	Other tires:					
	Number of establishments . . . . .	1,600	1,400	1,400	1,400	1,400
	Employees (thousands) . . . . .	5	5	5	5	5
	Capacity utilization (percent) . . . . .	90	92	90	90	90
	U.S. shipments (million dollars) . . . . .	1,800	1,750	1,800	1,800	1,900
	U.S. exports (million dollars) . . . . .	79	73	84	86	93
	U.S. imports (million dollars) . . . . .	114	121	116	132	143
	Apparent U.S. consumption (million dollars) . .	1,835	1,797	1,832	1,846	1,950
	Trade balance (million dollars) . . . . .	-35	-47	-32	-46	-50
	Ratio of imports to consumption (percent) . . .	6.2	6.7	6.3	7.2	7.3
	Ratio of exports to shipments (percent) . . . . .	4.4	4.2	4.7	4.8	4.9

See footnote(s) at end of table.

Table B-3--Continued

## Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH042	Plastic or rubber semifabricated forms:					
	Number of establishments . . . . .	1,551	1,555	1,555	1,555	1,560
	Employees (thousands) . . . . .	103	103	103	102	102
	Capacity utilization (percent) . . . . .	81	82	82	81	81
	U.S. shipments (million dollars) . . . . .	17,800	18,127	18,300	18,000	18,500
	U.S. exports (million dollars) . . . . .	3,596	4,116	4,244	4,791	4,648
	U.S. imports (million dollars) . . . . .	2,286	2,647	2,800	3,073	3,220
	Apparent U.S. consumption (million dollars) . .	16,490	16,658	16,856	16,282	17,072
	Trade balance (million dollars) . . . . .	1,310	1,469	1,444	1,718	1,428
	Ratio of imports to consumption (percent) . . .	13.9	15.9	16.6	18.9	18.9
	Ratio of exports to shipments (percent) . . . . .	20.2	22.7	23.2	26.6	25.1
CH043	Plastic containers and closures:					
	Number of establishments . . . . .	1,860	1,860	1,860	1,860	1,860
	Employees (thousands) . . . . .	76	76	76	76	77
	Capacity utilization (percent) . . . . .	90	90	91	90	90
	U.S. shipments (million dollars) . . . . .	9,466	9,578	9,800	9,600	9,700
	U.S. exports (million dollars) . . . . .	1,060	1,264	1,434	1,649	1,893
	U.S. imports (million dollars) . . . . .	968	1,210	1,279	1,489	1,569
	Apparent U.S. consumption (million dollars) . .	9,374	9,524	9,645	9,440	9,377
	Trade balance (million dollars) . . . . .	92	54	155	160	323
	Ratio of imports to consumption (percent) . . .	10.3	12.7	13.3	15.8	16.7
	Ratio of exports to shipments (percent) . . . . .	11.2	13.2	14.6	17.2	19.5
CH044	Hose, belting, and plastic pipe:					
	Number of establishments . . . . .	475	476	478	478	478
	Employees (thousands) . . . . .	38	38	38	38	38
	Capacity utilization (percent) . . . . .	75	76	77	76	76
	U.S. shipments (million dollars) . . . . .	5,900	6,129	6,300	6,200	6,200
	U.S. exports (million dollars) . . . . .	1,027	1,137	1,377	1,583	1,594
	U.S. imports (million dollars) . . . . .	855	991	1,063	1,134	1,226
	Apparent U.S. consumption (million dollars) . .	5,728	5,983	5,986	5,751	5,833
	Trade balance (million dollars) . . . . .	172	146	314	449	367
	Ratio of imports to consumption (percent) . . .	14.9	16.6	17.8	19.7	21.0
	Ratio of exports to shipments (percent) . . . . .	17.4	18.5	21.9	25.5	25.7
CH045	Miscellaneous rubber or plastic products:					
	Number of establishments . . . . .	12,900	12,800	12,800	12,800	12,800
	Employees (thousands) . . . . .	605	595	600	600	600
	Capacity utilization (percent) . . . . .	87	88	85	85	86
	U.S. shipments (million dollars) . . . . .	72,000	71,000	72,400	73,000	74,000
	U.S. exports (million dollars) . . . . .	3,110	3,253	3,757	4,429	4,702
	U.S. imports (million dollars) . . . . .	4,456	4,914	5,115	5,387	5,848
	Apparent U.S. consumption (million dollars) . .	73,346	72,661	73,758	73,958	75,146
	Trade balance (million dollars) . . . . .	-1,346	-1,661	-1,358	-958	-1,146
	Ratio of imports to consumption (percent) . . .	6.1	6.8	6.9	7.3	7.8
	Ratio of exports to shipments (percent) . . . . .	4.3	4.6	5.2	6.1	6.4
CH046	Gelatin:					
	Number of establishments . . . . .	8	8	8	8	8
	Employees (thousands) . . . . .	1	1	1	1	1
	Capacity utilization (percent) . . . . .	90	90	90	92	90
	U.S. shipments (million dollars) . . . . .	180	202	240	250	252
	U.S. exports (million dollars) . . . . .	36	42	46	59	51
	U.S. imports (million dollars) . . . . .	90	102	130	133	122
	Apparent U.S. consumption (million dollars) . .	235	261	324	324	323
	Trade balance (million dollars) . . . . .	-55	-59	-84	-74	-71
	Ratio of imports to consumption (percent) . . .	38.5	38.9	40.2	41.1	37.8
	Ratio of exports to shipments (percent) . . . . .	19.8	21.0	19.3	23.6	20.1

See footnote(s) at end of table.

Table B-3--*Continued*

Chemicals and related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH047	Natural rubber:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	0	0	0	0	0
	U.S. exports (million dollars) . . . . .	33	42	44	41	36
	U.S. imports (million dollars) . . . . .	965	1,629	1,468	1,229	977
	Apparent U.S. consumption (million dollars) . .	933	1,587	1,424	1,189	941
	Trade balance (million dollars) . . . . .	-933	-1,587	-1,424	-1,189	-941
	Ratio of imports to consumption (percent) . . .	103.5	102.6	103.1	103.4	103.8
	Ratio of exports to shipments (percent) . . . . .	( <sup>2</sup> )				

<sup>1</sup> Not available.

<sup>2</sup> Not meaningful.

Note.--Calculations based on unrounded data.

**Table B-4**  
**Energy-related products sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
CH001	Electrical energy:					
	Number of establishments . . . . .	3,225	3,225	3,225	3,225	3,225
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	100	100	100	100	100
	U.S. shipments (million dollars) . . . . .	185,062	190,428	196,141	214,322	199,510
	U.S. exports (million dollars) . . . . .	30	47	69	124	185
	U.S. imports (million dollars) . . . . .	960	856	902	978	1,039
	Apparent U.S. consumption (million dollars) . .	185,992	191,237	196,973	215,176	200,364
	Trade balance (million dollars) . . . . .	-930	-809	-832	-854	-854
	Ratio of imports to consumption (percent) . . .	0.5	0.4	0.5	0.5	0.5
	Ratio of exports to shipments (percent) . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	0.1	0.1
CH002	Nuclear materials:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	( <sup>1</sup> )				
	U.S. exports (million dollars) . . . . .	1,226	965	1,047	1,444	1,041
	U.S. imports (million dollars) . . . . .	1,114	1,127	1,326	1,219	1,382
	Apparent U.S. consumption (million dollars) . .	( <sup>1</sup> )				
	Trade balance (million dollars) . . . . .	112	-162	-279	225	-340
	Ratio of imports to consumption (percent) . . .	( <sup>1</sup> )				
	Ratio of exports to shipments (percent) . . . . .	( <sup>1</sup> )				
CH003	Coal, coke, and related chemical products:					
	Number of establishments . . . . .	520	520	520	520	520
	Employees (thousands) . . . . .	150	150	150	150	150
	Capacity utilization (percent) . . . . .	85	85	85	85	85
	U.S. shipments (million dollars) . . . . .	30,000	29,700	33,173	32,658	29,965
	U.S. exports (million dollars) . . . . .	3,464	4,328	4,452	4,276	3,635
	U.S. imports (million dollars) . . . . .	799	847	1,253	1,688	1,570
	Apparent U.S. consumption (million dollars) . .	27,335	26,219	29,975	30,070	27,900
	Trade balance (million dollars) . . . . .	2,665	3,481	3,198	2,588	2,065
	Ratio of imports to consumption (percent) . . .	2.9	3.2	4.2	5.6	5.6
	Ratio of exports to shipments (percent) . . . . .	11.5	14.6	13.4	13.1	12.1
CH004	Crude petroleum:					
	Number of establishments . . . . .	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. shipments (million dollars) . . . . .	34,000	34,846	43,601	40,342	28,344
	U.S. exports (million dollars) . . . . .	44	1	460	780	670
	U.S. imports (million dollars) . . . . .	38,530	42,077	44,849	38,394	25,467
	Apparent U.S. consumption (million dollars) . .	72,486	76,922	87,990	77,957	53,141
	Trade balance (million dollars) . . . . .	-38,486	-42,076	-44,389	-37,615	-24,797
	Ratio of imports to consumption (percent) . . .	53.2	54.7	51.0	49.3	47.9
	Ratio of exports to shipments (percent) . . . . .	0.1	( <sup>2</sup> )	1.1	1.9	2.4
CH005	Petroleum products:					
	Number of establishments . . . . .	190	190	190	190	190
	Employees (thousands) . . . . .	75	75	75	75	75
	Capacity utilization (percent) . . . . .	85	85	90	90	90
	U.S. shipments (million dollars) . . . . .	130,000	131,549	147,961	129,409	85,580
	U.S. exports (million dollars) . . . . .	6,014	6,583	7,604	7,728	6,233
	U.S. imports (million dollars) . . . . .	10,450	9,777	18,915	21,523	17,584
	Apparent U.S. consumption (million dollars) . .	134,436	134,743	159,273	143,203	96,931
	Trade balance (million dollars) . . . . .	-4,436	-3,194	-11,312	-13,794	-11,351
	Ratio of imports to consumption (percent) . . .	7.8	7.3	11.9	15.0	18.1
	Ratio of exports to shipments (percent) . . . . .	4.6	5.0	5.1	6.0	7.3

See footnote(s) at end of table.

Table B-4--Continued

Energy-related products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH006	Natural gas and components:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	205	205	200	200	200
	Capacity utilization (percent) . . . . .	80	80	80	80	80
	U.S. shipments (million dollars) . . . . .	76,000	76,000	77,000	79,000	65,000
	U.S. exports (million dollars) . . . . .	568	775	770	814	581
	U.S. imports (million dollars) . . . . .	5,201	5,157	8,253	10,215	9,212
	Apparent U.S. consumption (million dollars) . .	80,633	80,382	84,484	88,401	73,630
	Trade balance (million dollars) . . . . .	-4,633	-4,382	-7,484	-9,401	-8,630
	Ratio of imports to consumption (percent) . . .	6.5	6.4	9.8	11.6	12.5
	Ratio of exports to shipments (percent) . . . . .	0.7	1.0	1.0	1.0	0.9

<sup>1</sup> Not available.

<sup>2</sup> Less than 0.05 percent.

Note.--Calculations based on unrounded data.

**Table B-5**  
**Textiles and apparel, and footwear sectors: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
CH048	Manmade fibers and filament yarns:					
	Number of establishments . . . . .	257	253	274	302	296
	Employees (thousands) . . . . .	67	63	64	62	60
	Capacity utilization (percent) . . . . .	90	88	91	90	88
	U.S. shipments (million dollars) . . . . .	13,118	13,952	13,578	14,202	13,918
	U.S. exports (million dollars) . . . . .	1,585	2,064	2,109	2,166	1,981
	U.S. imports (million dollars) . . . . .	1,299	1,381	1,402	1,555	1,575
	Apparent U.S. consumption (million dollars) . .	12,832	13,269	12,870	13,591	13,513
	Trade balance (million dollars) . . . . .	286	683	708	611	405
	Ratio of imports to consumption (percent) . . .	10.1	10.4	10.9	11.4	11.7
	Ratio of exports to shipments (percent) . . . . .	12.1	14.8	15.5	15.3	14.2
CH049	Spun yarns and miscellaneous yarns:					
	Number of establishments . . . . .	529	539	536	534	523
	Employees (thousands) . . . . .	96	95	87	86	83
	Capacity utilization (percent) . . . . .	92	81	85	83	81
	U.S. shipments (million dollars) . . . . .	9,541	10,071	10,251	10,354	10,147
	U.S. exports (million dollars) . . . . .	458	574	654	712	745
	U.S. imports (million dollars) . . . . .	594	613	645	777	822
	Apparent U.S. consumption (million dollars) . .	9,678	10,110	10,242	10,419	10,225
	Trade balance (million dollars) . . . . .	-137	-39	9	-65	-78
	Ratio of imports to consumption (percent) . . .	6.1	6.1	6.3	7.5	8.0
	Ratio of exports to shipments (percent) . . . . .	4.8	5.7	6.4	6.9	7.3
CH050	Broadwoven fabrics:					
	Number of establishments . . . . .	2,091	1,984	2,019	2,065	2,024
	Employees (thousands) . . . . .	226	222	210	203	195
	Capacity utilization (percent) . . . . .	91	86	86	85	83
	U.S. shipments (million dollars) . . . . .	21,200	20,730	20,193	21,041	20,831
	U.S. exports (million dollars) . . . . .	1,747	1,888	2,089	2,254	2,294
	U.S. imports (million dollars) . . . . .	3,362	3,462	3,384	3,802	3,793
	Apparent U.S. consumption (million dollars) . .	22,815	22,304	21,487	22,589	22,330
	Trade balance (million dollars) . . . . .	-1,615	-1,574	-1,294	-1,548	-1,499
	Ratio of imports to consumption (percent) . . .	14.7	15.5	15.7	16.8	17.0
	Ratio of exports to shipments (percent) . . . . .	8.2	9.1	10.3	10.7	11.0
CH051	Knit fabrics:					
	Number of establishments . . . . .	516	514	501	496	486
	Employees (thousands) . . . . .	46	45	43	43	42
	Capacity utilization (percent) . . . . .	85	79	78	76	74
	U.S. shipments (million dollars) . . . . .	8,102	7,436	7,580	7,777	7,621
	U.S. exports (million dollars) . . . . .	344	437	497	615	601
	U.S. imports (million dollars) . . . . .	336	334	520	784	792
	Apparent U.S. consumption (million dollars) . .	8,095	7,334	7,603	7,946	7,812
	Trade balance (million dollars) . . . . .	7	102	-23	-169	-191
	Ratio of imports to consumption (percent) . . .	4.2	4.6	6.8	9.9	10.1
	Ratio of exports to shipments (percent) . . . . .	4.2	5.9	6.6	7.9	7.9
CH052	Miscellaneous fabrics:					
	Number of establishments . . . . .	400	400	400	400	( <sup>1</sup> )
	Employees (thousands) . . . . .	26	25	25	25	( <sup>1</sup> )
	Capacity utilization (percent) . . . . .	80	80	80	80	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	1,730	1,810	1,755	1,750	( <sup>1</sup> )
	U.S. exports (million dollars) . . . . .	234	268	260	311	353
	U.S. imports (million dollars) . . . . .	130	151	153	180	202
	Apparent U.S. consumption (million dollars) . .	1,626	1,693	1,648	1,619	( <sup>1</sup> )
	Trade balance (million dollars) . . . . .	104	117	107	131	151
	Ratio of imports to consumption (percent) . . .	8.0	8.9	9.3	11.1	( <sup>1</sup> )
	Ratio of exports to shipments (percent) . . . . .	13.5	14.8	14.8	17.8	( <sup>1</sup> )

See footnote(s) at end of table.

Table B-5--Continued

## Textiles and apparel, and footwear sectors: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH053	Coated, covered, impregnated, or laminated textile fabrics:					
	Number of establishments . . . . .	213	209	223	232	227
	Employees (thousands) . . . . .	9	9	9	10	9
	Capacity utilization (percent) . . . . .	83	81	79	84	82
	U.S. shipments (million dollars) . . . . .	1,750	1,880	1,845	1,930	1,890
	U.S. exports (million dollars) . . . . .	450	492	542	678	708
	U.S. imports (million dollars) . . . . .	227	243	255	288	311
	Apparent U.S. consumption (million dollars) . .	1,527	1,631	1,558	1,539	1,493
	Trade balance (million dollars) . . . . .	223	249	287	391	397
	Ratio of imports to consumption (percent) . . .	14.9	14.9	16.4	18.7	20.8
	Ratio of exports to shipments (percent) . . . . .	25.7	26.2	29.4	35.2	37.5
CH054	Cordage, nets, and netting:					
	Number of establishments . . . . .	210	214	208	205	201
	Employees (thousands) . . . . .	7	8	7	7	7
	Capacity utilization (percent) . . . . .	77	74	70	74	73
	U.S. shipments (million dollars) . . . . .	663	696	689	721	706
	U.S. exports (million dollars) . . . . .	43	48	55	58	63
	U.S. imports (million dollars) . . . . .	147	162	140	171	167
	Apparent U.S. consumption (million dollars) . .	767	810	774	834	810
	Trade balance (million dollars) . . . . .	-104	-114	-85	-113	-104
	Ratio of imports to consumption (percent) . . .	19.2	20.0	18.1	20.5	20.6
	Ratio of exports to shipments (percent) . . . . .	6.5	6.9	8.0	8.0	9.0
CH055	Certain textile articles and fabrics suitable for industrial use:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	( <sup>1</sup> )				
	U.S. exports (million dollars) . . . . .	282	277	262	302	303
	U.S. imports (million dollars) . . . . .	202	235	262	264	303
	Apparent U.S. consumption (million dollars) . .	( <sup>1</sup> )				
	Trade balance (million dollars) . . . . .	80	42	( <sup>2</sup> )	38	( <sup>2</sup> )
	Ratio of imports to consumption (percent) . . .	( <sup>1</sup> )				
	Ratio of exports to shipments (percent) . . . . .	( <sup>1</sup> )				
CH056	Miscellaneous textiles and articles:					
	Number of establishments . . . . .	1,250	1,252	1,252	1,254	( <sup>1</sup> )
	Employees (thousands) . . . . .	12	12	12	12	( <sup>1</sup> )
	Capacity utilization (percent) . . . . .	85	85	85	85	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	6,050	6,270	6,550	6,550	( <sup>1</sup> )
	U.S. exports (million dollars) . . . . .	848	976	1,045	1,225	1,128
	U.S. imports (million dollars) . . . . .	1,179	1,417	1,492	1,703	1,929
	Apparent U.S. consumption (million dollars) . .	6,381	6,711	6,996	7,028	( <sup>1</sup> )
	Trade balance (million dollars) . . . . .	-331	-441	-446	-478	-801
	Ratio of imports to consumption (percent) . . .	18.5	21.1	21.3	24.2	( <sup>1</sup> )
	Ratio of exports to shipments (percent) . . . . .	14.0	15.6	16.0	18.7	( <sup>1</sup> )

See footnote(s) at end of table.

**Table B-5--Continued**  
**Textiles and apparel, and footwear sectors: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
CH057	Sacks and bags of textile materials:					
	Number of establishments . . . . .	332	340	351	354	347
	Employees (thousands) . . . . .	11	12	11	11	11
	Capacity utilization (percent) . . . . .	73	60	71	65	64
	U.S. shipments (million dollars) . . . . .	856	858	897	938	920
	U.S. exports (million dollars) . . . . .	22	26	19	20	23
	U.S. imports (million dollars) . . . . .	52	76	17	18	18
	Apparent U.S. consumption (million dollars) . .	886	908	894	936	916
	Trade balance (million dollars) . . . . .	-30	-50	3	2	4
	Ratio of imports to consumption (percent) . . .	5.9	8.4	1.8	1.9	2.0
	Ratio of exports to shipments (percent) . . . . .	2.6	3.0	2.1	2.2	2.4
CH058	Carpets and rugs:					
	Number of establishments . . . . .	611	579	588	608	596
	Employees (thousands) . . . . .	64	63	61	62	60
	Capacity utilization (percent) . . . . .	84	78	76	80	78
	U.S. shipments (million dollars) . . . . .	10,141	10,405	10,806	10,925	10,706
	U.S. exports (million dollars) . . . . .	713	686	757	858	826
	U.S. imports (million dollars) . . . . .	748	858	845	961	1,109
	Apparent U.S. consumption (million dollars) . .	10,176	10,576	10,893	11,028	10,989
	Trade balance (million dollars) . . . . .	-35	-171	-87	-103	-283
	Ratio of imports to consumption (percent) . . .	7.4	8.1	7.8	8.7	10.1
	Ratio of exports to shipments (percent) . . . . .	7.0	6.6	7.0	7.9	7.7
CH059	Home furnishings:					
	Number of establishments . . . . .	1,795	1,767	1,720	1,675	1,640
	Employees (thousands) . . . . .	72	74	68	68	65
	Capacity utilization (percent) . . . . .	87	81	83	83	81
	U.S. shipments (million dollars) . . . . .	9,459	9,148	9,205	9,573	9,382
	U.S. exports (million dollars) . . . . .	261	266	280	328	349
	U.S. imports (million dollars) . . . . .	1,075	1,258	1,255	1,530	1,897
	Apparent U.S. consumption (million dollars) . .	10,273	10,140	10,179	10,774	10,930
	Trade balance (million dollars) . . . . .	-814	-992	-974	-1,201	-1,548
	Ratio of imports to consumption (percent) . . .	10.5	12.4	12.3	14.2	17.4
	Ratio of exports to shipments (percent) . . . . .	2.8	2.9	3.0	3.4	3.7
CH060	Men's and boys' suits and sports coats:					
	Number of establishments . . . . .	309	311	303	281	270
	Employees (thousands) . . . . .	33	31	27	25	24
	Capacity utilization (percent) . . . . .	76	80	82	75	75
	U.S. shipments (million dollars) . . . . .	1,935	1,677	1,559	1,524	1,367
	U.S. exports (million dollars) . . . . .	148	149	133	126	89
	U.S. imports (million dollars) . . . . .	748	850	924	1,054	1,156
	Apparent U.S. consumption (million dollars) . .	2,535	2,378	2,351	2,452	2,434
	Trade balance (million dollars) . . . . .	-600	-701	-792	-928	-1,067
	Ratio of imports to consumption (percent) . . .	29.5	35.8	39.3	43.0	47.5
	Ratio of exports to shipments (percent) . . . . .	7.6	8.9	8.5	8.3	6.5
CH061	Men's and boys' coats and jackets:					
	Number of establishments . . . . .	423	440	431	409	400
	Employees (thousands) . . . . .	21	21	18	16	15
	Capacity utilization (percent) . . . . .	84	75	77	77	75
	U.S. shipments (million dollars) . . . . .	1,253	1,312	1,467	1,664	1,421
	U.S. exports (million dollars) . . . . .	136	125	144	131	124
	U.S. imports (million dollars) . . . . .	1,773	1,692	1,783	2,230	2,163
	Apparent U.S. consumption (million dollars) . .	2,890	2,879	3,106	3,763	3,460
	Trade balance (million dollars) . . . . .	-1,637	-1,567	-1,639	-2,099	-2,039
	Ratio of imports to consumption (percent) . . .	61.3	58.8	57.4	59.3	62.5
	Ratio of exports to shipments (percent) . . . . .	10.9	9.5	9.8	7.9	8.7

See footnote(s) at end of table.

**Table B-5--Continued**  
**Textiles and apparel, and footwear sectors: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
CH062	Men's and boys' trousers:					
	Number of establishments . . . . .	713	725	694	646	620
	Employees (thousands) . . . . .	102	98	93	86	80
	Capacity utilization (percent) . . . . .	98	92	78	87	85
	U.S. shipments (million dollars) . . . . .	7,736	8,055	8,013	7,793	6,858
	U.S. exports (million dollars) . . . . .	1,050	1,082	1,232	1,364	1,249
	U.S. imports (million dollars) . . . . .	3,145	3,755	4,083	4,933	5,705
	Apparent U.S. consumption (million dollars) . .	9,831	10,728	10,863	11,362	11,314
	Trade balance (million dollars) . . . . .	-2,095	-2,673	-2,850	-3,569	-4,456
	Ratio of imports to consumption (percent) . . .	32.0	35.0	37.6	43.4	50.4
	Ratio of exports to shipments (percent) . . . . .	13.6	13.4	15.4	17.5	18.2
CH063	Women's and girls' trousers:					
	Number of establishments . . . . .	1,746	1,844	1,819	1,802	1,768
	Employees (thousands) . . . . .	65	63	60	59	54
	Capacity utilization (percent) . . . . .	91	76	78	76	76
	U.S. shipments (million dollars) . . . . .	5,099	5,131	5,125	5,570	5,263
	U.S. exports (million dollars) . . . . .	409	486	570	637	706
	U.S. imports (million dollars) . . . . .	3,583	3,670	3,948	5,097	5,887
	Apparent U.S. consumption (million dollars) . .	8,272	8,315	8,503	10,030	10,444
	Trade balance (million dollars) . . . . .	-3,173	-3,184	-3,378	-4,460	-5,181
	Ratio of imports to consumption (percent) . . .	43.3	44.1	46.4	50.8	56.4
	Ratio of exports to shipments (percent) . . . . .	8.0	9.5	11.1	11.4	13.4
CH064	Shirts and blouses:					
	Number of establishments . . . . .	2,064	2,123	2,005	1,861	1,760
	Employees (thousands) . . . . .	125	118	101	93	82
	Capacity utilization (percent) . . . . .	89	81	79	79	78
	U.S. shipments (million dollars) . . . . .	11,511	11,728	11,678	11,373	11,260
	U.S. exports (million dollars) . . . . .	1,021	1,285	1,402	1,657	1,582
	U.S. imports (million dollars) . . . . .	10,840	11,986	12,377	14,416	16,436
	Apparent U.S. consumption (million dollars) . .	21,330	22,429	22,653	24,132	26,114
	Trade balance (million dollars) . . . . .	-9,819	-10,701	-10,975	-12,759	-14,854
	Ratio of imports to consumption (percent) . . .	50.8	53.4	54.6	59.7	62.9
	Ratio of exports to shipments (percent) . . . . .	8.9	11.0	12.0	14.6	14.1
CH065	Sweaters:					
	Number of establishments . . . . .	314	328	319	311	297
	Employees (thousands) . . . . .	14	14	13	13	12
	Capacity utilization (percent) . . . . .	83	79	76	78	78
	U.S. shipments (million dollars) . . . . .	897	792	867	933	817
	U.S. exports (million dollars) . . . . .	30	32	46	34	29
	U.S. imports (million dollars) . . . . .	2,052	1,750	1,765	2,239	2,546
	Apparent U.S. consumption (million dollars) . .	2,919	2,510	2,586	3,137	3,334
	Trade balance (million dollars) . . . . .	-2,022	-1,718	-1,719	-2,204	-2,517
	Ratio of imports to consumption (percent) . . .	70.3	69.7	68.2	71.4	76.4
	Ratio of exports to shipments (percent) . . . . .	3.4	4.1	5.3	3.7	3.5
CH066	Women's and girls' suits, skirts, and coats:					
	Number of establishments . . . . .	819	771	703	631	618
	Employees (thousands) . . . . .	33	30	27	24	23
	Capacity utilization (percent) . . . . .	86	83	85	74	74
	U.S. shipments (million dollars) . . . . .	3,713	3,401	3,487	3,359	3,290
	U.S. exports (million dollars) . . . . .	255	274	287	311	312
	U.S. imports (million dollars) . . . . .	3,261	3,548	3,857	4,144	4,285
	Apparent U.S. consumption (million dollars) . .	6,718	6,675	7,057	7,192	7,263
	Trade balance (million dollars) . . . . .	-3,005	-3,274	-3,570	-3,833	-3,973
	Ratio of imports to consumption (percent) . . .	48.5	53.2	54.7	57.6	59.0
	Ratio of exports to shipments (percent) . . . . .	6.9	8.1	8.2	9.2	9.5

See footnote(s) at end of table.

**Table B-5--Continued**  
**Textiles and apparel, and footwear sectors: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
CH067	Women's and girls' dresses:					
	Number of establishments . . . . .	2,259	2,120	2,070	1,815	1,741
	Employees (thousands) . . . . .	58	52	48	46	42
	Capacity utilization (percent) . . . . .	83	84	84	83	84
	U.S. shipments (million dollars) . . . . .	4,804	4,674	4,455	4,341	4,645
	U.S. exports (million dollars) . . . . .	103	112	115	148	124
	U.S. imports (million dollars) . . . . .	1,260	1,443	1,574	1,636	1,686
	Apparent U.S. consumption (million dollars) . .	5,961	6,004	5,914	5,829	6,208
	Trade balance (million dollars) . . . . .	-1,157	-1,330	-1,459	-1,488	-1,563
	Ratio of imports to consumption (percent) . . .	21.1	24.0	26.6	28.1	27.2
	Ratio of exports to shipments (percent) . . . . .	2.2	2.4	2.6	3.4	2.7
CH068	Robes, nightwear, and underwear:					
	Number of establishments . . . . .	644	626	593	547	518
	Employees (thousands) . . . . .	74	65	55	48	42
	Capacity utilization (percent) . . . . .	87	89	89	88	80
	U.S. shipments (million dollars) . . . . .	3,970	4,023	3,644	3,619	2,823
	U.S. exports (million dollars) . . . . .	569	712	813	978	956
	U.S. imports (million dollars) . . . . .	2,197	2,673	2,947	3,597	4,117
	Apparent U.S. consumption (million dollars) . .	5,598	5,984	5,778	6,238	5,984
	Trade balance (million dollars) . . . . .	-1,628	-1,961	-2,134	-2,619	-3,161
	Ratio of imports to consumption (percent) . . .	39.2	44.7	51.0	57.7	68.8
	Ratio of exports to shipments (percent) . . . . .	14.3	17.7	22.3	27.0	33.9
CH069	Hosiery:					
	Number of establishments . . . . .	679	673	649	622	604
	Employees (thousands) . . . . .	67	64	61	58	54
	Capacity utilization (percent) . . . . .	85	88	89	88	88
	U.S. shipments (million dollars) . . . . .	4,832	4,784	5,070	5,210	5,300
	U.S. exports (million dollars) . . . . .	220	257	273	352	417
	U.S. imports (million dollars) . . . . .	291	363	404	566	685
	Apparent U.S. consumption (million dollars) . .	4,903	4,890	5,201	5,424	5,569
	Trade balance (million dollars) . . . . .	-71	-106	-131	-214	-269
	Ratio of imports to consumption (percent) . . .	5.9	7.4	7.8	10.4	12.3
	Ratio of exports to shipments (percent) . . . . .	4.6	5.4	5.4	6.8	7.9
CH070	Body-supporting garments:					
	Number of establishments . . . . .	104	100	96	91	86
	Employees (thousands) . . . . .	12	12	11	10	9
	Capacity utilization (percent) . . . . .	88	70	81	73	75
	U.S. shipments (million dollars) . . . . .	1,795	1,853	1,890	1,946	2,004
	U.S. exports (million dollars) . . . . .	344	431	405	507	518
	U.S. imports (million dollars) . . . . .	751	927	864	968	1,114
	Apparent U.S. consumption (million dollars) . .	2,202	2,349	2,349	2,407	2,600
	Trade balance (million dollars) . . . . .	-407	-496	-459	-461	-596
	Ratio of imports to consumption (percent) . . .	34.1	39.5	36.8	40.2	42.8
	Ratio of exports to shipments (percent) . . . . .	19.2	23.3	21.5	26.1	25.9
CH071	Neckwear, handkerchiefs, and scarves:					
	Number of establishments . . . . .	171	159	147	139	135
	Employees (thousands) . . . . .	6	6	5	5	5
	Capacity utilization (percent) . . . . .	65	78	78	82	80
	U.S. shipments (million dollars) . . . . .	594	618	574	545	505
	U.S. exports (million dollars) . . . . .	26	29	39	40	37
	U.S. imports (million dollars) . . . . .	336	339	351	414	411
	Apparent U.S. consumption (million dollars) . .	904	928	886	919	879
	Trade balance (million dollars) . . . . .	-310	-310	-312	-374	-374
	Ratio of imports to consumption (percent) . . .	37.2	36.5	39.7	45.0	46.7
	Ratio of exports to shipments (percent) . . . . .	4.3	4.8	6.9	7.3	7.3

See footnote(s) at end of table.

Table B-5--Continued

## Textiles and apparel, and footwear sectors: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH072	Gloves, including gloves for sports:					
	Number of establishments	160	160	155	162	160
	Employees (thousands)	8	8	7	7	7
	Capacity utilization (percent)	87	74	72	68	70
	U.S. shipments (million dollars)	897	1,010	985	908	880
	U.S. exports (million dollars)	168	175	186	205	203
	U.S. imports (million dollars)	1,499	1,733	1,893	2,004	2,156
	Apparent U.S. consumption (million dollars)	2,229	2,568	2,693	2,707	2,833
	Trade balance (million dollars)	-1,332	-1,558	-1,708	-1,799	-1,953
	Ratio of imports to consumption (percent)	67.3	67.5	70.3	74.0	76.1
	Ratio of exports to shipments (percent)	18.7	17.3	18.8	22.6	23.1
CH073	Headwear:					
	Number of establishments	345	357	378	380	385
	Employees (thousands)	21	20	19	18	18
	Capacity utilization (percent)	87	76	78	75	75
	U.S. shipments (million dollars)	886	932	872	865	905
	U.S. exports (million dollars)	112	115	118	113	93
	U.S. imports (million dollars)	821	842	883	867	959
	Apparent U.S. consumption (million dollars)	1,595	1,660	1,637	1,619	1,771
	Trade balance (million dollars)	-709	-728	-765	-754	-866
	Ratio of imports to consumption (percent)	51.5	50.7	53.9	53.5	54.1
	Ratio of exports to shipments (percent)	12.6	12.3	13.5	13.1	10.3
CH074	Leather apparel and accessories:					
	Number of establishments	382	366	330	300	300
	Employees (thousands)	10	9	8	7	7
	Capacity utilization (percent)	68	84	72	80	80
	U.S. shipments (million dollars)	685	662	679	685	675
	U.S. exports (million dollars)	93	122	103	104	92
	U.S. imports (million dollars)	1,456	1,199	1,149	1,227	1,195
	Apparent U.S. consumption (million dollars)	2,048	1,740	1,725	1,808	1,778
	Trade balance (million dollars)	-1,363	-1,078	-1,046	-1,123	-1,103
	Ratio of imports to consumption (percent)	71.1	68.9	66.6	67.9	67.2
	Ratio of exports to shipments (percent)	13.6	18.4	15.1	15.2	13.6
CH075	Fur apparel and other fur articles:					
	Number of establishments	190	176	161	154	150
	Employees (thousands)	1	1	1	1	1
	Capacity utilization (percent)	( <sup>1</sup> )	91	95	91	90
	U.S. shipments (million dollars)	131	98	101	98	93
	U.S. exports (million dollars)	58	72	74	91	57
	U.S. imports (million dollars)	187	146	187	177	160
	Apparent U.S. consumption (million dollars)	259	172	214	184	195
	Trade balance (million dollars)	-128	-74	-113	-86	-102
	Ratio of imports to consumption (percent)	72.0	84.8	87.3	96.0	81.7
	Ratio of exports to shipments (percent)	44.5	73.2	73.1	92.5	61.6
CH076	Rubber, plastic, and coated-fabric apparel:					
	Number of establishments	( <sup>1</sup> )				
	Employees (thousands)	2	2	2	( <sup>1</sup> )	( <sup>1</sup> )
	Capacity utilization (percent)	( <sup>1</sup> )				
	U.S. shipments (million dollars)	120	120	125	( <sup>1</sup> )	( <sup>1</sup> )
	U.S. exports (million dollars)	87	91	97	88	82
	U.S. imports (million dollars)	172	192	178	230	231
	Apparent U.S. consumption (million dollars)	205	221	206	( <sup>1</sup> )	( <sup>1</sup> )
	Trade balance (million dollars)	-85	-101	-81	-142	-149
	Ratio of imports to consumption (percent)	84.0	86.8	86.5	( <sup>1</sup> )	( <sup>1</sup> )
	Ratio of exports to shipments (percent)	72.6	75.6	77.7	( <sup>1</sup> )	( <sup>1</sup> )

See footnote(s) at end of table.

Table B-5--Continued

## Textiles and apparel, and footwear sectors: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
CH077	Nonwoven and related products:					
	Number of establishments . . . . .	85	96	102	110	115
	Employees (thousands) . . . . .	10	12	12	13	13
	Capacity utilization (percent) . . . . .	84	79	74	71	70
	U.S. shipments (million dollars) . . . . .	3,750	3,900	4,055	4,255	4,500
	U.S. exports (million dollars) . . . . .	526	577	621	726	693
	U.S. imports (million dollars) . . . . .	437	476	456	548	598
	Apparent U.S. consumption (million dollars) . .	3,661	3,798	3,890	4,077	4,405
	Trade balance (million dollars) . . . . .	89	102	165	178	95
	Ratio of imports to consumption (percent) . . .	11.9	12.5	11.7	13.4	13.6
	Ratio of exports to shipments (percent) . . . . .	14.0	14.8	15.3	17.1	15.4
CH078	Other wearing apparel:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	( <sup>1</sup> )				
	U.S. exports (million dollars) . . . . .	603	910	1,230	1,469	1,798
	U.S. imports (million dollars) . . . . .	2,292	2,297	2,276	2,414	2,681
	Apparent U.S. consumption (million dollars) . .	( <sup>1</sup> )				
	Trade balance (million dollars) . . . . .	-1,689	-1,388	-1,046	-945	-883
	Ratio of imports to consumption (percent) . . .	( <sup>1</sup> )				
	Ratio of exports to shipments (percent) . . . . .	( <sup>1</sup> )				
CH079	Footwear and footwear parts:					
	Number of establishments . . . . .	668	660	610	589	551
	Employees (thousands) . . . . .	72	64	54	50	44
	Capacity utilization (percent) . . . . .	80	81	74	74	75
	U.S. shipments (million dollars) . . . . .	4,629	3,880	3,710	3,517	3,315
	U.S. exports (million dollars) . . . . .	646	671	761	802	720
	U.S. imports (million dollars) . . . . .	11,714	12,095	12,708	13,951	13,879
	Apparent U.S. consumption (million dollars) . .	15,697	15,304	15,658	16,666	16,474
	Trade balance (million dollars) . . . . .	-11,068	-11,424	-11,948	-13,149	-13,159
	Ratio of imports to consumption (percent) . . .	74.6	79.0	81.2	83.7	84.2
	Ratio of exports to shipments (percent) . . . . .	14.0	17.3	20.5	22.8	21.7

<sup>1</sup> Not available.<sup>2</sup> Less than \$500,000.

Note.--Calculations based on unrounded data.

Table B-6

**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MM001	Clays and nonmetallic minerals and products, not elsewhere specified or included:					
	Number of establishments . . . . .	320	320	320	320	320
	Employees (thousands) . . . . .	14	14	14	14	14
	Capacity utilization (percent) . . . . .	74	78	80	84	86
	U.S. shipments (million dollars) . . . . .	2,550	2,700	2,780	2,840	2,925
	U.S. exports (million dollars) . . . . .	950	1,023	1,033	1,083	1,036
	U.S. imports (million dollars) . . . . .	153	183	211	240	282
	Apparent U.S. consumption (million dollars) . .	1,753	1,860	1,958	1,997	2,171
	Trade balance (million dollars) . . . . .	797	840	822	843	754
	Ratio of imports to consumption (percent) . . .	8.7	9.8	10.8	12.0	13.0
	Ratio of exports to shipments (percent) . . . . .	37.2	37.9	37.2	38.1	35.4
MM002	Certain miscellaneous minerals substances:					
	Number of establishments . . . . .	9	8	8	6	6
	Employees (thousands) . . . . .	2	2	2	1	1
	Capacity utilization (percent) . . . . .	82	80	80	80	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	42	40	40	38	36
	U.S. exports (million dollars) . . . . .	5	7	11	14	10
	U.S. imports (million dollars) . . . . .	34	47	49	57	40
	Apparent U.S. consumption (million dollars) . .	71	80	77	80	66
	Trade balance (million dollars) . . . . .	-29	-40	-37	-42	-30
	Ratio of imports to consumption (percent) . . .	48.3	58.9	62.9	70.6	60.9
	Ratio of exports to shipments (percent) . . . . .	13.0	18.3	28.2	38.0	27.8
MM003	Iron ores and concentrates:					
	Number of establishments . . . . .	16	18	14	14	14
	Employees (thousands) . . . . .	7	7	8	8	8
	Capacity utilization (percent) . . . . .	91	97	97	98	98
	U.S. shipments (million dollars) . . . . .	1,900	2,200	2,300	2,300	2,600
	U.S. exports (million dollars) . . . . .	162	184	232	235	244
	U.S. imports (million dollars) . . . . .	510	486	556	551	527
	Apparent U.S. consumption (million dollars) . .	2,247	2,501	2,624	2,616	2,883
	Trade balance (million dollars) . . . . .	-347	-301	-324	-316	-283
	Ratio of imports to consumption (percent) . . .	22.7	19.4	21.2	21.1	18.3
	Ratio of exports to shipments (percent) . . . . .	8.6	8.4	10.1	10.2	9.4
MM004	Copper ores and concentrates:					
	Number of establishments . . . . .	50	40	40	35	35
	Employees (thousands) . . . . .	13	14	13	13	13
	Capacity utilization (percent) . . . . .	90	90	90	90	88
	U.S. shipments (million dollars) . . . . .	2,720	3,380	2,770	2,740	1,960
	U.S. exports (million dollars) . . . . .	393	486	287	211	63
	U.S. imports (million dollars) . . . . .	126	127	70	68	228
	Apparent U.S. consumption (million dollars) . .	2,453	3,020	2,553	2,597	2,125
	Trade balance (million dollars) . . . . .	267	360	217	143	-165
	Ratio of imports to consumption (percent) . . .	5.1	4.2	2.8	2.6	10.7
	Ratio of exports to shipments (percent) . . . . .	14.4	14.4	10.4	7.7	3.2
MM005	Lead ores and residues:					
	Number of establishments . . . . .	16	16	16	16	16
	Employees (thousands) . . . . .	2	2	2	2	2
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	177	198	257	252	242
	U.S. exports (million dollars) . . . . .	23	25	28	35	65
	U.S. imports (million dollars) . . . . .	( <sup>2</sup> )	2	2	6	8
	Apparent U.S. consumption (million dollars) . .	154	176	231	222	185
	Trade balance (million dollars) . . . . .	23	22	26	30	57
	Ratio of imports to consumption (percent) . . .	0.2	1.3	1.0	2.5	4.2
	Ratio of exports to shipments (percent) . . . . .	13.0	12.4	10.9	14.1	26.9
MM006	Zinc ores and residues:					

See footnote(s) at end of table.

Table B-6--Continued

## Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Number of establishments . . . . .	26	26	26	26	26
	Employees (thousands) . . . . .	2	3	3	3	3
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	502	611	549	869	947
	U.S. exports (million dollars) . . . . .	191	242	227	379	304
	U.S. imports (million dollars) . . . . .	18	13	18	45	37
	Apparent U.S. consumption (million dollars) . .	329	382	340	536	680
	Trade balance (million dollars) . . . . .	173	229	209	333	267
	Ratio of imports to consumption (percent) . . .	5.4	3.3	5.2	8.5	5.4
	Ratio of exports to shipments (percent) . . . . .	38.0	39.6	41.4	43.6	32.1
MM007	Certain ores, concentrates, ash, and residues:					
	Number of establishments . . . . .	175	175	175	175	175
	Employees (thousands) . . . . .	4	4	4	4	4
	Capacity utilization (percent) . . . . .	48	51	51	52	50
	U.S. shipments (million dollars) . . . . .	410	690	675	700	600
	U.S. exports (million dollars) . . . . .	301	704	362	432	350
	U.S. imports (million dollars) . . . . .	508	622	604	645	710
	Apparent U.S. consumption (million dollars) . .	617	608	917	913	960
	Trade balance (million dollars) . . . . .	-207	82	-242	-213	-360
	Ratio of imports to consumption (percent) . . .	82.3	102.3	65.9	70.7	74.0
	Ratio of exports to shipments (percent) . . . . .	73.4	102.0	53.6	61.7	58.4
MM008	Precious metal ores and concentrates:					
	Number of establishments . . . . .	355	334	356	356	356
	Employees (thousands) . . . . .	17	17	18	18	18
	Capacity utilization (percent) . . . . .	88	87	89	89	87
	U.S. production (million dollars) . . . . .	3,487	3,359	3,413	3,373	3,017
	U.S. exports (million dollars) . . . . .	16	8	9	21	11
	U.S. imports (million dollars) . . . . .	49	87	74	38	45
	Apparent U.S. consumption (million dollars) . .	3,520	3,438	3,478	3,390	3,052
	Trade balance (million dollars) . . . . .	-33	-79	-65	-17	-35
	Ratio of imports to consumption (percent) . . .	1.4	2.5	2.1	1.1	1.5
	Ratio of exports to production (percent) . . . . .	0.4	0.2	0.3	0.6	0.4
MM009	Certain nonmetallic minerals and articles:					
	Number of establishments . . . . .	20,000	20,000	20,000	20,000	20,000
	Employees (thousands) . . . . .	300	300	300	300	300
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	37,000	40,000	44,000	46,000	47,000
	U.S. exports (million dollars) . . . . .	944	995	1,063	1,213	1,201
	U.S. imports (million dollars) . . . . .	1,820	2,144	2,361	2,860	3,426
	Apparent U.S. consumption (million dollars) . .	37,875	41,149	45,297	47,647	49,226
	Trade balance (million dollars) . . . . .	-875	-1,149	-1,297	-1,647	-2,226
	Ratio of imports to consumption (percent) . . .	4.8	5.2	5.2	6.0	7.0
	Ratio of exports to shipments (percent) . . . . .	2.6	2.5	2.4	2.6	2.6
MM010	Industrial ceramics:					
	Number of establishments . . . . .	220	220	220	220	205
	Employees (thousands) . . . . .	11	11	11	12	12
	Capacity utilization (percent) . . . . .	74	76	76	78	80
	U.S. shipments (million dollars) . . . . .	2,500	2,700	2,750	2,830	2,950
	U.S. exports (million dollars) . . . . .	411	635	620	723	668
	U.S. imports (million dollars) . . . . .	356	425	448	550	545
	Apparent U.S. consumption (million dollars) . .	2,444	2,490	2,578	2,656	2,827
	Trade balance (million dollars) . . . . .	56	210	172	174	123
	Ratio of imports to consumption (percent) . . .	14.5	17.1	17.4	20.7	19.3
	Ratio of exports to shipments (percent) . . . . .	16.4	23.5	22.5	25.6	22.6
MM011	Ceramic bricks and miscellaneous ceramic construction articles:					

See footnote(s) at end of table.

Table B-6--Continued

## Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Number of establishments . . . . .	326	326	326	326	326
	Employees (thousands) . . . . .	16	16	16	16	16
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	1,300	1,400	1,600	1,700	1,700
	U.S. exports (million dollars) . . . . .	19	20	22	25	26
	U.S. imports (million dollars) . . . . .	15	16	18	17	20
	Apparent U.S. consumption (million dollars) . .	1,296	1,397	1,596	1,693	1,693
	Trade balance (million dollars) . . . . .	4	3	4	7	7
	Ratio of imports to consumption (percent) . . .	1.2	1.2	1.1	1.0	1.2
	Ratio of exports to shipments (percent) . . . .	1.5	1.4	1.4	1.4	1.5
MM012	Ceramic floor and wall tiles:					
	Number of establishments . . . . .	110	110	110	110	110
	Employees (thousands) . . . . .	9	9	9	9	9
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	730	790	840	920	970
	U.S. exports (million dollars) . . . . .	24	26	25	29	27
	U.S. imports (million dollars) . . . . .	519	562	628	716	860
	Apparent U.S. consumption (million dollars) . .	1,226	1,326	1,444	1,607	1,804
	Trade balance (million dollars) . . . . .	-496	-536	-604	-687	-834
	Ratio of imports to consumption (percent) . . .	42.4	42.4	43.5	44.5	47.7
	Ratio of exports to shipments (percent) . . . .	3.2	3.3	2.9	3.1	2.7
MM013	Ceramic household articles:					
	Number of establishments . . . . .	69	65	65	64	63
	Employees (thousands) . . . . .	7	7	6	6	6
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	419	414	423	421	437
	U.S. exports (million dollars) . . . . .	105	99	95	101	103
	U.S. imports (million dollars) . . . . .	1,563	1,658	1,556	1,675	1,716
	Apparent U.S. consumption (million dollars) . .	1,878	1,972	1,884	1,996	2,050
	Trade balance (million dollars) . . . . .	-1,459	-1,558	-1,461	-1,575	-1,613
	Ratio of imports to consumption (percent) . . .	83.3	84.0	82.6	83.9	83.7
	Ratio of exports to shipments (percent) . . . .	25.0	23.9	22.6	23.9	23.6
MM014	Flat glass and certain flat-glass products:					
	Number of establishments . . . . .	1,100	1,100	1,100	1,100	1,100
	Employees (thousands) . . . . .	50	52	54	59	59
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	7,700	7,900	8,600	8,000	8,000
	U.S. exports (million dollars) . . . . .	1,031	1,135	1,278	1,488	1,416
	U.S. imports (million dollars) . . . . .	864	917	1,050	1,063	1,120
	Apparent U.S. consumption (million dollars) . .	7,533	7,682	8,372	7,575	7,704
	Trade balance (million dollars) . . . . .	167	218	228	425	296
	Ratio of imports to consumption (percent) . . .	11.5	11.9	12.5	14.0	14.5
	Ratio of exports to shipments (percent) . . . .	13.4	14.4	14.9	18.6	17.7
MM015	Glass containers:					
	Number of establishments . . . . .	76	76	76	76	76
	Employees (thousands) . . . . .	29	25	24	23	24
	Capacity utilization (percent) . . . . .	93	90	90	( <sup>1</sup> )	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	4,650	4,343	4,271	4,200	4,200
	U.S. exports (million dollars) . . . . .	127	129	148	157	173
	U.S. imports (million dollars) . . . . .	323	377	407	428	452
	Apparent U.S. consumption (million dollars) . .	4,846	4,591	4,530	4,471	4,479
	Trade balance (million dollars) . . . . .	-196	-248	-259	-271	-279
	Ratio of imports to consumption (percent) . . .	6.7	8.2	9.0	9.6	10.1
	Ratio of exports to shipments (percent) . . . .	2.7	3.0	3.5	3.7	4.1
MM016	Household glassware:					
	Number of establishments . . . . .	218	218	218	218	218
	Employees (thousands) . . . . .	19	20	19	19	19

See footnote(s) at end of table.

Table B-6--Continued

## Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	1,700	1,800	1,800	1,800	1,800
	U.S. exports (million dollars) . . . . .	192	198	205	250	179
	U.S. imports (million dollars) . . . . .	643	729	746	818	864
	Apparent U.S. consumption (million dollars) . .	2,151	2,331	2,340	2,368	2,485
	Trade balance (million dollars) . . . . .	-451	-531	-540	-568	-685
	Ratio of imports to consumption (percent) . . .	29.9	31.3	31.9	34.5	34.8
	Ratio of exports to shipments (percent) . . . . .	11.3	11.0	11.4	13.9	10.0
MM017	Certain glass and glass products:					
	Number of establishments . . . . .	443	443	443	443	443
	Employees (thousands) . . . . .	22	23	25	26	26
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	2,900	3,200	3,400	3,500	3,500
	U.S. exports (million dollars) . . . . .	437	576	604	770	662
	U.S. imports (million dollars) . . . . .	518	583	679	767	702
	Apparent U.S. consumption (million dollars) . .	2,981	3,207	3,475	3,497	3,541
	Trade balance (million dollars) . . . . .	-81	-7	-75	3	-41
	Ratio of imports to consumption (percent) . . .	17.4	18.2	19.5	21.9	19.8
	Ratio of exports to shipments (percent) . . . . .	15.1	18.0	17.8	22.0	18.9
MM018	Fiberglass products:					
	Number of establishments . . . . .	253	253	253	253	253
	Employees (thousands) . . . . .	35	36	37	42	42
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	5,700	6,100	6,200	7,100	7,100
	U.S. exports (million dollars) . . . . .	448	490	538	562	576
	U.S. imports (million dollars) . . . . .	255	294	342	347	390
	Apparent U.S. consumption (million dollars) . .	5,506	5,903	6,004	6,885	6,914
	Trade balance (million dollars) . . . . .	194	197	196	215	186
	Ratio of imports to consumption (percent) . . .	4.6	5.0	5.7	5.0	5.6
	Ratio of exports to shipments (percent) . . . . .	7.9	8.0	8.7	7.9	8.1
MM019	Natural and synthetic gemstones:					
	Number of establishments . . . . .	391	370	370	370	370
	Employees (thousands) . . . . .	1	1	1	1	1
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	800	700	700	600	700
	U.S. exports (million dollars) . . . . .	268	268	247	231	217
	U.S. imports (million dollars) . . . . .	6,429	6,666	7,412	8,564	9,449
	Apparent U.S. consumption (million dollars) . .	6,960	7,098	7,865	8,933	9,933
	Trade balance (million dollars) . . . . .	-6,160	-6,398	-7,165	-8,333	-9,233
	Ratio of imports to consumption (percent) . . .	92.4	93.9	94.2	95.9	95.1
	Ratio of exports to shipments (percent) . . . . .	33.5	38.3	35.3	38.5	30.9
MM020	Precious metals and related articles:					
	Number of establishments . . . . .	59	59	59	59	59
	Employees (thousands) . . . . .	8	9	9	9	9
	Capacity utilization (percent) . . . . .	85	81	82	83	81
	U.S. shipments (million dollars) . . . . .	3,386	3,304	2,848	2,973	2,835
	U.S. exports (million dollars) . . . . .	6,531	6,475	7,886	7,149	6,853
	U.S. imports (million dollars) . . . . .	4,033	4,676	5,330	5,869	7,735
	Apparent U.S. consumption (million dollars) . .	888	1,506	292	1,693	3,718
	Trade balance (million dollars) . . . . .	2,498	1,798	2,556	1,280	-883
	Ratio of imports to consumption (percent) . . .	454.1	310.6	1,826.2	346.7	208.1
	Ratio of exports to shipments (percent) . . . . .	192.9	196.0	276.9	240.5	241.7
MM021	Primary iron products:					
	Number of establishments . . . . .	23	23	22	21	23
	Employees (thousands) . . . . .	23	23	22	21	22
	Capacity utilization (percent) . . . . .	85	87	88	92	89

See footnote(s) at end of table.

Table B-6--Continued

## Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	U.S. shipments (million dollars) . . . . .	8,200	8,500	8,200	8,300	8,400
	U.S. exports (million dollars) . . . . .	12	13	13	19	17
	U.S. imports (million dollars) . . . . .	450	541	552	608	856
	Apparent U.S. consumption (million dollars) . .	8,638	9,028	8,739	8,890	9,238
	Trade balance (million dollars) . . . . .	-438	-528	-539	-590	-838
	Ratio of imports to consumption (percent) . . .	5.2	6.0	6.3	6.8	9.3
	Ratio of exports to shipments (percent) . . . . .	0.1	0.2	0.2	0.2	0.2
MM022	Ferroalloys:					
	Number of establishments . . . . .	26	25	25	24	23
	Employees (thousands) . . . . .	5	4	4	4	4
	Capacity utilization (percent) . . . . .	( <sup>3</sup> )				
	U.S. shipments (million dollars) . . . . .	990	1,125	1,205	1,275	1,255
	U.S. exports (million dollars) . . . . .	87	114	137	153	103
	U.S. imports (million dollars) . . . . .	777	1,245	1,217	1,044	1,018
	Apparent U.S. consumption (million dollars) . .	1,680	2,256	2,286	2,166	2,169
	Trade balance (million dollars) . . . . .	-690	-1,131	-1,081	-891	-914
	Ratio of imports to consumption (percent) . . .	46.2	55.2	53.3	48.2	46.9
	Ratio of exports to shipments (percent) . . . . .	8.8	10.1	11.3	12.0	8.2
MM023	Iron and steel waste and scrap:					
	Number of establishments . . . . .	5,000	5,000	5,000	5,000	5,000
	Employees (thousands) . . . . .	36	36	36	36	36
	Capacity utilization (percent) . . . . .	90	90	90	90	85
	U.S. shipments (million dollars) . . . . .	7,200	7,700	7,200	7,200	5,600
	U.S. exports (million dollars) . . . . .	1,269	1,703	1,347	1,356	817
	U.S. imports (million dollars) . . . . .	238	300	355	400	418
	Apparent U.S. consumption (million dollars) . .	6,169	6,298	6,208	6,244	5,201
	Trade balance (million dollars) . . . . .	1,031	1,402	992	956	399
	Ratio of imports to consumption (percent) . . .	3.9	4.8	5.7	6.4	8.0
	Ratio of exports to shipments (percent) . . . . .	17.6	22.1	18.7	18.8	14.6
MM024	Abrasive and ferrous products:					
	Number of establishments . . . . .	400	390	407	409	412
	Employees (thousands) . . . . .	23	23	24	22	21
	Capacity utilization (percent) . . . . .	80	82	80	83	85
	U.S. shipments (million dollars) . . . . .	4,124	4,352	4,683	4,454	4,539
	U.S. exports (million dollars) . . . . .	432	410	449	529	531
	U.S. imports (million dollars) . . . . .	595	633	662	735	735
	Apparent U.S. consumption (million dollars) . .	4,287	4,575	4,896	4,660	4,743
	Trade balance (million dollars) . . . . .	-163	-223	-213	-206	-204
	Ratio of imports to consumption (percent) . . .	13.9	13.8	13.5	15.8	15.5
	Ratio of exports to shipments (percent) . . . . .	10.5	9.4	9.6	11.9	11.7
MM025	Steel mill products, all grades:					
	Number of establishments . . . . .	850	850	850	850	850
	Employees (thousands) . . . . .	200	198	200	203	197
	Capacity utilization (percent) . . . . .	90	88	89	90	90
	U.S. shipments (million dollars) . . . . .	62,150	66,400	65,600	68,600	64,500
	U.S. exports (million dollars) . . . . .	3,029	4,665	4,076	4,843	4,636
	U.S. imports (million dollars) . . . . .	12,435	11,786	12,756	13,602	16,434
	Apparent U.S. consumption (million dollars) . .	71,555	73,521	74,280	77,358	76,298
	Trade balance (million dollars) . . . . .	-9,405	-7,121	-8,680	-8,758	-11,798
	Ratio of imports to consumption (percent) . . .	17.4	16.0	17.2	17.6	21.5
	Ratio of exports to shipments (percent) . . . . .	4.9	7.0	6.2	7.1	7.2
MM026	Steel pipe and tube fittings and certain cast products:					
	Number of establishments . . . . .	500	500	500	500	500
	Employees (thousands) . . . . .	27	28	26	27	28
	Capacity utilization (percent) . . . . .	79	82	82	83	83
	U.S. shipments (million dollars) . . . . .	3,300	3,400	3,500	3,800	3,900

See footnote(s) at end of table.

Table B-6--Continued

## Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	U.S. exports (million dollars) . . . . .	484	630	663	749	809
	U.S. imports (million dollars) . . . . .	367	427	515	555	591
	Apparent U.S. consumption (million dollars) . .	3,182	3,196	3,351	3,606	3,681
	Trade balance (million dollars) . . . . .	118	204	149	194	219
	Ratio of imports to consumption (percent) . . .	11.5	13.3	15.4	15.4	16.0
	Ratio of exports to shipments (percent) . . . .	14.7	18.5	18.9	19.7	20.7
MM027	Fabricated structurals:					
	Number of establishments . . . . .	2,226	2,216	2,456	2,453	2,450
	Employees (thousands) . . . . .	67	69	74	65	63
	Capacity utilization (percent) . . . . .	71	70	78	80	78
	U.S. shipments (million dollars) . . . . .	9,036	9,354	9,473	9,870	9,592
	U.S. exports (million dollars) . . . . .	122	143	178	189	151
	U.S. imports (million dollars) . . . . .	109	143	177	205	328
	Apparent U.S. consumption (million dollars) . .	9,023	9,354	9,472	9,885	9,769
	Trade balance (million dollars) . . . . .	13	( <sup>2</sup> )	1	-15	-177
	Ratio of imports to consumption (percent) . . .	1.2	1.5	1.9	2.1	3.4
	Ratio of exports to shipments (percent) . . . .	1.4	1.5	1.9	1.9	1.6
MM028	Metal construction components:					
	Number of establishments . . . . .	4,400	4,400	4,300	4,300	4,400
	Employees (thousands) . . . . .	131	134	138	137	138
	Capacity utilization (percent) . . . . .	78	71	74	67	70
	U.S. shipments (million dollars) . . . . .	14,077	15,111	16,600	17,155	18,180
	U.S. exports (million dollars) . . . . .	453	483	551	689	611
	U.S. imports (million dollars) . . . . .	181	258	353	435	562
	Apparent U.S. consumption (million dollars) . .	13,804	14,886	16,402	16,901	18,131
	Trade balance (million dollars) . . . . .	273	225	198	254	49
	Ratio of imports to consumption (percent) . . .	1.3	1.7	2.2	2.6	3.1
	Ratio of exports to shipments (percent) . . . .	3.2	3.2	3.3	4.0	3.4
MM029	Metallic containers:					
	Number of establishments . . . . .	521	521	520	520	520
	Employees (thousands) . . . . .	60	59	60	60	58
	Capacity utilization (percent) . . . . .	82	82	82	82	82
	U.S. shipments (million dollars) . . . . .	15,950	16,760	16,925	17,602	17,650
	U.S. exports (million dollars) . . . . .	642	787	796	901	819
	U.S. imports (million dollars) . . . . .	324	380	449	458	463
	Apparent U.S. consumption (million dollars) . .	15,631	16,353	16,578	17,159	17,294
	Trade balance (million dollars) . . . . .	319	407	347	443	356
	Ratio of imports to consumption (percent) . . .	2.1	2.3	2.7	2.7	2.7
	Ratio of exports to shipments (percent) . . . .	4.0	4.7	4.7	5.1	4.6
MM030	Wire products of iron, steel, aluminum, copper, and nickel:					
	Number of establishments . . . . .	1,300	1,300	1,300	1,300	1,300
	Employees (thousands) . . . . .	102	108	112	115	115
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	15,057	16,351	16,000	17,500	18,200
	U.S. exports (million dollars) . . . . .	474	604	693	817	815
	U.S. imports (million dollars) . . . . .	990	1,127	1,169	1,247	1,264
	Apparent U.S. consumption (million dollars) . .	15,573	16,874	16,477	17,930	18,650
	Trade balance (million dollars) . . . . .	-516	-523	-477	-430	-450
	Ratio of imports to consumption (percent) . . .	6.4	6.7	7.1	7.0	6.8
	Ratio of exports to shipments (percent) . . . .	3.1	3.7	4.3	4.7	4.5
MM031	Chain and miscellaneous products of base metal:					
	Number of establishments . . . . .	4,400	4,400	4,650	4,700	4,750
	Employees (thousands) . . . . .	400	450	450	460	470
	Capacity utilization (percent) . . . . .	76	77	76	75	74
	U.S. shipments (million dollars) . . . . .	31,300	33,600	35,800	37,200	36,500
	U.S. exports (million dollars) . . . . .	3,178	3,555	4,255	4,645	5,077

See footnote(s) at end of table.

Table B-6--Continued

## Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	U.S. imports (million dollars) . . . . .	4,154	4,553	5,053	5,866	6,473
	Apparent U.S. consumption (million dollars) . .	32,276	34,599	36,598	38,421	37,896
	Trade balance (million dollars) . . . . .	-976	-999	-798	-1,221	-1,396
	Ratio of imports to consumption (percent) . . .	12.9	13.2	13.8	15.3	17.1
	Ratio of exports to shipments (percent) . . . .	10.2	10.6	11.9	12.5	13.9
MM032	Industrial fasteners of base metal:					
	Number of establishments . . . . .	895	893	917	920	923
	Employees (thousands) . . . . .	43	46	47	45	44
	Capacity utilization (percent) . . . . .	84	79	77	78	78
	U.S. shipments (million dollars) . . . . .	5,439	5,916	6,115	6,200	6,200
	U.S. exports (million dollars) . . . . .	873	1,022	1,325	1,280	1,397
	U.S. imports (million dollars) . . . . .	1,640	1,863	1,818	1,874	1,985
	Apparent U.S. consumption (million dollars) . .	6,206	6,758	6,609	6,794	6,788
	Trade balance (million dollars) . . . . .	-767	-842	-494	-594	-588
	Ratio of imports to consumption (percent) . . .	26.4	27.6	27.5	27.6	29.2
	Ratio of exports to shipments (percent) . . . .	16.1	17.3	21.7	20.6	22.5
MM033	Cooking and kitchen ware:					
	Number of establishments . . . . .	130	130	130	130	130
	Employees (thousands) . . . . .	49	50	51	51	51
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	1,300	1,350	1,300	1,300	1,200
	U.S. exports (million dollars) . . . . .	233	245	278	242	244
	U.S. imports (million dollars) . . . . .	1,001	1,158	1,140	1,303	1,393
	Apparent U.S. consumption (million dollars) . .	2,068	2,263	2,162	2,361	2,349
	Trade balance (million dollars) . . . . .	-768	-913	-862	-1,061	-1,149
	Ratio of imports to consumption (percent) . . .	48.4	51.2	52.7	55.2	59.3
	Ratio of exports to shipments (percent) . . . .	17.9	18.1	21.4	18.6	20.3
MM034	Metal and ceramic sanitary ware:					
	Number of establishments . . . . .	150	150	150	150	150
	Employees (thousands) . . . . .	16	16	16	16	15
	Capacity utilization (percent) . . . . .	( <sup>3</sup> )				
	U.S. shipments (million dollars) . . . . .	1,642	1,602	1,628	1,661	1,703
	U.S. exports (million dollars) . . . . .	153	159	142	159	147
	U.S. imports (million dollars) . . . . .	249	271	318	332	403
	Apparent U.S. consumption (million dollars) . .	1,738	1,714	1,804	1,834	1,960
	Trade balance (million dollars) . . . . .	-96	-112	-176	-173	-257
	Ratio of imports to consumption (percent) . . .	14.3	15.8	17.6	18.1	20.6
	Ratio of exports to shipments (percent) . . . .	9.3	9.9	8.7	9.6	8.6
MM035	Iron construction castings and other nonmalleable cast-iron articles:					
	Number of establishments . . . . .	50	50	50	50	50
	Employees (thousands) . . . . .	7	6	6	6	6
	Capacity utilization (percent) . . . . .	88	84	85	85	85
	U.S. shipments (million dollars) . . . . .	900	800	900	900	900
	U.S. exports (million dollars) . . . . .	26	26	44	46	37
	U.S. imports (million dollars) . . . . .	72	87	91	99	110
	Apparent U.S. consumption (million dollars) . .	945	861	947	953	973
	Trade balance (million dollars) . . . . .	-45	-61	-47	-53	-73
	Ratio of imports to consumption (percent) . . .	7.6	10.1	9.6	10.4	11.3
	Ratio of exports to shipments (percent) . . . .	2.9	3.2	4.9	5.1	4.1
MM036	Copper and related articles:					
	Number of establishments . . . . .	830	680	675	676	673
	Employees (thousands) . . . . .	41	41	40	40	41
	Capacity utilization (percent) . . . . .	88	87	88	88	89
	U.S. shipments (million dollars) . . . . .	12,800	15,000	13,200	14,000	11,800
	U.S. exports (million dollars) . . . . .	1,813	2,708	2,370	2,228	1,813
	U.S. imports (million dollars) . . . . .	2,655	3,401	3,472	3,743	3,359

See footnote(s) at end of table.

Table B-6--Continued

## Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Apparent U.S. consumption (million dollars) . .	13,642	15,694	14,302	15,516	13,346
	Trade balance (million dollars) . . . . .	-842	-694	-1,102	-1,516	-1,546
	Ratio of imports to consumption (percent) . . .	19.5	21.7	24.3	24.1	25.2
	Ratio of exports to shipments (percent) . . . .	14.2	18.1	18.0	15.9	15.4
MM037	Unwrought aluminum:					
	Number of establishments . . . . .	91	91	90	90	90
	Employees (thousands) . . . . .	21	21	22	22	23
	Capacity utilization (percent) . . . . .	79	81	86	86	88
	U.S. shipments (million dollars) . . . . .	7,533	9,251	7,716	8,763	9,026
	U.S. exports (million dollars) . . . . .	896	1,294	1,057	1,023	917
	U.S. imports (million dollars) . . . . .	4,221	4,585	3,828	4,389	4,558
	Apparent U.S. consumption (million dollars) . .	10,858	12,542	10,488	12,129	12,667
	Trade balance (million dollars) . . . . .	-3,325	-3,291	-2,772	-3,366	-3,641
	Ratio of imports to consumption (percent) . . .	38.9	36.6	36.5	36.2	36.0
	Ratio of exports to shipments (percent) . . . .	11.9	14.0	13.7	11.7	10.2
MM038	Aluminum mill products:					
	Number of establishments . . . . .	300	300	300	300	300
	Employees (thousands) . . . . .	55	60	60	60	60
	Capacity utilization (percent) . . . . .	90	94	95	95	95
	U.S. shipments (million dollars) . . . . .	15,624	19,094	19,101	20,085	20,828
	U.S. exports (million dollars) . . . . .	2,177	2,974	2,771	3,133	3,046
	U.S. imports (million dollars) . . . . .	1,446	2,048	1,737	2,009	2,181
	Apparent U.S. consumption (million dollars) . .	14,893	18,168	18,068	18,961	19,962
	Trade balance (million dollars) . . . . .	731	926	1,033	1,124	866
	Ratio of imports to consumption (percent) . . .	9.7	11.3	9.6	10.6	10.9
	Ratio of exports to shipments (percent) . . . .	13.9	15.6	14.5	15.6	14.6
MM039	Lead and related articles:					
	Number of establishments . . . . .	48	48	53	53	53
	Employees (thousands) . . . . .	3	3	3	3	3
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	1,700	1,900	2,300	2,300	2,200
	U.S. exports (million dollars) . . . . .	70	86	163	181	160
	U.S. imports (million dollars) . . . . .	149	195	240	201	190
	Apparent U.S. consumption (million dollars) . .	1,780	2,009	2,377	2,319	2,230
	Trade balance (million dollars) . . . . .	-80	-109	-77	-19	-30
	Ratio of imports to consumption (percent) . . .	8.4	9.7	10.1	8.7	8.5
	Ratio of exports to shipments (percent) . . . .	4.1	4.5	7.1	7.9	7.3
MM040	Zinc and related articles:					
	Number of establishments . . . . .	39	39	39	39	39
	Employees (thousands) . . . . .	4	4	4	4	4
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	590	665	600	970	1,120
	U.S. exports (million dollars) . . . . .	67	81	98	113	102
	U.S. imports (million dollars) . . . . .	813	952	979	1,328	1,119
	Apparent U.S. consumption (million dollars) . .	1,336	1,535	1,482	2,185	2,137
	Trade balance (million dollars) . . . . .	-746	-870	-882	-1,215	-1,017
	Ratio of imports to consumption (percent) . . .	60.9	62.0	66.1	60.8	52.4
	Ratio of exports to shipments (percent) . . . .	11.3	12.2	16.3	11.7	9.1
MM041	Certain base metals and chemical elements:					
	Number of establishments . . . . .	( <sup>1</sup> )				
	Employees (thousands) . . . . .	20	22	25	25	25
	Capacity utilization (percent) . . . . .	85	82	82	82	84
	U.S. shipments (million dollars) . . . . .	4,700	5,700	6,800	6,900	6,300
	U.S. exports (million dollars) . . . . .	927	1,190	1,263	1,401	1,398
	U.S. imports (million dollars) . . . . .	1,720	2,536	2,640	2,777	2,424
	Apparent U.S. consumption (million dollars) . .	5,493	7,046	8,178	8,276	7,325

See footnote(s) at end of table.

Table B-6--Continued

## Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Trade balance (million dollars) . . . . .	-793	-1,346	-1,378	-1,376	-1,025
	Ratio of imports to consumption (percent) . . .	31.3	36.0	32.3	33.6	33.1
	Ratio of exports to shipments (percent) . . . . .	19.7	20.9	18.6	20.3	22.2
MM042	Nonpowered handtools:					
	Number of establishments . . . . .	1,250	1,250	1,220	1,200	1,150
	Employees (thousands) . . . . .	125	121	120	123	122
	Capacity utilization (percent) . . . . .	80	80	80	80	80
	U.S. shipments (million dollars) . . . . .	13,193	13,868	15,356	16,278	16,766
	U.S. exports (million dollars) . . . . .	1,455	1,639	1,732	2,188	2,060
	U.S. imports (million dollars) . . . . .	1,939	2,230	2,280	2,725	2,885
	Apparent U.S. consumption (million dollars) . .	13,677	14,459	15,904	16,815	17,591
	Trade balance (million dollars) . . . . .	-484	-591	-548	-537	-825
	Ratio of imports to consumption (percent) . . .	14.2	15.4	14.3	16.2	16.4
	Ratio of exports to shipments (percent) . . . . .	11.0	11.8	11.3	13.4	12.3
MM043	Cutlery other than tableware, certain sewing implements, and related products:					
	Number of establishments . . . . .	135	132	130	130	135
	Employees (thousands) . . . . .	11	11	11	11	11
	Capacity utilization (percent) . . . . .	90	89	90	86	88
	U.S. shipments (million dollars) . . . . .	1,850	1,920	2,120	2,010	2,090
	U.S. exports (million dollars) . . . . .	385	420	480	475	511
	U.S. imports (million dollars) . . . . .	585	656	673	719	781
	Apparent U.S. consumption (million dollars) . .	2,050	2,156	2,313	2,254	2,361
	Trade balance (million dollars) . . . . .	-200	-236	-193	-244	-271
	Ratio of imports to consumption (percent) . . .	28.5	30.4	29.1	31.9	33.1
	Ratio of exports to shipments (percent) . . . . .	20.8	21.9	22.6	23.6	24.4
MM044	Table flatware and related products:					
	Number of establishments . . . . .	5	5	5	5	5
	Employees (thousands) . . . . .	5	5	5	5	5
	Capacity utilization (percent) . . . . .	90	90	90	93	95
	U.S. shipments (million dollars) . . . . .	198	200	194	205	215
	U.S. exports (million dollars) . . . . .	28	35	30	36	24
	U.S. imports (million dollars) . . . . .	224	272	287	325	327
	Apparent U.S. consumption (million dollars) . .	394	436	452	494	518
	Trade balance (million dollars) . . . . .	-196	-236	-258	-289	-303
	Ratio of imports to consumption (percent) . . .	56.8	62.3	63.6	65.8	63.2
	Ratio of exports to shipments (percent) . . . . .	14.1	17.7	15.4	17.6	11.4
MM045	Certain builders' hardware:					
	Number of establishments . . . . .	212	212	189	191	192
	Employees (thousands) . . . . .	33	33	34	34	35
	Capacity utilization (percent) . . . . .	86	75	76	74	73
	U.S. shipments (million dollars) . . . . .	3,983	4,177	4,606	4,778	4,874
	U.S. exports (million dollars) . . . . .	620	637	562	600	636
	U.S. imports (million dollars) . . . . .	709	763	866	908	1,045
	Apparent U.S. consumption (million dollars) . .	4,071	4,303	4,910	5,086	5,283

See footnote(s) at end of table.

**Table B-6--Continued**

**Minerals and metals sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
	Trade balance (million dollars) . . . . .	-88	-126	-304	-308	-409
	Ratio of imports to consumption (percent) . . .	17.4	17.7	17.6	17.8	19.8
	Ratio of exports to shipments (percent) . . . . .	15.6	15.2	12.2	12.6	13.1

<sup>1</sup> Not available.

<sup>2</sup> Less than \$500,000.

<sup>3</sup> Capacity utilization could not be meaningfully calculated for this industry.

Note.--Calculations based on unrounded data.

Table B-7

## Machinery sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MT003	Pumps for liquids:					
	Number of establishments	572	585	586	590	565
	Employees (thousands)	51	55	55	57	54
	Capacity utilization (percent)	64	69	70	72	73
	U.S. shipments (million dollars)	6,920	7,152	7,367	7,735	7,890
	U.S. exports (million dollars)	2,222	2,368	2,504	2,978	2,896
	U.S. imports (million dollars)	1,777	1,967	2,061	2,203	2,367
	Apparent U.S. consumption (million dollars)	6,475	6,750	6,924	6,960	7,361
	Trade balance (million dollars)	445	402	443	775	529
	Ratio of imports to consumption (percent)	27.4	29.1	29.8	31.7	32.2
	Ratio of exports to shipments (percent)	32.1	33.1	34.0	38.5	36.7
MT004	Air-conditioning equipment and parts:					
	Number of establishments	1,165	1,275	1,300	1,222	1,205
	Employees (thousands)	146	152	155	146	140
	Capacity utilization (percent)	79	85	87	77	75
	U.S. shipments (million dollars)	22,455	26,946	28,293	26,595	25,528
	U.S. exports (million dollars)	4,121	4,538	4,988	5,726	5,471
	U.S. imports (million dollars)	3,666	4,129	4,576	4,433	4,945
	Apparent U.S. consumption (million dollars)	22,000	26,537	27,881	25,301	25,002
	Trade balance (million dollars)	455	409	412	1,294	526
	Ratio of imports to consumption (percent)	16.7	15.6	16.4	17.5	19.8
	Ratio of exports to shipments (percent)	18.4	16.8	17.6	21.5	21.4
MT005	Certain industrial thermal-processing equipment and certain furnaces:					
	Number of establishments	305	308	315	300	290
	Employees (thousands)	33	35	36	34	32
	Capacity utilization (percent)	66	67	70	67	68
	U.S. shipments (million dollars)	3,380	3,549	3,726	3,539	3,610
	U.S. exports (million dollars)	1,879	2,098	2,195	2,698	2,321
	U.S. imports (million dollars)	1,003	1,089	1,338	1,374	1,234
	Apparent U.S. consumption (million dollars)	2,504	2,540	2,869	2,215	2,524
	Trade balance (million dollars)	876	1,009	857	1,324	1,086
	Ratio of imports to consumption (percent)	40.1	42.9	46.7	62.0	48.9
	Ratio of exports to shipments (percent)	55.6	59.1	58.9	76.2	64.3
MT006	Commercial machinery:					
	Number of establishments	500	520	518	497	495
	Employees (thousands)	40	41	41	39	38
	Capacity utilization (percent)	83	83	83	79	78
	U.S. shipments (million dollars)	6,895	7,240	7,457	7,159	7,230
	U.S. exports (million dollars)	2,031	2,390	2,463	2,667	2,779
	U.S. imports (million dollars)	1,082	1,191	1,223	1,329	1,413
	Apparent U.S. consumption (million dollars)	5,946	6,041	6,217	5,821	5,863
	Trade balance (million dollars)	949	1,199	1,240	1,338	1,367
	Ratio of imports to consumption (percent)	18.2	19.7	19.7	22.8	24.1
	Ratio of exports to shipments (percent)	29.5	33.0	33.0	37.3	38.4
MT007	Electrical household appliances and certain heating equipment:					
	Number of establishments	420	422	430	414	410
	Employees (thousands)	98	102	104	100	102
	Capacity utilization (percent)	83	84	87	82	78
	U.S. shipments (million dollars)	20,248	21,260	21,685	20,926	20,492
	U.S. exports (million dollars)	2,348	2,433	2,585	2,724	2,681
	U.S. imports (million dollars)	3,858	4,074	4,261	4,593	5,194
	Apparent U.S. consumption (million dollars)	21,759	22,901	23,361	22,795	23,005
	Trade balance (million dollars)	-1,511	-1,641	-1,676	-1,869	-2,513
	Ratio of imports to consumption (percent)	17.7	17.8	18.2	20.1	22.6
	Ratio of exports to shipments (percent)	11.6	11.4	11.9	13.0	13.1

See footnote(s) at end of table.

Table B-7--Continued

## Machinery sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MT008	Centrifuges and filtering and purifying equipment:					
	Number of establishments . . . . .	270	280	280	280	280
	Employees (thousands) . . . . .	28	29	32	32	32
	Capacity utilization (percent) . . . . .	73	70	69	70	70
	U.S. shipments (million dollars) . . . . .	3,798	4,086	4,455	4,500	4,815
	U.S. exports (million dollars) . . . . .	1,902	2,134	2,389	2,845	2,452
	U.S. imports (million dollars) . . . . .	1,067	1,211	1,353	1,291	1,405
	Apparent U.S. consumption (million dollars) . .	2,963	3,162	3,419	2,946	3,768
	Trade balance (million dollars) . . . . .	835	924	1,036	1,554	1,047
	Ratio of imports to consumption (percent) . . .	36.0	38.3	39.6	43.8	37.3
	Ratio of exports to shipments (percent) . . . . .	50.1	52.2	53.6	63.2	50.9
MT009	Wrapping, packaging, and can-sealing machinery:					
	Number of establishments . . . . .	630	630	630	630	630
	Employees (thousands) . . . . .	25	28	27	27	27
	Capacity utilization (percent) . . . . .	83	81	77	78	80
	U.S. shipments (million dollars) . . . . .	3,272	3,630	3,435	3,500	3,600
	U.S. exports (million dollars) . . . . .	792	839	841	871	791
	U.S. imports (million dollars) . . . . .	842	932	1,042	1,104	1,072
	Apparent U.S. consumption (million dollars) . .	3,322	3,723	3,636	3,733	3,881
	Trade balance (million dollars) . . . . .	-50	-93	-201	-233	-281
	Ratio of imports to consumption (percent) . . .	25.3	25.0	28.6	29.6	27.6
	Ratio of exports to shipments (percent) . . . . .	24.2	23.1	24.5	24.9	22.0
MT010	Scales and weighing machinery:					
	Number of establishments . . . . .	116	120	116	115	114
	Employees (thousands) . . . . .	6	6	5	5	5
	Capacity utilization (percent) . . . . .	85	71	68	70	70
	U.S. shipments (million dollars) . . . . .	705	643	729	691	694
	U.S. exports (million dollars) . . . . .	120	127	136	154	147
	U.S. imports (million dollars) . . . . .	183	201	197	228	223
	Apparent U.S. consumption (million dollars) . .	769	716	790	765	770
	Trade balance (million dollars) . . . . .	-64	-73	-61	-74	-76
	Ratio of imports to consumption (percent) . . .	23.8	28.0	24.9	29.8	28.9
	Ratio of exports to shipments (percent) . . . . .	17.0	19.8	18.7	22.3	21.2
MT013	Mineral processing machinery:					
	Number of establishments . . . . .	90	90	90	90	90
	Employees (thousands) . . . . .	7	7	7	7	7
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	409	619	605	673	675
	U.S. exports (million dollars) . . . . .	569	673	674	915	764
	U.S. imports (million dollars) . . . . .	260	371	432	508	574
	Apparent U.S. consumption (million dollars) . .	100	317	363	266	486
	Trade balance (million dollars) . . . . .	309	302	242	407	189
	Ratio of imports to consumption (percent) . . .	259.6	117.0	119.0	191.2	118.3
	Ratio of exports to shipments (percent) . . . . .	139.0	108.7	111.4	136.0	113.2
MT014	Farm and garden machinery and equipment:					
	Number of establishments . . . . .	1,900	1,870	1,820	1,800	1,890
	Employees (thousands) . . . . .	103	100	98	101	101
	Capacity utilization (percent) . . . . .	76	72	74	76	78
	U.S. shipments (million dollars) . . . . .	16,560	16,200	17,000	17,500	18,200
	U.S. exports (million dollars) . . . . .	3,934	4,317	4,848	5,855	5,558
	U.S. imports (million dollars) . . . . .	3,279	3,477	3,382	3,887	4,169
	Apparent U.S. consumption (million dollars) . .	15,904	15,360	15,535	15,533	16,811
	Trade balance (million dollars) . . . . .	656	840	1,465	1,967	1,389
	Ratio of imports to consumption (percent) . . .	20.6	22.6	21.8	25.0	24.8
	Ratio of exports to shipments (percent) . . . . .	23.8	26.6	28.5	33.5	30.5

See footnote(s) at end of table.

Table B-7--Continued

## Machinery sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MT015	Industrial food-processing and related machinery:					
	Number of establishments . . . . .	525	531	526	531	535
	Employees (thousands) . . . . .	20	20	21	20	20
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	2,674	2,819	2,798	2,950	3,051
	U.S. exports (million dollars) . . . . .	641	694	708	697	688
	U.S. imports (million dollars) . . . . .	439	552	505	549	619
	Apparent U.S. consumption (million dollars) . .	2,472	2,677	2,595	2,803	2,981
	Trade balance (million dollars) . . . . .	202	142	203	147	70
	Ratio of imports to consumption (percent) . . .	17.8	20.6	19.5	19.6	20.8
	Ratio of exports to shipments (percent) . . . .	24.0	24.6	25.3	23.6	22.6
MT016	Pulp, paper, and paperboard machinery:					
	Number of establishments . . . . .	329	337	346	355	358
	Employees (thousands) . . . . .	17	19	20	20	20
	Capacity utilization (percent) . . . . .	89	92	87	88	( <sup>2</sup> )
	U.S. shipments (million dollars) . . . . .	2,813	3,424	3,419	3,461	3,619
	U.S. exports (million dollars) . . . . .	644	857	851	990	809
	U.S. imports (million dollars) . . . . .	893	978	1,178	1,105	1,037
	Apparent U.S. consumption (million dollars) . .	3,063	3,545	3,746	3,576	3,846
	Trade balance (million dollars) . . . . .	-250	-121	-327	-115	-227
	Ratio of imports to consumption (percent) . . .	29.2	27.6	31.4	30.9	27.0
	Ratio of exports to shipments (percent) . . . .	22.9	25.0	24.9	28.6	22.4
MT017	Printing, typesetting, and bookbinding machinery and printing plates:					
	Number of establishments . . . . .	494	500	522	533	545
	Employees (thousands) . . . . .	21	22	22	19	18
	Capacity utilization (percent) . . . . .	87	74	74	75	( <sup>2</sup> )
	U.S. shipments (million dollars) . . . . .	3,015	3,498	3,654	3,299	3,309
	U.S. exports (million dollars) . . . . .	1,094	1,297	1,421	1,486	1,455
	U.S. imports (million dollars) . . . . .	1,574	2,009	1,796	2,048	2,231
	Apparent U.S. consumption (million dollars) . .	3,495	4,210	4,029	3,861	4,085
	Trade balance (million dollars) . . . . .	-480	-712	-375	-562	-776
	Ratio of imports to consumption (percent) . . .	45.0	47.7	44.6	53.0	54.6
	Ratio of exports to shipments (percent) . . . .	36.3	37.1	38.9	45.0	44.0
MT018	Textile machinery and parts:					
	Number of establishments . . . . .	500	500	500	500	500
	Employees (thousands) . . . . .	15	17	16	17	16
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	1,615	1,620	1,475	1,642	1,724
	U.S. exports (million dollars) . . . . .	687	752	728	849	760
	U.S. imports (million dollars) . . . . .	1,833	1,752	1,528	1,686	1,958
	Apparent U.S. consumption (million dollars) . .	2,761	2,620	2,275	2,479	2,922
	Trade balance (million dollars) . . . . .	-1,146	-1,000	-800	-837	-1,198
	Ratio of imports to consumption (percent) . . .	66.4	66.9	67.2	68.0	67.0
	Ratio of exports to shipments (percent) . . . .	42.5	46.4	49.3	51.7	44.1
MT019	Metal rolling mills and parts thereof:					
	Number of establishments . . . . .	17	15	15	15	15
	Employees (thousands) . . . . .	3	3	3	3	3
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	482	610	722	762	840
	U.S. exports (million dollars) . . . . .	287	235	205	262	252
	U.S. imports (million dollars) . . . . .	201	278	533	394	514
	Apparent U.S. consumption (million dollars) . .	395	653	1,050	894	1,102
	Trade balance (million dollars) . . . . .	87	-43	-328	-132	-262
	Ratio of imports to consumption (percent) . . .	50.8	42.6	50.7	44.1	46.6
	Ratio of exports to shipments (percent) . . . .	59.6	38.5	28.4	34.4	30.0
MT020	Machine tools for cutting metal and parts; tool					

See footnote(s) at end of table.

Table B-7--Continued

## Machinery sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	holders, work holders; dividing heads and other special attachments for machine tools:					
	Number of establishments . . . . .	820	800	750	750	720
	Employees (thousands) . . . . .	86	88	87	88	88
	Capacity utilization (percent) . . . . .	79	76	74	73	70
	U.S. shipments (million dollars) . . . . .	6,535	6,650	7,100	7,300	6,935
	U.S. exports (million dollars) . . . . .	1,653	1,722	2,228	2,206	1,985
	U.S. imports (million dollars) . . . . .	2,735	3,512	3,880	4,298	4,590
	Apparent U.S. consumption (million dollars) . .	7,617	8,440	8,752	9,392	9,540
	Trade balance (million dollars) . . . . .	-1,082	-1,790	-1,652	-2,092	-2,605
	Ratio of imports to consumption (percent) . . .	35.9	41.6	44.3	45.8	48.1
	Ratio of exports to shipments (percent) . . . . .	25.3	25.9	31.4	30.2	28.6
MT021	Machine tools for metal forming and parts thereof:					
	Number of establishments . . . . .	360	340	340	310	300
	Employees (thousands) . . . . .	17	18	18	17	16
	Capacity utilization (percent) . . . . .	76	80	76	86	75
	U.S. shipments (million dollars) . . . . .	1,933	2,153	2,500	2,400	2,136
	U.S. exports (million dollars) . . . . .	778	862	1,033	1,054	996
	U.S. imports (million dollars) . . . . .	913	1,125	1,226	1,355	1,409
	Apparent U.S. consumption (million dollars) . .	2,067	2,416	2,693	2,701	2,549
	Trade balance (million dollars) . . . . .	-134	-263	-193	-301	-413
	Ratio of imports to consumption (percent) . . .	44.1	46.6	45.5	50.2	55.3
	Ratio of exports to shipments (percent) . . . . .	40.3	40.0	41.3	43.9	46.6
MT022	Non-metalworking machine tools and parts thereof:					
	Number of establishments . . . . .	340	330	330	300	290
	Employees (thousands) . . . . .	15	16	17	17	16
	Capacity utilization (percent) . . . . .	89	85	85	85	80
	U.S. shipments (million dollars) . . . . .	2,249	2,564	2,900	2,950	2,655
	U.S. exports (million dollars) . . . . .	861	1,456	1,368	1,610	617
	U.S. imports (million dollars) . . . . .	818	993	1,207	1,464	1,229
	Apparent U.S. consumption (million dollars) . .	2,206	2,101	2,739	2,804	3,267
	Trade balance (million dollars) . . . . .	43	463	161	146	-612
	Ratio of imports to consumption (percent) . . .	37.1	47.3	44.1	52.2	37.6
	Ratio of exports to shipments (percent) . . . . .	38.3	56.8	47.2	54.6	23.2
MT023	Semiconductor manufacturing equipment and robotics:					
	Number of establishments . . . . .	500	440	420	420	400
	Employees (thousands) . . . . .	33	44	53	53	50
	Capacity utilization (percent) . . . . .	80	100	100	98	60
	U.S. shipments (million dollars) . . . . .	8,597	12,655	15,474	13,498	12,608
	U.S. exports (million dollars) . . . . .	3,563	5,956	6,525	7,270	8,631
	U.S. imports (million dollars) . . . . .	2,376	2,848	3,057	3,721	4,134
	Apparent U.S. consumption (million dollars) . .	7,410	9,547	12,006	9,949	8,111
	Trade balance (million dollars) . . . . .	1,187	3,108	3,468	3,549	4,497
	Ratio of imports to consumption (percent) . . .	32.1	29.8	25.5	37.4	51.0
	Ratio of exports to shipments (percent) . . . . .	41.5	47.1	42.2	53.9	68.5
MT024	Taps, cocks, valves, and similar devices:					
	Number of establishments . . . . .	889	893	890	935	825
	Employees (thousands) . . . . .	71	74	72	74	72
	Capacity utilization (percent) . . . . .	73	76	76	78	75
	U.S. shipments (million dollars) . . . . .	9,862	10,355	10,614	11,144	11,033
	U.S. exports (million dollars) . . . . .	1,909	2,180	2,423	2,745	2,836
	U.S. imports (million dollars) . . . . .	2,600	2,931	3,128	3,566	3,974
	Apparent U.S. consumption (million dollars) . .	10,554	11,107	11,319	11,965	12,171
	Trade balance (million dollars) . . . . .	-692	-752	-705	-821	-1,138
	Ratio of imports to consumption (percent) . . .	24.6	26.4	27.6	29.8	32.7
	Ratio of exports to shipments (percent) . . . . .	19.4	21.0	22.8	24.6	25.7
MT026	Gear boxes and other speed changers; torque					

See footnote(s) at end of table.

Table B-7--Continued

## Machinery sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	converters; ball screws; flywheels and pulleys; clutches and shaft couplings; universal joints; and parts thereof:					
	Number of establishments . . . . .	230	230	210	210	210
	Employees (thousands) . . . . .	38	40	38	39	40
	Capacity utilization (percent) . . . . .	81	72	76	77	80
	U.S. shipments (million dollars) . . . . .	3,803	4,334	4,551	4,606	4,836
	U.S. exports (million dollars) . . . . .	764	818	889	1,027	1,011
	U.S. imports (million dollars) . . . . .	1,412	1,607	1,607	1,650	1,843
	Apparent U.S. consumption (million dollars) . .	4,451	5,123	5,269	5,229	5,668
	Trade balance (million dollars) . . . . .	-648	-789	-718	-623	-832
	Ratio of imports to consumption (percent) . . .	31.7	31.4	30.5	31.6	32.5
	Ratio of exports to shipments (percent) . . . .	20.1	18.9	19.5	22.3	20.9
MT027	Boilers, turbines, and related machinery:					
	Number of establishments . . . . .	35	30	30	30	28
	Employees (thousands) . . . . .	11	9	9	9	8
	Capacity utilization (percent) . . . . .	79	65	70	73	70
	U.S. shipments (million dollars) . . . . .	1,797	1,805	2,100	2,000	1,960
	U.S. exports (million dollars) . . . . .	1,231	1,540	1,560	1,864	1,495
	U.S. imports (million dollars) . . . . .	348	363	499	345	370
	Apparent U.S. consumption (million dollars) . .	914	628	1,040	481	835
	Trade balance (million dollars) . . . . .	883	1,177	1,060	1,519	1,125
	Ratio of imports to consumption (percent) . . .	38.1	57.8	48.0	71.7	44.4
	Ratio of exports to shipments (percent) . . . .	68.5	85.3	74.3	93.2	76.3
MT028	Electric motors, generators, and related equipment:					
	Number of establishments . . . . .	510	510	510	515	515
	Employees (thousands) . . . . .	93	96	96	94	95
	Capacity utilization (percent) . . . . .	82	80	81	74	76
	U.S. shipments (million dollars) . . . . .	17,205	17,770	17,800	18,250	19,100
	U.S. exports (million dollars) . . . . .	2,955	3,391	3,316	3,849	3,962
	U.S. imports (million dollars) . . . . .	3,457	3,880	3,875	4,179	4,749
	Apparent U.S. consumption (million dollars) . .	17,707	18,259	18,360	18,580	19,887
	Trade balance (million dollars) . . . . .	-502	-489	-560	-330	-787
	Ratio of imports to consumption (percent) . . .	19.5	21.2	21.1	22.5	23.9
	Ratio of exports to shipments (percent) . . . .	17.2	19.1	18.6	21.1	20.7
MT029	Electrical transformers, static converters, and inductors:					
	Number of establishments . . . . .	310	310	315	315	310
	Employees (thousands) . . . . .	52	51	53	51	50
	Capacity utilization (percent) . . . . .	75	74	75	76	74
	U.S. shipments (million dollars) . . . . .	7,110	7,585	7,700	7,900	8,200
	U.S. exports (million dollars) . . . . .	1,750	2,000	1,923	2,480	2,301
	U.S. imports (million dollars) . . . . .	2,713	3,537	3,631	4,290	4,481
	Apparent U.S. consumption (million dollars) . .	8,073	9,123	9,408	9,710	10,380
	Trade balance (million dollars) . . . . .	-963	-1,538	-1,708	-1,810	-2,180
	Ratio of imports to consumption (percent) . . .	33.6	38.8	38.6	44.2	43.2
	Ratio of exports to shipments (percent) . . . .	24.6	26.4	25.0	31.4	28.1
MT031	Portable electric handtools:					
	Number of establishments . . . . .	30	30	30	29	30
	Employees (thousands) . . . . .	9	10	10	10	10
	Capacity utilization (percent) . . . . .	78	80	78	80	82
	U.S. shipments (million dollars) . . . . .	1,900	1,930	2,200	2,300	2,400
	U.S. exports (million dollars) . . . . .	350	369	333	443	383
	U.S. imports (million dollars) . . . . .	421	481	607	765	834
	Apparent U.S. consumption (million dollars) . .	1,971	2,042	2,475	2,622	2,851
	Trade balance (million dollars) . . . . .	-71	-112	-275	-322	-451
	Ratio of imports to consumption (percent) . . .	21.4	23.6	24.5	29.2	29.3
	Ratio of exports to shipments (percent) . . . .	18.4	19.1	15.1	19.3	16.0
MT032	Nonelectrically powered handtools and parts					

See footnote(s) at end of table.

Table B-7--Continued

## Machinery sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	thereof:					
	Number of establishments . . . . .	48	46	42	42	38
	Employees (thousands) . . . . .	13	12	12	12	11
	Capacity utilization (percent) . . . . .	76	80	77	80	77
	U.S. shipments (million dollars) . . . . .	1,491	1,558	1,800	1,875	1,780
	U.S. exports (million dollars) . . . . .	474	462	478	579	553
	U.S. imports (million dollars) . . . . .	619	661	684	735	782
	Apparent U.S. consumption (million dollars) . .	1,636	1,757	2,006	2,031	2,010
	Trade balance (million dollars) . . . . .	-145	-199	-206	-156	-230
	Ratio of imports to consumption (percent) . . .	37.8	37.6	34.1	36.2	38.9
	Ratio of exports to shipments (percent) . . . . .	31.8	29.7	26.6	30.9	31.0
MT034	Flashlights and other similar electric lights, light bulbs and fluorescent tubes; arc lamps:					
	Number of establishments . . . . .	125	125	127	125	120
	Employees (thousands) . . . . .	26	25	26	27	28
	Capacity utilization (percent) . . . . .	84	72	71	70	73
	U.S. shipments (million dollars) . . . . .	3,330	3,200	3,400	3,500	3,650
	U.S. exports (million dollars) . . . . .	811	786	833	955	896
	U.S. imports (million dollars) . . . . .	1,030	1,097	1,153	1,215	1,287
	Apparent U.S. consumption (million dollars) . .	3,549	3,511	3,720	3,760	4,041
	Trade balance (million dollars) . . . . .	-219	-311	-320	-260	-391
	Ratio of imports to consumption (percent) . . .	29.0	31.3	31.0	32.3	31.8
	Ratio of exports to shipments (percent) . . . . .	24.4	24.6	24.5	27.3	24.5
MT035	Electric and gas welding and soldering equipment:					
	Number of establishments . . . . .	183	225	250	245	245
	Employees (thousands) . . . . .	19	22	21	22	22
	Capacity utilization (percent) . . . . .	86	75	80	82	82
	U.S. shipments (million dollars) . . . . .	3,043	3,301	3,565	3,725	3,900
	U.S. exports (million dollars) . . . . .	460	507	534	762	617
	U.S. imports (million dollars) . . . . .	486	596	683	810	706
	Apparent U.S. consumption (million dollars) . .	3,069	3,390	3,714	3,772	3,989
	Trade balance (million dollars) . . . . .	-26	-89	-149	-47	-89
	Ratio of imports to consumption (percent) . . .	15.8	17.6	18.4	21.5	17.7
	Ratio of exports to shipments (percent) . . . . .	15.1	15.4	15.0	20.5	15.8
MT036	Insulated electrical wire and cable and conduit; glass and ceramic insulators:					
	Number of establishments . . . . .	530	535	535	530	535
	Employees (thousands) . . . . .	83	87	90	91	92
	Capacity utilization (percent) . . . . .	83	85	85	83	85
	U.S. shipments (million dollars) . . . . .	15,210	16,565	17,200	18,450	19,750
	U.S. exports (million dollars) . . . . .	3,289	3,566	3,936	4,491	4,258
	U.S. imports (million dollars) . . . . .	4,810	5,398	5,935	6,819	7,221
	Apparent U.S. consumption (million dollars) . .	16,731	18,397	19,199	20,778	22,713
	Trade balance (million dollars) . . . . .	-1,521	-1,832	-1,999	-2,328	-2,963
	Ratio of imports to consumption (percent) . . .	28.8	29.3	30.9	32.8	31.8
	Ratio of exports to shipments (percent) . . . . .	21.6	21.5	22.9	24.3	21.6
MT045	Miscellaneous machinery:					
	Number of establishments . . . . .	5,000	5,500	5,500	5,550	5,550

See footnote(s) at end of table.

Table B-7--Continued

## Machinery sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Employees (thousands) . . . . .	220	230	230	230	230
	Capacity utilization (percent) . . . . .	( <sup>2</sup> )				
	U.S. shipments (million dollars) . . . . .	22,000	24,000	24,000	26,712	29,000
	U.S. exports (million dollars) . . . . .	4,759	4,957	5,474	6,131	5,091
	U.S. imports (million dollars) . . . . .	3,160	4,117	4,377	4,715	5,176
	Apparent U.S. consumption (million dollars) . .	20,402	23,160	22,903	25,296	29,086
	Trade balance (million dollars) . . . . .	1,598	840	1,097	1,416	-86
	Ratio of imports to consumption (percent) . . .	15.5	17.8	19.1	18.6	17.8
	Ratio of exports to shipments (percent) . . . .	21.6	20.7	22.8	23.0	17.6
MT046	Molds and molding machinery:					
	Number of establishments . . . . .	120	120	120	120	120
	Employees (thousands) . . . . .	8	8	8	8	8
	Capacity utilization (percent) . . . . .	( <sup>1</sup> )				
	U.S. shipments (million dollars) . . . . .	4,265	4,775	4,922	5,478	5,750
	U.S. exports (million dollars) . . . . .	1,287	1,301	1,442	1,681	1,711
	U.S. imports (million dollars) . . . . .	3,121	3,528	3,030	3,227	3,272
	Apparent U.S. consumption (million dollars) . .	6,099	7,002	6,510	7,024	7,312
	Trade balance (million dollars) . . . . .	-1,834	-2,227	-1,588	-1,546	-1,562
	Ratio of imports to consumption (percent) . . .	51.2	50.4	46.5	45.9	44.8
	Ratio of exports to shipments (percent) . . . .	30.2	27.2	29.3	30.7	29.8

<sup>1</sup> Capacity utilization could not be meaningfully calculated for this industry.

<sup>2</sup> Not available.

Note.--Calculations based on unrounded data.

**Table B-8**  
**Transportation equipment sector: Profile of U.S. industry and market, by industry/commodity groups,**  
**1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
MT001	Aircraft engines and gas turbines:					
	Number of establishments . . . . .	26	30	30	30	30
	Employees (thousands) . . . . .	121	114	122	91	131
	Capacity utilization (percent) . . . . .	80	80	85	90	95
	U.S. shipments (million dollars) . . . . .	16,060	15,099	15,853	16,500	17,509
	U.S. exports (million dollars) . . . . .	8,467	8,641	8,963	11,594	13,115
	U.S. imports (million dollars) . . . . .	5,825	5,285	6,241	8,380	10,404
	Apparent U.S. consumption (million dollars) . .	13,418	11,743	13,131	13,287	14,798
	Trade balance (million dollars) . . . . .	2,642	3,356	2,722	3,213	2,711
	Ratio of imports to consumption (percent) . . .	43.4	45.0	47.5	63.1	70.3
	Ratio of exports to shipments (percent) . . . . .	52.7	57.2	56.5	70.3	74.9
MT002	Internal combustion piston engines, other than for aircraft:					
	Number of establishments . . . . .	800	800	800	800	810
	Employees (thousands) . . . . .	155	160	160	160	165
	Capacity utilization (percent) . . . . .	80	82	85	85	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	41,400	43,600	46,900	47,000	55,000
	U.S. exports (million dollars) . . . . .	8,288	8,906	9,167	10,625	11,015
	U.S. imports (million dollars) . . . . .	7,424	8,508	9,533	9,987	11,478
	Apparent U.S. consumption (million dollars) . .	40,536	43,202	47,266	46,362	55,463
	Trade balance (million dollars) . . . . .	864	398	-366	638	-463
	Ratio of imports to consumption (percent) . . .	18.3	19.7	20.2	21.5	20.7
	Ratio of exports to shipments (percent) . . . . .	20.0	20.4	19.5	22.6	20.0
MT011	Forklift trucks and similar industrial vehicles:					
	Number of establishments . . . . .	432	435	435	436	438
	Employees (thousands) . . . . .	18	20	21	23	25
	Capacity utilization (percent) . . . . .	75	95	93	94	94
	U.S. shipments (million dollars) . . . . .	3,440	4,600	4,866	5,528	5,940
	U.S. exports (million dollars) . . . . .	691	928	920	1,161	1,188
	U.S. imports (million dollars) . . . . .	955	1,136	1,007	1,164	1,456
	Apparent U.S. consumption (million dollars) . .	3,705	4,808	4,954	5,531	6,208
	Trade balance (million dollars) . . . . .	-265	-208	-88	-3	-268
	Ratio of imports to consumption (percent) . . .	25.8	23.6	20.3	21.0	23.4
	Ratio of exports to shipments (percent) . . . . .	20.1	20.2	18.9	21.0	20.0
MT012	Construction and mining equipment:					
	Number of establishments . . . . .	1,600	1,600	1,600	1,605	1,610
	Employees (thousands) . . . . .	80	78	79	110	125
	Capacity utilization (percent) . . . . .	73	75	77	85	87
	U.S. shipments (million dollars) . . . . .	13,870	15,500	28,670	35,100	38,646
	U.S. exports (million dollars) . . . . .	7,526	8,426	9,953	11,070	11,595
	U.S. imports (million dollars) . . . . .	3,622	3,812	3,928	4,884	6,188
	Apparent U.S. consumption (million dollars) . .	9,966	10,886	22,645	28,914	33,239
	Trade balance (million dollars) . . . . .	3,904	4,614	6,025	6,186	5,407
	Ratio of imports to consumption (percent) . . .	36.3	35.0	17.3	16.9	18.6
	Ratio of exports to shipments (percent) . . . . .	54.3	54.4	34.7	31.5	30.0

See footnote(s) at end of table.

Table B-8--Continued

## Transportation equipment sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MT025	Ball and rollers bearings:					
	Number of establishments . . . . .	140	145	146	150	150
	Employees (thousands) . . . . .	37	38	36	37	37
	Capacity utilization (percent) . . . . .	67	75	75	77	80
	U.S. shipments (million dollars) . . . . .	4,470	5,400	5,446	5,736	6,022
	U.S. exports (million dollars) . . . . .	801	967	1,008	1,140	1,141
	U.S. imports (million dollars) . . . . .	1,302	1,520	1,526	1,615	1,719
	Apparent U.S. consumption (million dollars) . .	4,970	5,953	5,964	6,211	6,600
	Trade balance (million dollars) . . . . .	-500	-553	-518	-475	-578
	Ratio of imports to consumption (percent) . . .	26.2	25.5	25.6	26.0	26.0
	Ratio of exports to shipments (percent) . . . . .	17.9	17.9	18.5	19.9	18.9
MT030	Primary cells and batteries and electric storage batteries:					
	Number of establishments . . . . .	230	232	230	230	230
	Employees (thousands) . . . . .	40	42	42	42	42
	Capacity utilization (percent) . . . . .	87	87	85	80	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	5,800	5,900	6,075	6,100	7,000
	U.S. exports (million dollars) . . . . .	1,125	1,208	1,310	1,494	1,334
	U.S. imports (million dollars) . . . . .	1,441	1,637	1,710	1,896	1,936
	Apparent U.S. consumption (million dollars) . .	6,116	6,329	6,475	6,503	7,602
	Trade balance (million dollars) . . . . .	-316	-429	-400	-403	-602
	Ratio of imports to consumption (percent) . . .	23.6	25.9	26.4	29.2	25.5
	Ratio of exports to shipments (percent) . . . . .	19.4	20.5	21.6	24.5	19.1
MT033	Ignition, starting, lighting, and other electrical equipment:					
	Number of establishments . . . . .	523	520	520	520	520
	Employees (thousands) . . . . .	70	71	71	70	70
	Capacity utilization (percent) . . . . .	77	75	75	75	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	9,000	8,500	8,500	8,800	9,300
	U.S. exports (million dollars) . . . . .	1,409	1,336	1,404	1,579	1,725
	U.S. imports (million dollars) . . . . .	1,699	1,833	2,032	2,170	2,363
	Apparent U.S. consumption (million dollars) . .	9,290	8,997	9,129	9,391	9,937
	Trade balance (million dollars) . . . . .	-290	-497	-629	-591	-637
	Ratio of imports to consumption (percent) . . .	18.3	20.4	22.3	23.1	23.8
	Ratio of exports to shipments (percent) . . . . .	15.7	15.7	16.5	17.9	18.6
MT037	Rail locomotive and rolling stock:					
	Number of establishments . . . . .	140	140	140	142	140
	Employees (thousands) . . . . .	25	25	25	27	27
	Capacity utilization (percent) . . . . .	90	95	93	95	95
	U.S. shipments (million dollars) . . . . .	4,913	5,623	5,305	5,700	6,000
	U.S. exports (million dollars) . . . . .	750	877	851	1,229	1,694
	U.S. imports (million dollars) . . . . .	1,161	1,292	1,312	1,372	2,156
	Apparent U.S. consumption (million dollars) . .	5,324	6,037	5,766	5,843	6,462
	Trade balance (million dollars) . . . . .	-411	-414	-461	-143	-462
	Ratio of imports to consumption (percent) . . .	21.8	21.4	22.8	23.5	33.4
	Ratio of exports to shipments (percent) . . . . .	15.3	15.6	16.1	21.6	28.2

See footnote(s) at end of table.

**Table B-8--Continued**

**Transportation equipment sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98**

USITC		1994	1995	1996	1997	1998
code	Industry/commodity group					
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing:					
	Number of establishments . . . . .	1,125	1,125	1,125	1,130	1,130
	Employees (thousands) . . . . .	338	360	355	358	359
	Capacity utilization (percent) . . . . .	87	85	85	87	87
	U.S. shipments (million dollars) . . . . .	175,800	170,500	160,270	163,475	168,890
	U.S. exports (million dollars) . . . . .	20,904	21,345	22,693	24,394	22,544
	U.S. imports (million dollars) . . . . .	79,086	84,217	87,116	92,988	99,828
	Apparent U.S. consumption (million dollars) . .	233,982	233,372	224,693	232,069	246,174
	Trade balance (million dollars) . . . . .	-58,182	-62,872	-64,423	-68,594	-77,284
	Ratio of imports to consumption (percent) . . .	33.8	36.1	38.8	40.1	40.6
	Ratio of exports to shipments (percent) . . . .	11.9	12.5	14.2	14.9	13.3
MT039	Certain motor-vehicle parts:					
	Number of establishments . . . . .	5,900	5,895	5,900	5,900	5,950
	Employees (thousands) . . . . .	396	385	400	425	445
	Capacity utilization (percent) . . . . .	85	81	78	78	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	79,000	85,000	92,400	100,300	112,100
	U.S. exports (million dollars) . . . . .	20,685	22,265	22,793	26,324	25,988
	U.S. imports (million dollars) . . . . .	16,085	16,298	16,867	17,804	18,767
	Apparent U.S. consumption (million dollars) . .	74,399	79,033	86,473	91,780	104,879
	Trade balance (million dollars) . . . . .	4,601	5,967	5,927	8,520	7,221
	Ratio of imports to consumption (percent) . . .	21.6	20.6	19.5	19.4	17.9
	Ratio of exports to shipments (percent) . . . .	26.2	26.2	24.7	26.2	23.2
MT040	Motorcycles, mopeds, and parts:					
	Number of establishments . . . . .	58	60	65	70	75
	Employees (thousands) . . . . .	8	8	8	9	9
	Capacity utilization (percent) . . . . .	88	88	88	88	86
	U.S. shipments (million dollars) . . . . .	1,370	1,560	1,700	1,850	2,000
	U.S. exports (million dollars) . . . . .	511	593	638	666	626
	U.S. imports (million dollars) . . . . .	937	1,162	1,137	1,104	1,293
	Apparent U.S. consumption (million dollars) . .	1,796	2,128	2,199	2,288	2,667
	Trade balance (million dollars) . . . . .	-426	-568	-499	-438	-667
	Ratio of imports to consumption (percent) . . .	52.2	54.6	51.7	48.3	48.5
	Ratio of exports to shipments (percent) . . . .	37.3	38.0	37.6	36.0	31.3
MT041	Miscellaneous vehicles and transportation-related equipment:					
	Number of establishments . . . . .	1,200	1,200	1,200	1,200	1,202
	Employees (thousands) . . . . .	35	36	36	35	36
	Capacity utilization (percent) . . . . .	60	62	64	63	63
	U.S. shipments (million dollars) . . . . .	5,500	5,900	5,900	5,782	5,924
	U.S. exports (million dollars) . . . . .	3,171	3,396	3,980	3,166	2,962
	U.S. imports (million dollars) . . . . .	1,458	1,510	1,418	1,522	1,666
	Apparent U.S. consumption (million dollars) . .	3,787	4,013	3,338	4,137	4,628
	Trade balance (million dollars) . . . . .	1,713	1,887	2,562	1,645	1,296
	Ratio of imports to consumption (percent) . . .	38.5	37.6	42.5	36.8	36.0
	Ratio of exports to shipments (percent) . . . .	57.7	57.6	67.5	54.8	50.0

See footnote(s) at end of table.

Table B-8--Continued

## Transportation equipment sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MT042	Aircraft, spacecraft, and related equipment:					
	Number of establishments . . . . .	270	275	280	260	250
	Employees (thousands) . . . . .	413	386	473	498	464
	Capacity utilization (percent) . . . . .	78	80	85	90	95
	U.S. shipments (million dollars) . . . . .	47,918	45,816	47,513	56,674	65,384
	U.S. exports (million dollars) . . . . .	28,576	23,839	30,754	38,698	50,248
	U.S. imports (million dollars) . . . . .	6,431	6,135	7,353	9,459	12,748
	Apparent U.S. consumption (million dollars) . .	25,772	28,112	24,112	27,435	27,884
	Trade balance (million dollars) . . . . .	22,146	17,704	23,401	29,239	37,500
	Ratio of imports to consumption (percent) . . .	25.0	21.8	30.5	34.5	45.7
	Ratio of exports to shipments (percent) . . . . .	59.6	52.0	64.7	68.3	76.9
MT043	Ships, tugs, pleasure boats, and similar vessels:					
	Number of establishments . . . . .	2,200	2,200	2,100	2,100	2,100
	Employees (thousands) . . . . .	146	145	140	138	135
	Capacity utilization (percent) . . . . .	70	75	70	70	70
	U.S. shipments (million dollars) . . . . .	14,497	14,992	14,800	14,600	14,500
	U.S. exports (million dollars) . . . . .	1,203	1,220	1,058	1,408	1,765
	U.S. imports (million dollars) . . . . .	653	919	1,130	924	1,090
	Apparent U.S. consumption (million dollars) . .	13,947	14,691	14,872	14,115	13,825
	Trade balance (million dollars) . . . . .	550	301	-72	485	675
	Ratio of imports to consumption (percent) . . .	4.7	6.3	7.6	6.5	7.9
	Ratio of exports to shipments (percent) . . . . .	8.3	8.1	7.1	9.6	12.2
MT044	Motors and engines, except internal combustion, aircraft, or electric:					
	Number of establishments . . . . .	45	45	45	45	45
	Employees (thousands) . . . . .	9	9	9	9	9
	Capacity utilization (percent) . . . . .	84	86	85	85	( <sup>1</sup> )
	U.S. shipments (million dollars) . . . . .	4,200	4,200	4,250	4,300	4,350
	U.S. exports (million dollars) . . . . .	275	315	335	402	397
	U.S. imports (million dollars) . . . . .	374	474	511	567	621
	Apparent U.S. consumption (million dollars) . .	4,299	4,359	4,426	4,466	4,573
	Trade balance (million dollars) . . . . .	-99	-159	-176	-166	-223
	Ratio of imports to consumption (percent) . . .	8.7	10.9	11.5	12.7	13.6
	Ratio of exports to shipments (percent) . . . . .	6.5	7.5	7.9	9.3	9.1

<sup>1</sup> Not available.

Note.--Calculations based on unrounded data.

Table B-9

## Electronic products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
ST001	Office machines:					
	Number of establishments . . . . .	250	250	250	250	250
	Employees (thousands) . . . . .	47	48	48	49	48
	Capacity utilization (percent) . . . . .	85	80	80	80	80
	U.S. shipments (million dollars) . . . . .	9,498	8,851	8,567	9,492	9,403
	U.S. exports (million dollars) . . . . .	1,777	1,930	2,099	2,307	2,470
	U.S. imports (million dollars) . . . . .	5,781	6,366	6,296	6,688	6,208
	Apparent U.S. consumption (million dollars) . .	13,502	13,287	12,763	13,873	13,141
	Trade balance (million dollars) . . . . .	-4,004	-4,436	-4,196	-4,381	-3,738
	Ratio of imports to consumption (percent) . . .	42.8	47.9	49.3	48.2	47.2
	Ratio of exports to shipments (percent) . . . . .	18.7	21.8	24.5	24.3	26.3
ST002	Telephone and telegraph apparatus:					
	Number of establishments . . . . .	431	388	390	382	370
	Employees (thousands) . . . . .	147	162	172	177	171
	Capacity utilization (percent) . . . . .	74	75	77	80	78
	U.S. shipments (million dollars) . . . . .	29,445	34,559	41,760	47,686	53,122
	U.S. exports (million dollars) . . . . .	6,724	8,203	8,630	9,370	9,762
	U.S. imports (million dollars) . . . . .	7,448	7,742	8,202	9,261	10,488
	Apparent U.S. consumption (million dollars) . .	30,168	34,099	41,332	47,577	53,848
	Trade balance (million dollars) . . . . .	-723	460	428	109	-726
	Ratio of imports to consumption (percent) . . .	24.7	22.7	19.8	19.5	19.5
	Ratio of exports to shipments (percent) . . . . .	22.8	23.7	20.7	19.7	18.4
ST003	Microphones, loudspeakers, audio amplifiers, and combinations thereof:					
	Number of establishments . . . . .	110	110	100	100	100
	Employees (thousands) . . . . .	12	12	12	12	12
	Capacity utilization (percent) . . . . .	75	75	75	75	75
	U.S. shipments (million dollars) . . . . .	1,890	1,880	2,075	1,900	1,750
	U.S. exports (million dollars) . . . . .	1,006	1,046	1,138	1,228	1,095
	U.S. imports (million dollars) . . . . .	1,827	2,001	2,108	2,168	2,312
	Apparent U.S. consumption (million dollars) . .	2,711	2,835	3,045	2,840	2,967
	Trade balance (million dollars) . . . . .	-821	-955	-970	-940	-1,217
	Ratio of imports to consumption (percent) . . .	67.4	70.6	69.2	76.3	77.9
	Ratio of exports to shipments (percent) . . . . .	53.2	55.6	54.8	64.6	62.6
ST004	Tape recorders, tape players, video cassette recorders, turntables, and compact disc players:					
	Number of establishments . . . . .	24	24	24	24	24
	Employees (thousands) . . . . .	1	1	1	1	1
	Capacity utilization (percent) . . . . .	75	75	75	75	75
	U.S. shipments (million dollars) . . . . .	340	425	392	495	550
	U.S. exports (million dollars) . . . . .	640	754	964	1,058	888
	U.S. imports (million dollars) . . . . .	6,283	6,733	5,873	6,128	6,426
	Apparent U.S. consumption (million dollars) . .	5,983	6,403	5,300	5,566	6,088
	Trade balance (million dollars) . . . . .	-5,643	-5,978	-4,908	-5,071	-5,538
	Ratio of imports to consumption (percent) . . .	105.0	105.1	110.8	110.1	105.5
	Ratio of exports to shipments (percent) . . . . .	188.4	177.5	246.0	213.7	161.4

ST005 Unrecorded magnetic tapes, discs, and other media:

See footnote(s) at end of table.

Table B-9--Continued

## Electronic products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Number of establishments . . . . .	55	55	59	57	57
	Employees (thousands) . . . . .	25	25	24	24	24
	Capacity utilization (percent) . . . . .	91	87	87	85	85
	U.S. shipments (million dollars) . . . . .	4,777	5,106	5,739	5,243	5,300
	U.S. exports (million dollars) . . . . .	1,736	2,030	2,670	2,603	2,042
	U.S. imports (million dollars) . . . . .	1,943	1,936	2,072	2,090	2,103
	Apparent U.S. consumption (million dollars) . .	4,984	5,012	5,140	4,730	5,362
	Trade balance (million dollars) . . . . .	-207	94	599	513	-62
	Ratio of imports to consumption (percent) . . .	39.0	38.6	40.3	44.2	39.2
	Ratio of exports to shipments (percent) . . . . .	36.3	39.8	46.5	49.7	38.5
ST006	Records, tapes, compact discs, computer software, and other recorded media:					
	Number of establishments . . . . .	11,200	11,400	11,920	12,400	12,900
	Employees (thousands) . . . . .	180	185	225	250	250
	Capacity utilization (percent) . . . . .	90	90	90	90	90
	U.S. shipments (million dollars) . . . . .	27,000	30,800	60,000	65,000	75,000
	U.S. exports (million dollars) . . . . .	3,742	3,814	3,453	3,785	3,619
	U.S. imports (million dollars) . . . . .	755	916	994	981	1,135
	Apparent U.S. consumption (million dollars) . .	24,013	27,902	57,541	62,196	72,515
	Trade balance (million dollars) . . . . .	2,987	2,898	2,459	2,804	2,485
	Ratio of imports to consumption (percent) . . .	3.1	3.3	1.7	1.6	1.6
	Ratio of exports to shipments (percent) . . . . .	13.9	12.4	5.8	5.8	4.8
ST007	Radio transmission and reception apparatus, and combinations thereof:					
	Number of establishments . . . . .	381	350	350	350	350
	Employees (thousands) . . . . .	70	70	65	65	65
	Capacity utilization (percent) . . . . .	70	70	70	70	70
	U.S. shipments (million dollars) . . . . .	13,128	14,192	14,578	15,190	15,800
	U.S. exports (million dollars) . . . . .	5,166	6,604	6,500	9,217	8,341
	U.S. imports (million dollars) . . . . .	7,764	8,528	8,071	9,060	10,249
	Apparent U.S. consumption (million dollars) . .	15,727	16,116	16,149	15,034	17,708
	Trade balance (million dollars) . . . . .	-2,599	-1,924	-1,571	156	-1,908
	Ratio of imports to consumption (percent) . . .	49.4	52.9	50.0	60.3	57.9
	Ratio of exports to shipments (percent) . . . . .	39.3	46.5	44.6	60.7	52.8
ST008	Radio navigational aid, radar, and remote control apparatus:					
	Number of establishments . . . . .	100	100	100	100	100
	Employees (thousands) . . . . .	108	105	105	110	110
	Capacity utilization (percent) . . . . .	72	72	72	75	75
	U.S. shipments (million dollars) . . . . .	13,170	13,565	13,972	14,391	13,959
	U.S. exports (million dollars) . . . . .	1,242	1,198	1,215	1,570	1,607
	U.S. imports (million dollars) . . . . .	438	522	594	691	724
	Apparent U.S. consumption (million dollars) . .	12,366	12,889	13,351	13,512	13,075
	Trade balance (million dollars) . . . . .	804	676	621	879	884
	Ratio of imports to consumption (percent) . . .	3.5	4.1	4.5	5.1	5.5
	Ratio of exports to shipments (percent) . . . . .	9.4	8.8	8.7	10.9	11.5

ST009 Television receivers, video monitors, and combinations including television receivers:

See footnote(s) at end of table.

Table B-9--Continued

## Electronic products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Number of establishments . . . . .	26	25	23	21	19
	Employees (thousands) . . . . .	21	20	16	14	12
	Capacity utilization (percent) . . . . .	85	85	85	85	87
	U.S. shipments (million dollars) . . . . .	5,020	5,145	4,650	4,200	3,800
	U.S. exports (million dollars) . . . . .	1,302	1,331	1,268	1,542	2,268
	U.S. imports (million dollars) . . . . .	4,320	4,540	4,498	4,403	5,319
	Apparent U.S. consumption (million dollars) . .	8,037	8,354	7,880	7,061	6,851
	Trade balance (million dollars) . . . . .	-3,017	-3,209	-3,230	-2,861	-3,051
	Ratio of imports to consumption (percent) . . .	53.7	54.3	57.1	62.4	77.6
	Ratio of exports to shipments (percent) . . . . .	25.9	25.9	27.3	36.7	59.7
ST010	Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus:					
	Number of establishments . . . . .	115	115	110	110	110
	Employees (thousands) . . . . .	8	8	8	8	8
	Capacity utilization (percent) . . . . .	72	72	70	70	70
	U.S. shipments (million dollars) . . . . .	1,780	2,110	2,100	2,460	3,100
	U.S. exports (million dollars) . . . . .	427	637	726	969	752
	U.S. imports (million dollars) . . . . .	3,265	3,881	4,353	4,039	5,110
	Apparent U.S. consumption (million dollars) . .	4,619	5,354	5,727	5,530	7,458
	Trade balance (million dollars) . . . . .	-2,839	-3,244	-3,627	-3,070	-4,358
	Ratio of imports to consumption (percent) . . .	70.7	72.5	76.0	73.0	68.5
	Ratio of exports to shipments (percent) . . . . .	24.0	30.2	34.6	39.4	24.3
ST011	Electric sound and visual signaling apparatus:					
	Number of establishments . . . . .	502	502	502	502	502
	Employees (thousands) . . . . .	16	15	16	15	15
	Capacity utilization (percent) . . . . .	84	66	73	69	69
	U.S. shipments (million dollars) . . . . .	2,654	2,707	3,006	2,942	3,060
	U.S. exports (million dollars) . . . . .	578	692	788	903	950
	U.S. imports (million dollars) . . . . .	1,576	1,748	1,883	2,053	2,100
	Apparent U.S. consumption (million dollars) . .	3,652	3,763	4,101	4,092	4,210
	Trade balance (million dollars) . . . . .	-998	-1,056	-1,095	-1,150	-1,150
	Ratio of imports to consumption (percent) . . .	43.2	46.4	45.9	50.2	49.9
	Ratio of exports to shipments (percent) . . . . .	21.8	25.6	26.2	30.7	31.1
ST012	Electrical capacitors and resistors:					
	Number of establishments . . . . .	170	170	170	175	170
	Employees (thousands) . . . . .	30	32	29	30	28
	Capacity utilization (percent) . . . . .	80	80	75	80	75
	U.S. shipments (million dollars) . . . . .	2,539	2,891	2,708	3,161	2,900
	U.S. exports (million dollars) . . . . .	1,186	1,571	1,807	2,194	2,021
	U.S. imports (million dollars) . . . . .	1,475	1,879	1,691	1,950	2,001
	Apparent U.S. consumption (million dollars) . .	2,828	3,199	2,592	2,917	2,880
	Trade balance (million dollars) . . . . .	-289	-308	116	244	20
	Ratio of imports to consumption (percent) . . .	52.2	58.7	65.2	66.8	69.5
	Ratio of exports to shipments (percent) . . . . .	46.7	54.3	66.7	69.4	69.7
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits:					
	Number of establishments . . . . .	1,825	1,820	1,820	1,820	1,820

See footnote(s) at end of table.

Table B-9--Continued

## Electronic products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Employees (thousands) . . . . .	176	179	180	185	180
	Capacity utilization (percent) . . . . .	85	85	80	85	80
	U.S. shipments (million dollars) . . . . .	28,900	30,400	32,000	35,000	37,000
	U.S. exports (million dollars) . . . . .	6,471	7,502	8,200	9,268	9,528
	U.S. imports (million dollars) . . . . .	7,380	8,528	8,829	9,965	10,120
	Apparent U.S. consumption (million dollars) . .	29,809	31,426	32,628	35,697	37,592
	Trade balance (million dollars) . . . . .	-909	-1,026	-628	-697	-592
	Ratio of imports to consumption (percent) . . .	24.8	27.1	27.1	27.9	26.9
	Ratio of exports to shipments (percent) . . . . .	22.4	24.7	25.6	26.5	25.8
ST014	Television picture tubes and other cathode-ray tubes:					
	Number of establishments . . . . .	19	19	18	18	18
	Employees (thousands) . . . . .	22	22	22	22	23
	Capacity utilization (percent) . . . . .	85	85	85	85	85
	U.S. shipments (million dollars) . . . . .	2,935	3,180	3,465	3,640	3,800
	U.S. exports (million dollars) . . . . .	1,061	1,391	1,566	2,085	2,314
	U.S. imports (million dollars) . . . . .	1,003	1,116	987	876	798
	Apparent U.S. consumption (million dollars) . .	2,877	2,905	2,886	2,431	2,284
	Trade balance (million dollars) . . . . .	58	275	579	1,209	1,516
	Ratio of imports to consumption (percent) . . .	34.9	38.4	34.2	36.0	34.9
	Ratio of exports to shipments (percent) . . . . .	36.2	43.7	45.2	57.3	60.9
ST015	Special-purpose tubes:					
	Number of establishments . . . . .	40	38	38	38	36
	Employees (thousands) . . . . .	5	5	5	5	4
	Capacity utilization (percent) . . . . .	70	70	70	70	70
	U.S. shipments (million dollars) . . . . .	855	855	611	700	720
	U.S. exports (million dollars) . . . . .	171	150	153	174	157
	U.S. imports (million dollars) . . . . .	215	274	252	247	200
	Apparent U.S. consumption (million dollars) . .	899	979	710	774	763
	Trade balance (million dollars) . . . . .	-44	-124	-99	-74	-43
	Ratio of imports to consumption (percent) . . .	23.9	28.0	35.5	31.9	26.3
	Ratio of exports to shipments (percent) . . . . .	20.0	17.5	25.1	24.8	21.8
ST016	Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices:					
	Number of establishments . . . . .	500	500	500	500	500
	Employees (thousands) . . . . .	221	235	260	278	287
	Capacity utilization (percent) . . . . .	85	88	86	88	84
	U.S. shipments (million dollars) . . . . .	47,600	63,086	65,423	68,725	70,000
	U.S. exports (million dollars) . . . . .	18,098	23,317	24,135	29,037	29,222
	U.S. imports (million dollars) . . . . .	26,020	39,168	36,771	36,878	33,696
	Apparent U.S. consumption (million dollars) . .	55,522	78,937	78,059	76,566	74,474
	Trade balance (million dollars) . . . . .	-7,922	-15,851	-12,636	-7,841	-4,474
	Ratio of imports to consumption (percent) . . .	46.9	49.6	47.1	48.2	45.2
	Ratio of exports to shipments (percent) . . . . .	38.0	37.0	36.9	42.3	41.7
ST017	Electrical and electronic articles, apparatus, and parts not elsewhere provided for:					
	Number of establishments . . . . .	640	640	650	650	650
	Employees (thousands) . . . . .	23	23	24	24	24

See footnote(s) at end of table.

Table B-9--Continued

## Electronic products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	Capacity utilization (percent) . . . . .	75	78	78	78	80
	U.S. shipments (million dollars) . . . . .	3,700	3,800	4,000	4,200	4,400
	U.S. exports (million dollars) . . . . .	2,117	2,814	2,904	3,064	2,554
	U.S. imports (million dollars) . . . . .	1,137	1,463	1,472	1,597	1,779
	Apparent U.S. consumption (million dollars) . .	2,720	2,449	2,568	2,733	3,624
	Trade balance (million dollars) . . . . .	980	1,351	1,432	1,467	776
	Ratio of imports to consumption (percent) . . .	41.8	59.8	57.3	58.4	49.1
	Ratio of exports to shipments (percent) . . . . .	57.2	74.1	72.6	73.0	58.0
ST018	Automatic data processing machines:					
	Number of establishments . . . . .	770	785	795	795	760
	Employees (thousands) . . . . .	201	210	221	230	230
	Capacity utilization (percent) . . . . .	81	90	88	85	84
	U.S. shipments (million dollars) . . . . .	62,353	73,150	82,733	92,661	106,453
	U.S. exports (million dollars) . . . . .	29,102	34,476	37,977	41,792	38,707
	U.S. imports (million dollars) . . . . .	46,161	56,308	61,457	69,953	72,157
	Apparent U.S. consumption (million dollars) . .	79,412	94,982	106,213	120,822	139,904
	Trade balance (million dollars) . . . . .	-17,059	-21,832	-23,480	-28,161	-33,451
	Ratio of imports to consumption (percent) . . .	58.1	59.3	57.9	57.9	51.6
	Ratio of exports to shipments (percent) . . . . .	46.7	47.1	45.9	45.1	36.4
ST019	Photographic supplies:					
	Number of establishments . . . . .	731	731	731	731	731
	Employees (thousands) . . . . .	46	45	46	46	42
	Capacity utilization (percent) . . . . .	92	83	82	83	83
	U.S. shipments (million dollars) . . . . .	12,829	12,650	13,051	13,286	12,711
	U.S. exports (million dollars) . . . . .	1,621	1,780	2,148	2,302	1,987
	U.S. imports (million dollars) . . . . .	1,675	1,754	1,702	1,766	1,709
	Apparent U.S. consumption (million dollars) . .	12,884	12,624	12,605	12,750	12,433
	Trade balance (million dollars) . . . . .	-55	26	446	536	278
	Ratio of imports to consumption (percent) . . .	13.0	13.9	13.5	13.9	13.7
	Ratio of exports to shipments (percent) . . . . .	12.6	14.1	16.5	17.3	15.6
ST020	Exposed photographic plates, film, and paper:					
	Number of establishments . . . . .	200	200	200	200	200
	Employees (thousands) . . . . .	230	230	230	230	230
	Capacity utilization (percent) . . . . .	85	85	85	85	85
	U.S. shipments (million dollars) . . . . .	6,290	6,440	6,600	6,650	6,675
	U.S. exports (million dollars) . . . . .	110	98	101	99	120
	U.S. imports (million dollars) . . . . .	107	125	150	147	152
	Apparent U.S. consumption (million dollars) . .	6,287	6,467	6,649	6,698	6,706
	Trade balance (million dollars) . . . . .	3	-27	-49	-48	-31
	Ratio of imports to consumption (percent) . . .	1.7	1.9	2.3	2.2	2.3
	Ratio of exports to shipments (percent) . . . . .	1.7	1.5	1.5	1.5	1.8
ST021	Optical fibers, optical fiber bundles and cables:					
	Number of establishments . . . . .	58	60	62	63	64
	Employees (thousands) . . . . .	8	9	10	11	12
	Capacity utilization (percent) . . . . .	90	90	92	93	95
	U.S. shipments (million dollars) . . . . .	2,290	2,750	2,807	3,228	3,712
	U.S. exports (million dollars) . . . . .	418	475	646	806	807
	U.S. imports (million dollars) . . . . .	104	154	216	272	398
	Apparent U.S. consumption (million dollars) . .	1,976	2,429	2,377	2,694	3,303
	Trade balance (million dollars) . . . . .	314	321	430	534	409
	Ratio of imports to consumption (percent) . . .	5.3	6.3	9.1	10.1	12.1
	Ratio of exports to shipments (percent) . . . . .	18.3	17.3	23.0	25.0	21.7
ST022	Optical goods, including ophthalmic goods:					
	Number of establishments . . . . .	904	900	905	904	905
	Employees (thousands) . . . . .	60	58	60	60	60
	Capacity utilization (percent) . . . . .	80	78	82	83	85
	U.S. shipments (million dollars) . . . . .	4,750	4,900	5,400	5,700	5,900

See footnote(s) at end of table.

Table B-9--Continued

## Electronic products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	U.S. exports (million dollars) . . . . .	1,324	1,527	1,941	2,380	2,438
	U.S. imports (million dollars) . . . . .	2,385	2,820	3,114	3,397	3,683
	Apparent U.S. consumption (million dollars) . .	5,811	6,193	6,573	6,717	7,144
	Trade balance (million dollars) . . . . .	-1,061	-1,293	-1,173	-1,017	-1,244
	Ratio of imports to consumption (percent) . . .	41.0	45.5	47.4	50.6	51.5
	Ratio of exports to shipments (percent) . . . . .	27.9	31.2	35.9	41.8	41.3
ST023	Photographic cameras and equipment:					
	Number of establishments . . . . .	100	100	100	100	100
	Employees (thousands) . . . . .	8	8	8	8	8
	Capacity utilization (percent) . . . . .	92	83	82	83	83
	U.S. shipments (million dollars) . . . . .	2,371	2,188	2,157	2,458	2,352
	U.S. exports (million dollars) . . . . .	808	843	1,036	999	906
	U.S. imports (million dollars) . . . . .	1,891	2,048	2,198	2,334	2,549
	Apparent U.S. consumption (million dollars) . .	3,454	3,393	3,320	3,793	3,995
	Trade balance (million dollars) . . . . .	-1,083	-1,205	-1,163	-1,335	-1,643
	Ratio of imports to consumption (percent) . . .	54.7	60.4	66.2	61.5	63.8
	Ratio of exports to shipments (percent) . . . . .	34.1	38.5	48.0	40.6	38.5
ST024	Medical goods:					
	Number of establishments . . . . .	2,325	2,325	2,338	2,340	2,338
	Employees (thousands) . . . . .	178	180	181	182	182
	Capacity utilization (percent) . . . . .	87	88	90	90	89
	U.S. shipments (million dollars) . . . . .	25,200	27,000	28,900	30,200	30,800
	U.S. exports (million dollars) . . . . .	7,997	8,966	10,217	11,226	11,582
	U.S. imports (million dollars) . . . . .	4,405	4,951	5,368	5,895	6,934
	Apparent U.S. consumption (million dollars) . .	21,608	22,985	24,050	24,869	26,152
	Trade balance (million dollars) . . . . .	3,592	4,015	4,850	5,331	4,648
	Ratio of imports to consumption (percent) . . .	20.4	21.5	22.3	23.7	26.5
	Ratio of exports to shipments (percent) . . . . .	31.7	33.2	35.4	37.2	37.6
ST025	Surveying and navigational instruments:					
	Number of establishments . . . . .	356	355	355	357	357
	Employees (thousands) . . . . .	42	41	41	43	45
	Capacity utilization (percent) . . . . .	63	63	65	70	75
	U.S. shipments (million dollars) . . . . .	6,435	6,762	6,965	7,313	7,678
	U.S. exports (million dollars) . . . . .	1,470	1,511	1,547	1,809	1,851
	U.S. imports (million dollars) . . . . .	461	556	571	757	826
	Apparent U.S. consumption (million dollars) . .	5,426	5,807	5,989	6,261	6,653
	Trade balance (million dollars) . . . . .	1,009	955	976	1,052	1,025
	Ratio of imports to consumption (percent) . . .	8.5	9.6	9.5	12.1	12.4
	Ratio of exports to shipments (percent) . . . . .	22.8	22.3	22.2	24.7	24.1
ST026	Watches:					
	Number of establishments . . . . .	38	38	38	38	38
	Employees (thousands) . . . . .	2	2	2	2	2
	Capacity utilization (percent) . . . . .	67	65	67	70	70
	U.S. shipments (million dollars) . . . . .	144	132	134	134	127
	U.S. exports (million dollars) . . . . .	163	139	154	190	188
	U.S. imports (million dollars) . . . . .	2,127	2,243	2,268	2,311	2,548
	Apparent U.S. consumption (million dollars) . .	2,108	2,236	2,248	2,254	2,487
	Trade balance (million dollars) . . . . .	-1,964	-2,104	-2,114	-2,120	-2,360
	Ratio of imports to consumption (percent) . . .	100.9	100.3	100.9	102.5	102.5
	Ratio of exports to shipments (percent) . . . . .	113.3	105.1	114.9	142.2	148.2
ST027	Clocks and timing devices:					
	Number of establishments . . . . .	141	141	141	141	141
	Employees (thousands) . . . . .	7	7	6	6	6
	Capacity utilization (percent) . . . . .	67	65	67	70	70
	U.S. shipments (million dollars) . . . . .	561	527	483	482	458
	U.S. exports (million dollars) . . . . .	113	108	123	119	123

See footnote(s) at end of table.

Table B-9--Continued

## Electronic products sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
	U.S. imports (million dollars) . . . . .	424	430	447	447	552
	Apparent U.S. consumption (million dollars) . .	871	849	807	810	887
	Trade balance (million dollars) . . . . .	-310	-322	-324	-328	-429
	Ratio of imports to consumption (percent) . . .	48.6	50.7	55.4	55.2	62.2
	Ratio of exports to shipments (percent) . . . . .	20.2	20.5	25.5	24.6	26.9
ST028	Balances of a sensitivity of 5 cgs or better:					
	Number of establishments . . . . .	10	10	10	10	10
	Employees (thousands) . . . . .	( <sup>1</sup> )				
	Capacity utilization (percent) . . . . .	61	61	65	65	65
	U.S. shipments (million dollars) . . . . .	34	32	35	37	38
	U.S. exports (million dollars) . . . . .	18	21	23	23	16
	U.S. imports (million dollars) . . . . .	37	35	36	41	38
	Apparent U.S. consumption (million dollars) . .	53	46	48	55	60
	Trade balance (million dollars) . . . . .	-19	-14	-13	-18	-22
	Ratio of imports to consumption (percent) . . .	69.7	75.1	74.8	73.8	63.4
	Ratio of exports to shipments (percent) . . . . .	52.9	64.1	65.1	60.8	41.8
ST029	Drawing and mathematical calculating and measuring instruments:					
	Number of establishments . . . . .	175	175	175	175	175
	Employees (thousands) . . . . .	6	6	6	7	8
	Capacity utilization (percent) . . . . .	64	64	65	70	75
	U.S. shipments (million dollars) . . . . .	543	545	550	578	595
	U.S. exports (million dollars) . . . . .	145	172	275	400	425
	U.S. imports (million dollars) . . . . .	322	401	385	428	427
	Apparent U.S. consumption (million dollars) . .	721	774	660	606	597
	Trade balance (million dollars) . . . . .	-178	-229	-110	-28	-2
	Ratio of imports to consumption (percent) . . .	44.7	51.8	58.3	70.7	71.5
	Ratio of exports to shipments (percent) . . . . .	26.6	31.5	50.0	69.2	71.4
ST030	Measuring, testing, controlling, and analyzing instruments:					
	Number of establishments . . . . .	3,210	3,210	3,210	3,210	3,210
	Employees (thousands) . . . . .	225	225	225	225	225
	Capacity utilization (percent) . . . . .	74	74	75	75	75
	U.S. shipments (million dollars) . . . . .	22,677	23,087	24,848	26,310	27,307
	U.S. exports (million dollars) . . . . .	9,782	10,951	11,755	13,435	12,935
	U.S. imports (million dollars) . . . . .	5,607	6,440	6,817	7,719	8,323
	Apparent U.S. consumption (million dollars) . .	18,501	18,577	19,910	20,594	22,696
	Trade balance (million dollars) . . . . .	4,176	4,510	4,938	5,716	4,611
	Ratio of imports to consumption (percent) . . .	30.3	34.7	34.2	37.5	36.7
	Ratio of exports to shipments (percent) . . . . .	43.1	47.4	47.3	51.1	47.4

<sup>1</sup> Not available.

Note.--Calculations based on unrounded data.

Table B-10

## Miscellaneous manufactures sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MM046	Luggage, handbags, and flat goods:					
	Number of establishments . . . . .	655	590	580	520	485
	Employees (thousands) . . . . .	19	19	19	18	17
	Capacity utilization (percent) . . . . .	74	67	73	67	65
	U.S. shipments (million dollars) . . . . .	1,712	1,531	1,515	1,385	1,300
	U.S. exports (million dollars) . . . . .	233	253	306	331	304
	U.S. imports (million dollars) . . . . .	3,008	3,333	3,512	3,779	3,912
	Apparent U.S. consumption (million dollars) . .	4,488	4,610	4,721	4,833	4,908
	Trade balance (million dollars) . . . . .	-2,776	-3,079	-3,206	-3,448	-3,608
	Ratio of imports to consumption (percent) . . .	67.0	72.3	74.4	78.2	79.7
	Ratio of exports to shipments (percent) . . . . .	13.6	16.5	20.2	23.9	23.4
MM047	Certain other leather goods:					
	Number of establishments . . . . .	450	445	445	450	450
	Employees (thousands) . . . . .	7	7	7	7	7
	Capacity utilization (percent) . . . . .	77	76	75	67	70
	U.S. shipments (million dollars) . . . . .	543	512	521	531	542
	U.S. exports (million dollars) . . . . .	88	93	80	103	106
	U.S. imports (million dollars) . . . . .	196	229	239	198	195
	Apparent U.S. consumption (million dollars) . .	651	648	681	626	631
	Trade balance (million dollars) . . . . .	-108	-136	-160	-95	-89
	Ratio of imports to consumption (percent) . . .	30.1	35.4	35.2	31.6	30.9
	Ratio of exports to shipments (percent) . . . . .	16.2	18.2	15.3	19.4	19.6
MM048	Musical instruments and accessories:					
	Number of establishments . . . . .	470	470	470	470	470
	Employees (thousands) . . . . .	12	13	13	13	13
	Capacity utilization (percent) . . . . .	86	80	79	73	75
	U.S. shipments (million dollars) . . . . .	977	1,167	1,182	1,229	1,282
	U.S. exports (million dollars) . . . . .	389	418	432	425	392
	U.S. imports (million dollars) . . . . .	883	1,015	995	1,063	1,188
	Apparent U.S. consumption (million dollars) . .	1,471	1,765	1,745	1,867	2,078
	Trade balance (million dollars) . . . . .	-494	-598	-563	-638	-796
	Ratio of imports to consumption (percent) . . .	60.0	57.5	57.0	57.0	57.2
	Ratio of exports to shipments (percent) . . . . .	39.8	35.8	36.5	34.6	30.6
MM049	Umbrellas, whips, riding crops, and canes:					
	Number of establishments . . . . .	15	17	17	17	16
	Employees (thousands) . . . . .	400	405	405	410	410
	Capacity utilization (percent) . . . . .	78	78	78	78	78
	U.S. shipments (million dollars) . . . . .	62	64	66	67	69
	U.S. exports (million dollars) . . . . .	8	10	9	11	11
	U.S. imports (million dollars) . . . . .	188	198	196	233	250
	Apparent U.S. consumption (million dollars) . .	242	252	253	288	309
	Trade balance (million dollars) . . . . .	-180	-188	-187	-221	-240
	Ratio of imports to consumption (percent) . . .	77.7	78.7	77.3	80.7	81.1
	Ratio of exports to shipments (percent) . . . . .	12.8	16.2	13.0	16.9	15.5
MM050	Silverware and certain other articles of precious metal:					
	Number of establishments . . . . .	44	44	42	42	41
	Employees (thousands) . . . . .	3	3	3	3	3
	Capacity utilization (percent) . . . . .	75	80	80	85	88
	U.S. shipments (million dollars) . . . . .	180	185	205	215	220
	U.S. exports (million dollars) . . . . .	89	74	103	109	114
	U.S. imports (million dollars) . . . . .	317	139	83	78	158
	Apparent U.S. consumption (million dollars) . .	408	250	186	184	264
	Trade balance (million dollars) . . . . .	-228	-65	19	31	-44
	Ratio of imports to consumption (percent) . . .	77.6	55.4	44.9	42.3	59.9
	Ratio of exports to shipments (percent) . . . . .	49.3	39.8	50.1	50.5	51.8

See footnote(s) at end of table.

Table B-10--Continued

## Miscellaneous manufactures sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MM051	Precious jewelry and related articles:					
	Number of establishments . . . . .	2,210	2,212	2,214	2,214	( <sup>1</sup> )
	Employees (thousands) . . . . .	38	38	37	36	36
	Capacity utilization (percent) . . . . .	89	79	82	78	78
	U.S. shipments (million dollars) . . . . .	4,060	4,030	4,010	4,075	4,160
	U.S. exports (million dollars) . . . . .	381	386	402	486	518
	U.S. imports (million dollars) . . . . .	3,525	3,642	3,790	4,021	4,592
	Apparent U.S. consumption (million dollars) . .	7,204	7,286	7,398	7,611	8,233
	Trade balance (million dollars) . . . . .	-3,144	-3,256	-3,388	-3,536	-4,073
	Ratio of imports to consumption (percent) . . .	48.9	50.0	51.2	52.8	55.8
	Ratio of exports to shipments (percent) . . . . .	9.4	9.6	10.0	11.9	12.5
MM052	Costume jewelry and related articles:					
	Number of establishments . . . . .	908	908	910	910	( <sup>1</sup> )
	Employees (thousands) . . . . .	19	16	16	16	16
	Capacity utilization (percent) . . . . .	74	74	72	72	72
	U.S. shipments (million dollars) . . . . .	1,679	1,769	1,666	1,800	1,900
	U.S. exports (million dollars) . . . . .	126	124	113	136	128
	U.S. imports (million dollars) . . . . .	567	493	462	464	493
	Apparent U.S. consumption (million dollars) . .	2,120	2,138	2,014	2,128	2,264
	Trade balance (million dollars) . . . . .	-441	-369	-348	-328	-364
	Ratio of imports to consumption (percent) . . .	26.7	23.1	22.9	21.8	21.8
	Ratio of exports to shipments (percent) . . . . .	7.5	7.0	6.8	7.6	6.8
MM053	Bicycles and certain parts:					
	Number of establishments . . . . .	30	30	30	30	25
	Employees (thousands) . . . . .	7	7	7	7	6
	Capacity utilization (percent) . . . . .	75	67	70	70	65
	U.S. shipments (million dollars) . . . . .	1,205	1,140	1,095	1,035	910
	U.S. exports (million dollars) . . . . .	200	257	268	310	292
	U.S. imports (million dollars) . . . . .	825	968	878	979	1,115
	Apparent U.S. consumption (million dollars) . .	1,831	1,852	1,705	1,704	1,733
	Trade balance (million dollars) . . . . .	-626	-712	-610	-669	-823
	Ratio of imports to consumption (percent) . . .	45.1	52.3	51.5	57.5	64.4
	Ratio of exports to shipments (percent) . . . . .	16.6	22.5	24.4	30.0	32.1
MM054	Furniture and selected furnishings:					
	Number of establishments . . . . .	14,600	14,600	14,600	14,700	14,800
	Employees (thousands) . . . . .	481	494	506	525	549
	Capacity utilization (percent) . . . . .	74	74	75	75	76
	U.S. shipments (million dollars) . . . . .	58,800	60,350	62,800	67,400	73,600
	U.S. exports (million dollars) . . . . .	3,300	3,302	3,519	4,158	4,616
	U.S. imports (million dollars) . . . . .	7,638	8,423	9,497	11,224	13,428
	Apparent U.S. consumption (million dollars) . .	63,138	65,472	68,778	74,466	82,412
	Trade balance (million dollars) . . . . .	-4,338	-5,122	-5,978	-7,066	-8,812
	Ratio of imports to consumption (percent) . . .	12.1	12.9	13.8	15.1	16.3
	Ratio of exports to shipments (percent) . . . . .	5.6	5.5	5.6	6.2	6.3
MM055	Writing instruments and related articles:					
	Number of establishments . . . . .	200	200	200	200	200
	Employees (thousands) . . . . .	12	12	12	12	12
	Capacity utilization (percent) . . . . .	65	81	79	73	75
	U.S. shipments (million dollars) . . . . .	1,650	1,690	1,850	1,950	2,050
	U.S. exports (million dollars) . . . . .	233	264	304	400	373
	U.S. imports (million dollars) . . . . .	611	668	719	800	842
	Apparent U.S. consumption (million dollars) . .	2,027	2,094	2,265	2,350	2,518
	Trade balance (million dollars) . . . . .	-377	-404	-415	-400	-468
	Ratio of imports to consumption (percent) . . .	30.1	31.9	31.7	34.1	33.4
	Ratio of exports to shipments (percent) . . . . .	14.1	15.6	16.4	20.5	18.2

See footnote(s) at end of table.

Table B-10--Continued

## Miscellaneous manufactures sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MM056	Lamps and lighting fittings:					
	Number of establishments . . . . .	1,560	1,560	1,550	1,550	1,550
	Employees (thousands) . . . . .	62	62	60	62	62
	Capacity utilization (percent) . . . . .	75	80	80	85	88
	U.S. shipments (million dollars) . . . . .	8,100	8,400	8,650	9,515	9,990
	U.S. exports (million dollars) . . . . .	519	543	529	655	619
	U.S. imports (million dollars) . . . . .	1,956	2,198	2,422	2,729	3,167
	Apparent U.S. consumption (million dollars) . .	9,537	10,055	10,543	11,589	12,538
	Trade balance (million dollars) . . . . .	-1,437	-1,655	-1,893	-2,074	-2,548
	Ratio of imports to consumption (percent) . . .	20.5	21.9	23.0	23.6	25.3
	Ratio of exports to shipments (percent) . . . . .	6.4	6.5	6.1	6.9	6.2
MM057	Prefabricated buildings:					
	Number of establishments . . . . .	1,200	1,300	1,300	1,300	1,400
	Employees (thousands) . . . . .	75	81	88	90	91
	Capacity utilization (percent) . . . . .	79	80	75	76	76
	U.S. shipments (million dollars) . . . . .	13,341	15,210	16,401	17,700	18,400
	U.S. exports (million dollars) . . . . .	415	409	465	463	385
	U.S. imports (million dollars) . . . . .	48	67	92	129	160
	Apparent U.S. consumption (million dollars) . .	12,974	14,868	16,028	17,366	18,176
	Trade balance (million dollars) . . . . .	367	342	373	334	224
	Ratio of imports to consumption (percent) . . .	0.4	0.5	0.6	0.7	0.9
	Ratio of exports to shipments (percent) . . . . .	3.1	2.7	2.8	2.6	2.1
MM058	Children's vehicles:					
	Number of establishments . . . . .	45	45	43	43	43
	Employees (thousands) . . . . .	3	3	3	3	3
	Capacity utilization (percent) . . . . .	70	70	68	68	65
	U.S. shipments (million dollars) . . . . .	600	510	490	480	470
	U.S. exports (million dollars) . . . . .	44	44	36	46	47
	U.S. imports (million dollars) . . . . .	249	266	293	300	315
	Apparent U.S. consumption (million dollars) . .	805	732	747	733	738
	Trade balance (million dollars) . . . . .	-205	-222	-257	-253	-268
	Ratio of imports to consumption (percent) . . .	30.9	36.4	39.3	40.9	42.7
	Ratio of exports to shipments (percent) . . . . .	7.3	8.7	7.4	9.7	10.1
MM059	Dolls:					
	Number of establishments . . . . .	165	160	158	154	154
	Employees (thousands) . . . . .	3	3	3	3	3
	Capacity utilization (percent) . . . . .	60	68	65	65	65
	U.S. shipments (million dollars) . . . . .	115	95	105	105	100
	U.S. exports (million dollars) . . . . .	29	28	26	30	28
	U.S. imports (million dollars) . . . . .	934	1,167	1,356	1,516	1,484
	Apparent U.S. consumption (million dollars) . .	1,020	1,233	1,435	1,591	1,555
	Trade balance (million dollars) . . . . .	-905	-1,138	-1,330	-1,486	-1,455
	Ratio of imports to consumption (percent) . . .	91.5	94.6	94.5	95.3	95.4
	Ratio of exports to shipments (percent) . . . . .	24.8	29.9	24.9	28.8	28.3
MM060	Toys and models:					
	Number of establishments . . . . .	312	312	312	310	310
	Employees (thousands) . . . . .	11	11	11	10	10
	Capacity utilization (percent) . . . . .	72	72	70	70	70
	U.S. shipments (million dollars) . . . . .	2,450	2,700	2,500	2,450	2,400
	U.S. exports (million dollars) . . . . .	528	581	597	627	538
	U.S. imports (million dollars) . . . . .	4,010	4,526	5,481	6,728	7,494
	Apparent U.S. consumption (million dollars) . .	5,931	6,646	7,384	8,552	9,356
	Trade balance (million dollars) . . . . .	-3,481	-3,946	-4,884	-6,102	-6,956
	Ratio of imports to consumption (percent) . . .	67.6	68.1	74.2	78.7	80.1
	Ratio of exports to shipments (percent) . . . . .	21.6	21.5	23.9	25.6	22.4

See footnote(s) at end of table.

Table B-10--Continued

## Miscellaneous manufactures sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MM061	Games and fairground amusements:					
	Number of establishments . . . . .	320	315	310	310	310
	Employees (thousands) . . . . .	45	45	45	45	45
	Capacity utilization (percent) . . . . .	80	80	83	85	85
	U.S. shipments (million dollars) . . . . .	2,500	2,500	2,500	2,500	2,400
	U.S. exports (million dollars) . . . . .	1,117	1,130	1,089	1,144	988
	U.S. imports (million dollars) . . . . .	2,575	2,494	2,881	4,033	4,338
	Apparent U.S. consumption (million dollars) . .	3,958	3,864	4,292	5,389	5,750
	Trade balance (million dollars) . . . . .	-1,458	-1,364	-1,792	-2,889	-3,350
	Ratio of imports to consumption (percent) . . .	65.1	64.5	67.1	74.8	75.4
	Ratio of exports to shipments (percent) . . . . .	44.7	45.2	43.6	45.7	41.2
MM062	Sporting goods:					
	Number of establishments . . . . .	2,130	2,135	2,138	2,142	2,144
	Employees (thousands) . . . . .	58	58	60	62	62
	Capacity utilization (percent) . . . . .	73	73	69	70	70
	U.S. shipments (million dollars) . . . . .	7,672	8,225	8,698	9,161	9,300
	U.S. exports (million dollars) . . . . .	1,326	1,731	1,900	1,934	1,688
	U.S. imports (million dollars) . . . . .	2,699	2,956	3,068	3,070	3,041
	Apparent U.S. consumption (million dollars) . .	9,045	9,450	9,866	10,298	10,653
	Trade balance (million dollars) . . . . .	-1,373	-1,225	-1,168	-1,137	-1,353
	Ratio of imports to consumption (percent) . . .	29.8	31.3	31.1	29.8	28.5
	Ratio of exports to shipments (percent) . . . . .	17.3	21.0	21.8	21.1	18.2
MM063	Smokers' articles:					
	Number of establishments . . . . .	12	10	10	10	11
	Employees (thousands) . . . . .	1	1	1	1	1
	Capacity utilization (percent) . . . . .	65	70	75	70	75
	U.S. shipments (million dollars) . . . . .	165	170	195	190	200
	U.S. exports (million dollars) . . . . .	75	85	97	88	71
	U.S. imports (million dollars) . . . . .	145	153	149	139	145
	Apparent U.S. consumption (million dollars) . .	235	238	247	241	274
	Trade balance (million dollars) . . . . .	-70	-68	-52	-51	-74
	Ratio of imports to consumption (percent) . . .	61.5	64.1	60.2	57.6	53.0
	Ratio of exports to shipments (percent) . . . . .	45.2	49.7	49.5	46.3	35.6
MM064	Brooms, brushes, and hair grooming articles:					
	Number of establishments . . . . .	280	280	280	280	275
	Employees (thousands) . . . . .	10	10	10	10	9
	Capacity utilization (percent) . . . . .	70	75	75	75	75
	U.S. shipments (million dollars) . . . . .	1,650	1,700	1,900	1,995	2,000
	U.S. exports (million dollars) . . . . .	148	149	163	176	184
	U.S. imports (million dollars) . . . . .	525	610	625	655	698
	Apparent U.S. consumption (million dollars) . .	2,027	2,161	2,362	2,474	2,514
	Trade balance (million dollars) . . . . .	-377	-461	-462	-479	-514
	Ratio of imports to consumption (percent) . . .	25.9	28.2	26.5	26.5	27.8
	Ratio of exports to shipments (percent) . . . . .	8.9	8.8	8.6	8.8	9.2
MM065	Miscellaneous articles:					
	Number of establishments . . . . .	2,200	2,200	2,200	2,300	2,300
	Employees (thousands) . . . . .	38	39	39	40	41
	Capacity utilization (percent) . . . . .	60	62	62	62	62
	U.S. shipments (million dollars) . . . . .	26,000	27,300	28,500	29,000	30,000
	U.S. exports (million dollars) . . . . .	1,524	1,420	1,254	1,513	1,564
	U.S. imports (million dollars) . . . . .	4,449	5,037	5,056	6,079	6,853
	Apparent U.S. consumption (million dollars) . .	28,926	30,917	32,303	33,566	35,289
	Trade balance (million dollars) . . . . .	-2,926	-3,617	-3,803	-4,566	-5,289
	Ratio of imports to consumption (percent) . . .	15.4	16.3	15.7	18.1	19.4
	Ratio of exports to shipments (percent) . . . . .	5.9	5.2	4.4	5.2	5.2

See footnote(s) at end of table.

Table B-10--Continued

## Miscellaneous manufactures sector: Profile of U.S. industry and market, by industry/commodity groups, 1994-98

USITC code	Industry/commodity group	1994	1995	1996	1997	1998
MM066	Apparel fasteners:					
	Number of establishments . . . . .	93	90	90	90	90
	Employees (thousands) . . . . .	5	5	5	5	5
	Capacity utilization (percent) . . . . .	87	85	90	90	90
	U.S. shipments (million dollars) . . . . .	425	500	515	541	550
	U.S. exports (million dollars) . . . . .	88	84	98	119	136
	U.S. imports (million dollars) . . . . .	122	127	123	126	103
	Apparent U.S. consumption (million dollars) . .	459	543	541	548	517
	Trade balance (million dollars) . . . . .	-34	-43	-26	-7	33
	Ratio of imports to consumption (percent) . . .	26.6	23.3	22.8	22.9	19.9
	Ratio of exports to shipments (percent) . . . . .	20.7	16.7	19.0	21.9	24.7
MM067	Arms and ammunition:					
	Number of establishments . . . . .	279	275	271	265	260
	Employees (thousands) . . . . .	19	19	18	16	15
	Capacity utilization (percent) . . . . .	74	77	69	70	70
	U.S. shipments (million dollars) . . . . .	2,203	2,159	1,975	1,800	1,700
	U.S. exports (million dollars) . . . . .	2,212	2,662	2,606	2,395	2,348
	U.S. imports (million dollars) . . . . .	777	657	598	611	649
	Apparent U.S. consumption (million dollars) . .	767	154	-33	16	2
	Trade balance (million dollars) . . . . .	1,436	2,005	2,008	1,784	1,698
	Ratio of imports to consumption (percent) . . .	101.2	426.2	-1,792.1	3,851.3	39,950.1
	Ratio of exports to shipments (percent) . . . . .	100.4	123.3	132.0	133.1	138.1

<sup>1</sup> Not available.

Note.--Calculations based on unrounded data.

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**APPENDIX C**  
**Industry/Commodity Groups**  
**with Most Significant Shifts, 1997-98**



Table C-1

## Domestic export increases: Ranking of top 20 industry/commodity groups, 1997 and 1998

1997 USITC code	Industry/commodity group	U.S. exports		Change, 1998 from	
		1997	1998	Absolute	Percentage
<i>Million Dollars</i>					
Rank order based on change in absolute value growth:					
MT042	Aircraft, spacecraft, and related equipment . . . . .	38,698	50,248	11,550	29.8
CH026	Medicinal chemicals . . . . .	10,344	11,955	1,611	15.6
MT001	Aircraft engines and gas turbines . . . . .	11,594	13,115	1,521	13.1
MT023	Semiconductor manufacturing equipment and robotics . . . . .	7,270	8,631	1,361	18.7
ST009	Television receivers, video monitors, and combinations including television receivers . . . . .	1,542	2,268	726	47.1
AG033	Animal or vegetable fats and oils . . . . .	2,173	2,763	591	27.2
MT012	Construction and mining equipment . . . . .	11,070	11,595	525	4.7
MT037	Rail locomotive and rolling stock . . . . .	1,229	1,694	465	37.9
MM054	Furniture and selected furnishings . . . . .	4,158	4,616	458	11.0
MM031	Chain and miscellaneous products of base metal . . . . .	4,645	5,077	432	9.3
ST002	Telephone and telegraph apparatus . . . . .	9,370	9,762	392	4.2
MT002	Internal combustion piston engines, other than for aircraft . . . . .	10,625	11,015	390	3.7
MT043	Ships, tugs, pleasure boats, and similar vessels . . . . .	1,408	1,765	357	25.3
ST024	Medical goods . . . . .	11,226	11,582	356	3.2
CH078	Other wearing apparel . . . . .	1,469	1,798	329	22.4
CH045	Miscellaneous rubber or plastic products . . . . .	4,429	4,702	273	6.2
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits . . . . .	9,268	9,528	260	2.8
CH043	Plastic containers and closures . . . . .	1,649	1,893	244	14.8
ST014	Television picture tubes and other cathode-ray tubes . . . . .	2,085	2,314	229	11.0
CH017	Fertilizers . . . . .	3,138	3,339	201	6.4
Rank order based on change in percentage growth:					
MM005	Lead ores and residues . . . . .	35	65	30	83.6
CH001	Electrical energy . . . . .	124	185	61	48.9
ST009	Television receivers, video monitors, and combinations including television receivers . . . . .	1,542	2,268	726	47.1
MT037	Rail locomotive and rolling stock . . . . .	1,229	1,694	465	37.9
MT042	Aircraft, spacecraft, and related equipment . . . . .	38,698	50,248	11,550	29.8
AG039	Wine and certain other fermented beverages . . . . .	415	532	117	28.3
AG033	Animal or vegetable fats and oils . . . . .	2,173	2,763	591	27.2
MT043	Ships, tugs, pleasure boats, and similar vessels . . . . .	1,408	1,765	357	25.3
AG050	Wooden containers . . . . .	112	138	26	23.0
CH078	Other wearing apparel . . . . .	1,469	1,798	329	22.4
AG014	Live plants . . . . .	117	142	25	21.8
ST020	Exposed photographic plates, film, and paper . . . . .	99	120	21	21.1
AG042	Cigars and certain other manufactured tobacco . . . . .	547	661	114	20.9
CH008	Other olefins . . . . .	175	211	36	20.5
MT023	Semiconductor manufacturing equipment and robotics . . . . .	7,270	8,631	1,361	18.7
CH069	Hosiery . . . . .	352	417	64	18.3
AG026	Frozen fruit . . . . .	79	92	13	15.8
CH026	Medicinal chemicals . . . . .	10,344	11,955	1,611	15.6
CH043	Plastic containers and closures . . . . .	1,649	1,893	244	14.8
MM066	Apparel fasteners . . . . .	119	136	17	14.6

Note.--Calculations based on unrounded data.

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

Table C-2

## Domestic export declines: Ranking of top 20 industry/commodity groups, 1997 and 1998

1997 USITC code	Industry/commodity group	U.S. exports		Change, 1998 from	
		1997	1998	Absolute	Percentage
<i>Million Dollars</i>					
Rank order based on change in absolute value decline:					
ST018	Automatic data processing machines . . . . .	41,792	38,707	-3,086	-7.4
AG032	Oilseeds . . . . .	7,700	5,166	-2,535	-32.9
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing . . . . .	24,394	22,544	-1,849	-7.6
CH005	Petroleum products . . . . .	7,728	6,233	-1,495	-19.3
AG030	Cereals . . . . .	11,106	9,991	-1,115	-10.0
MT045	Miscellaneous machinery . . . . .	6,131	5,091	-1,040	-17.0
MT022	Non-metalworking machine tools and parts thereof . . . . .	1,610	617	-993	-61.7
CH012	Miscellaneous organic chemicals . . . . .	7,780	6,804	-975	-12.5
ST007	Radio transmission and reception apparatus, and combinations thereof . . . . .	9,217	8,341	-876	-9.5
CH003	Coal, coke, and related chemical products . . . . .	4,276	3,635	-640	-15.0
AG047	Lumber . . . . .	2,532	1,959	-573	-22.6
ST005	Unrecorded magnetic tapes, discs, and other media . . . . .	2,603	2,042	-561	-21.6
MM023	Iron and steel waste and scrap . . . . .	1,356	817	-539	-39.7
AG013	Animal feeds . . . . .	4,837	4,317	-520	-10.8
ST017	Electrical and electronic articles, apparatus, and parts not elsewhere provided for . . . . .	3,064	2,554	-510	-16.6
ST030	Measuring, testing, controlling, and analyzing instruments . . . . .	13,435	12,935	-500	-3.7
AG046	Logs and rough wood products . . . . .	2,420	1,970	-451	-18.6
CH013	Miscellaneous inorganic chemicals . . . . .	4,859	4,418	-441	-9.1
AG054	Wood pulp and wastepaper . . . . .	3,893	3,452	-441	-11.3
MM036	Copper and related articles . . . . .	2,228	1,813	-415	-18.6
Rank order based on change in percentage decline:					
CH009	Primary aromatics . . . . .	255	56	-199	-77.8
MM004	Copper ores and concentrates . . . . .	211	63	-148	-70.1
MT022	Non-metalworking machine tools and parts thereof . . . . .	1,610	617	-993	-61.7
AG062	Ethyl alcohol for nonbeverage purposes . . . . .	123	58	-65	-52.8
MM008	Precious metal ores and concentrates . . . . .	21	11	-10	-49.0
AG004	Sheep and meat of sheep . . . . .	65	35	-30	-46.2
CH007	Major primary olefins . . . . .	306	169	-137	-44.8
MM023	Iron and steel waste and scrap . . . . .	1,356	817	-539	-39.7
CH075	Fur apparel and other fur articles . . . . .	91	57	-33	-36.9
AG032	Oilseeds . . . . .	7,700	5,166	-2,535	-32.9
MM022	Ferroalloys . . . . .	153	103	-49	-32.3
MM044	Table flatware and related products . . . . .	36	24	-12	-32.3
MM002	Certain miscellaneous minerals substances . . . . .	14	10	-4	-30.7
CH060	Men's and boys' suits and sports coats . . . . .	126	89	-37	-29.5
ST028	Balances of a sensitivity of 5 cgs or better . . . . .	23	16	-7	-29.4
CH006	Natural gas and components . . . . .	814	581	-232	-28.5
MM016	Household glassware . . . . .	250	179	-70	-28.2
CH002	Nuclear materials . . . . .	1,444	1,041	-403	-27.9
AG063	Wool and other animal hair . . . . .	17	13	-4	-23.8
AG047	Lumber . . . . .	2,532	1,959	-573	-22.6

Note.--Calculations based on unrounded data.

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

Table C-3

## Domestic import increases: Ranking of top 20 industry/commodity groups, 1997 and 1998

1997 USITC code	Industry/commodity group	U.S. imports		Change, 1998 from	
		1997	1998	Absolute	Percentage
<i>Million Dollars</i>					
Rank order based on change in absolute value growth:					
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing	92,988	99,828	6,841	7.4
CH026	Medicinal chemicals	14,184	17,941	3,758	26.5
MT042	Aircraft, spacecraft, and related equipment	9,459	12,748	3,289	34.8
MM025	Steel mill products, all grades	13,602	16,434	2,833	20.8
ST018	Automatic data processing machines	69,953	72,157	2,204	3.2
MM054	Furniture and selected furnishings	11,224	13,428	2,204	19.6
MT001	Aircraft engines and gas turbines	8,380	10,404	2,023	24.1
CH064	Shirts and blouses	14,416	16,436	2,020	14.0
MM020	Precious metals and related articles	5,869	7,735	1,866	31.8
MT002	Internal combustion piston engines, other than for aircraft	9,987	11,478	1,491	14.9
MT012	Construction and mining equipment	4,884	6,188	1,304	26.7
ST002	Telephone and telegraph apparatus	9,261	10,488	1,227	13.3
ST007	Radio transmission and reception apparatus, and combinations thereof	9,060	10,249	1,188	13.1
ST010	Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	4,039	5,110	1,071	26.5
ST024	Medical goods	5,895	6,934	1,039	17.6
MT039	Certain motor-vehicle parts	17,804	18,767	962	5.4
ST009	Television receivers, video monitors, and combinations including television receivers	4,403	5,319	916	20.8
MM019	Natural and synthetic gemstones	8,564	9,449	885	10.3
CH063	Women's and girls' trousers	5,097	5,887	790	15.5
MT037	Rail locomotive and rolling stock	1,372	2,156	784	57.1
Rank order based on changes in percentage growth:					
AG064	Cotton, not carded or combed	3	14	11	346.2
MM004	Copper ores and concentrates	68	228	160	236.7
MM050	Silverware and certain other articles of precious metal	78	158	80	102.9
MM027	Fabricated structurals	205	328	124	60.5
MT037	Rail locomotive and rolling stock	1,372	2,156	784	57.1
ST021	Optical fibers, optical fiber bundles and cables	272	398	126	46.5
MM005	Lead ores and residues	6	8	2	41.9
MM021	Primary iron products	608	856	248	40.7
AG043	Cigarettes	44	59	15	34.9
MT042	Aircraft, spacecraft, and related equipment	9,459	12,748	3,289	34.8
CH008	Other olefins	62	82	20	32.6
MM020	Precious metals and related articles	5,869	7,735	1,866	31.8
MT019	Metal rolling mills and parts thereof	394	514	120	30.4
MM028	Metal construction components	435	562	126	29.0
CH036	Saturated polyester resins	355	451	96	27.0
MT012	Construction and mining equipment	4,884	6,188	1,304	26.7
ST010	Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	4,039	5,110	1,071	26.5
CH026	Medicinal chemicals	14,184	17,941	3,758	26.5
MT011	Forklift trucks and similar industrial vehicles	1,164	1,456	292	25.1
AG018	Fresh, chilled, or frozen vegetables	1,857	2,313	456	24.6

Note.--Calculations based on unrounded data.

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

Table C-4

## Domestic import declines: Ranking of top 20 industry/commodity groups, 1997 and 1998

1997 USITC code	Industry/commodity group	U.S. imports		Change, 1998 from	
		1997	1998	Absolute	Percentage
<i>Million Dollars</i>					
Rank order based on change in absolute value decline:					
CH004	Crude petroleum . . . . .	38,394	25,467	-12,928	-33.7
CH005	Petroleum products . . . . .	21,523	17,584	-3,938	-18.3
ST016	Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices . . . . .	36,878	33,696	-3,182	-8.6
CH006	Natural gas and components . . . . .	10,215	9,212	-1,003	-9.8
AG047	Lumber . . . . .	7,360	6,730	-630	-8.6
ST001	Office machines . . . . .	6,688	6,208	-480	-7.2
AG028	Coffee and tea . . . . .	4,071	3,656	-414	-10.2
MM036	Copper and related articles . . . . .	3,743	3,359	-384	-10.3
CH013	Miscellaneous inorganic chemicals . . . . .	5,118	4,752	-366	-7.2
MM041	Certain base metals and chemical elements . . . . .	2,777	2,424	-353	-12.7
AG041	Unmanufactured tobacco . . . . .	1,089	771	-318	-29.2
AG012	Sugar and other sweeteners . . . . .	1,321	1,068	-253	-19.2
CH047	Natural rubber . . . . .	1,229	977	-253	-20.6
MT022	Non-metalworking machine tools and parts thereof . . . . .	1,464	1,229	-235	-16.0
AG030	Cereals . . . . .	984	773	-211	-21.5
MM040	Zinc and related articles . . . . .	1,328	1,119	-209	-15.7
AG054	Wood pulp and wastepaper . . . . .	2,656	2,447	-209	-7.9
CH010	Benzenoid commodity chemicals . . . . .	923	741	-182	-19.7
AG036	Fruit and vegetable juices . . . . .	856	677	-179	-20.9
CH012	Miscellaneous organic chemicals . . . . .	5,493	5,316	-177	-3.2
Rank order based on changes in percentage decline:					
CH004	Crude petroleum . . . . .	38,394	25,467	-12,928	-33.7
AG041	Unmanufactured tobacco . . . . .	1,089	771	-318	-29.2
MM002	Certain miscellaneous minerals substances . . . . .	57	40	-16	-28.6
AG011	Eggs . . . . .	19	14	-5	-27.9
AG045	Furskins . . . . .	115	86	-28	-24.6
CH021	Synthetic tanning agents . . . . .	8	6	-2	-21.6
AG030	Cereals . . . . .	984	773	-211	-21.5
AG063	Wool and other animal hair . . . . .	179	141	-38	-21.5
AG036	Fruit and vegetable juices . . . . .	856	677	-179	-20.9
CH047	Natural rubber . . . . .	1,229	977	-253	-20.6
CH010	Benzenoid commodity chemicals . . . . .	923	741	-182	-19.7
AG012	Sugar and other sweeteners . . . . .	1,321	1,068	-253	-19.2
MM006	Zinc ores and residues . . . . .	45	37	-9	-19.0
ST015	Special-purpose tubes . . . . .	247	200	-47	-18.9
CH005	Petroleum products . . . . .	21,523	17,584	-3,938	-18.3
MM066	Apparel fasteners . . . . .	126	103	-23	-18.3
CH009	Primary aromatics . . . . .	856	704	-153	-17.8
MT022	Non-metalworking machine tools and parts thereof . . . . .	1,464	1,229	-235	-16.0
MM040	Zinc and related articles . . . . .	1,328	1,119	-209	-15.7
CH023	Photographic chemicals and preparations . . . . .	733	633	-100	-13.6

Note.--Calculations based on unrounded data.

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

Table C-5

## U.S. trade position increases: Ranking of top 30 industry/commodity groups, 1997 and 1998

1997 USITC code	Industry/commodity group	U.S. balance		Change, 1998 from	
		1997	1998	Absolute	Percentage
<i>Million Dollars</i>					
CH004	Crude petroleum . . . . .	-37,615	-24,797	12,818	34.1
MT042	Aircraft, spacecraft, and related equipment . . . . .	29,239	37,500	8,261	28.3
ST016	Diodes, transistors, integrated circuits, and similar semiconductor solid-state devices . . . . .	-7,841	-4,474	3,367	42.9
CH005	Petroleum products . . . . .	-13,794	-11,351	2,443	17.7
MT023	Semiconductor manufacturing equipment and robotics . . . . .	3,549	4,497	949	26.7
CH006	Natural gas and components . . . . .	-9,401	-8,630	771	8.2
ST001	Office machines . . . . .	-4,381	-3,738	643	14.7
AG033	Animal or vegetable fats and oils . . . . .	656	1,289	633	96.5
AG028	Coffee and tea . . . . .	-3,816	-3,393	423	11.1
MM041	Certain base metals and chemical elements . . . . .	-1,376	-1,025	351	25.5
ST014	Television picture tubes and other cathode-ray tubes . . . . .	1,209	1,516	308	25.5
AG012	Sugar and other sweeteners . . . . .	-961	-687	275	28.6
CH047	Natural rubber . . . . .	-1,189	-941	248	20.9
AG041	Unmanufactured tobacco . . . . .	464	688	224	48.3
CH017	Fertilizers . . . . .	646	867	221	34.3
MM040	Zinc and related articles . . . . .	-1,215	-1,017	198	16.3
MT043	Ships, tugs, pleasure boats, and similar vessels . . . . .	485	675	191	39.3
AG036	Fruit and vegetable juices . . . . .	-178	-9	170	95.2
CH010	Benzenoid commodity chemicals . . . . .	361	526	165	45.8
CH043	Plastic containers and closures . . . . .	160	323	163	101.7
AG042	Cigars and certain other manufactured tobacco . . . . .	128	284	156	121.9
CH018	Paints, inks, and related items, and certain components thereof . . . . .	1,208	1,357	149	12.3
ST013	Apparatus for making, breaking, protecting, or connecting electrical circuits . . . . .	-697	-592	105	15.1
AG006	Fresh or chilled fish . . . . .	-787	-686	100	12.8
AG027	Prepared or preserved fruit . . . . .	-363	-299	65	17.8
CH078	Other wearing apparel . . . . .	-945	-883	62	6.6
CH061	Men's and boys' coats and jackets . . . . .	-2,099	-2,039	60	2.8
AG047	Lumber . . . . .	-4,828	-4,771	57	1.2
CH050	Broadwoven fabrics . . . . .	-1,548	-1,499	50	3.2
CH023	Photographic chemicals and preparations . . . . .	-231	-184	47	20.4

Note.--Calculations based on unrounded data.

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

Table C-6

## U.S. trade position declines: Ranking of top 30 industry/commodity groups, 1997 and 1998

1997 USITC code	Industry/commodity group	U.S. balance		Change, 1998 from	
		1997	1998	Absolute	Percentage
<i>Million Dollars</i>					
MT038	Automobiles, trucks, buses, and bodies and chassis of the foregoing	-68,594	-77,284	-8,690	-12.7
ST018	Automatic data processing machines	-28,161	-33,451	-5,290	-18.8
MM025	Steel mill products, all grades	-8,758	-11,798	-3,040	-34.7
AG032	Oilseeds	7,365	4,851	-2,514	-34.1
MM020	Precious metals and related articles	1,280	-883	-2,163	( <sup>1</sup> )
CH026	Medicinal chemicals	-3,840	-5,987	-2,147	-55.9
CH064	Shirts and blouses	-12,759	-14,854	-2,095	-16.4
ST007	Radio transmission and reception apparatus, and combinations thereof	156	-1,908	-2,064	( <sup>1</sup> )
MM054	Furniture and selected furnishings	-7,066	-8,812	-1,746	-24.7
MT045	Miscellaneous machinery	1,416	-86	-1,501	( <sup>1</sup> )
MT039	Certain motor-vehicle parts	8,520	7,221	-1,299	-15.2
ST010	Television apparatus (except receivers and monitors), including cameras, camcorders, and cable apparatus	-3,070	-4,358	-1,288	-41.9
ST030	Measuring, testing, controlling, and analyzing instruments	5,716	4,611	-1,104	-19.3
MT002	Internal combustion piston engines, other than for aircraft	638	-463	-1,101	( <sup>1</sup> )
AG030	Cereals	10,122	9,218	-904	-8.9
MM019	Natural and synthetic gemstones	-8,333	-9,233	-899	-10.8
CH062	Men's and boys' trousers	-3,569	-4,456	-887	-24.8
MM060	Toys and models	-6,102	-6,956	-854	-14.0
ST002	Telephone and telegraph apparatus	109	-726	-836	( <sup>1</sup> )
CH012	Miscellaneous organic chemicals	2,286	1,488	-799	-34.9
MT012	Construction and mining equipment	6,186	5,407	-779	-12.6
MT004	Air-conditioning equipment and parts	1,294	526	-768	-59.4
MT022	Non-metalworking machine tools and parts thereof	146	-612	-758	( <sup>1</sup> )
AG049	Structural panel products	-1,083	-1,838	-754	-69.6
MM065	Miscellaneous articles	-4,566	-5,289	-723	-15.8
CH063	Women's and girls' trousers	-4,460	-5,181	-721	-16.2
ST017	Electrical and electronic articles, apparatus, and parts not elsewhere provided for	1,467	776	-691	-47.1
ST024	Medical goods	5,331	4,648	-684	-12.8
MT007	Electrical household appliances and certain heating equipment	-1,869	-2,513	-644	-34.4
MT036	Insulated electrical wire and cable and conduit; glass and ceramic insulators	-2,328	-2,963	-636	-27.3

<sup>1</sup>Not meaningful for purposes of comparison.

Note.--Calculations based on unrounded data.

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

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**APPENDIX D**  
**Definitions of Selected**  
**Country Groups**



## **ASEAN (ASSOCIATION OF SOUTHEAST ASIAN NATIONS)**

Brunei	Myanmar
Cambodia	Philippines
Indonesia	Singapore
Laos	Thailand
Malaysia	Vietnam

## **ASIAN PACIFIC RIM**

Australia	Macao
Brunei	Malaysia
Cambodia	New Zealand
China	Niue
Christmas Island	Norfolk Island
Cocos Island	North Korea
Cook Islands	Papua New Guinea
Heard Island and McDonald Islands	Philippines
Hong Kong	Singapore
Indonesia	Taiwan
Japan	Thailand
Korea	Tokelau
Laos	Vietnam

## **CBERA (CARIBBEAN BASIN ECONOMIC RECOVERY ACT) BENEFICIARIES**

Antigua and Barbuda	Guyana
Aruba	Haiti
Bahamas	Honduras
Barbados	Jamaica
Belize	Montserrat
British Virgin Islands	Netherlands Antilles
Costa Rica	Nicaragua
Dominica	Panama
Dominican Republic	St. Kitts and Nevis
El Salvador	St. Lucia
Grenada	St. Vincent and the Grenadines
Guatemala	Trinidad and Tobago

## **CENTRAL AND EASTERN EUROPE**

Albania	Macedonia
Bosnia-Herzegovina	Poland
Bulgaria	Romania
Croatia	Slovakia
Czech Republic	Slovenia
Hungary	Yugoslavia (Serbia and Montenegro)

## **CIS (COMMONWEALTH OF INDEPENDENT STATES)**

Armenia	Moldova
Azerbaijan	Russia
Belarus	Tajikistan
Georgia	Turkmenistan
Kazakhstan	Ukraine
Kyrgyzstan	Uzbekistan

## **EU/EU-15 (EUROPEAN UNION)**

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Portugal
France	Spain
Germany	Sweden
Greece	United Kingdom
Ireland	

## **LATIN AMERICA**

Anguilla	Guatemala
Antigua and Barbuda	Guyana
Argentina	Haiti
Aruba	Honduras
Bahamas, The	Jamaica
Barbados	Leeward and Windward Islands
Belize	Martinique
Bermuda	Mexico
Bolivia	Montserrat
Brazil	Netherlands Antilles
British Virgin Islands	Nicaragua
Cayman Islands	Panama
Chile	Paraguay
Costa Rica	Peru
Cuba	St. Kitts and Nevis
Dominica Island	St. Lucia
Dominican Republic	St. Pierre and Miquelon
Ecuador	St. Vincent and the Grenadines
El Salvador	Suriname
Falkland Islands	Trinidad and Tobago
French Guiana	Turks and Caicos Islands
Grenada	Uruguay
Guadeloupe	Venezuela

## **MERCOSUR (MERCADO COMUN DEL SUR/SOUTHERN CONE COMMON MARKET)**

Argentina	Paraguay
Brazil	Uruguay

## **NAFTA (NORTH AMERICAN FREE TRADE AGREEMENT) PARTNERS**

Canada	Mexico
United States	

## **OPEC (ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES)**

Algeria

Indonesia

Iran

Iraq

Kuwait

Libya

Nigeria

Qatar

Saudi Arabia

United Arab Emirates

Venezuela



**APPENDIX E**  
**Status of Antidumping and Countervailing**  
**Duty Order 5-Year (Sunset) Reviews**



**Table E-1**  
**Status of Antidumping and Countervailing Duty Order 5-Year (Sunset) Reviews (as of August 5, 1999)**

<b>Month and Year of Initiation</b>	<b>Country</b>	<b>Product</b>	<b>Status<sup>1</sup></b>
July 1998	Canada	Steel Jacks . . . . .	R
July 1998	Japan	Fish Netting of Manmade Fiber . . . . .	R
July 1998	France	Large Power Transformers . . . . .	R
July 1998	Italy	Large Power Transformers . . . . .	R
July 1998	Japan	Large Power Transformers . . . . .	R
July 1998	Japan	Bicycle Speedometers . . . . .	R
July 1998	Australia	Canned Bartlett Pears . . . . .	R
July 1998	Japan	Roller Chain . . . . .	R
August 1998	Sweden	Stainless Steel Plate . . . . .	R
August 1998	Japan	Synthetic Methionine . . . . .	R
August 1998	Japan	Polychloroprene Rubber . . . . .	C
August 1998	Canada	Elemental Sulphur . . . . .	R
August 1998	Canada	Racing Plates . . . . .	R
August 1998	Japan	Acrylic Sheet . . . . .	R
August 1998	Japan	Melamine . . . . .	C
September 1998	Brazil	Cotton Yarn . . . . .	R
September 1998	Italy	Pressure Sensitive Tape . . . . .	C
September 1998	Germany	Animal Glue . . . . .	R
September 1998	Austria	Railway Track Equipment . . . . .	R
September 1998	Japan	Impression Fabric . . . . .	R
September 1998	Japan	Steel Wire Strand . . . . .	C
September 1998	Finland	Rayon Staple Fiber . . . . .	R
September 1998	Sweden	Rayon Staple Fiber . . . . .	R
October 1998	EC	Sugar . . . . .	F
October 1998	Belgium	Sugar . . . . .	F
October 1998	France	Sugar . . . . .	F
October 1998	Germany	Sugar . . . . .	F
October 1998	Canada	Sugar and Syrups . . . . .	F
October 1998	Japan	Television Receivers . . . . .	R
October 1998	Korea	Color Television Receivers . . . . .	R
October 1998	Taiwan	Color Television Receivers . . . . .	R
October 1998	Japan	Small Electric Motors (SA) . . . . .	R
October 1998	France	Anhydrous Sodium Metasilicate . . . . .	K
October 1998	France	Sorbitol . . . . .	C
October 1998	Japan	High Power Microwave Amplifiers . . . . .	R
October 1998	Germany	Barium Carbonate . . . . .	R
October 1998	China, PR	Barium Chloride . . . . .	C
November 1998	China, PR	Griege Polyester Cotton Print Cloth . . . . .	C
November 1998	Argentina	Carbon Steel Wire Rod (SA) . . . . .	F
November 1998	Argentina	Carbon Steel Wire Rods . . . . .	F
November 1998	Singapore	Refrigeration Compressors (SA) . . . . .	R
November 1998	Spain	Potassium Permanganate . . . . .	F
November 1998	China, PR	Potassium Permanganate . . . . .	F
November 1998	China, PR	Chloropicrin . . . . .	C
November 1998	India	Iron Metal Castings . . . . .	F
November 1998	Canada	Iron Construction Castings . . . . .	F
November 1998	Brazil	Iron Construction Castings . . . . .	F
November 1998	China, PR	Iron Construction Castings . . . . .	F
November 1998	Brazil	Heavy Iron Construction Castings . . . . .	F
November 1998	Italy	Brass Fire Protection Equipment . . . . .	R

See notes at end of table.

Table E-1--Continued

## Status of Antidumping and Countervailing Duty Order 5-Year (Sunset) Reviews (as of August 5, 1999)

Month and Year of Initiation	Country	Product	Status <sup>1</sup>
December 1998	Colombia	Textiles and Textile Products (SA)	R
December 1998	Thailand	Certain Textile Mill Products (SA)	R
December 1998	Brazil	Frozen Concentrated Orange Juice (SA)	R
December 1998	Brazil	Frozen Concentrated Orange Juice	C
December 1998	Japan	Calcium Hypochlorite	R
December 1998	Brazil	Castor Oil	R
December 1998	China, PR	Sebacic Acid	C
December 1998	Canada	Red Raspberries	R
December 1998	Canada	Live Swine	F
December 1998	Brazil	Tillage Tools	R
December 1998	Argentina	Barbed Wire	C
January 1999	New Zealand	Brazing Copper Wire and Rod	R
January 1999	South Africa	Brazing Copper Wire and Rod	R
January 1999	Japan	Cellular Mobile Phones	R
January 1999	China, PR	Paint Brushes	F
January 1999	China, PR	Shop Towels	F
January 1999	Pakistan	Shop Towels	F
January 1999	Peru	Cotton Shop Towels (SA)	F
January 1999	Bangladesh	Shop Towels	F
January 1999	China, PR	Candles	E
January 1999	Japan	Steel Wire Rope	F
January 1999	Mexico	Steel Wire Rope	F
January 1999	Korea (South)	Steel Wire Rope	F
January 1999	Brazil	Malleable Cast Iron Pipe Fittings	F
January 1999	Korea (South)	Malleable Cast Iron Pipe Fittings	F
January 1999	Taiwan	Malleable Cast Iron Pipe Fittings	F
January 1999	Japan	Malleable Cast Iron Pipe Fittings	F
January 1999	Thailand	Malleable Cast Iron Pipe Fittings	F
February 1999	China, PR	Porcelain-on-Steel Cooking Ware	F
February 1999	Mexico	Porcelain-on-Steel Cooking Ware	F
February 1999	Taiwan	Porcelain-on-Steel Cooking Ware	F
February 1999	Mexico	Porcelain-on-Steel Cooking Ware	F
February 1999	Korea (South)	Top-of-the-Stove Stainless Steel Cooking Ware	F
February 1999	Korea (South)	Top-of-the-Stove Stainless Steel Cooking Ware	F
February 1999	Taiwan	Top-of-the-Stove Stainless Steel Cooking Ware	F
February 1999	Taiwan	Top-of-the-Stove Stainless Steel Cooking Ware	F
February 1999	Netherlands	Standard Chrysanthemums	R
February 1999	Peru	Pompon Chrysanthemums	F
February 1999	Colombia	Fresh Cut Flowers	F
February 1999	Ecuador	Fresh Cut Flowers	F
February 1999	Mexico	Fresh Cut Flowers	F
February 1999	Chile	Standard Carnations	F
February 1999	Chile	Standard Carnations	F
February 1999	Kenya	Standard Carnations	R
February 1999	Brazil	Brass Sheet and Strip	F
February 1999	Brazil	Brass Sheet and Strip	F
February 1999	Canada	Brass Sheet and Strip	F
February 1999	Korea (South)	Brass Sheet and Strip	F
February 1999	France	Brass Sheet and Strip	F
February 1999	France	Brass Sheet and Strip	F
February 1999	Germany	Brass Sheet and Strip	F

See notes at end of table.

Table E-1--Continued

## Status of Antidumping and Countervailing Duty Order 5-Year (Sunset) Reviews (as of August 5, 1999)

Month and Year of Initiation	Country	Product	Status <sup>1</sup>
February 1999	Italy	Brass Sheet and Strip . . . . .	F
February 1999	Sweden	Brass Sheet and Strip . . . . .	F
February 1999	Japan	Brass Sheet and Strip . . . . .	F
February 1999	Netherlands	Brass Sheet and Strip . . . . .	F
March 1999	Armenia	Solid Urea . . . . .	E
March 1999	Azerbaijan	Solid Urea . . . . .	R
March 1999	Belarus	Solid Urea . . . . .	E
March 1999	Estonia	Solid Urea . . . . .	E
March 1999	Georgia	Solid Urea . . . . .	R
March 1999	Kazakstan	Solid Urea . . . . .	R
March 1999	Kyrgyzstan	Solid Urea . . . . .	R
March 1999	Latvia	Solid Urea . . . . .	R
March 1999	Lithuania	Solid Urea . . . . .	E
March 1999	Moldova	Solid Urea . . . . .	R
March 1999	Romania	Solid Urea . . . . .	E
March 1999	Russia	Solid Urea . . . . .	E
March 1999	Tajikistan	Solid Urea . . . . .	E
March 1999	Turkmenistan	Solid Urea . . . . .	E
March 1999	Ukraine	Solid Urea . . . . .	E
March 1999	Uzbekistan	Solid Urea . . . . .	E
March 1999	Israel	Industrial Phosphoric Acid (AD) . . . . .	R
March 1999	Israel	Industrial Phosphoric Acid (CVD) . . . . .	F
March 1999	Belgium	Industrial Phosphoric Acid (CVD) . . . . .	F
March 1999	Turkey	Aspirin . . . . .	C
March 1999	Canada	Color Picture Tubes . . . . .	F
March 1999	Japan	Color Picture Tubes . . . . .	F
March 1999	Korea (South)	Color Picture Tubes . . . . .	F
March 1999	Singapore	Color Picture Tubes . . . . .	F
April 1999	Canada	Potassium Chloride (Potash) (SA) . . . . .	R
April 1999	Japan	Tapered Roller Bearings, 4 Inches and Under . . . . .	F
April 1999	China, PR	Tapered Roller Bearings . . . . .	F
April 1999	Hungary	Tapered Roller Bearings . . . . .	F
April 1999	Romania	Tapered Roller Bearings . . . . .	F
April 1999	Japan	Tapered Roller Bearings, Over 4 Inches . . . . .	F
April 1999	France	Ball Bearings . . . . .	F
April 1999	Germany	Ball Bearings . . . . .	F
April 1999	Italy	Ball Bearings . . . . .	F
April 1999	Japan	Ball Bearings . . . . .	F
April 1999	Romania	Ball Bearings . . . . .	F
April 1999	Singapore	Ball Bearings . . . . .	F
April 1999	Sweden	Ball Bearings . . . . .	F
April 1999	United Kingdom	Ball Bearings . . . . .	F
April 1999	France	Spherical Plain Bearings . . . . .	F
April 1999	Germany	Spherical Plain Bearings . . . . .	F
April 1999	Japan	Spherical Plain Bearings . . . . .	F
April 1999	Germany	Cylindrical Roller Bearings . . . . .	F
April 1999	Italy	Cylindrical Roller Bearings . . . . .	F
April 1999	Japan	Cylindrical Roller Bearings . . . . .	F
April 1999	France	Cylindrical Roller Bearings . . . . .	F
April 1999	Sweden	Cylindrical Roller Bearings . . . . .	F
April 1999	United Kingdom	Cylindrical Roller Bearings . . . . .	F
April 1999	Japan	Forklift Trucks . . . . .	F

See notes at end of table.

**Table E-1--Continued**  
**Status of Antidumping and Countervailing Duty Order 5-Year (Sunset) Reviews (as of August 5, 1999)**

<b>Month and Year of Initiation</b>	<b>Country</b>	<b>Product</b>	<b>Status<sup>1</sup></b>
April 1999	Japan	Nitrile Rubber . . . . .	E
May 1999	Taiwan	Small Diameter Carbon Steel Pipe and Tube . . . . .	F
May 1999	Singapore	Small Diameter Standard & Rectangular Pipe and Tube . . . . .	F
May 1999	Turkey	Welded Carbon Steel Pipes and Tubes . . . . .	F
May 1999	Turkey	Welded Carbon Steel Line Pipe . . . . .	R
May 1999	Thailand	Welded Carbon Steel Pipes and Tubes . . . . .	F
May 1999	India	Welded Carbon Steel Pipes and Tubes . . . . .	F
May 1999	Turkey	Welded Carbon Steel Pipes and Tubes . . . . .	F
May 1999	Canada	Oil Country Tubular Goods . . . . .	F
May 1999	Taiwan	Oil Country Tubular Goods . . . . .	F
May 1999	Israel	Oil Country Tubular Goods . . . . .	R
May 1999	Israel	Oil Country Tubular Goods . . . . .	R
May 1999	Taiwan	Light Walled Rectangular Tubing . . . . .	F
May 1999	Argentina	Light Walled Rectangular Tubing . . . . .	F
May 1999	Brazil	Circular-Welded Non-Alloy Steel Pipe . . . . .	F
May 1999	Korea (South)	Circular-Welded Non-Alloy Steel Pipe . . . . .	F
May 1999	Mexico	Circular-Welded Non-Alloy Steel Pipe . . . . .	F
May 1999	Taiwan	Circular-Welded Non-Alloy Pipe . . . . .	F
May 1999	Venezuela	Circular-Welded Non-Alloy Pipe . . . . .	F
May 1999	Japan	Granular Polytetrafluoroethylene Resin . . . . .	E
May 1999	Italy	Granular Polytetrafluoroethylene Resin . . . . .	E
May 1999	Brazil	Carbon Steel Butt-Weld Pipe Fittings . . . . .	E
May 1999	Taiwan	Carbon Steel Butt-Weld Pipe Fittings . . . . .	E
May 1999	Japan	Carbon Steel Butt-Weld Pipe Fittings . . . . .	E
May 1999	China, PR	Carbon Steel Butt-Weld Pipe Fittings . . . . .	E
May 1999	Thailand	Carbon Steel Butt-Weld Pipe Fittings . . . . .	E
May 1999	Japan	Micro Disks . . . . .	R
May 1999	Greece	Electrolytic Manganese Dioxide . . . . .	F
May 1999	Japan	Electrolytic Manganese Dioxide . . . . .	F
June 1999	Germany	Industrial Belts Except Synchronous and V-Belts . . . . .	
June 1999	Italy	Synchronous and V-Belts . . . . .	
June 1999	Japan	Industrial Belts . . . . .	
June 1999	Singapore	V-Belts . . . . .	
June 1999	France	Industrial Nitrocellulose . . . . .	
June 1999	Brazil	Industrial Nitrocellulose . . . . .	
June 1999	China, PR	Industrial Nitrocellulose . . . . .	
June 1999	Germany	Industrial Nitrocellulose . . . . .	
June 1999	Japan	Industrial Nitrocellulose . . . . .	
June 1999	Korea (South)	Industrial Nitrocellulose . . . . .	
June 1999	United Kingdom	Industrial Nitrocellulose . . . . .	
June 1999	Yugoslavia	Industrial Nitrocellulose . . . . .	
June 1999	Canada	Steel Rail . . . . .	
June 1999	Canada	Steel Rail . . . . .	
June 1999	Japan	Drafting Machines . . . . .	
June 1999	Japan	Small Business Telephone Systems . . . . .	R
June 1999	Taiwan	Small Business Telephone Systems . . . . .	R
June 1999	Korea (South)	Small Business Telephone Systems . . . . .	R
June 1999	Japan	Mechanical Transfer Presses . . . . .	
June 1999	Japan	Multiangle Laser Light Scattering Instruments . . . . .	R
June 1999	Japan	Benzyl Paraben . . . . .	R
July 1999	China, PR	Bars, Wedges . . . . .	

See notes at end of table.

**Table E-1--Continued**

**Status of Antidumping and Countervailing Duty Order 5-Year (Sunset) Reviews (as of August 5, 1999)**

<b>Month and Year of Initiation</b>	<b>Country</b>	<b>Product</b>	<b>Status<sup>1</sup></b>
July 1999	China, PR	Axes, Adzes . . . . .	
July 1999	China, PR	Picks, Mattocks . . . . .	
July 1999	China, PR	Hammers, Sledges . . . . .	
July 1999	China, PR	Sulfur Chemicals (Sodium Thiosulfate) . . . . .	
July 1999	Germany	Sulfur Chemicals (Sodium Thiosulfate) . . . . .	
July 1999	United Kingdom	Sulfur Chemicals (Sodium Thiosulfate) . . . . .	
July 1999	Spain	Stainless Steel Wire Rods . . . . .	
July 1999	India	Stainless Steel Wire Rods . . . . .	
July 1999	Brazil	Stainless Steel Wire Rods . . . . .	
July 1999	France	Stainless Steel Wire Rods . . . . .	
July 1999	Sweden	Seamless Stainless Steel Hollow Products . . . . .	R
July 1999	Korea (South)	Welded Stainless Steel Pipes . . . . .	
July 1999	Taiwan	Welded Stainless Steel Pipes . . . . .	
July 1999	Norway	Fresh and Chilled Atlantic Salmon . . . . .	
July 1999	Norway	Fresh and Chilled Atlantic Salmon . . . . .	
July 1999	Korea (South)	Polyethylene Terephthalate Film . . . . .	
July 1999	China, PR	Sparklers . . . . .	
July 1999	Japan	Stainless Steel Butt-Weld Pipe Fittings . . . . .	
July 1999	Korea (South)	Stainless Steel Butt-Weld Pipe Fittings . . . . .	
July 1999	Taiwan	Stainless Steel Butt-Weld Pipe Fittings . . . . .	

<sup>1</sup> Status codes: Cases listed without an assigned code have been instituted and are proceeding to the next decision point.

- E . . . . . ITC Expedited Determination
- F . . . . . ITC Full Review Determination
- R . . . . . DOC Intends to Revoke
- C . . . . . Order to be Continued

Source: Compiled by USITC staff.

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**APPENDIX F**  
**Background on**  
**Exchange Rate Shifts**



## **BACKGROUND ON EXCHANGE RATE SHIFTS**

### **Introduction**

This appendix provides a general background on exchange rates, and describes their interactions with trade flows. More specifically, it discusses the general behavior of the U.S. dollar relative to foreign currencies during 1994-98, and its relationship to recent trends in U.S. imports and exports. Because the discussion is generalized, it should be read in conjunction with chapters 2 and 3 in this report.

This appendix is divided into three sections. The first section provides a definition of exchange rates and examines the relationships between exchange rates and trade flows. The second section shows changes in nominal and real exchange rates, relative to the U.S. dollar, for the United States's top 10 trading partners on a quarterly basis and for selected regional country groups and individual countries on an annual basis. This section also briefly relates the changes in the bilateral/multilateral trade balances to changes in the dollar's international value. The third section discusses exchange rate arrangements and convertibility, highlights exchange rate and banking crises of the 1990s, and examines the possible impact on the dollar's value following inauguration of the euro in January 1999.

Strong U.S. economic growth in 1997 and 1998, characterized by rapidly rising private domestic spending on consumption and investment, together with a significant appreciation of the foreign exchange value of the U.S. dollar (which contributed to declines in import prices), brought a surge of imports in 1998. Exports slowed in 1998 because of severe financial difficulties abroad, particularly among the advanced developing countries in Asia, and because the higher value of the U.S. dollar increased the cost of U.S. exports. Although the dollar began to depreciate during the last half of 1998, only a minor, positive, lagged impact on the U.S. trade deficit can be expected.

### **Exchange Rate Determinants and Trade**

#### **Exchange rate definitions**

An exchange rate is the number of units of a country's currency exchangeable for one unit of another country's currency. A nation's currency appreciates when its value increases relative to a foreign currency, i.e., one unit of the home currency purchases more units of the foreign currency. Likewise a nation's currency depreciates when its value decreases relative to a foreign currency; one unit of the home currency purchases fewer units of the foreign currency.<sup>1</sup> For example, if 1 dollar is worth (can purchase) 100 Japanese yen at the beginning of a period, but can purchase 150 yen at the end of the period, the dollar has risen in value (has appreciated) because it can purchase more yen. This also is expressed in dollar terms as a depreciation of the yen from \$0.0100 to \$0.0067. Two recent examples<sup>2</sup> illustrate depreciation/appreciation:

- Between January and December 1994, the Mexican peso declined in value against the U.S. dollar by nearly 60 percent, from 3.11 pesos per dollar to over 5 pesos per dollar. During January-March 1995, the peso declined further, from 5 to over 7 per dollar. That the foreign exchange market fluctuates is illustrated by the peso's increase in value from March to May 1995, from 7 per dollar

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<sup>1</sup> The terms "revaluation" and "devaluation" often are used interchangeably with "appreciation," and "depreciation," respectively.

<sup>2</sup> These rates are from the series of daily and weekly historical exchange rates collected by the Federal Reserve Bank of New York from a sample of market participants. Found at Internet address <http://www.bog.frb.fed.us/releases/H10/hist/dat96> for individual countries.

to 5.90 per dollar, but it declined thereafter to 8.05 pesos per dollar in November 1995. The peso has traded in a narrow range between 8 and 9 pesos per dollar between 1995 and 1998. More recently, the peso has fluctuated in value against the dollar in a range of about 9.3 to 10 during December 1998 to May 1999.

- More recently, the Thai baht declined in value against the U.S. dollar, falling from about 22 to 40 per dollar between May and November 1997, and declined further, to 50 per dollar in January 1998. During 1999, the baht has recovered (appreciated) to about 37 per dollar in early May 1999.

Under a system of flexible or floating exchange rates,<sup>3</sup> market or “nominal” exchange rates<sup>4</sup> of freely convertible currencies are determined by the demand for, and the supply of, the domestic currency in the foreign exchange market, reflecting the supply of and demand for internationally traded goods, services, and assets. The demand for the foreign currencies is influenced by the same forces that influence the demand for domestic currency. The foreign demand for U.S. dollars is based on other countries’ desires to purchase U.S. goods and services and to invest in the United States. Likewise, the supply of U.S. dollars outside the United States is based on U.S. citizens’ desires to purchase foreign goods and services and to invest abroad.<sup>5</sup>

Exchange rate shifts can significantly affect trade flows because they change the relative prices of goods and services, assuming all other factors remain unchanged. A foreign currency depreciation (U.S. dollar appreciation) would reduce the price competitiveness of U.S. goods in foreign markets, thus discouraging U.S. exports and likewise enhancing the price competitiveness of foreign goods in the U.S. market, thus encouraging U.S. imports. The converse also is true when the dollar depreciates.<sup>6</sup> If the value of the U.S. dollar rises (appreciates), the relative price of U.S. merchandise also rises and the relative price of foreign merchandise falls.

Consider the case of a U.S. exporter selling \$50,000 worth of goods that are invoiced in U.S. dollars to a Thai importer at a time when each baht is worth \$0.05 (i.e., 20 baht per dollar, which was the exchange rate about May 1997).<sup>7</sup> In financial accounting terms, the exporter has an account receivable (an asset) for \$50,000 and the importer has an account payable (a liability), denominated in U.S. dollars for \$50,000 (equivalent to 1 million baht). Suppose that the importer does not make the payment for several

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<sup>3</sup> Floating, flexible, and fixed exchange rates are discussed later in this appendix.

<sup>4</sup> Nominal rates are reported on the financial pages of major newspapers and are distinguished from real, or inflation-adjusted exchange rates discussed later.

<sup>5</sup> The demand for money and its value stem from its use as a medium of exchange (purchasing power), as a store of value (determined by its expected rate of inflation), and as a store of liquidity (determined by the volume of transactions in that currency). For money to have value internationally, foreigners must be willing to accept it in exchange for goods, services, or financial assets. In part, this acceptance comes about from an assessment of the currency’s underlying value (the money’s ability to maintain its value and on the level of national economic activity) and from expectations that the currency’s value will continue at the same level.

<sup>6</sup> Although this has focused on merchandise trade, exchange rate changes also affect international capital flows by affecting the present value of cash flows from capital investments and purchases of foreign intangible assets.

<sup>7</sup> This example ignores the possibility of hedging the foreign exchange receivable or payable in the forward market. Hedging represents a form of price insurance in terms of locking in a contractual exchange rate for the future date at the time of the transaction. A discussion of hedging mechanisms (e.g., purchases and sales of foreign exchange through banks or brokers or on organized futures exchanges) and accounting conventions (recognition and disclosure of risk and the impact of foreign exchange on the company’s financial statements) are beyond the scope of this appendix.

months, at which time the baht has declined in value to \$0.025 (i.e., 40 baht per dollar, the exchange rate in November 1997). With depreciation of the baht, the importer's account payable has doubled in his own currency—from baht 1 million to baht 2 million, without a change in the dollar value because of the exchange rate movement. Because the quantity of goods has not changed, the dollar appreciation results in a doubling of the sales price in terms of the local currency (the baht). Given economic assumptions regarding price elasticity of demand, a doubling of the sales price results in lower quantity demanded. The example would be reverse if the U.S. exporter were to sell in baht rather than dollars. Here, a depreciation of the baht/appreciation of the dollar means that when the exporter eventually converts his baht receivable he receives only \$25,000 and not the \$50,000 he had originally calculated. The foreign currency value of the receivable has remained the same at 1 million baht, but the dollar value of the export has fallen from \$50,000 to \$25,000 because of a depreciation of the baht against the dollar. The calculated unit price in U.S. dollars has been halved.

A significant source of uncertainty in conducting international trade arises from exchange rate fluctuations as the relative value between the buyer's and the seller's currencies may change between the time the deal is concluded and the time payment is received, posing a gain to one and a loss to the other party involved in the transaction (absent hedging by either party). There are several ways to reduce or transfer the risk of an adverse price change. One of the simplest is for an exporter/importer to quote prices and establish payment terms in one's home currency, thus placing the burden and risk on the counter-party. This is a practical approach when one's own currency is freely convertible and stable.<sup>8</sup> The U.S. dollar is the premier international currency (i.e., there is a tendency for world trade in general to be denominated in dollars, and the dollar is the world's premier reserve currency), reportedly accounting for over 40 percent of global foreign exchange transactions, and more than the combined total of transactions in German marks or Japanese yen.<sup>9</sup> Typically, currencies of major trading countries are most commonly utilized—therefore U.S. dollars, German marks, UK pound sterling, Japanese yen, French francs, and Swiss francs are often quoted.

Exchange rates and domestic prices do not adjust at the same pace. Adjustment of domestic prices to an exchange rate change tends to lag because of “stickiness” of product prices and wages (e.g., labor contracts and unwritten agreements, failure to pass-through the exchange rate change,<sup>10</sup> and the sensitivity

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<sup>8</sup> U.S. companies derive a number of benefits from the fact that the dollar is the most widely used currency for international trade and financial transactions. Such benefits include the convenience factor enabling exporters, importers, borrowers, and lenders to deal in their own currency; increased business for U.S. banks and other financial institutions; and, the ability to borrow in international capital markets in their home currency. However, there are two disadvantages to having a key currency: the first is the threat of large fluctuations in demand for the currency that reverberate as fluctuations in the domestic money supply; the second disadvantage is an increase in average demand for the currency, which may cause an inflow of foreign capital, causing the currency to appreciate and exports to be less competitive. Council of Economic Advisors (CEA), *Economic Report of the President*, together with the *Annual Report of the Council of Economic Advisors*, Feb. 1999, pp. 299-300.

<sup>9</sup> Bank for International Settlements (BIS), *Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 1998: Preliminary Global Data*, found at Internet address, <http://www.bis.org/publ/index.htm>, retrieved Apr. 19, 1999. Also see George S. Tavlas, “The International Use of Currencies: The U.S. Dollar and the Euro,” *IMF Finance and Development*, International Monetary Fund (IMF), June 1998, found at Internet address <http://www.imf.org/external/pubs/ft/fandd/1998/06/tavlas.htm>, retrieved Apr. 14, 1999.

<sup>10</sup> Shinji Takagi and Yishi Yoshida, “Exchange Rate Movements and Tradable Goods Prices in East Asia: An Analysis Based on Japanese Customs Data, 1988-98,” *IMF Working Paper*, IMF, Mar. 1999, p. 3. The prices of tradable goods might tend not to change in equal proportions with a change in the nominal exchange rate. Appreciation of an exporting country's currency is often not fully reflected in price adjustments for traded goods (incomplete pass-through), attributable to exporters' pricing strategies to maintain or increase market share. If an

(continued...)

of import demand to price changes).<sup>11</sup> Exchange rate changes, like other price changes, will affect individual industries differently. Those industries that require proportionately more imported inputs will probably need to adjust their pricing and production plans more quickly in response to an exchange rate change. Others may not be so responsive to an exchange rate change.

There also may be a lagged effect in terms of changes in relative prices on the trade balance. Specifically there is the possibility that a depreciation worsens the trade balance. In this instance, if the volume of imports takes time to adjust, the value measured in domestic currency increases because of higher prices, leading to a short-term widening of the trade deficit followed by a narrowing of the trade deficit as the demand for imports decreases and exports increases. This is termed the “J curve.”<sup>12</sup>

### **Importance of exchange rates in the national economy**

The exchange rate is important because rate changes may have an effect on domestic input prices and production costs, aggregate demand, the domestic money supply and interest rates, the trade balance, and international competitiveness. Prices of commodities or raw materials are affected by worldwide supply and demand conditions. Changes in global commodity prices affect production input costs and prices in the United States, and prices of foreign manufactured goods affect the demand for domestically produced goods (as the dollar appreciates, U.S. produced goods become less competitive relative to imports). Additionally, asset and portfolio managers shift financial capital internationally, arbitraging<sup>13</sup> between levels of relative real interest rates, effectively equalizing interest rates internationally. Finally, changes in a country’s exchange rate affect the cost of servicing the part of its debt denominated in foreign currencies.<sup>14</sup>

A country’s economy is linked to the rest of the world through the twin channels of trade (merchandise and services) and financial flows. Demand for money (transaction and speculative demand) is a function of income, prices, and interest rates. The link between the “goods” (real balances) and “assets” (money and interest bearing assets) markets are shown schematically in figure F-1: This figure also shows the links between income and spending, interest rates, monetary policy, and fiscal policy and the goods markets and assets markets.<sup>15</sup>

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<sup>10</sup> (...continued)

export product has a high foreign demand sensitivity to a price change, exporters have to lower the pass-through rate of the induced price change offered to foreign importers to keep the shares for their products in international markets. Hence, the sensitivity to the price change is a key consideration for the pass-through rate.

<sup>11</sup> This describes a change in the exchange rate leading to a change in domestic prices. For example, during the Indonesian currency crisis, the rupee depreciated because of exogenous shocks. Following the depreciation, imported inputs and consumer goods became more expensive in terms of the home currency, resulting in inflation.

<sup>12</sup> Rudiger Dornbusch and Stanley Fischer, *Macroeconomics* (New York: McGraw-Hill Publishing Co., 1990 (5th ed.)), p. 783. However, this does not apply during 1994 to mid-1998 because the dollar was appreciating during that time. There is a lag so that the effects of dollar depreciation since mid-1998 are not seen until 1999.

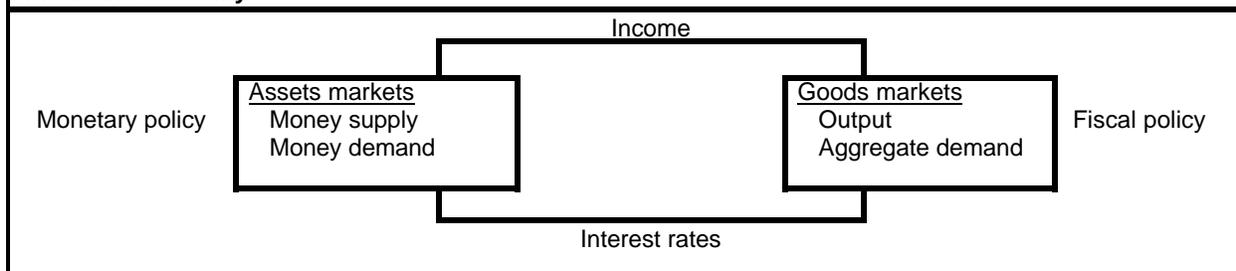
<sup>13</sup> Arbitrage can be defined as a profit-maximizing effort that seeks to take advantage of price discrepancies of the same good or asset in different markets or different points in time.

<sup>14</sup> Russia, Romania, and Mexico provide recent examples of the effect of dollar appreciation on increasing foreign debt that was denominated in dollars. The export earnings of these countries were denominated in their own currencies. Hence, the value of the debt increased at a faster rate than the value of the exports available to pay interest and principle.

<sup>15</sup> These relationships are shown graphically by the IS-LM model which summarizes the conditions that have to be satisfied in order for the goods and asset markets, respectively to be in equilibrium. The IS-LM schedules show

(continued...)

**Figure F-1**  
**Interrelationships of income, interest rates, monetary and fiscal policies on assets and goods markets within the economy**



Source: Rudiger Dornbusch and Stanley Fischer, *Macroeconomics* (New York: McGraw-Hill Publishing Co., 1990 (5th ed.)), p. 108.

### Exchange rate parity conditions

There are several ways to describe conditions of equilibrium among spot (current) and forward (a specific future time period) exchange rates, prices, and interest rates: each focuses on specific aspects of the interrelationships between income, interest rates, assets markets, and goods markets that were described earlier. No single approach seems to provide a satisfactory explanation of exchange rate movements, particularly short- and medium-term movements, since the widespread adoption of floating exchange rates in the 1970s.

- ! **Purchasing power parity (PPP) theory**— in the long run, exchange rates will adjust to equalize the relative purchasing power of currencies. This follows from the “law of one price,” which states that in competitive markets, the exchange-adjusted prices of identical tradeable goods and financial assets must be equal worldwide, allowing for transaction costs.
- ! **Monetary approach**-- this approach combines PPP with the quantity theory of money.<sup>16</sup> Relative rates of inflation (an expansion of the money supply in excess of real output growth) influence exchange rates because they influence the riskiness of and real returns of financial assets. Real economic growth also influences exchange rates because of its effect on transactions demand for money.
- ! **Interest rate parity theory**--the currency of the country with a lower interest rate should be at forward premium in terms of the currency of the country with a high rate; interest parity ensures that the return on a hedged foreign investment will equal the domestic interest rate on investments of identical risk (this is termed covered interest arbitrage).

<sup>15</sup> (...continued)

that interest rates and levels of output are determined by the interactions of the financial assets curve (LM) and goods markets curve (IS). For a detailed discussion of this model, see Dornbusch and Fischer, *Macroeconomics*, chs. 6 and 20; and Paul R. Krugman and Maurice Obstfeld, *International Economics, Theory and Policy* (NY: HarperCollins College Publishers, 1994 (3rd ed.)), ch. 17.

<sup>16</sup> According to the quantity theory of money, the relationship between the “money economy” and the “real” economy is shown in the equation,  $MV = PT$ , where  $P$  is the price level,  $T$  represents the total volume of transactions in the economy,  $M$  is the amount of money in the economy (money supply), and  $V$  is the velocity (speed of circulation) of money within the economy.

- ! **The Fisher effect and international Fisher effect**-- the Fisher effect assumes that capital markets are integrated across countries through arbitrage, thereby equalizing real interest rates (returns on assets) internationally.<sup>17</sup> Currencies with high rates of inflation should bear higher interest rates than currencies with lower rates of inflation. The international Fisher effect states that currencies with high inflation rates (and high interest rates) are expected to depreciate against those currencies with low inflation rates (and low interest rates) because of “uncovered interest arbitrage.”
- ! **The portfolio balance approach**-- this is a short-term view of exchange rates that examines the linkage between demand and supply conditions for money and other financial assets. It assumes that exchange rates will be in equilibrium through the process by which firms and individuals balance their diversified portfolios among domestic money, domestic bonds, and foreign currency bonds, and that portfolios are adjusted as conditions change so as to maximize risk-adjusted returns.<sup>18</sup>

### **Changes in the Nominal and Real Value of the Dollar**

Factors that led to dollar appreciation during 1997 and 1998 include high rates of growth of U.S. GDP and turmoil in global markets of East/Southeast Asia, Russia, and Brazil. These same factors led to an increase in the U.S. merchandise trade deficit. However, the relatively small ratio of trade to gross national product tends to make the U.S. economy less vulnerable to changes in its currency compared with its major trading partners.

With respect to economic growth, real U.S. GDP increased by about 4 percent in both 1997 and 1998, and exceeded 5.5 percent annualized in the fourth quarter of 1998.<sup>19</sup> The year 1998 represented the seventh year of U.S. economic expansion, and during that year, the U.S. economy continued to grow at a faster rate than that of many of its major trading partners, with low inflation and low unemployment.<sup>20</sup> This economic growth has contributed to the sustained demand for imported goods; decreasing imports prices, partly due to the dollar’s appreciation through mid-1998, also contributed to low overall U.S. inflation. The turmoil in global markets, especially in the emerging economies of Asia, stimulated both an

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<sup>17</sup> The most important assumption behind the Fisher effect is that capital markets are integrated; such markets can be segmented (local conditions determine interest rates) through government regulatory barriers to capital market access, currency controls, or political risk to foreign investors.

<sup>18</sup> For further information on these parity conditions, see The Federal Reserve Bank of New York, *The Foreign Exchange Market in the United States*, particularly ch. 11, “The Determination of Exchange Rates;” and Alan C. Shapiro, ch. 7, “Parity Conditions in International Finance and Currency Forecasting,” *Multinational Financial Management* (Upper Saddle, NJ: Prentice-Hall, 1996), pp. 183-234.

<sup>19</sup> Testimony of Chairman Alan Greenspan, “The Federal Reserve’s Semiannual Monetary Policy Report,” before the Subcommittee on Domestic and International Monetary Policy of the Committee on Banking and Financial Services, U.S. House of Representatives, on Feb. 24, 1998 and Feb. 23, 1999, found at Internet addresses <http://www.bog.frb.fed.us/boarddocs/hh/1998> and [1999/February/testimony/htm](http://www.bog.frb.fed.us/boarddocs/hh/1999/February/testimony/htm), respectively, retrieved June 4, 1999. Also see Michael Boldin, “International Trade, Exchange Rates, and the U.S. Economy,” *Business Cycle Research*, The Conference Board, Mar. 1999, found at Internet address <http://www.tcb-indicators.org/articles/bci-0399/bci-0399.htm>, retrieved June 4, 1999.

<sup>20</sup> This is based on a comparison of GDP in the third quarter of 1997 with the third quarter of 1998. See, CEA, *Economic Report of the President*, table B-1, p. 327. In contrast, GDP declined by 2.7 percent in Japan, 7 percent in Korea, 6.2 percent in Malaysia, 13 percent in Indonesia, and 9.6 percent in Thailand. It grew by 4.0 percent in Taiwan, 2.9 percent in France and Germany, 2.7 percent in the United Kingdom, and by 1.2 percent in Singapore. The U.S. economy is estimated to grow faster than many of its trading partners in 1999. See, “Economic Outlook,” *Industry Week*, Jan. 4, 1999, p. 10. Statistics compiled by the World Bank for real GDP, consumer prices, and unemployment confirm a relatively stronger growth pattern of the U.S. economy. See, World Bank, *World Economic Outlook and Policy Responses to the Global Slowdown*, tables 1.1-1.3.

increase in exports from countries of the region and a dramatic decrease in U.S. exports, and contributed to lower prices for crude petroleum and other commodities.<sup>21</sup> These events contributed to the merchandise trade deficit widening during 1997-98, from \$219.2 billion to \$272.9 billion (24.5 percent).<sup>22</sup>

Although part of the increase in the trade deficit may be attributed to strong U.S. economic growth and to declines in world demand, part can be explained by exchange rates. The international trading value of the U.S. dollar generally rose against the currencies of the top 10 country trading partners (and others) of the United States during most of the 5-year period, but it declined against them during the last half of 1998. The dollar's appreciation hindered exports and provided an impetus for imports. The Asian financial crisis and its spinoffs reportedly are largely responsible for the widening U.S. merchandise trade deficit; the largest U.S. trading partners in that region are China, Korea, Malaysia, Singapore, and Taiwan, which have taken a while to recover from the financial crisis.<sup>23</sup> One study suggests that exchange rate shifts during 1997 in Southeast Asia could have added more than \$50 billion to the U.S. trade deficit, with the greatest impact felt in the light manufacturing and machinery sectors.<sup>24</sup> Only a minor, positive impact of the dollar depreciation since mid-1998 on the U.S. trade deficit is estimated (e.g., pass-through and J-curve effects).<sup>25</sup>

The rising U.S. trade deficit increased the supply of dollars to the foreign exchange market that was offset by foreign purchases of U.S. government and private sector investment securities, and foreign investment in the United States.<sup>26</sup> This was partly caused by turmoil in foreign markets that stimulated a "flight to quality" in terms of increasing foreign purchases of U.S. securities.<sup>27</sup> According to the Chairman

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<sup>21</sup> Decreasing import prices contributed to low overall U.S. inflation. Testimony of Chairman Alan Greenspan, before the Subcommittee on Domestic and International Monetary Policy of the Committee on Banking and Financial Services, U.S. House of Representatives, on Feb. 23, 1999.

<sup>22</sup> GDP equals domestic consumption, investment, and government spending plus net exports (exports minus imports). An increasing merchandise trade deficit, or negative net exports, should represent a drag on GDP by definition. However, U.S. imports and U.S. exports as a share of U.S. GDP ranged from 11.0 percent to 13.1 percent and from 10.0 to 11.8 percent during 1993-97, respectively (table 2-4 in this report), for a relatively small ratio of negative net exports to U.S. GDP of about 1 percent. Because U.S. net exports represent a small fraction of U.S. GDP, a change in net exports will have only a small impact on GDP. Boldin, "International Trade."

<sup>23</sup> The financial market turbulence that began in July 1997 has led to large nominal exchange rates movements throughout Asia, altered the pattern of relative competitiveness throughout the region, and affected the volume and composition of international trade flows. Boldin, "International Trade."

<sup>24</sup> Ligang Liu, Marcus Noland, Sherman Robinson, and Zhi Wang, "Asian Competitive Devaluations," Institute for International Economics, Working Paper 98-2, found at Internet address <http://www.iie.com/CATALOG/WP/1998/98-2/98-2.htm>, retrieved Apr. 17, 1999.

<sup>25</sup> Boldin, "International Trade."

<sup>26</sup> The counterpart of a rising current account deficit has been increased net indebtedness of the United States to foreigners. According to standard balance of payments accounting, the balance on current account equals the balance on capital account plus or minus statistical discrepancies and the net change in foreign reserves. This states that inward capital flows from foreign investment will offset outward capital flows generated by the excess of imports minus exports. For further data on this see U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), *Survey of Current Business*, Apr. 1999, Table A—Summary of International Transactions, p. 18.

<sup>27</sup> This is termed "safe-haven demands for U.S. Treasury securities." It occurred in the wake of the Russian crisis (e.g., the Russian government's decision in mid-August 1998 to suspend payments on its debt and to devalue the ruble), and the subsequent pressure on the Brazilian real. In the United States, safe-haven demands have had the effect of widening interest rate spreads between U.S. Treasury securities and private debt securities of lower-rated issuers. The Federal Open Market Committee reduced interest rates on three occasions, beginning in Sept. 1998. Testimony of Chairman Alan Greenspan before the Committee on Banking and Financial Services, U.S.

(continued...)

of the Federal Reserve, “foreign savers provided an additional source of funds for vigorous domestic investment.”<sup>28</sup> Overall this inflow of funds helped restrain upward pressure on U.S. interest rates caused by economic expansion, although the Federal Reserve engaged in market calming measures. Although there were “two exceptionally large acquisitions of U.S. corporations by foreign firms” that affected both foreign direct investment capital flows to the United States and net U.S. purchases of foreign securities in fourth quarter 1998,<sup>29</sup> net U.S. sales of foreign securities continued at a high pace and net foreign purchases of U.S. securities, including U.S. Treasury securities, decreased sharply between 1997 and 1998.<sup>30</sup> Also, U.S. banks’ claims on foreigners declined as U.S. banks withdrew outstanding loans and extended fewer new loans<sup>31</sup> (e.g., in response to the East/Southeast Asian, Russian, and Brazilian crises). Furthermore, U.S. banks’ liabilities to foreigners decreased, as foreigners sharply reduced their deposits in U.S. banks and as most U.S. banks had little need to borrow from abroad.<sup>32</sup> These events culminated in a relatively weaker dollar by the end of 1998. In fourth quarter 1998, the dollar depreciated 5 percent on a trade-weighted quarterly average basis against the currencies of 10 industrial countries. The depreciation was 5 to 6 percent against the currencies of most European countries, 15 percent against the Japanese yen, and 3 to 6 percent against the currencies of most developing countries in Asia.<sup>33</sup>

Quarterly real and nominal exchange rates for the currencies of the 10 leading U.S. trading partners against the U.S. dollar during 1994-98, indexed to January-March 1994, are shown in figure F-2.<sup>34</sup> Real exchange rates are nominal exchange rates adjusted for relative rates of inflation. Adjusting

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<sup>27</sup> (...continued)

House of Representatives, Feb. 24, 1999, found at Internet address

<http://www.bog.frb.fed.us/boarddocs/hh/1999/February/testimony.htm>, retrieved June 4, 1999.

<sup>28</sup> Chairman Greenspan noted the possibility that the dollar might depreciate with upward pressure on U.S. prices should U.S. foreign indebtedness be called into question. Greenspan testimony on Feb. 24, 1999. According to the Semiannual Report of the Federal Reserve, the large current account deficits have been funded with increased net foreign saving in the United States. As U.S. net external debt has risen, net investment income has become increasingly negative (from a \$14 billion surplus in 1996, it moved to a \$5 billion deficit in 1997, and was moving toward a \$15 billion deficit in 1998). In 1998, net income from direct investment slowed because slower economic growth abroad reduced U.S. investment earnings, appreciation of the U.S. dollar reduced the value of U.S. earnings, and higher U.S. economic growth boosted foreigner’s earnings on direct investment in the United States. Federal Reserve Board of Governors, *The Federal Reserve’s Semiannual Report on Monetary Policy*, submitted to Congress on Feb. 23, 1999, found at Internet address <http://www.bog.frb.fed.us/boarddocs/hh/1999/February/ReportSection2.htm>, retrieved June 4, 1999.

<sup>29</sup> Christopher L. Bach, “U.S. International Transactions, Fourth Quarter and Year 1998,” *Survey of Current Business*, USDOC, BEA, Apr. 1999, pp. 18-46.

<sup>30</sup> Ibid.

<sup>31</sup> Some of this was a carryover of uncertainties engendered by the declaration of a debt moratorium by Russia (and ruble devaluation), by sharply declining equity prices and interest rates throughout the world, and by renewed instability in key developing countries such as Brazil. Bach, “U.S. International Transactions.”

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> The quarterly real exchange rate indices were calculated from nominal exchange rates, producer or wholesale price indices in the partner countries, and the producer price index in the United States; the nominal exchange rates and price indices were reported by the IMF. Producer selling prices of each country are estimated to follow the trend in that country’s overall producer-price level; if foreign producer prices do not follow the trend in the general price level, the calculated real exchange rate would over- or under-estimate the impact of the effect of the actual changes in domestic prices and exchange rates on dollar-denominated prices of exports. The producer or wholesale price indices measure inflation or deflation at the producer selling price level in each subject county and in the United States. As a result, the nominal exchange rate in each period has a counterpart real exchange rate for

(continued...)

nominal rates by relative inflation or deflation in the foreign country vis-a-vis the United States yields a real exchange rate which accounts for relative changes in prices in the subject country as well as changes in nominal exchange rates. Being adjusted for relative inflation, the real exchange rate gives a clearer indication than the nominal exchange rate of the impact of exchange rates on export and import prices, and, hence, a better indicator of changes in competitiveness. Differences between the rates of changes in nominal versus real exchange rates may be explained by various frictions in the economy which cause real prices to change more slowly over time whereas nominal exchange rates adjust more rapidly in response to new information or changes in expectations.

The exchange rate indexes are based on exchange rates expressed in U.S. dollars per unit of the foreign currency (i.e., the dollar price of the foreign currency). Hence, an exchange rate index is a price index--an index below 100 indicates that the foreign currency has depreciated compared to the base year, becoming cheaper relative to the dollar (it requires fewer dollars to buy one unit of the foreign currency compared to the number of dollars during the base period), and the converse is equally valid. Thus, in each graph of figure F-2, the slope of the line indicates a change during a specific period; an upward sloping line indicates that the foreign currency is becoming stronger relative to the dollar (i.e., dollar depreciation), whereas a downward sloping line indicates the opposite (dollar appreciation).

A more extensive depiction of the value of the dollar during 1994-98 is provided in table F-1. This shows trade-weighted real exchange rate indices of foreign currencies of regional groupings and individual country trading partners and country groups. The trade-weighted exchange rate is a nominal index that measures the value of the dollar against the currencies of all 131 U.S. trading partners, weighted by each country's share of U.S. trade, and thus more accurately reflects the worldwide value of the dollar.<sup>35</sup> In this table (unlike figure F-2), a rising index number indicates a real dollar appreciation.<sup>36</sup> The world trend for this measure over the period 1994-98, has been that of appreciation, rising from an index number of 97.6 to 109.4. During calendar year 1998, the average annual real exchange rate of the dollar was 7.4 percentage points higher than during calendar year 1997. High rates of import growth correspond to the high index numbers shown in table F-1.

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<sup>34</sup> (...continued)

that period. Indexes of the two exchange rates may show opposing changes in the value of the currency, with one index representing the nominal value of the currency and the other the real value of the currency.

<sup>35</sup> For a discussion of how the trade-weighted nominal and real dollar indexes are constructed and their value in research, see W. Michael Cox, "A New Alternative Trade-Weighted Dollar Exchange Rate Index," Federal Reserve Bank of Dallas, *Economic Review--September 1986*; and W. Michael Cox, "A Comprehensive New Real Dollar Exchange Rate Index," Federal Reserve Bank of Dallas, *Economic Review--March 1987*.

<sup>36</sup> Differences between figure F-2 and table F-1 may be attributable to the base period selected for the index number (1994 and 1990, respectively) and to the use of trade weighted exchange rates in table F-1.

**Table F-1**  
**Real exchange rates: Indexes of foreign currencies, or baskets of currencies, against the U.S. dollar, annual averages 1994-98**

Year	World average	Western hemisphere <sup>1</sup>	Canada	Mexico	Europe	Japan	Pacific NICs <sup>2</sup>	Other
Indexes (First quarter 1990 = 100)								
1994	97.6	97.2	120.3	80.3	102.6	73.6	98.4	109.7
1995	95.3	89.1	121.7	117.0	94.0	69.7	92.4	100.2
1996	97.7	87.3	122.5	105.8	96.8	82.8	92.0	97.5
1997	101.9	84.8	125.3	93.3	106.7	92.7	98.3	100.4
1998	109.4	84.5	135.0	94.2	107.4	101.2	119.0	110.3
Percentage change (negative) over the preceding period								
1994	0.1	(2.9)	8.4	3.9	(1.1)	(6.4)	1.4	(4.9)
1995	(2.3)	(10.0)	1.1	45.6	(8.3)	(5.3)	(6.1)	(8.7)
1996	2.5	2.3	0.7	(9.5)	2.9	18.9	(0.4)	(2.7)
1997	4.3	(4.4)	2.3	(11.8)	10.2	11.9	6.8	2.9
1998	7.4	(1.2)	7.7	0.9	0.7	9.2	21.0	9.9

<sup>1</sup> Excludes Canada and Mexico.

<sup>2</sup> Newly industrialized countries.

Source: Federal Reserve Bank of Dallas, "Trade-Weighted Value of the Dollar," Jan. 1999, found at Internet address <http://www.dallasfed.org>.

### **Exchange Rate Stability and Convertibility**

This section highlights factors that promote U.S. dollar stability and currency convertibility, including government intervention in the foreign exchange market; several recent exchange rate crises; and a look at how inauguration of the euro in January 1999 may affect possible changes in the dollar's value on international foreign exchange markets. As noted earlier, the merchandise and financial markets are linked, and a currency crisis (which is usually symptomatic of a country's economic distress) disrupts trade flows. Moreover, because of increasing global integration of financial markets, problems of one country's capital markets (e.g., a currency or banking crisis) may rapidly spread to other countries, affecting both capital and merchandise flows.<sup>37</sup> The sheer size of the foreign exchange market also impedes intervention and exchange rate stabilization efforts by government authorities in the absence of coordinated fiscal and monetary policies.<sup>38</sup>

#### **Currency stability and convertibility**

Because the exchange rate is dependent on basic economic factors, a wide range of government policies affects exchange values, including domestic monetary and fiscal policies, independence of the country's central bank, exchange controls and openness of its capital market,<sup>39</sup> and arrangements for

<sup>37</sup> BIS, *Settlement Risk in Foreign Exchange Transactions: Report Prepared by the Committee on Payment and Settlement Systems of the Central Banks of the Group of Ten Countries* (Basle: Mar. 1996).

<sup>38</sup> For a discussion of the cost of European intervention during the 1992-93 EMS crisis, see Shapiro, *Multinational Financial Management*, pp. 91-100.

<sup>39</sup> For a definition of exchange convertibility and restrictions on convertibility, by country, see IMF, *Exchange* (continued...)

**Figure F-2**

**Exchange rates: Indexes of nominal and real exchange rates of the currencies of Canada, Japan, Mexico, China, Germany, the United Kingdom, Taiwan, France, Korea, and Singapore relative to the U.S. dollar, by quarters, 1994-98**

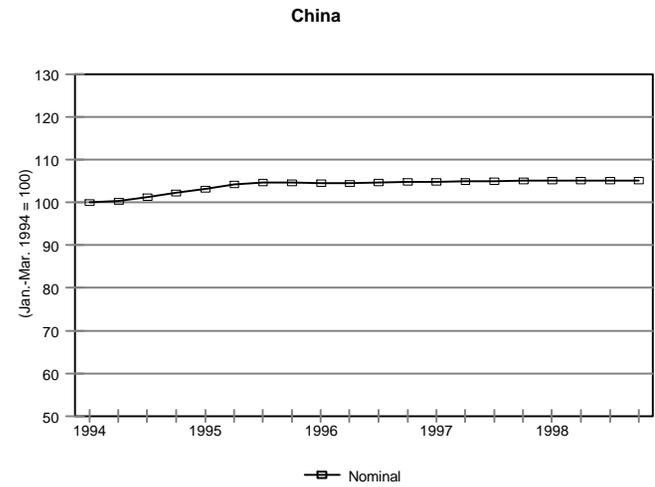
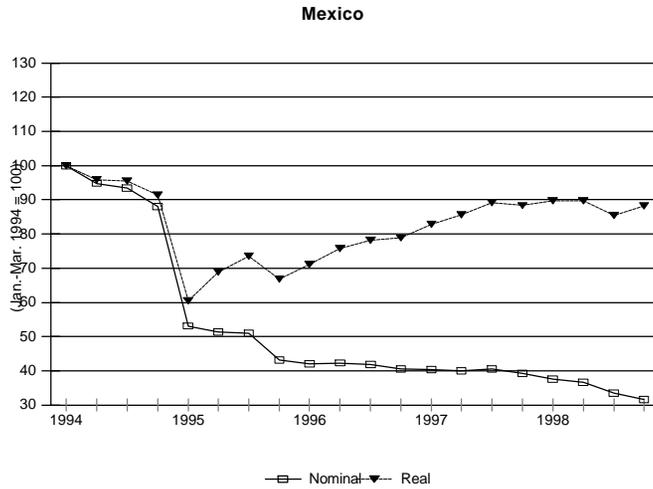
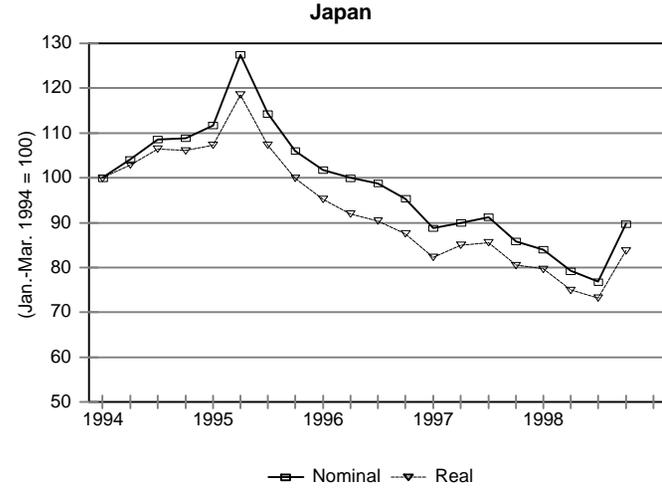
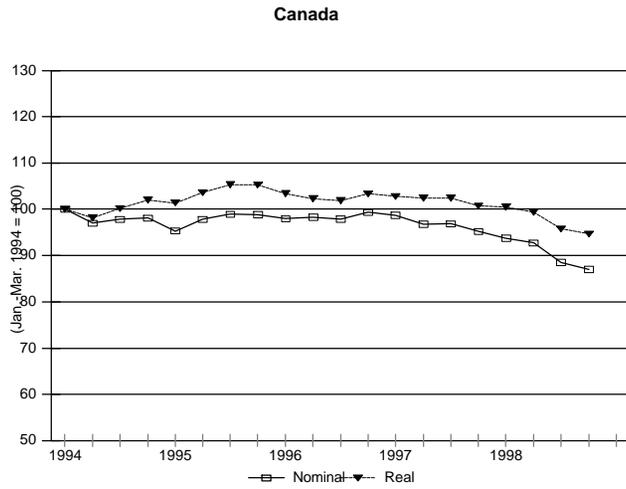


Figure F-2--Continued

Exchange rates: Indexes of exchange rates of the currencies of Canada, Japan, Mexico, China, Germany, the United Kingdom, Taiwan, France, Korea, and Singapore relative to the U.S. dollar, by quarters, 1994-98

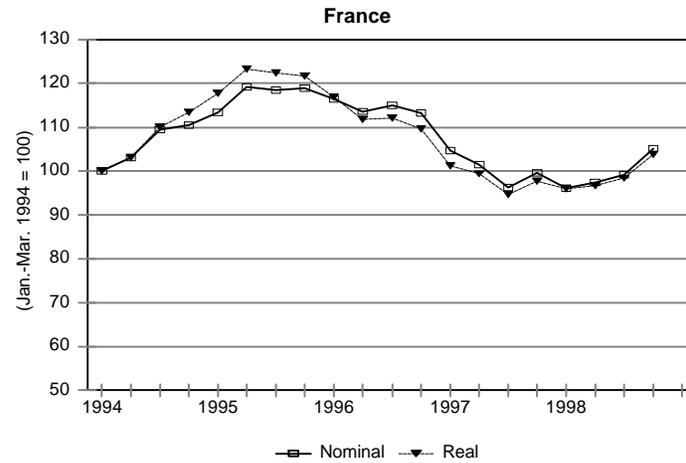
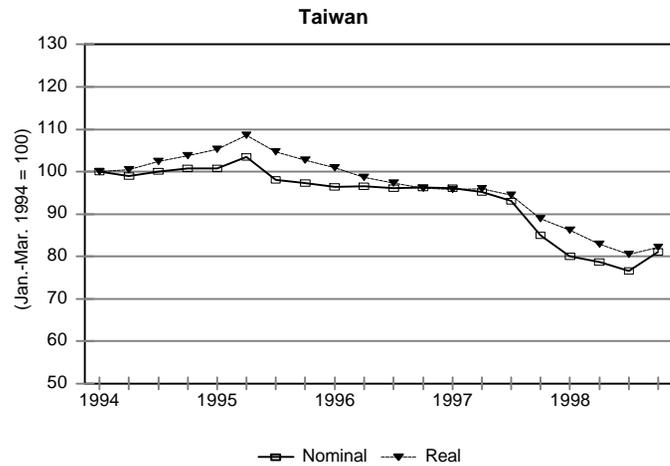
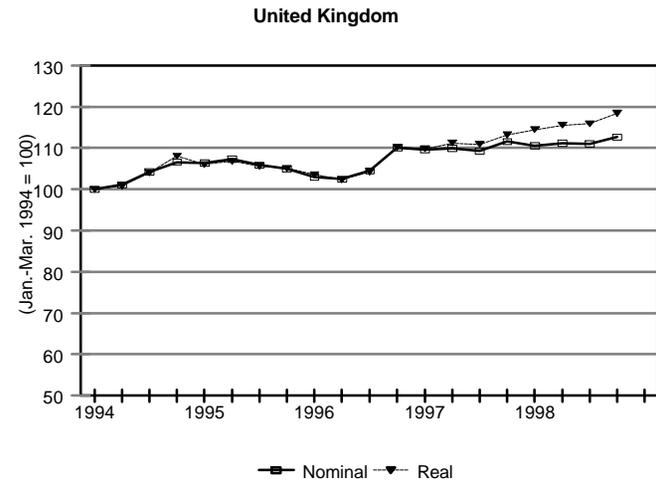
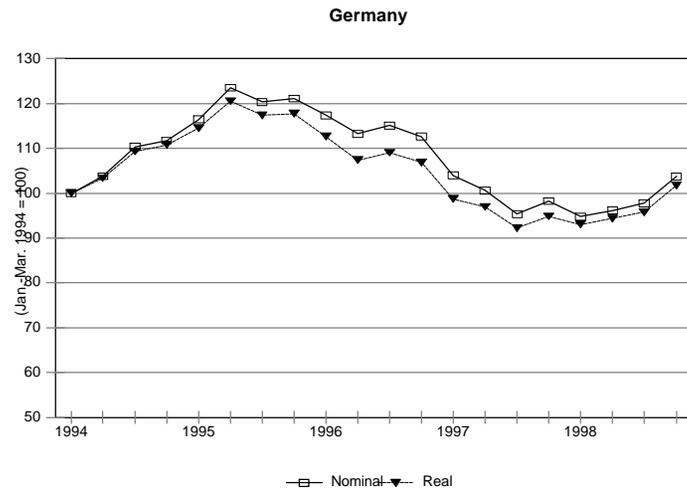
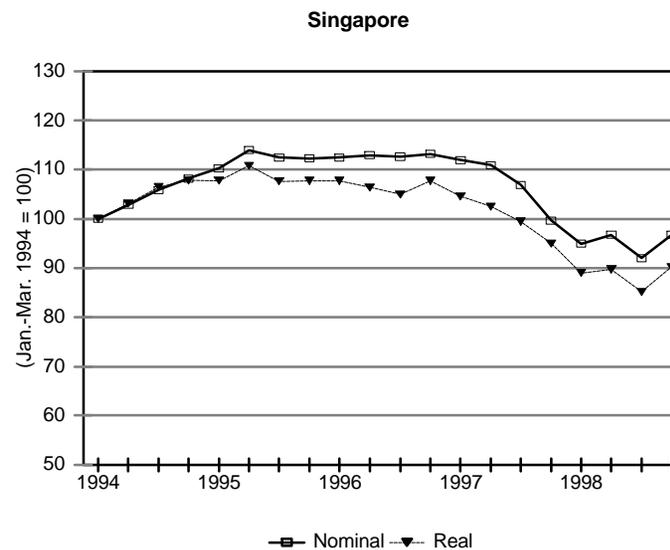
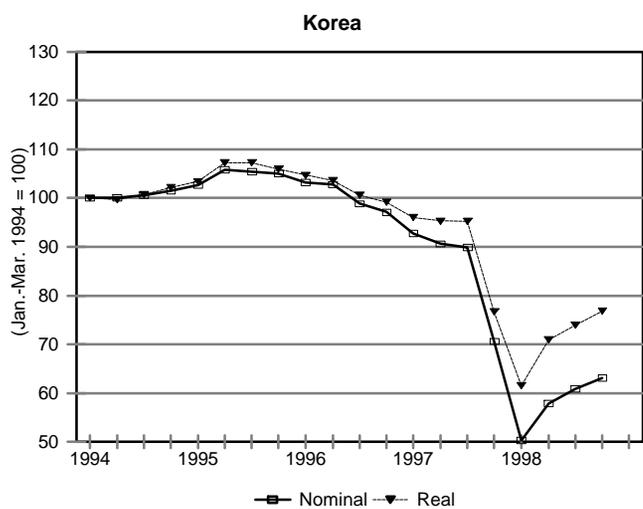


Figure F-2--Continued

Exchange rates: Indexes of exchange rates of the currencies of Canada, Japan, Mexico, China, Germany, the United Kingdom, Taiwan, France, Korea, and Singapore relative to the U.S. dollar, by quarters, 1994-98



Note--An declining index number indicates appreciation of the U.S. dollar as does a downward sloping line; producer price data, and thus, real exchange rate data, were not available for China.

Source: International Monetary Fund, *International Financial Statistics*, various issues; and Central Bank of China (Taiwan), *Financial Statistics*, various issues.

payments and receipts. Also important in terms of the currency's exchange value are the government's intervention policy (reflecting its desire to maintain exchange rate stability),<sup>40</sup> and the country's exchange rate arrangements. Exchange rate arrangements refers to the mechanisms by which the exchange rate is established which range from market-determined exchange rates (freely floating exchange rates or clean float) to fixed rate systems.<sup>41</sup> The U.S. dollar is classified as "independently floating."

Most governments also state that they will periodically intervene in order to stabilize disorderly foreign exchange markets, and to ensure that their capital markets are insulated from external exchange rate crises that may escalate into banking and general financial crises. U.S. authorities purchase dollars from time to time to resist downward pressure on the dollar exchange rate and occasionally sell dollars to resist strong upward pressure. From 1993 through mid-1995, market pressures against the dollar were mainly downward, and U.S. authorities intervened by buying dollars on 18 trading days, with purchases totaling \$14 billion, just over half of which were purchased against Japanese yen, with the remainder purchased against the German mark. There were no dollar intervention operations undertaken by the U.S. authorities from mid-1995 until mid-1998. During 1998, U.S. monetary authorities intervened in the foreign exchange markets on one occasion, on June 17, selling a total of 833 million U.S. dollars and buying Japanese yen.<sup>42</sup>

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<sup>39</sup> (...continued)

*Arrangements and Exchange Restrictions, Annual Report 1998.*

<sup>40</sup> Foreign exchange market intervention consists of the official purchases and sales of foreign exchange that nations undertake through their central banks to influence the values of their currencies. An intervention may affect the domestic money supply (a purchase of domestic currency and sale of the targeted foreign currency results in a decrease of the domestic money supply, affecting the rate of inflation and interest rates) in which case the government offsets the intervention by purchasing or selling government securities. "Sterilized" foreign exchange market intervention refers to insulating the domestic money supply from the foreign exchange transactions. This is brought about by open-market operations (a sale or purchase of U.S. Treasury securities) by the Federal Reserve. To neutralize a foreign exchange market intervention where the U.S. Treasury buys dollars, the Open-Market Committee of the Federal Reserve would purchase Treasury bills, returning the U.S. money supply to its pre-intervention level.

<sup>41</sup> For a description of the five types of arrangements for exchange rates, each of which represents efforts by the central bank to stabilize the country's exchange rate against those of its trading partners, see IMF, *Exchange Arrangements and Exchange Restrictions, Annual Report 1998*, Appendix 1. Also, for a chart of exchange rate arrangements, see IMF, *International Financial Statistics*, monthly series, p. 8. The current international system is a hybrid, with major currencies floating on a managed basis, some currencies freely floating, and other currencies moving in and out of various types of pegged exchange rate relationships. Under a fixed rate system, central banks stand ready to buy and to sell their currencies at a fixed price in terms of dollars. Also, central banks have to finance any balance of payments surplus or deficit that arises at the official exchange rate. So long as a central bank possesses reserves of foreign currencies (foreign exchange reserves), Special Drawing Rights (SDRs), and gold, it can continue to intervene in the foreign exchange market. In contrast, under a "clean float" flexible exchange rate system, the central bank does not intervene to support the value of its currency and official reserve transactions are zero; under a "managed float," the central bank intervenes to buy or sell foreign currencies in an effort to influence exchange rates and official reserve transactions are not zero. According to statistics compiled by the IMF, in 1998, the currencies of 46 countries were classified as independently floating, 55 currencies were managed, while another 66 currencies were pegged to a single currency (with about 22 were pegged to the U.S. dollar) or to a basket of currencies.

<sup>42</sup> The mark and the yen have been the only two currencies in which the United States has conducted its intervention operations. Foreign exchange intervention is carried out by the foreign exchange trading desk at the Federal Reserve Bank of New York, in coordination with the foreign monetary authorities, and the amount may be split between the Federal Reserve System and the U.S. Treasury's Exchange Stabilization Fund. For a review of foreign exchange market activities, see Federal Reserve Bank of New York, *The Foreign Exchange Market in the*  
(continued...)

Most of the leading U.S. trading partners maintain floating exchange rates, and their central banks intervene selectively or not at all. Those allowing their currency's exchange value to freely float include Canada, Japan, Korea, Mexico, Singapore, and Taiwan. Several others do not, preferring instead to maintain an organized floating exchange rate, or managed float. For example, the People's Bank of China announces a reference rate for the renminbi against the U.S. dollar, the Hong Kong dollar, and Japanese yen based on the weighted-average price of foreign exchange transactions on the previous day. This reference rate is then used to establish the current day's maximum trading limits in the interbank foreign exchange market.<sup>43</sup> The central banks of several others have announced their intentions to intervene should they consider market conditions disorderly or if their currency's foreign exchange value fluctuates beyond a stated range of parity against other currencies or a basket of currencies. The Exchange Rate Mechanism of the European Monetary System (EMS, which ended with the advent of the euro on January 1, 1999) was similar to a managed floating system; under this system, the central banks committed themselves to intervene in the foreign exchange market if the value of their currencies traded outside of an established percentage range<sup>44</sup> of cross rates of other EMS currencies.

### Exchange rate crises

The foreign exchange market is, by most accounts, the oldest, largest, and most extensive financial market in the world. The average daily turnover has been estimated at nearly \$1.5 trillion by the Bank for International Settlements (BIS) in April 1998 (up 25 percent since the previous BIS study in 1995), compared with the daily turnover of U.S. Government securities (the next largest market) of \$175 billion. Financial markets have increasingly become integrated because of lessened restrictions on cross-border flows of foreign direct and portfolio investment.<sup>45</sup> A foreign exchange crisis has repercussions throughout the system, including a banking crisis within the country or the affected region,<sup>46</sup> private capital flight abroad, and changes in the composition and direction of trade flows (e.g., increased exports of commodity-quality goods and a significant reduction in imports).

The international financial system has experienced several exchange rate crises: (1) the EMS in 1992 and 1993; (2) when Mexico devalued and then floated the peso in December 1994 and a number of

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<sup>42</sup> (...continued)

*United States*, Ch. 9, found at Internet address <http://www.ny.frb.org/pihome/addpub/usfxm/chap9.pdf>, retrieved Apr. 24, 1999. Also, see quarterly press releases of the Federal Reserve Bank of New York, found at Internet address <http://www.ny.frb.org/pihome/news/forex>.

<sup>43</sup> For the U.S. dollar, this limit is  $\pm 0.3$  percent of the reference price versus a band of  $\pm 1$  percent for the Hong Kong dollar and the Japanese yen, and a limit for all other currencies of  $\pm 0.5$  percent. Until Dec. 15, 1997, the Korean won-dollar exchange rate was similarly determined with a range of  $\pm 2.25$  percent; after Dec. 16, 1997, the won's exchange rate was allowed to float. See IMF, *Exchange Arrangements and Exchange Restrictions*.

<sup>44</sup> Exchange rates had been maintained in a much narrower target zone within the EMS until the exchange rate crisis that began in Sept. 1992. Reportedly, the catalyst was the decision by the Bundesbank to tighten monetary policy and raise interest rates to restrain inflation and attract inflows of foreign capital to cover budget deficits associated with German reunification. For a description of the crises in Sept. 1992 and Aug. 1993, see Shapiro, *Multinational Financial Management*, pp. 91-99.

<sup>45</sup> The rising magnitude of gross flows is one indicator of financial integration while another indicator is the sharp expansion of foreign exchange trading, much of which is related to financial transactions rather than merchandise trade. For further discussion of this topic, see CEA, *Economic Report of the President*, ch. 6.

<sup>46</sup> BIS, *Settlement Risk*, pp. 5-6. Also, for a more detailed analysis of the "twin crises," see Graciela L. Kaminsky, "Currency and Banking Crises: The Early Warnings of Distress," *International Finance Discussion Papers*, No. 629, Oct. 1998, found at Internet address <http://www.bog.frb.fed.us>.

other Latin currencies were attacked in the “Tequila” aftermath;<sup>47</sup> and, (3) more recently, when Thailand abandoned its efforts to maintain a fixed exchange rate for the baht on July 2, 1997. The baht quickly depreciated by more than 20 percent and during the Fall of 1997, the “contagion” spread to other currencies, including those of Indonesia, Malaysia, the Philippines, and Korea. These events were followed by more recent currency crises in Russia and Brazil.<sup>48</sup> The three more recent crises are presented in further detail in table F-2.

### **Inauguration of the euro**

One recent development has been the inauguration of a new currency, the euro, which reflects the continued incremental movement toward a united Europe. The euro is an outgrowth of the European currency unit (ECU) and EMS.<sup>49</sup> The process of moving toward a European Economic and Monetary Union (EMU) was formalized in the Treaty on European Union (Maastricht Treaty) under which the European Union (EU) heads of states established a single central bank, the European Central Bank,<sup>50</sup> with the sole power to issue a single European. In order to join this monetary union, European nations needed to meet rigorous standards on inflation, currency stability, and deficit spending. Of the 15 members of the EU, 3 opted not to participate in this monetary union, and Greece did not qualify. To ensure the EMU’s inflation-fighting success, the new central bankers have been granted a degree of independence together with a statutory duty to maintain price stability through a consistent monetary policy. The new currency, the euro, formally came into existence on January 1, 1999, but initially will only be used for

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<sup>47</sup> For a discussion of Mexican peso crisis, see Edwin M. Truman, “The Mexican Peso Crisis: Implications for International Finance,” *Federal Reserve Bulletin*, vol. 82, No. 3 (Mar. 1996), pp. 199-209; and USITC, *Shifts in U.S. Merchandise Trade in 1995*, Investigation No. 332-345, publication No. 2992, Sept. 1992, p. 2-24.

<sup>48</sup> See ch. 3 for information about trade developments in East/Southeast Asia, Russia, and Brazil. For a discussion of the exchange rate crises in East/Southeast Asia, see USITC, *Shifts in U.S. Merchandise Trade in 1997*, Investigation No. 332-345, publication No. 3120, July 1998, pp. 3-48 to 3-56.

<sup>49</sup> The EMS began operating in Mar. 1979 to foster monetary stability in the European Community. As part of this system, the members established the ECU, a composite currency that consisted of fixed proportions of 10 European currencies. The ECU functioned as a unit of account, as a means of settlement, and as a reserve asset for EMS members. Under this system, each EMS member determined a mutually agreed upon central exchange rate for its currency and each rate was denominated in currency units per ECU. These central rates established a grid of bilateral cross-exchange rates between the currencies and participating nations pledged to keep their currencies within a 2.25 percent margin of these central cross-exchange rates; non-participants, Spain and the United Kingdom had 6 percent margins. Exchange rate stability required a coordination of monetary and fiscal policies as well as the convergence of real economic growth. Although the system helped keep its member currencies relatively stable, differences in inflation rates across countries led to the need to intervene, to numerous devaluations of individual currencies, as well as to realignment of the target zones. The system broke down in 1992 and again in 1993 under heavy speculative pressure. The target zone was significantly widened in August 1993 for 9 of 11 currencies, and the United Kingdom withdrew entirely. For further information on the EMS and the exchange rate crises of 1992-93, see Shapiro, *Multinational Financial Management*, pp. 91-100; also Krugman and Obstfeld, *International Economics, Theory and Practice*, pp. 608-609

<sup>50</sup> For a description of EMU terms, see Internet address <http://www.dallasfed.org/htm/homepage/glossary.html>.

**Table F-2**  
**Recent exchange rate crises**

East/Southeast Asia's financial crisis has been ascribed to the bursting of an economic bubble. This reportedly involved a combination of excessive money supply growth; overvalued real estate and stock markets; unstable financial institutions with a lack of transparency and lapses in oversight by government regulators; a slowdown in country exports during 1996-97 caused by an appreciation of their currencies against others in the region during 1995-97; and relatively large amounts of short-term dollar-denominated debt, a large portion of which went to fund real estate loans. With the realignment of land and stock market values, increasing amounts of bad loans (approaching 10 to 20 percent of total loans, and about 10 to 15 percent of GDP) led to banking crises in each country. Loan repayments (many of which had not been hedged) became larger with the currency devaluations, further destabilizing the foreign exchange value of the local currency. Finally, the prolonged maintenance of pegged exchange rates at high levels, a banking crises, and political uncertainties led to downward pressure on the currencies of these countries and their stock markets.

The Central Bank of Russia announced the official unitary exchange rate twice per week during 1993-96 and daily during 1997-98, based on daily auctions held at the Moscow Interbank Currency Exchange, participated in by licensed dealers and banks. During July 1995-Aug. 1998, the Central Bank conducted a more managed float of the exchange rate by establishing allowable exchange rate bands around its officially announced exchange rate. Based on the new ruble, the band, initially established at 5.0 to 5.6 rubles per U.S. dollar in early 1995, was allowed to slip up by 1.5 percent per month to 5.5 to 6.1 rubles per dollar by the end of 1996 and to 5.75 to 6.35 rubles per dollar by Nov. 10, 1997. On this date, the Central Bank established a band of 5.27 to 7.13 rubles per dollar which remained until Aug. 17, 1998, when the Russian Government imposed a 90-day moratorium on external debt repayments by commercial companies and financial enterprises, and allowed the upper end of the exchange rate band to rise to 9.5 rubles per dollar (i.e., devalued the ruble). These decisions reportedly caught investors by surprise, initiated an exodus of portfolio investment capital (prices collapsed on Russian financial markets). By the end of 1998, the ruble was trading at 17 per dollar. The Russian stabilization program continues to be on hold and the payment moratorium is currently still in effect.

As part of largely-successful efforts to control inflation, the Central Bank of Brazil adjusted the band for the real from 1 per U.S. dollar to 0.91 to 0.99 per dollar on June 22, 1995; the band was further adjusted in Jan. 1996 (to 0.97 to 1.06 reals per dollar), in Feb. 1997 (1.05 to 1.14 reals per dollar), and in Jan. 1998 (to 1.12 to 1.22 reals per dollar). However, this last band came under increased pressure, resulting in a devaluation by 8.3 percent in mid-Jan. 1999 and a freely floating rate a week later. The depreciation resulting from a freely floating exchange rate totaled approximately 30 percent from the earlier devaluation in the same month. To some extent, Brazil's real crisis was a result of financial contagion from the 1997 Asian financial crisis and Russia's 1998 financial crisis. To discourage the outflow of dollars which the central bank would have to supply to maintain the pegged exchange rate, the Central Bank of Brazil raised interest rates. Brazil's growing fiscal deficit also was troubling in terms of the cumulative effect of the debt buildup, the context of Brazil's history of debt moratoriums, and the financial crises elsewhere. The growing economic uncertainty and darkened fiscal outlook, setbacks of budget reform legislation in Brazil's parliament resulted in waning market confidence, capital outflows, and a drawdown of foreign currency reserves. Ultimately, the decision was taken to allow the real to float and it depreciated sharply.

Sources: Alan C. Shapiro, *Multinational Financial Management* (Upper Saddle, NJ: Prentice-Hall, 1996), pp. 91-100; International Monetary Fund (IMF) Staff, "The Asian Crisis: Causes and Cures," IMF Finance and Development, June 1998, found at Internet address <http://www.imf.org/external/pubs/ft/fandd/1998/06/imfstaff.htm>, retrieved Apr. 14, 1998; Stanley Fisher, "Reforming World Finance: Lessons from a Crisis," *Economist*, found at Internet address <http://www.economist.com/editorial/freeforall/current/sfl142.html>, retrieved Oct. 1, 1998; IMF, *International Financial Statistics and Exchange Arrangements and Exchange Restrictions, 1998 Annual Report*; USITC, *Shifts in U.S. Merchandise Trade in 1997*, July 1998, pp. 3-48 to 3-56; Testimony of Chairman Alan Greenspan before the Committee on Banking and Financial Services, U.S. House of Representatives, Feb. 24, 1999, found at Internet address <http://www.bog.frb.fed.us/boarddocs/hh/1999/February/testimony.htm>, retrieved June 4, 1999; and Federal Reserve Bank of Dallas, "Brazil: The First Financial Crisis of 1999," found at Internet address <http://www.dallasfed.org/hompage/global.html>, retrieved June 17, 1999.

interbank transactions. There is a three-year phase-in period during which euro banknotes and coins are to

replace the current system of national currencies in everyday transactions.<sup>51</sup>

The benefits of EMU are those of any single currency within a single market (and may accelerate the development of a single market in Europe), and also include lower cross-border currency conversion costs, estimated by the EU Commission at more than \$13 billion per year.<sup>52</sup> Theoretically, adopting a common currency would also eliminate the risk of currency fluctuations, encouraging the flow of trade and investments among member countries and, hence, a more efficient allocation of resources among member countries. The euro should foster new investment opportunities because a single currency may lead to added depth, liquidity, and enhance the financial infrastructure of a consolidated Europe. Inflation rates would converge with a common inflation rate being decided by the monetary policy of the European central bank. If these desired goals are achieved, it could lead to trade diversion as well as a diversion of capital flows from the United States.

In the longer run, should the euro prove successful, it may pose a challenge to the international role of the dollar. Outside the EMU, the euro poses new foreign exchange exposure risk; U.S. companies that have shifted the currency risk to their European counterparts may find themselves less able to do so in the future. A credible euro could be an attractive alternative to the dollar as a vehicle currency for international transactions and as a reserve currency.<sup>53</sup> This depends upon investor confidence in the euro's value (which is related to the EU's inflation performance), the sophistication of the EU's financial markets, and economic and trade related characteristics of the EU. However, some analysts have voiced concern about the diffuse power structure of the European System of Central Banks, which makes it difficult to resolve conflicts over monetary and fiscal policy, and undermines investor credibility. By fixing their exchange rates permanently, country authorities have relinquished sovereign control of their monetary policy.<sup>54</sup> Also, labor and capital are relatively more mobile in the United States than in the EU, allowing relative prices and wages to adjust more readily. Whether monetary policy can be coordinated across the whole of a united Europe remains an open question. During the first six months of operation, the euro depreciated against the dollar, from about U.S.\$1.16 per euro to about U.S.\$1.05 per euro. Also, the Italian government has recently announced it has difficulty in meeting euro criteria.

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<sup>51</sup> Conversion rates between currencies of qualifying countries and the euro were legally fixed on Jan. 1, 1999, at which time the euro became the legal currency in the qualifying countries. The European Central Bank became responsible for setting interest rates, and formulating and implementing monetary and exchange rate policies. Since Jan. 1, 1999, depositors could direct their banks to pay or receive funds denominated in euros to satisfy financial obligations. Also, all ECUs automatically convert to euros. At the end of the transition period, Jan. 1, 2002, all bank accounts still denominated in the original currencies will automatically be converted to euros at the official exchange rate. Euro notes and coins are to be issued, replacing national banknotes and coins, which are to be withdrawn from circulation. Holders of the original currencies can convert them to euros at their respective central banks for a period of 10 years. Ira G. Kawaller, "Capitalizing on Change: Preparing for the Euro," *TMA Journal*, Sept./Oct. 1998, p. 32; and Her Majesty's Treasury, "The Euro," found at Internet address <http://www.euro.gov.uk/will/time.html>, retrieved June 4, 1999.

<sup>52</sup> Shapiro, *Multinational Financial Management*, p. 100, citing an EU Commission report.

<sup>53</sup> For a discussion of the choice of international currencies, see Tavlas, "The International Use of Currencies;" and Federal Reserve Bank of Dallas, "European Economic and Monetary Union," found at Internet address [http://www.dallasfed.org/htm/homepage/archive/global/2\\_99/emu.html](http://www.dallasfed.org/htm/homepage/archive/global/2_99/emu.html), retrieved June 17, 1999.

<sup>54</sup> Whether Europe is an optimum currency area, see Federal Reserve Bank of Dallas, "European EMU."