Shifts in U.S. Merchandise Trade 2009

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Introduction

The annual *Shifts in U.S. Merchandise Trade* report is based on the examination of merchandise trade activity for more than 250 major industry/commodity groups and subgroups identified by the U.S. International Trade Commission (the Commission). The report contains the analysis of international trade analysts in the Commission's Office of Industries, who routinely monitor trade developments in all natural resource, agricultural, and manufacturing industries. Analysis of trade in services industries is provided in a separate annual report, *Recent Trends in Services Trade*, and may be found at http://www.usitc.gov/research_and_analysis/service_industries.htm.This report is divided into three parts.

Part I presents an analysis of overall economic performance and U.S. merchandise trade in 10 merchandise sectors from 2008 to 2009.[1] U.S. merchandise trade performance in 2009 is summarized and compared with such performance in 2008. Coverage of the individual merchandise sectors includes data showing U.S. export, import, and trade balance shifts by sectors, industry/commodity groups, and, in some cases, subgroups, as well as shifts in trade with U.S. trade partners. Major shifts in trade are highlighted and examined in greater detail in the rest of the report.

Part II examines the shifts in U.S. trade with each of the top five U.S. trade partners—the European Union (EU), Canada, China, Mexico, and Japan. Also examined are shifts in trade with Brazil, India, Russia, and the Republic of Korea (Korea)—U.S. trading partners that are growing in significance. Summary tables show the important shifts in U.S. bilateral trade and highlight leading changes in industry/commodity groups for each of the major trading partners.

Part III presents a general overview for each of the 10 merchandise sectors, identifying significant shifts in trade within each sector. Each sector chapter includes a table summarizing statistics for each of the selected industry/commodity groups or subgroups, showing absolute and percent changes in bilateral trade in a year-to-year comparison of 2008 and 2009. [2] In addition to the sectoral analyses, shifts in 16 specific industry/commodity groups are examined in greater detail. Most of these industry/commodity groups were selected because the absolute and percentage shifts in trade exceeded $1.5 billion and 50 percent. Three of the chosen industries (cereals; motor vehicles; and cement, stone, and related products) did not experience shifts that exceeded these levels, but were added because they have not been analyzed in recent years and have been industries of interest throughout the economic downturn.

[1] The 10 sectors are agricultural products; chemicals and related products; electronic products; energy-related products; forest products; minerals and metals; miscellaneous manufactures; machinery; transportation equipment; and textiles, apparel, and footwear.

[2] For trade-monitoring purposes, the Commission assigns U.S. Harmonized Tariff Schedule (HTS) import headings/subheadings, and the corresponding Schedule B export categories, to industry/commodity groups and subgroups. These groups are aggregated into the 10 sectors analyzed in this report.

Part I: U.S. Merchandise Trade and Overall Economic Performance

This part of the report presents an analysis of U.S. merchandise trade and overall economic performance from 2008 to 2009. Overall U.S. merchandise trade performance in 2009 is summarized for 10 merchandise sectors and compared with their trade performance for 2008. Coverage of the individual merchandise sectors includes data on shifts in U.S. exports, imports, and trade balance by sector, by industry/commodity group, and, in some cases, by subgroups, as well as shifts in trade with U.S. trade partners. Major shifts in trade are highlighted here; these will be examined in greater detail throughout the rest of the report.

Overall Economic Performance

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In 2009, the U.S. trade balance improved as both U.S. merchandise exports and imports decreased, causing the merchandise trade deficit to fall by $308.2 billion (34 percent) to $612.4 billion (table US.1). U.S. domestic merchandise exports and imports for consumption were $936.7 billion and $1,549.2 billion, respectively, in 2009, a decline of 20 percent and 26 percent. U.S. merchandise trade deficits with most major trading partners also fell in 2009. The downturn in the world economy and reduced global demand were the primary factors behind the declines in U.S. and worldwide trade in 2009.[1] U.S. imports fell as both businesses and consumers cut back on spending relative to 2008, while U.S exports declined as a result of the slower growth in the economies of the major U.S. trading partners. Global trade flows began to recover as U.S. and global economic performance improved during the second half of 2009, particularly in emerging economies. However, after the steep declines during the first quarter of 2009, U.S. import and export trade levels at the end of 2009 did not reach the pre-crisis levels registered in 2008.

As noted, U.S. merchandise trade in 2009 was substantially affected by the U.S. economic recession. Real gross domestic product (GDP) declined by 2.6 percent in 2009, compared to no growth or decline (0.0 percent) in 2008. Further, unemployment increased to annual average of 9.3 percent in 2009 from 5.8 percent in 2008, reaching its highest level since 1982.[2] Consumer spending, which accounts for 70 percent of the U.S. economy, fell by 0.6 percent. In addition, private domestic investment declined by 23.2 percent in 2009, as businesses and households cut back on inventories and on purchases of investment goods and services, houses, and new factories.[3] All of these factors contributed to reduced demand for imported products.

The value of U.S. merchandise imports fell at a faster rate than exports in 2009, reflecting not only the downturn in the U.S. economy but also a decline in crude petroleum prices, which resulted in a large decrease in the value of U.S. imports of energy-related products.[4] Imports of such products fell by 45 percent in value during 2009 to reach their lowest point for the 2005–09 period (table US.1).

[1] The World Trade Organization (WTO) has estimated that the volume of world trade contracted by 12 percent in 2009. WTO, "Trading Our Way Out of the Recession," February 24, 2010, 1.

[2] USDOL, BLS, "Labor Force Statistics from the Current Population Survey," series LNU04000000.

[3] USDOC, BEA, "Gross Domestic Product: Fourth Quarter 2009 (Third Estimate) Corporate Profits: Fourth Quarter 2009," table 1.

[4] World crude petroleum prices fell to an average of $62 per barrel in 2009, down from an average of $98 per barrel in 2008. Official statistics of the U.S. Department of Energy. See the "Energy-related Products" chapter for more detailed information.

TABLE US.1 U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	68,698	76,924	96,041	121,077	103,184	–17,894	–14.8
Forest products	27,809	30,156	33,088	35,362	30,489	–4,872	–13.8
Chemicals and related products	132,734	149,848	169,409	189,784	165,948	–23,836	–12.6
Energy-related products	29,892	38,999	46,674	81,737	59,827	–21,910	–26.8
Textiles and apparel	17,864	18,088	17,535	17,805	14,653	–3,152	–17.7
Footwear	507	573	578	673	620	–53	–7.8
Minerals and metals	62,911	82,944	100,260	119,753	84,351	–35,403	–29.6
Machinery	80,038	92,438	100,235	106,766	85,410	–21,356	–20.0
Transportation equipment	183,098	218,773	250,475	257,516	194,082	–63,434	–24.6
Electronic products	155,552	169,381	172,502	174,810	142,955	–31,855	–18.2
Miscellaneous manufactures	18,435	22,438	25,954	27,821	24,765	–3,056	–11.0
Special provisions	26,454	28,925	33,607	36,716	30,460	–6,256	–17.0
Total	803,992	929,486	1,046,358	1,169,821	936,745	–233,076	–19.9
U.S. imports of merchandise for consumption:							
Agricultural products	73,050	81,456	88,136	96,238	87,301	–8,937	–9.3
Forest products	50,003	50,416	46,561	42,291	31,511	–10,780	–25.5
Chemicals and related products	163,050	179,410	194,331	223,492	182,515	–40,977	–18.3
Energy-related products	273,197	319,168	344,829	472,325	260,878	–211,448	–44.8
Textiles and apparel	100,485	104,563	107,678	104,329	90,581	–13,748	–13.2
Footwear	17,834	19,038	19,270	19,451	17,666	–1,785	–9.2
Minerals and metals	137,367	169,510	174,207	184,994	117,025	–67,969	–36.7
Machinery	115,929	130,809	138,676	142,098	110,062	–32,036	–22.5
Transportation equipment	283,140	304,262	310,378	288,697	199,808	–88,889	–30.8
Electronic products	305,667	332,485	353,009	351,622	311,419	–40,203	–11.4
Miscellaneous manufactures	86,559	94,099	103,905	100,837	84,437	–16,400	–16.3
Special provisions	56,098	59,837	61,882	64,109	55,960	–8,149	–12.7
Total	1,662,380	1,845,053	1,942,863	2,090,483	1,549,163	–541,319	–25.9
U.S. merchandise trade balance:							
Agricultural products	–4,352	–4,532	7,906	24,839	15,883	–8,957	–36.1
Forest products	–22,194	–20,260	–13,473	–6,930	–1,022	5,908	85.3
Chemicals and related products	–30,317	–29,562	–24,923	–33,708	–16,567	17,141	50.9
Energy-related products	–243,304	–280,170	–298,155	–390,588	–201,051	189,538	48.5
Textiles and apparel	–82,621	–86,476	–90,143	–86,523	–75,928	10,596	12.2
Footwear	–17,327	–18,465	–18,692	–18,778	–17,046	1,732	9.2
Minerals and metals	–74,456	–86,567	–73,947	–65,240	–32,674	32,566	49.9
Machinery	–35,890	–38,370	–38,441	–35,331	–24,652	10,679	30.2
Transportation equipment	–100,042	–85,489	–59,903	–31,181	–5,726	25,456	81.6
Electronic products	–150,115	–163,105	–180,507	–176,812	–168,465	8,348	4.7
Miscellaneous manufactures	–68,124	–71,661	–77,951	–73,015	–59,672	13,343	18.3
Special provisions	–29,644	–30,912	–28,275	–27,393	–25,500	1,893	6.9
Total	–858,388	–915,567	–896,505	–920,661	–612,419	308,243	33.5

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

At the same time, U.S. imports of non-energy-related merchandise fell by a smaller, yet still substantial, 20 percent. As a result, U.S. imports of energy-related products declined as a share of total merchandise import value, from 23 percent in 2008 to 17 percent in 2009.

The slowdown in U.S. exports resulted from reduced GDP growth in most of the United States' major trading partners, many of which faced economic conditions similar to those in the United States. Average global GDP growth for all countries was negative in 2009 (–1 percent), compared to GDP growth of 3.0 percent in 2008.[5] Real income growth for many of the United States' major export partners—including Canada, the EU, Mexico, and Japan—was much lower than the world average, ranging from –2.6 percent in Canada to –6.8 percent in Mexico. An exception was China, whose real GDP grew by 9 percent in 2009 and almost 10 percent in 2008. In 2009, China accounted for 7 percent of U.S. merchandise exports, up from 6 percent in 2008.

Changes in the value of the dollar in 2009 likely contributed to the downturn in U.S. exports in early 2009, but helped to improve the competitiveness of U.S.-made goods in the latter part of the year.[6] The average trade-weighted value of the dollar measured against an index of major foreign currencies rose by 5 percent in 2009 as compared to 2008, but it peaked in the first quarter of 2009 and then fell steadily throughout the remainder of the year.

Prices for agricultural commodities, including both crops and livestock animals and products, declined in 2009 due to lower global food and energy demand.[7] For example, average export unit values were down by 36 percent for wheat and 11 percent for soybeans. Lower commodity prices contributed to a smaller value of agricultural product exports in 2009.

[5] CEA, *2010 Economic Report of the President*, table B112.
[6] CEA, *2010 Economic Report of the President*, table B110.
[7] USDA, ERS, "Farm Income and Costs: 2010 Farm Sector Income Forecast," 2.

U.S. Trade by Industry/Commodity Groups and Sectors[8]

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U.S. Trade Balance

Although all sectors except agricultural products registered a trade deficit in 2009, the overall merchandise deficit decreased by approximately 34 percent to $612.4 billion (table US.1). Every sector described in this report, excluding agricultural products, experienced a deficit decline as exports and imports both decreased. The largest deficit ($201.1 billion) and the largest absolute change was in energy-related products—principally crude petroleum, petroleum products, and natural gas and components—due to falling prices. The minerals and metals sector experienced the second largest absolute change. The deficit in this sector decreased as U.S. imports fell sharply due to declining demand in end markets such as construction and durable goods manufacturing. The electronic products sector recorded the second-largest trade deficit in 2009 ($168.5 billion), although it decreased by 5 percent. The U.S. deficit in transportation equipment showed one of the largest percent declines, falling by 82 percent ($25.5 billion) to $5.7 billion, as imports of motor vehicles declined due to the weakening U.S. economy.

U.S. Exports

In 2009, U.S. exports decreased in all merchandise sectors, declining by 20 percent overall to $936.7 billion (table US.1). The greatest absolute decrease was in the transportation equipment sector, which fell by $63.4 billion (25 percent) to $194.1 billion in 2009. Most of the decline occurred in motor vehicles and in aircraft engines and gas turbine products,[9] which fell $20.9 billion and $19.2 billion, respectively (table US.2). U.S. exports of motor vehicles, which are primarily destined for Canada, Germany, and Mexico, decreased due to the global economic downturn and the resulting decline in demand for vehicles, as well as tighter credit.[10]

The second largest absolute decline in 2009 occurred in the minerals and metals sector, in which U.S. exports dropped by 30 percent to $84.4 billion. The largest decline in this sector occurred in exports of steel mill products, which fell by 36 percent to $10.6 billion

[8] Each of the 10 industry sectors is analyzed in a separate chapter in part III in this report. They are agricultural products; chemicals and related products; electronic products; energy-related products; forest products; machinery; minerals and metals; miscellaneous manufactures; textiles, apparel, and footwear; and transportation equipment.

[9] Because certain products were reclassified into a new export code under the Harmonized Tariff System, it is not possible to determine the specific reasons for the shift in both the aircraft, spacecraft, and related equipment and the engines and gas turbines commodity groups. In 2009, 60 export commodity classification codes were consolidated into a single code covering all civilian aircraft, engines, equipment, and parts (Schedule B Commodity Code No. 8800.00.00). This new export code is classified within the aircraft, spacecraft, and related equipment commodity group. Because the new code does not differentiate between products and includes products that were previously classified in other commodity groups, it was not possible to determine the causes for the shift in trade on a product-by-product basis.

[10] Guildford, Harris, and Roland, "Credit Crunch (Cont'd)," September 7, 2009.

TABLE US.2 All merchandise sectors: Leading changes in U.S. exports and imports, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Aircraft, spacecraft, and related equipment (TE013)	47,981	64,374	73,406	69,516	77,700	8,183	11.8
Medicinal chemicals (CH019)	29,296	32,460	37,041	42,146	46,359	4,214	10.0
Oilseeds (AG032)	6,527	7,172	10,346	15,853	16,780	927	5.9
Medical goods (EL022)	21,114	23,443	25,446	28,415	28,647	232	0.8
Decreases:							
Transportation equipment:							
Motor vehicles (TE009)	35,312	44,437	52,739	56,898	35,963	–20,936	–36.8
Aircraft engines and gas turbines (TE001)	20,771	21,631	25,780	28,638	9,457	–19,181	–67.0
Petroleum products (EP005)	18,302	26,407	31,484	58,765	42,048	–16,717	–28.4
Cereals (AG030)	11,096	13,341	20,860	28,625	17,240	–11,385	–39.8
Electronic products:							
Semiconductors and integrated circuits (EL015)	34,195	37,227	35,487	35,809	25,058	–10,751	–30.0
Computers, peripherals, and parts (EL017)	28,862	29,969	28,051	26,554	19,770	–6,784	–25.5
Steel mill products (MM025)	9,331	10,479	12,535	16,737	10,648	–6,089	–36.4
All other	541,204	618,547	693,183	761,865	607,075	–154,789	–20.3
Total	803,992	929,486	1,046,358	1,169,821	936,745	–233,076	–19.9
U.S. IMPORTS:							
Increases:							
Medicinal chemicals (CH019)	56,104	65,218	71,777	79,943	82,417	2,474	3.1
Unrefined and refined gold (MM020A)	4,112	5,029	3,934	5,454	7,928	2,473	45.3
Arms, ammunition, and armored vehicles (MS019)	1,718	2,240	2,976	3,280	4,076	796	24.3
Decreases:							
Energy-related products:							
Crude petroleum (EP004)	137,331	171,243	186,476	274,950	150,809	–124,141	–45.2
Petroleum products (EP005)	77,684	89,448	98,577	126,441	72,581	–53,860	–42.6
Natural gas and components (EP006)	46,211	45,118	44,910	52,757	26,840	–25,917	–49.1
Transportation equipment:							
Motor vehicles (TE009)	146,308	159,537	158,895	142,541	94,348	–48,193	–33.8
Certain motor-vehicle parts (TE010)	50,998	53,307	55,619	49,190	35,296	–13,894	–28.2
Minerals and metals:							
Steel mill products (MM025)	23,534	31,500	29,204	36,870	16,995	–19,875	–53.9
Natural and synthetic gemstones (MM019)	17,352	18,452	20,239	21,072	13,608	–7,464	–35.4
All other	1,101,028	1,203,960	1,270,256	1,297,985	1,044,265	–253,720	–19.5
Total	1,662,380	1,845,053	1,942,863	2,090,483	1,549,163	–541,319	–25.9

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

(table US.2). Most of the decrease in U.S. exports of steel mill products was the result of lower exports to Canada and Mexico caused by declining demand from automotive producers and a contracting Canadian energy market.[11]

U.S. exports of electronic products registered the third largest absolute decline in 2009, falling by $31.9 billion to $143.0 billion. The largest decreases in this sector were in semiconductors and integrated circuits, as well as computers, peripherals, and parts, which declined by $10.8 billion (30 percent) and $6.8 billion (26 percent), respectively. U.S. exports of semiconductors and integrated circuits declined due to the general weakness in demand for semiconductors worldwide as well as the ongoing shift of semiconductor production away from the United States.[12] However, while the electronic products sector registered an overall decline in U.S. exports, medical goods registered a slight increase due to growing Chinese demand for medical goods products.[13]

U.S. Imports

In 2009, the value of U.S. imports decreased by $541.3 billion (26 percent) to $1.5 trillion. The largest declines occurred in energy-related products (45 percent), minerals and metals (37 percent), and transportation equipment (31 percent). The value of U.S. imports of energy-related products dropped by $211.4 billion in 2009 due primarily to falling prices. Most of the decreases occurred in crude petroleum, petroleum products, and natural gas and components. Canada remained the leading source of U.S. imports of energy-related products, with Venezuela, Mexico, Nigeria, and Saudi Arabia as the other major suppliers.

In 2009, the value of U.S. imports within the minerals and metals sector fell by $68.0 billion to $117.0 billion. U.S. imports of steel mill products recorded the steepest decline in this sector, dropping 54 percent to $17.0 billion due to reduced purchases in key end-use sectors. Reduced purchases of various carbon and alloy steels, in the form of pipes and tubes used by the energy and industrial sectors; flat-rolled products used by the automotive industry; and semi-finished forms used by the steel industry for processing into finished steel mill products, reflected lower demand for imports of steel mill products. U.S. imports of natural and synthetic gemstones recorded the second largest absolute decline in the minerals and metals sector as consumers scaled back their purchases of gemstone-mounted precious jewelry and other luxury goods owing to the U.S. economy's struggles in 2009. Canada, China, and Mexico were the major suppliers of the products in the minerals and metals sector to the United States, accounting for 46 percent of all U.S. imports within the sector.

U.S. imports within the transportation equipment sector fell by $88.9 billion to approximately $200.0 billion, mostly due to declines in U.S. imports of motor vehicles and certain motor vehicle parts. As noted, the drop in U.S. imports of motor vehicles was due to the U.S. recession and tightening of credit, which depressed demand for motor vehicles.[14] In 2009, Canada, Mexico, and Japan supplied 73 percent of all U.S. motor vehicle imports.

[11] Statistics Canada, *International Merchandise Trade*, 2009, 16.
[12] IC Insights, *The McClean Report: 2010 Edition*, 2–49.
[13] *China Daily*, "China Outlines Plans on Health Care Reform in 2009," July 24, 2009.
[14] Guildford, Harris, and Roland, "Credit Crunch (Cont'd)," September 7, 2009.

Significant Shifts in U.S. Bilateral/Multilateral Trade

China, the European Union (EU), Mexico, Canada, and Japan, the five main U.S. trading partners, together accounted for approximately 78 percent of the U.S. trade deficit in 2009 (table US.3). The U.S. merchandise deficits with each of these countries declined in 2009.

The U.S. trade deficit with China, the largest with any single country, decreased by 15 percent to $230.4 billion, reflecting the general decrease in international trade resulting from the global economic downturn. However, China remained the single largest source of U.S. imports by value ($295.5 billion) in 2009. Recent U.S. trade (primarily imports) with China has been influenced by China's role as an important location in a long chain of value-added production for many goods, including low-value assembly industries.[15]

The EU is the United States' largest two-way trading partner, accounting for almost 20 percent of total U.S. merchandise trade in 2009. The U.S. trade deficit with the EU declined by $36.8 billion (33 percent) in 2009, due to the shared economic downturn and rising unemployment coupled with the worldwide financial and credit crisis. These factors began to reduce bilateral trade between the two markets in the final quarter of 2008, and the trend continued through 2009, even as both economies began to show improvements in the latter half of the year. [16] During 2009, U.S. imports from the EU showed a much sharper decline (down $85.6 billion) than the fall in U.S. exports of goods (down $48.8 billion) to the EU.[17]

In 2009, the U.S. trade deficit with Canada, the largest single-country U.S. trading partner, declined by $59.5 billion to $52.9 billion. Of particular importance was the decline in the deficit within the energy-related products sector, which decreased by 43 percent to $54.2 billion and accounted for 69 percent of the total fall in the deficit with Canada, primarily as a result of lower prices.

[15] EIU, *China: Country Profile*, 2009, 25.

[16] *OECD Economic Outlook*, No. 2, 2009, 1.

[17] U.S.-EU merchandise trade in 2009 was undermined by economic developments affecting both economies, beginning in late 2007 and continuing into 2008 and 2009. Of particular importance was the sharp rise in energy and food prices during this period, which reduced real incomes and reduced production in the respective economies; international financial and credit turmoil beginning in September 2008, which marked the end of a period of historically favorable financing conditions for firms and households and effectively raised the cost of financing; and the peaking of the housing cycle and its subsequent decline in the United States and the EU, which led to sharp falls in construction activity and in GDP.

TABLE US.3 All merchandise sectors: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	183,235	198,226	213,119	222,424	171,695	–50,729	–22.8
China	38,857	51,624	61,013	67,166	65,124	–2,042	–3.0
Mexico	101,667	114,562	119,381	131,507	105,718	–25,790	–19.6
Japan	51,499	55,596	58,096	61,435	47,074	–14,361	–23.4
Germany	29,227	37,850	44,294	50,150	40,229	–9,921	–19.8
United Kingdom	34,065	41,335	45,436	49,061	41,990	–7,072	–14.4
Korea	26,210	30,794	33,012	33,074	27,074	–6,000	–18.1
France	20,658	22,590	25,784	26,748	24,367	–2,381	–8.9
Netherlands	24,059	28,604	30,536	37,076	29,169	–7,907	–21.3
Taiwan	20,527	21,376	24,541	23,628	16,712	–6,916	–29.3
All other	273,988	326,929	391,146	467,550	367,593	–99,957	–21.4
Total	803,992	929,486	1,046,358	1,169,821	936,745	–233,076	–19.9
EU-27	168,289	197,281	226,252	251,196	202,392	–48,804	–19.4
OPEC	28,863	39,454	45,819	57,645	46,750	–10,895	–18.9
Latin America	167,686	196,723	218,553	258,616	205,299	–53,317	–20.6
Asia	204,120	237,021	266,513	284,302	238,447	–45,855	–16.1
Sub–Saharan Africa	9,919	11,709	13,860	18,008	14,638	–3,370	–18.7
U.S. imports for consumption:							
Canada	287,534	303,034	312,505	334,840	224,584	–110,255	–32.9
China	242,638	287,052	323,085	337,504	295,545	–41,960	–12.4
Mexico	169,216	197,056	210,159	216,328	176,309	–40,020	–18.5
Japan	137,831	148,071	144,928	139,112	96,002	–43,111	–31.0
Germany	84,345	87,756	94,416	95,828	69,790	–26,038	–27.2
United Kingdom	50,758	53,502	56,873	58,419	47,019	–11,399	–19.5
Korea	43,155	44,714	45,368	46,687	38,770	–7,918	–17.0
France	33,499	36,837	41,237	43,372	33,961	–9,411	–21.7
Netherlands	14,854	18,140	19,260	21,103	15,820	–5,283	–25.0
Taiwan	34,574	38,086	38,052	36,204	28,074	–8,129	–22.5
All other	563,975	630,806	656,980	761,086	523,291	–237,796	–31.2
Total	1,662,380	1,845,053	1,942,863	2,090,483	1,549,163	–541,319	–25.9
EU-27	308,628	330,898	352,189	363,667	278,104	–85,562	–23.5
OPEC	124,504	147,948	161,743	225,186	109,883	–115,303	–51.2
Latin America	290,720	329,153	340,983	374,538	283,049	–91,488	–24.4
Asia	593,811	668,735	704,436	711,690	583,910	–127,780	–18.0
Sub-Saharan Africa	49,925	58,762	66,889	86,082	47,159	–38,923	–45.2

See footnote(s) at end of table.

TABLE US.3 All merchandise sectors: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–104,299	–104,808	–99,386	–112,415	–52,889	59,526	53.0
China	–203,781	–235,428	–262,072	–270,338	–230,421	39,918	14.8
Mexico	–67,549	–82,493	–90,778	–84,821	–70,591	14,230	16.8
Japan	–86,333	–92,475	–86,832	–77,677	–48,928	28,750	37.0
Germany	–55,118	–49,907	–50,122	–45,677	–29,561	16,117	35.3
United Kingdom	–16,693	–12,166	–11,437	–9,357	–5,030	4,327	46.2
Korea	–16,944	–13,920	–12,357	–13,613	–11,696	1,918	14.1
France	–12,841	–14,247	–15,452	–16,624	–9,593	7,030	42.3
Netherlands	9,205	10,464	11,276	15,974	13,349	–2,624	–16.4
Taiwan	–14,047	–16,709	–13,511	–12,576	–11,362	1,213	9.6
All other	–289,987	–303,877	–265,834	–293,536	–155,698	137,839	47.0
Total	–858,388	–915,567	–896,505	–920,661	–612,419	308,243	33.5
EU-27	–140,339	–133,617	–125,937	–112,470	–75,712	36,759	32.7
OPEC	–95,641	–108,494	–115,924	–167,541	–63,133	104,408	62.3
Latin America	–123,034	–132,430	–122,430	–115,922	–77,750	38,172	32.9
Asia	–389,691	–431,714	–437,923	–427,388	–345,463	81,925	19.2
Sub-Saharan Africa	–40,005	–47,053	–53,028	–68,074	–32,521	35,553	52.2

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

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Part II: Bilateral Trade

This part of the report analyzes shifts in trade between the United States and its five leading trading partners (based on total trade): the European Union, Canada, China, Mexico, and Japan. Trade with Brazil, India, Russia, and Korea are also examined in light of their rising importance as trading partners. Countries are listed alphabetically herein.

Brazil

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Change in 2009 from 2008:

U.S. trade balance: Increased by $3.6 billion, from a $1.0 billion deficit to a $2.5 billion surplus
U.S. exports: Decreased by $6.9 billion (24 percent) to $22.1 billion
U.S. imports: Decreased by $10.4 billion (35 percent) to $19.6 billion

U.S. merchandise trade with Brazil decreased by $17.3 billion (29 percent) to $41.7 billion in 2009. The $2.5 billion U.S. merchandise trade surplus with Brazil was the first surplus since 2001, as the decline in U.S. imports from Brazil exceeded the decline in U.S. exports to Brazil in most sectors, particularly in the energy-related products and minerals and metals sectors.

The fall in value of merchandise trade between the United States and Brazil in 2009 reflects reduced demand for merchandise goods and declines in commodity prices in both countries. U.S. exports to Brazil of energy-related products and of minerals and metals declined by $358 million (15 percent) and $443 million (36 percent), respectively; meanwhile, U.S. imports from Brazil of energy-related products and of minerals and metals declined by $2.2 billion (27 percent) and $3.0 billion (55 percent), respectively. Lower energy prices contributed to the large decreases in the value of U.S. imports, despite increases in the quantities of energy-related products imported from Brazil.

The chemical and related products sector was one notable exception to the general pattern, with the decline in U.S. exports to Brazil ($1.7 billion) far exceeding the decline in U.S. imports from Brazil ($491 million). Electronic products and special provisions were the other sectors where there were larger decreases in U.S. exports as compared to U.S. imports from Brazil.

In 2009, approximately 58 percent ($24.2 billion) of U.S.-Brazilian bilateral merchandise trade occurred in three sectors: chemicals and related products, energy-related products, and transportation equipment. About 70 percent ($15.6 billion) of U.S. exports to Brazil were chemicals and related products, transportation equipment, and electronic products, while 68 percent ($13.3 billion) of U.S. imports from Brazil were energy-related products, agricultural products, minerals and metals, and transportation equipment (table BR.1).

TABLE BR.1 Brazil: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	203	265	394	646	349	–298	–46.1
Forest products	241	251	329	409	359	–50	–12.2
Chemicals and related products	3,651	4,399	5,778	7,381	5,714	–1,667	–22.6
Energy-related products	705	891	1,093	2,381	2,022	–358	–15.1
Textiles and apparel	136	169	195	244	188	–56	–23.0
Footwear	1	2	3	4	1	–2	–64.1
Minerals and metals	419	517	718	1,227	784	–443	–36.1
Machinery	1,193	1,455	1,781	2,660	2,143	–517	–19.4
Transportation equipment	3,990	5,656	7,248	9,108	6,407	–2,701	–29.7
Electronic products	2,535	2,923	3,534	4,213	3,474	–739	–17.5
Miscellaneous manufactures	93	129	154	191	184	–7	–3.8
Special provisions	388	320	458	563	510	–53	–9.5
Total	13,554	16,977	21,684	29,027	22,135	–6,892	–23.7
U.S. imports of merchandise for consumption:							
Agricultural products	2,246	3,451	3,222	3,204	2,632	–572	–17.8
Forest products	2,305	2,365	2,064	1,928	1,300	–628	–32.6
Chemicals and related products	1,549	1,567	1,976	2,374	1,883	–491	–20.7
Energy-related products	2,757	3,582	3,950	8,345	6,118	–2,227	–26.7
Textiles and apparel	494	455	469	366	259	–107	–29.3
Footwear	1,019	896	758	518	382	–135	–26.1
Minerals and metals	5,347	5,849	5,249	5,496	2,458	–3,038	–55.3
Machinery	1,443	1,459	1,705	1,387	969	–417	–30.1
Transportation equipment	4,772	4,485	4,126	4,898	2,066	–2,832	–57.8
Electronic products	1,000	770	479	428	321	–106	–24.9
Miscellaneous manufactures	613	533	520	429	387	–42	–9.8
Special provisions	800	759	501	688	836	148	21.6
Total	24,346	26,169	25,018	30,061	19,612	–10,449	–34.8
U.S. merchandise trade balance:							
Agricultural products	–2,043	–3,186	–2,827	–2,558	–2,284	274	10.7
Forest products	–2,064	–2,113	–1,736	–1,519	–941	578	38.1
Chemicals and related products	2,101	2,832	3,802	5,007	3,831	–1,176	–23.5
Energy-related products	–2,052	–2,690	–2,857	–5,965	–4,096	1,869	31.3
Textiles and apparel	–358	–286	–274	–122	–71	51	42.0
Footwear	–1,018	–894	–755	–514	–381	133	25.9
Minerals and metals	–4,928	–5,332	–4,531	–4,268	–1,673	2,595	60.8
Machinery	–250	–4	76	1,273	1,174	–99	–7.8
Transportation equipment	–782	1,172	3,122	4,210	4,341	131	3.1
Electronic products	1,534	2,154	3,055	3,785	3,153	–632	–16.7
Miscellaneous manufactures	–521	–404	–366	–238	–203	35	14.7
Special provisions	–411	–439	–43	–125	–326	–202	–162.0
Total	–10,792	–9,192	–3,334	–1,033	2,523	3,556	([a])

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a]Not meaningful for purposes of comparison.

U.S. Exports

Most of the $6.9 billion (24 percent) decline in U.S. exports to Brazil can be attributed to decreased exports of aircraft engines and gas turbines; [1] petroleum products; various organic chemicals and fertilizers; and rail locomotive and rolling stock. Collectively, these industry/commodity groups represented 49 percent ($3.4 billion) of the total decrease in U.S. exports to Brazil in 2009 (table BR.2). The largest increase in U.S. exports to Brazil was in aircraft, spacecraft, and related equipment, which grew by $416 million (11 percent) to $4.1 billion.[2]

U.S. exports of organic chemicals (e.g., organic commodity chemicals, organic specialty chemicals, and certain organic chemicals) and fertilizers to Brazil decreased by $552 million (48 percent) in 2009 (table BR.2). There were a variety of reasons for this decline.

Decreases in U.S. exports of some organic specialty chemicals (e.g., styrene used in packaging, refrigerators, and housing materials) and certain organic chemicals (e.g., ethylene glycol used in the production of plastics) can be largely attributed to decreased consumption of plastics and home appliances in Brazil in 2009 due to reduced consumer spending and housing construction during the economic downturn. Decreases in U.S. exports of fertilizers and of other organic specialty chemicals, often used in herbicide glyphosate (e.g., commercially available weed killers such as Roundup) and livestock feed additives, reflect decreased Brazilian agricultural production in 2009 due to drought and the high cost of agrochemical inputs.[3]

The value of U.S. exports of petroleum products, primarily distillate fuel oils (e.g., diesel fuels and other industrial fuels), to Brazil decreased by $387 million (27 percent) in 2009 (table BR.2). Overall, prices for most petroleum products decreased in 2009 because of lower prices for crude petroleum, which is refined into petroleum products. The decrease in the value of U.S. exports of petroleum products is primarily a result of the decrease in the price of distillate fuel oils, which fell from $126 per barrel in 2008 to $82 per barrel in 2009. U.S. export volumes were stable at approximately 20 million barrels in both 2008 and 2009.

U.S. exports of rail locomotive and rolling stock to Brazil decreased by $355 million (77 percent) in 2009 (table BR.2). A major reason is that the number of U.S. locomotives exported to Brazil in 2008 was above average, with exports in 2009 returning to levels more consistent with previous years. One U.S. locomotive manufacturer exported 114 locomotives to Brazil in 2008 as compared to only 10 in 2009.[4] The increased number of locomotives to Brazil in 2008 coincided with that country's large investment

[1] Because certain products were reclassified into a new export code under the Harmonized Tariff System, it is not possible to determine the specific reasons for the shift in both the aircraft, spacecraft, and related equipment and the engines and gas turbines commodity groups. In 2009, 60 export commodity classification codes were consolidated into a single code covering all civilian aircraft, engines, equipment, and parts (Schedule B Commodity Code No. 8800.00.00). This new export code is classified within the aircraft, spacecraft, and related equipment commodity group. Because the new code does not differentiate between products and includes products that were previously classified in other commodity groups, it was not possible to determine the causes for the shift in trade on a product-by-product basis.

[2] See previous footnote.

[3] EIU, *Brazil Country Report*, March 3, 2010.

[4] Industry representative, e-mail message to Commission staff, March 30, 2010.

TABLE BR.2 Brazil: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Aircraft, spacecraft, and related equipment (TE013)	1,031	2,323	3,149	3,699	4,116	416	11.3
Decreases:							
Transportation equipment:							
Aircraft engines and gas turbines (TE001)	1,140	1,131	1,563	2,271	177	–2,094	–92.2
Rail locomotive and rolling stock (TE008)	202	107	163	463	108	–355	–76.7
Petroleum products (EP005)	328	443	491	1,413	1,026	–387	–27.4
Chemicals and related products:							
Organic commodity chemicals (CH004)	143	251	330	449	131	–318	–70.9
Fertilizers (CH010)	242	256	414	692	458	–234	–33.9
All other	10,468	12,467	15,574	20,040	16,120	–3,920	–19.6
Total	13,554	16,977	21,684	29,027	22,135	–6,892	–23.7
U.S. IMPORTS:							
Decreases:							
Crude petroleum (EP004)	1,265	2,546	2,682	6,522	4,661	–1,861	–28.5
Aircraft, spacecraft, and related equipment (TE013)	1,806	1,202	1,712	2,278	722	–1,556	–68.3
Minerals and metals:							
Primary iron products (MM021)	1,198	1,126	1,124	1,993	478	–1,515	–76.0
Steel mill products (MM025)	1,374	1,629	1,411	1,114	450	–663	–59.6
All other	18,704	19,665	18,088	18,155	13,301	–4,854	–26.7
Total	24,346	26,169	25,018	30,061	19,612	–10,449	–34.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

($230 billion) in modernizing its infrastructure, including the transportation sector, over four years.[5]

U.S. Imports

During 2008–09, the energy-related products, transportation equipment, and minerals and metals sectors accounted for the largest shifts in U.S. imports. More specifically, U.S. imports of crude petroleum; aircraft, spacecraft, and related equipment; primary iron products; and steel mill products from Brazil decreased by $5.6 billion. These product groups together accounted for 54 percent of the total decrease in U.S. imports ($10.4 billion) from Brazil in 2009 (table BR.2).

In 2009, the value of U.S. imports of crude petroleum from Brazil decreased by $1.9 billion (29 percent) (table BR.2), while the quantity of U.S. imports of crude petroleum increased by 22.9 million barrels. The decline in the U.S. import value of crude petroleum is directly attributable to the price, which declined from $98 per barrel on average in 2008 to $62 per barrel in 2009.[6] The quantity increase is a result of the closures of two Brazilian refineries for long-term maintenance in mid-2009, which led to excess crude petroleum production being sent to U.S. refineries for processing.[7]

U.S. imports of aircraft, spacecraft, and related equipment decreased by $1.6 billion (68 percent) in 2009 (table BR.2) and accounted for 15 percent of the total decline in U.S. imports from Brazil. Decreased demand for aircraft in 2009 in the United States was driven by two factors. First, the global economic downturn negatively affected U.S. airline carriers. Second, historically high fuel prices since 2007 have decreased demand for regional jets as they have became more costly to operate. As a result, fewer orders were placed for new aircraft and some existing orders were canceled.[8]

U.S. imports of primary iron products and steel mill products decreased by $1.5 billion (76 percent) and $663 million (60 percent) in 2009, respectively (table BR.2). Compared to 2008, the quantity of primary iron products imported in 2009 from Brazil fell by 65 percent and the unit value of imports fell by 32 percent. Pig iron, which is used in the manufacturing of steel, was the largest U.S. import of primary iron products from Brazil. Numerous Brazilian pig iron producers were forced to temporarily shut down as global and U.S. demand declined and prices fell to unprofitable levels. Similarly, Brazilian production also declined as demand for steel mill products in the Brazilian market fell. The U.S. economic recession and financial crisis caused demand in the automotive and construction industries—the two largest steel-consuming sectors—to contract, which adversely affected U.S. demand for steel mill products.[9]

[5] Brazilian-American Chamber of Commerce, "Brazil Receives USTDA Country of the Year Award," December 23, 2008.

[6] See the "Energy-related Products" chapter for more detailed information.

[7] USDOE, EIA, *Petroleum Supply Monthly*, various issues.

[8] Prada, "Plane Speaking," March 29, 2010.

[9] Petry, "Analysts' Views Dim As Credit Woes Threaten to Choke Steel," October 8, 2008.

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Canada

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Change in 2009 from 2008: [3]

U.S. trade deficit: Decreased by $59.5 billion (53 percent) to $52.9 billion
U.S. exports: Decreased by $50.7 billion (23 percent) to $171.7 billion
U.S. imports: Decreased by $110.3 billion (33 percent) to $224.6 billion

U.S. merchandise trade with Canada, the largest U.S. trading partner,[1] totaled $396.3 billion in 2009, although both imports and exports between the two countries declined. The U.S. trade deficit with Canada fell by 53 percent ($59.5 billion) to $52.9 billion, as the decline in U.S. imports was more than double the decline in exports (table CA.1). Shifts in trade in energy-related products alone accounted for more than two-thirds of the decline in the deficit.

In 2009, over 40 percent of U.S.-Canadian bilateral trade occurred within two sectors: energy-related products (19 percent) and transportation equipment (22 percent). The value of bilateral trade in both of these product categories decreased as prices fell significantly for energy products and as the economic downturn in both countries led to depressed consumption of energy products and transportation equipment. Lower global crude petroleum prices, which declined from $98 per barrel on average in 2008 to $62 per barrel in 2009, was the primary factor reducing the value of energy-related products trade.[2] Furthermore, although the highly integrated motor vehicle industry in North America traditionally contributes to significant trade flows of vehicles and vehicle components between the United States and Canada, total U.S.-Canadian trade in motor vehicles declined significantly in 2009 as the economic downturn undermined automotive production and sales in both markets.

U.S. Exports

U.S. exports to Canada decreased by $50.7 billion (23 percent) to $171.7 billion in 2009. Transportation equipment exports were the leading contributor to this shift, declining by $19.5 billion (31 percent) to $44.4 billion. In particular, U.S. exports of motor vehicles fell by $6.5 billion (29 percent) and exports of auto parts fell by $4.6 billion (30 percent) (table CA.2). U.S. auto manufacturers experienced steep declines in their Canadian sales and market share as they cut back their U.S. automobile production in response to lower demand.[3] The decline in U.S. exports to Canada of auto parts was due, in part, to the sharp contraction of the U.S. motor vehicle market, as a large share of the U.S. auto parts that are exported to Canada are assembled into motor vehicles that are in turn exported back to the U.S. market.[4]

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[1] If the European Union is considered as a single entity, Canada is the second-largest U.S. trading partner.
[2] See the "Energy-related Products" chapter for more detailed information.
[3] *Ward's Automotive Reports*, "Korean OEMs Shine in Canada," January 11, 2010, 7.
[4] See the "Motor Vehicles" section in the "Transportation Equipment" chapter for more detailed information.

TABLE CA.1 Canada: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	11,151	12,514	14,882	17,241	16,571	–670	–3.9
Forest products	9,111	9,846	10,236	10,557	9,142	–1,415	–13.4
Chemicals and related products	26,412	28,475	29,033	30,657	26,743	–3,914	–12.8
Energy-related products	8,487	8,953	10,563	16,772	10,127	–6,644	–39.6
Textiles and apparel	3,471	3,561	3,531	3,645	3,063	–582	–16.0
Footwear	65	73	78	86	83	–3	–3.1
Minerals and metals	19,110	22,687	24,689	27,816	18,907	–8,909	–32.0
Machinery	17,256	19,331	20,013	21,080	17,428	–3,652	–17.3
Transportation equipment	59,898	64,493	69,460	63,980	44,447	–19,533	–30.5
Electronic products	18,941	18,378	18,183	18,474	15,227	–3,247	–17.6
Miscellaneous manufactures	3,918	4,425	5,067	5,449	4,664	–785	–14.4
Special provisions	5,414	5,490	7,385	6,668	5,293	–1,375	–20.6
Total	183,235	198,226	213,119	222,424	171,695	–50,729	–22.8
U.S. imports of merchandise for consumption:							
Agricultural products	14,963	16,128	17,919	20,691	17,136	–3,555	–17.2
Forest products	28,224	26,717	23,435	20,496	14,781	–5,715	–27.9
Chemicals and related products	25,535	28,036	29,939	33,124	25,021	–8,103	–24.5
Energy-related products	66,116	73,748	79,138	111,953	64,367	–47,587	–42.5
Textiles and apparel	3,633	3,395	3,080	2,484	1,972	–513	–20.6
Footwear	94	79	76	77	66	–11	–14.5
Minerals and metals	25,590	32,155	34,562	36,695	22,533	–14,163	–38.6
Machinery	11,818	13,076	13,675	13,613	10,352	–3,261	–24.0
Transportation equipment	78,421	76,816	77,823	63,547	43,301	–20,246	–31.9
Electronic products	12,480	11,958	12,141	11,830	9,626	–2,204	–18.6
Miscellaneous manufactures	5,903	6,013	5,825	5,264	4,052	–1,212	–23.0
Special provisions	14,757	14,911	14,892	15,065	11,379	–3,686	–24.5
Total	287,534	303,034	312,505	334,840	224,584	–110,255	–32.9
U.S. merchandise trade balance:							
Agricultural products	–3,811	–3,614	–3,037	–3,450	–565	2,885	83.6
Forest products	–19,113	–16,871	–13,199	–9,939	–5,639	4,300	43.3
Chemicals and related products	878	439	–906	–2,467	1,722	4,189	[a]
Energy-related products	–57,629	–64,796	–68,575	–95,182	–54,239	40,943	43.0
Textiles and apparel	–162	166	451	1,161	1,091	–70	–6.0
Footwear	–29	–6	2	9	18	9	95.2
Minerals and metals	–6,480	–9,468	–9,873	–8,879	–3,625	5,254	59.2
Machinery	5,438	6,255	6,338	7,467	7,076	–391	–5.2
Transportation equipment	–18,524	–12,323	–8,363	433	1,146	713	164.5
Electronic products	6,461	6,419	6,041	6,644	5,601	–1,043	–15.7
Miscellaneous manufactures	–1,985	–1,588	–758	184	612	428	232.3
Special provisions	–9,343	–9,421	–7,507	–8,397	–6,085	2,311	27.5
Total	–104,299	–104,808	–99,386	–112,415	–52,889	59,526	53.0

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a]Not meaningful for purposes of comparison.

U.S. exports of minerals and metals to Canada decreased by $8.9 billion (32 percent) to $18.9 billion in 2009. This substantial shift was caused largely by weakening Canadian demand from the construction and automotive sectors.[5] In particular, shipments of steel mill products that are used heavily in automobile production posted steep declines (down $2.9 billion or 40 percent) as the automotive industry significantly scaled back production in Canada.

Canada remained the largest U.S. export market for energy-related products in 2009, but exports to Canada in this sector decreased by $6.6 billion (40 percent) to $10.1 billion, principally because of much lower prices for crude petroleum, petroleum products, and natural gas. In terms of volume, U.S. exports to Canada of crude petroleum, natural gas, and refined petroleum products actually rose in 2009.[6] However, the large price declines more than offset the increased volumes. Canada is the primary market for U.S exports of petroleum products, as well as the single largest supplier of U.S. petroleum product imports.

U.S. Imports

U.S. imports from Canada decreased by $110.3 billion (33 percent) to $224.6 billion in 2009. Energy-related products and transportation equipment were the leading drivers of the change, accounting for 62 percent of the overall import decline. Due to the large price declines noted earlier as well as modest declines in the quantity imported, the value of energy-related imports fell by 43 percent to $64.4 billion in 2009.[7] The quantity declines can largely be attributed to poor economic conditions that decreased demand in the United States, while the price declines were felt worldwide.

The declines in imports of energy-related products affected all of the major subsectors. U.S. imports of crude petroleum from Canada, in terms of quantity, declined from 716 million barrels in 2008 to 707 million barrels in 2009. When combined with the price declines, this volume reduction reduced the value of U.S. imports of crude petroleum by $25.5 billion (41 percent) to $37.0 billion (table CA.2). U.S. imports of refined petroleum products (principally distillate fuel oils and gasoline) from Canada decreased in value by 33 percent, while the quantity of imports fell by 11 percent. The quantity decline was generally in line with U.S. consumption, which fell from 7.1 billion barrels in 2008 to 6.8 billion barrels in 2009 (or by 4 percent). U.S. imports of natural gas from Canada via pipeline also deceased in terms of quantity, by 19 percent, but the value fell by 51 percent as prices declined from $8.58 per billion cubic feet in 2008 to $3.95 per billion cubic feet in 2009.[8]

U.S. imports of transportation equipment from Canada fell by $20.2 billion (32 percent) to $43.3 billion. The biggest factor in this decline was the drop in U.S. imports of motor vehicles from Canada, which fell by $12.0 billion (32 percent) to $25.1 billion, as Canadian light vehicle production fell by 28 percent in 2009 to nearly 1.4 million units, principally in response to lower vehicle demand in the United States. U.S imports of motor vehicle parts also posted a substantial decline, falling by $4.3 billion (43 percent) to $5.6 billion. These decreases in auto parts imports were in line with the sharp drop in

[5] See the "Minerals and Metals" chapter for more detailed information.
[6] Data related to energy are derived from official statistics of the U.S. Department of Energy.
[7] See the "Energy-related Products" chapter for more detailed information relating to prices.
[8] Official statistics of the U.S. Department of Energy.

TABLE CA.2 Canada: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Aircraft, spacecraft, and related equipment (TE013)	2,381	2,488	3,806	3,923	4,688	764	19.5
Decreases:							
Transportation equipment:							
Motor vehicles (TE009)	20,639	22,936	25,135	22,320	15,806	–6,514	–29.2
Certain motor-vehicle parts (TE010)	18,417	18,263	18,261	15,268	10,649	–4,618	–30.2
Petroleum products (EP005)	2,605	3,272	4,105	6,968	3,973	–2,995	–43.0
Steel mill products (MM025)	5,009	5,600	6,085	7,245	4,372	–2,873	–39.7
All other	134,184	145,667	155,726	166,701	132,207	–34,493	–20.7
Total	183,235	198,226	213,119	222,424	171,695	–50,729	–22.8
U.S. IMPORTS:							
Increases:							
Medicinal chemicals (CH019)	2,500	3,618	4,934	4,853	5,078	226	4.6
Decreases:							
Energy-related products:							
Crude petroleum (EP004)	24,120	32,889	37,929	62,485	36,972	–25,513	–40.8
Natural gas and components (EP006)	29,357	27,039	25,410	30,205	14,688	–15,516	–51.4
Petroleum products (EP005)	8,977	10,131	11,856	14,420	9,699	–4,721	–32.7
Transportation equipment:							
Motor vehicles (TE009)	48,581	48,623	47,606	37,071	25,108	–11,963	–32.3
Certain motor-vehicle parts (TE010)	13,172	12,597	12,526	9,897	5,646	–4,251	–43.0
Steel mill products (MM025)	4,334	4,702	5,275	6,950	3,448	–3,501	–50.4
All other	156,494	163,434	166,969	168,959	123,943	–45,016	–26.6
Total	287,534	303,034	312,505	334,840	224,584	–110,255	–32.9

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

U.S. motor vehicle production due to the weakened U.S. automotive demand caused by, among other factors, including the reduced availability of consumer financing for vehicle purchases.[9]

U.S. imports from Canada in certain mineral and metals sectors also showed significant decreases. Imports of steel mill products, for example, fell by 50 percent to $3.4 billion. Such declines are attributable to reduced purchases in key U.S. downstream end-use sectors of various carbon and alloy steels in the forms of (1) pipes and tubes by the energy and industrial sectors and (2) flat-rolled products (e.g., plates and sheets) by the automotive industry.[10] The slumping U.S. economy and downturn in domestic industrial operations also led to notable declines in U.S. imports of unwrought aluminum and copper from Canada. U.S. imports of unwrought aluminum fell by 37 percent to $3.8 billion, due both to declining demand from domestic aluminum fabricators and to lower aluminum prices. Shipments from Canada to the United States of copper and related articles fell by $1.8 billion (48 percent) to $1.9 billion, as U.S. copper fabricators consumed less unwrought copper in response to declining orders for copper mill products from construction and manufacturing customers.[11]

[9] See the "Motor Vehicles" section in the "Transportation Equipment" chapter for more detailed information.

[10] See the "Steel Mill Products" section of the "Mineral and Metals" chapter for more detailed information.

[11] See the "Mineral and Metals" chapter for more detailed information.

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China

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $39.9 billion (15 percent) to $230.4 billion
U.S. exports: Decreased by $2.0 billion (3 percent) to $65.1 billion
U.S. imports: Decreased by $42.0 billion (12 percent) to $295.5 billion

After several years of steady growth, U.S. merchandise trade with China contracted by $44.0 billion in 2009 to $360.7 billion, reflecting the general decrease in international trade due to the global economic downturn. Both U.S. exports to and imports from China fell in 2009; however, the decline in U.S. imports exceeded the decrease in U.S. exports, resulting in a 15 percent reduction of the U.S. trade deficit with China. China continues to be the single largest source of U.S. imports and the third-largest market for U.S. exports after Canada and Mexico.

Recent U.S. trade with China has been highly influenced by China's role as the last link in a long chain of value-added production, including low-value assembly industries, and by strong U.S. demand for more labor-intensive products. In 2009, however, U.S.-China trade succumbed to the effects of the global economic downturn. Weak global demand for Chinese exports helped to slow the growth of China's gross domestic product (GDP).[1] However, a Chinese government stimulus package issued in November 2008 raised government spending on infrastructure projects, cut taxes, and increased credit availability, all of which mitigated the negative effect of the global downturn on Chinese economic growth by late 2009.[2]

U.S. exports of machinery and electronic products each declined by $1.2 billion and were the main drivers of the $2.0 billion (3 percent) reduction in U.S. exports to China in 2009 (table CHN.1). Smaller increases in U.S. exports of certain agricultural products, iron and steel products, and chemicals and related products mitigated declines in other export products.

U.S. imports from China fell in every sector, contributing to the $42.0 billion absolute decrease in U.S. imports from China in 2009. Large declines in U.S. imports of Chinese minerals and metals (a drop of $9.8 billion), miscellaneous manufactures (a drop of $9.0 billion), and electronic products (a drop of $7.2 billion) occurred primarily as a result of the contracting U.S. economy and contributed most to the overall lower value of imports in 2009. In addition, sharp percentage decreases were recorded for products representing relatively smaller import trade flows, such as energy-related products (down 85 percent) and transportation equipment (down 21 percent).

[1] China's gross domestic product (GDP) growth fell to 8.7 percent in 2009 after more than two decades of 10 percent annual growth on average. EIU, *China: Country Profile*, 2009, 25.
[2] EIU, *China: Country Report*, April 2010, 5.

TABLE CHN.1 China: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	5,648	7,264	8,981	12,811	13,762	951	7.4
Forest products	1,995	2,572	3,272	3,518	3,720	202	5.7
Chemicals and related products	5,831	6,863	8,975	9,885	10,643	758	7.7
Energy-related products	221	307	407	584	708	124	21.3
Textiles and apparel	629	731	844	940	846	–94	–10.0
Footwear	41	57	38	35	44	9	24.8
Minerals and metals	5,215	7,736	9,043	9,701	8,703	–998	–10.3
Machinery	4,239	5,270	6,086	6,628	5,424	–1,204	–18.2
Transportation equipment	6,513	9,020	11,077	9,659	9,193	–466	–4.8
Electronic products	7,952	11,113	11,433	12,375	11,133	–1,242	–10.0
Miscellaneous manufactures	185	207	307	367	362	–5	–1.4
Special provisions	389	483	551	663	585	–77	–11.7
Total	38,857	51,624	61,013	67,166	65,124	–2,042	–3.0
U.S. imports of merchandise for consumption:							
Agricultural products	3,365	4,303	4,945	5,588	4,850	–739	–13.2
Forest products	5,463	6,630	7,317	7,371	6,281	–1,090	–14.8
Chemicals and related products	12,240	14,389	16,889	20,918	17,510	–3,408	–16.3
Energy-related products	1,023	1,139	641	2,025	305	–1,720	–85.0
Textiles and apparel	26,937	31,284	36,162	36,368	35,083	–1,285	–3.5
Footwear	12,654	13,795	14,090	14,444	13,415	–1,029	–7.1
Minerals and metals	17,553	23,462	25,749	28,975	19,146	–9,829	–33.9
Machinery	21,038	25,569	28,386	29,923	25,996	–3,927	–13.1
Transportation equipment	6,493	8,656	10,185	10,837	8,553	–2,285	–21.1
Electronic products	86,858	103,289	116,467	117,986	110,793	–7,192	–6.1
Miscellaneous manufactures	46,122	51,068	58,306	58,917	49,892	–9,025	–15.3
Special provisions	2,891	3,467	3,950	4,151	3,721	–430	–10.4
Total	242,638	287,052	323,085	337,504	295,545	–41,960	–12.4
U.S. merchandise trade balance:							
Agricultural products	2,283	2,961	4,036	7,223	8,913	1,690	23.4
Forest products	–3,468	–4,058	–4,045	–3,853	–2,561	1,292	33.5
Chemicals and related products	–6,409	–7,526	–7,914	–11,033	–6,867	4,166	37.8
Energy-related products	–802	–832	–234	–1,441	403	1,845	[a]
Textiles and apparel	–26,308	–30,553	–35,317	–35,429	–34,237	1,191	3.4
Footwear	–12,613	–13,738	–14,052	–14,409	–13,371	1,038	7.2
Minerals and metals	–12,339	–15,726	–16,707	–19,274	–10,443	8,831	45.8
Machinery	–16,799	–20,299	–22,300	–23,295	–20,572	2,723	11.7
Transportation equipment	19	364	892	–1,178	640	1,818	[a]
Electronic products	–78,906	–92,176	–105,034	–105,611	–99,660	5,950	5.6
Miscellaneous manufactures	–45,938	–50,861	–57,999	–58,550	–49,530	9,020	15.4
Special provisions	–2,502	–2,984	–3,399	–3,489	–3,136	353	10.1
Total	–203,781	–235,428	–262,072	–270,338	–230,421	39,918	14.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a]Not meaningful for purposes of comparison.

U.S. Exports

U.S. exports to China, which had been steadily growing over the five-year period, recorded a $2.0 billion decrease in 2009. U.S. exports of semiconductor manufacturing equipment and robotics fell by $439 million (40 percent) to $659 million (table CHN.2) and accounted for 36 percent of the total export decline within the machinery sector. This shift reflects the sharp fall in China's capital equipment spending between 2008 and 2009 that resulted from the industry-wide overcapacity and low utilization that materialized with the global economic downturn.[3] Reduced global semiconductor capital spending (45 percent drop in 2009 over 2008[4]) mirrored the overall capital equipment spending decrease (46 percent in 2009), as semiconductor companies generally reduced their inventories in the first half of 2009.[5] As a result, U.S. exports of semiconductors and integrated circuits to China fell by $1.1 billion (22 percent) to $4.2 billion. The decrease in U.S. exports of semiconductors and integrated circuits accounted for over 90 percent of the total export decline within the electronic products sector.

U.S. exports of agricultural products to China rose slightly, buoyed by a $2.0 billion (27 percent) increase in exports of oilseeds, especially soybeans. Strong processing margins in China for crushing soybeans into meal for animal feed and cooking oil encouraged China to import more soybeans in 2009.[6] Animal feed fuels the growing livestock industry in China, while soy oil is used for cooking. The Chinese are increasingly consuming more food on a per capita basis and are continuing to vary the traditional Chinese diet (including consuming more meat) as incomes rise, particularly in the urban centers.[7]

Despite the overall increase in U.S. agricultural exports to China, U.S. exports of cotton to China declined by 50 percent from $1.6 billion to $824 million in 2009. Chinese import demand for cotton in 2009 was weakened by the government draw down of domestic stocks from a bumper Chinese cotton harvest in 2008. In addition, demand for cotton by China's textile industry waned as recessionary pressures reduced global demand for its textile products.[8]

China was the largest foreign market for U.S. exports of iron and steel waste and scrap in 2009, recording the largest rate of increase for such exports (36 percent), in contrast to the decline in U.S. exports of such products to other major industrial nations. As the only major steel-producing nation that increased production in 2009, China's demand for scrap was high, and Chinese importers took advantage of lower demand and prices in the United States to increase their purchases of scrap from the United States.[9] Iron and steel waste and scrap are raw materials for China's iron and steel foundry industries, which

[3] Capital equipment spending rebounded slowly after the second quarter of 2009, as increased foundry activity replenished depleted inventories. Gartner, Inc., "Gartner Says Outlook for Semiconductor Equipment Industry Bottomed Out in Second Quarter of 2009," June 15, 2009.

[4] Gartner, Inc., "Gartner Says Outlook for Semiconductor Equipment Industry Bottomed Out in Second Quarter of 2009," June 15, 2009.

[5] IC Insights, *The McClean Report 2010 Edition*.

[6] USDA, FAS, *Oilseeds: World Markets and Trade*, January 2010, 1.

[7] Gale et al., *China's Ongoing Agricultural Modernization*, April 2009, 40.

[8] Beckman and Xinping, *China—Peoples Republic of: Cotton Market Update*, September 4, 2009, 2–3.

[9] Domestic purchases of iron and steel waste and scrap by U.S. steel mills and iron and steel foundries fell by 54 percent, from the previous year's total, to $13.7 billion in 2009. Although fluctuating, the composite price for No. 1 Heavy Melting steel scrap delivered to purchasers in Chicago, Philadelphia, and Pittsburg, averaged $195 per metric ton in 2009, down by $154 from the previous year's average. Fenton, "Iron and Steel Scrap," 82.

TABLE CHN.2 China: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Oilseeds (AG032)	2,255	2,536	4,121	7,261	9,222	1,961	27.0
Iron and steel waste and scrap (MM023)	1,258	1,600	1,876	1,844	2,503	659	35.7
Chemicals and related products:							
Polyethylene resins in primary forms (CH025)	350	381	555	711	1,095	384	54.0
Certain organic chemicals (CH006)	724	716	1,012	996	1,269	273	27.4
Decreases:							
Semiconductors and integrated circuits (EL015)	2,676	4,633	4,880	5,305	4,164	–1,141	–21.5
Cotton, not carded or combed (AG049)	1,397	2,059	1,454	1,631	824	–807	–49.5
Semiconductor manufacturing equipment and robotics (MT019)	688	1,159	1,608	1,098	659	–439	–40.0
All other	29,509	38,540	45,507	48,320	45,388	–2,932	–6.1
Total	38,857	51,624	61,013	67,166	65,124	–2,042	–3.0
U.S. IMPORTS:							
Decreases:							
Steel mill products (MM025)	1,687	3,605	3,968	5,995	2,007	–3,988	–66.5
Miscellaneous manufactures:							
Furniture (MS009)	11,726	13,481	14,305	13,600	11,181	–2,419	–17.8
Toys and games (MS013)	13,910	15,082	20,051	21,272	18,855	–2,418	–11.4
Computers, peripherals, and parts (EL017)	40,298	46,583	52,272	52,556	50,873	–1,683	–3.2
Coal, coke, and related chemical products (EP003)	379	415	250	1,250	17	–1,233	–98.7
All other	174,638	207,887	232,240	242,831	212,612	–30,219	–12.4
Total	242,638	287,052	323,085	337,504	295,545	–41,960	–12.4

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

produce key inputs to numerous downstream segments of the construction and manufacturing industries.

U.S. exports of polyethylene resins in primary forms increased by $384 million (54 percent) to $1.1 billion. Polyethylene is a thermoplastic, commonly used for packaging, toys, plastic shopping bags, tubing, and machine parts, and is an important input into China's manufacturing sector. While U.S. domestic sales of polyethylene decreased in 2009, the U.S. export gains of 2009 were fueled by a depreciation of the U.S. dollar and by low-priced natural gas feedstock in North America that reduced U.S. production costs.[10] U.S. exports of certain organic chemicals also grew, rising by $273 million (27 percent) to $1.3 billion. These chemicals are used as inputs into China's growing plastics, rubber, adhesives, and solvent industries.

U.S. Imports

U.S. imports of steel mill products from China decreased by $4 billion (67 percent) in 2009. Steel mill products are key inputs for numerous downstream segments of the construction and manufacturing industries. Within the steel products industry, U.S. imports of pipes and tubes of carbon and alloy steels decreased by $2.1 billion (60 percent). Recessionary pressures at the end of 2008 and in 2009 decreased demand for such pipes and tubes, which are used for residential, commercial, and industrial construction, as well as for the extraction and distribution of fossil fuels in the United States. In addition, U.S. imports from China were affected by the filing of antidumping and countervailing duty cases against China on a number of these products.[11]

U.S. imports of miscellaneous products of base metal from China fell by $1.0 billion (21 percent) to $4.0 billion in 2009. The decline was led by domestic cooking and warming appliances (e.g. stoves, ranges, grills, and plate warmers). Demand fell for household appliances in 2009, with declining U.S. residential construction activity.[12]

U.S. imports of miscellaneous manufactures from China, which annually supplies almost 60 percent of total U.S. miscellaneous manufactures imports, dropped by $9 billion (15 percent) to $49.9 billion in 2009. Decreases in imports of furniture, toys and games, and luggage accounted for 64 percent of this drop. Factors affecting the falling demand for these products mainly relate to the slowing U.S. economy. Stagnant U.S. housing sales in 2009 led to decreased purchases of household furniture and to lower U.S. production and imports of furniture. The maturing of the market for the latest generation of video games accounted for much of the decline in U.S. imports of toys and games.

[10] Esposito, "Exports Boost 2009 Resin Sales Total," March 17, 2010.

[11] New antidumping (AD) and countervailing duty (CVD) orders were put in place on Chinese imports of line pipe and stainless steel pipe in 2009. USITC, "AD and CVD Orders in Place," http://info.usitc.gov/oinv/sunset.nsf/AllDocID/96DAF5A6C0C5290985256A0A004DEE7D?OpenDocument. New AD and CVD petitions were filed on oil country tubular goods and seamless pipe imports from China in 2009. 74 Fed. Reg. 17514 (April 15, 2009) and 74 Fed. Reg. 48292 (Sept. 22, 2009). In May of 2010, the United States International Trade Commission determined that a U.S. industry is materially injured or threatened with material injury by reason of imports of certain oil country tubular goods from China that the U.S. Department of Commerce determined are subsidized. USITC, *Certain Oil Country Tubular Goods From China*, May, 2010.

[12] The value of put-in-place construction fell by $97 million (27 percent) for the residential segment of the U.S. construction industry in 2009 compared to a year ago. USDOC, Census, "December 2009 Construction," February 1, 2010.

Cautious spending on vacations and travel was reflected in reduced purchases of travel goods, including luggage and handbags.[13]

U.S. imports of coal, coke, and related chemical products from China declined sharply by $1.2 billion (99 percent) to $17 million. U.S. imports of such goods from China, which account for less than 1 percent of total U.S. imports and consumption of energy-related products,[14] shrank in terms of both value and quantity as a result of a decrease in U.S. demand coupled with a decrease in the world price of coal.[15] The demand decrease is attributable to reduced purchases of coal by electric utilities in favor of lower-priced, cleaner-burning fuels, particularly natural gas, coupled with lower demand for electricity because of a relatively mild winter in 2008–09.

[13] See the "Miscellaneous Manufactures" chapter for additional information on these trends.

[14] The United States is a net exporter of coal, coke, and other carbonaceous materials, based on abundant available reserves of coal.

[15] World prices for coal declined by about 9 percent to $63 per short ton in 2009 from 2008 levels. U.S. Department of Energy. See the Energy-related Products chapter for more detailed information.

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European Union-27

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Change in 2009 from 2008: [3]

U.S. trade deficit: Decreased by $36.8 billion (33 percent) to $75.7 billion
U.S. exports: Decreased by $48.8 billion (19 percent) to $202.4 billion
U.S. imports: Decreased by $85.6 billion (24 percent) to $278.1 billion

The U.S. merchandise trade deficit with the European Union (EU) decreased for the fourth year in a row, declining by 33 percent to $75.7 billion in 2009 (table EU.1). Both U.S. imports from and U.S. exports to the EU were negatively affected by the economic downturn and rising unemployment in both regions, which began in the final quarter of 2008. However, U.S. imports from the EU showed a much sharper decline than did U.S. exports of goods to the EU.

The decline in trade took place despite signs that the economies of both regions began to emerge from the downturn during the latter half of 2009.[1] In fact, according to the Organisation for Economic Co-operation and Development (OECD), the sharp economic contraction in the European economy appears to have ended sooner than anticipated, with household consumption, industrial production, and industrial orders rising during the third and fourth quarters of 2009.[2]

The U.S.-EU trade relationship remains important to both parties, with strong ties in both directions. For example, nearly a quarter of all U.S.-EU trade reportedly consists of intra-firm transactions.[3] The EU was both the third largest regional market for U.S. exports and third-largest source of U.S. imports in 2009 after Asia and Latin America (table US.3). Moreover, U.S. exports to the EU accounted for 22 percent of total U.S. merchandise exports in 2009, while imports from the EU accounted for 18 percent of total U.S. merchandise imports.

U.S. trade with its main EU trading partners remained stable during 2009. For example, Germany, the United Kingdom, the Netherlands, France, and Belgium together accounted for 75 percent of U.S. exports to the EU in 2009, while Germany, the United Kingdom, France, Italy, and Ireland accounted for 73 percent of all U.S. imports from the region. The percentage of trade for which these countries accounted for remained virtually the same in 2008 and 2009.

U.S. Exports

[1] OECD, *OECD Economic Outlook*, 1, accessed March 5, 2010.
[2] OECD, *OECD Economic Outlook*, 130, accessed March 5, 2010.
[3] European Commission, *Trade: EC Bilateral Relations; United States*, accessed March 5, 2010.

TABLE EU.1 EU27: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	8,160	8,704	10,210	11,527	8,582	–2,945	–25.5
Forest products	4,745	4,947	5,539	5,698	4,476	–1,222	–21.4
Chemicals and related products	37,550	43,015	49,656	55,958	51,116	–4,842	–8.7
Energy-related products	4,119	6,896	7,449	15,653	12,581	–3,072	–19.6
Textiles and apparel	1,749	1,899	2,064	2,121	1,666	–456	–21.5
Footwear	65	60	65	68	53	–15	–21.7
Minerals and metals	11,040	16,389	20,757	22,965	17,339	–5,627	–24.5
Machinery	14,530	16,350	17,352	18,605	13,543	–5,062	–27.2
Transportation equipment	37,397	45,180	55,680	59,168	44,357	–14,811	–25.0
Electronic products	39,009	41,767	43,632	43,636	35,455	–8,181	–18.7
Miscellaneous manufactures	4,461	5,684	6,639	7,862	6,340	–1,522	–19.4
Special provisions	5,466	6,389	7,208	7,934	6,885	–1,049	–13.2
Total	168,289	197,281	226,252	251,196	202,392	–48,804	–19.4
U.S. imports of merchandise for consumption:							
Agricultural products	14,871	16,220	17,558	17,569	15,534	–2,035	–11.6
Forest products	6,668	6,797	6,140	5,671	3,974	–1,696	–29.9
Chemicals and related products	68,160	74,042	78,521	84,791	77,571	–7,220	–8.5
Energy-related products	22,623	26,057	28,011	33,956	18,970	–14,987	–44.1
Textiles and apparel	6,095	5,988	6,287	5,791	3,972	–1,819	–31.4
Footwear	1,738	1,700	1,776	1,586	1,090	–496	–31.3
Minerals and metals	24,533	27,836	29,375	29,376	18,305	–11,071	–37.7
Machinery	33,396	36,486	39,775	41,416	29,322	–12,094	–29.2
Transportation equipment	67,002	70,056	73,281	70,232	48,048	–22,184	–31.6
Electronic products	36,184	36,405	38,114	40,399	32,502	–7,897	–19.5
Miscellaneous manufactures	12,473	13,602	15,931	14,520	10,955	–3,565	–24.6
Special provisions	14,885	15,709	17,420	18,360	17,862	–498	–2.7
Total	308,628	330,898	352,189	363,667	278,104	–85,562	–23.5
U.S. merchandise trade balance:							
Agricultural products	–6,712	–7,516	–7,348	–6,042	–6,952	–910	–15.1
Forest products	–1,923	–1,850	–602	27	501	474	1,764.1
Chemicals and related products	–30,610	–31,027	–28,865	–28,833	–26,455	2,378	8.2
Energy-related products	–18,504	–19,161	–20,563	–18,303	–6,388	11,915	65.1
Textiles and apparel	–4,347	–4,089	–4,223	–3,670	–2,307	1,363	37.1
Footwear	–1,673	–1,640	–1,711	–1,518	–1,037	481	31.7
Minerals and metals	–13,493	–11,446	–8,618	–6,410	–966	5,444	84.9
Machinery	–18,866	–20,136	–22,423	–22,811	–15,779	7,032	30.8
Transportation equipment	–29,605	–24,876	–17,601	–11,064	–3,691	7,373	66.6
Electronic products	2,825	5,362	5,519	3,237	2,953	–284	–8.8
Miscellaneous manufactures	–8,012	–7,918	–9,292	–6,658	–4,615	2,043	30.7
Special provisions	–9,420	–9,320	–10,212	–10,426	–10,977	–551	–5.3
Total	–140,339	–133,617	–125,937	–112,470	–75,712	36,759	32.7

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

exports to the EU in 2009 were transportation equipment and electronic products, which accounted for almost half of the total decrease (table EU.1).[4]

U.S. exports of transportation equipment declined 25 percent in 2009 to $44.4 billion. Two product groups—aircraft, spacecraft, and related equipment, and aircraft engines and gas turbines—experienced the largest absolute shifts in trade within the transportation sector during 2008–09 (table EU.2). They moved, however, in opposite directions: U.S. exports of aircraft, spacecraft, and related equipment increased by $8.0 billion (40 percent), while aircraft engine and gas turbine exports decreased by $10.5 billion (79 percent) in 2009.[5] Motor vehicle exports also fell sharply, declining 50 percent to $6.2 billion.[6] A combination of high fuel prices, restricted consumer credit, and rising unemployment in the EU all served to depress demand for U.S. automobiles in 2009.[7] The export decline was overwhelmingly concentrated in passenger vehicles, and Germany was the principal EU export market experiencing a decline in U.S. exports of these products.

U.S. exports of electronic products to EU nations declined 19 percent to $35.5 billion in 2009, with exports decreasing in most industries within the electronic products sector. The most heavily affected products in 2009 included semiconductors and integrated circuits, down 33 percent to $2.3 billion; computers, peripherals, and parts, down 29 percent to $4.7 billion; telecommunications equipment, down 35 percent to $3.0 billion; and measuring, testing, and controlling instruments, down 17 percent to $5.0 billion. U.S. export declines in 2009 were attributable to weak demand for consumer electronics (audio and video) and falling demand for electronic products by businesses, which reduced or postponed information technology purchases in the face of declining consumer and business demand for their products. Principal export markets for these goods in 2009 included Germany, the United Kingdom, and the Netherlands.

U.S. Imports

In 2009, U.S. imports from the EU fell by $85.6 billion (24 percent) to $278.1 billion, due to the U.S. economic downturn. The decline in U.S. imports in 2009 reversed the consecutive import increases of 6 percent and 3 percent, respectively, registered in 2007 and 2008. Although all sectors registered declines, decreases in imports of transportation equipment and energy-related products accounted for almost half of the overall decline in imports for the year (table EU.1).[8]

[4] See the "Electronic Products" chapter for more detailed information.

[5] Because certain products were reclassified into a new export code under the Harmonized Tariff System, it is not possible to determine the specific reasons for the shift in both the aircraft, spacecraft, and related equipment and the engines and gas turbines commodity groups. In 2009, 60 export commodity classification codes were consolidated into a single code covering all civilian aircraft, engines, equipment, and parts (Schedule B Commodity Code No. 8800.00.00). This new export code is classified within the aircraft, spacecraft, and related equipment commodity group. Because the new code does not differentiate between products and includes products that were previously classified in other commodity groups, it was not possible to determine the causes for the shift in trade on a product-by-product basis.

[6] See the "Motor Vehicles" section in the "Transportation Equipment" chapter for more detailed information.

[7] OECD, *OECD Economic Outlook*, November 2009, 96.

[8] See the "Energy-related Products" chapter for more detailed information.

TABLE EU.2 EU27: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Aircraft, spacecraft, and related equipment (TE013)	13,594	15,916	20,798	19,868	27,897	8,028	40.4
Decreases:							
Transportation equipment:							
Aircraft engines and gas turbines (TE001)	10,184	10,658	11,580	13,268	2,727	–10,541	–79.4
Motor vehicles (TE009)	3,334	7,594	10,322	12,271	6,170	–6,101	–49.7
Petroleum products (EP005)	1,935	4,270	4,142	10,850	8,260	–2,590	–23.9
Electronic products:							
Computers, peripherals, and parts (EL017)	8,485	8,493	7,335	6,704	4,738	–1,966	–29.3
Telecommunications equipment (EL002)	4,066	3,918	5,121	4,593	3,005	–1,588	–34.6
Semiconductors and integrated circuits (EL015)	3,167	3,659	3,590	3,500	2,342	–1,158	–33.1
All other	123,524	142,772	163,364	180,142	147,253	–32,889	–18.3
Total	168,289	197,281	226,252	251,196	202,392	–48,804	–19.4
U.S. IMPORTS:							
Decreases:							
Petroleum products (EP005)	17,157	21,354	22,244	27,568	14,049	–13,519	–49.0
Motor vehicles (TE009)	33,637	32,883	33,701	30,250	17,373	–12,877	–42.6
All other	257,834	276,660	296,244	305,849	246,682	–59,166	–19.3
Total	308,628	330,898	352,189	363,667	278,104	–85,562	–23.5

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

U.S. imports from the EU of transportation equipment fell by 32 percent in 2009 ($22.2 billion) to $48.0 billion. This contraction was attributable largely to a fall in motor vehicle truck imports, which declined by $12.9 billion (43 percent). U.S. imports of motor vehicles, especially trucks, were depressed in 2009 by the lingering effects of high automotive fuel prices registered in 2008, which lowered demand for higher-priced, low-fuel-economy, luxury cars from Europe; by the economic downturn in the United States, which negatively affected both demand and consumer credit conditions; and by rising unemployment levels in 2009. The decline in U.S. transportation equipment imports from the EU in 2009 was concentrated in light trucks and passenger vehicles from Germany. The decline in U.S. imports of motor vehicles from the EU in 2009 was also largely in line with the 21 percent decline in total U.S. demand for passenger cars and light trucks in 2009.

U.S. imports of energy-related products from the EU fell by $15.0 billion (44 percent) to $19.0 billion in 2009 due to declines in both price and quantity. About 74 percent of these energy-related imports consisted of refined petroleum products, chiefly distillate fuel oils and motor fuel blending stocks. The decline in such imports from the EU was principally attributable to the relatively mild 2008–09 U.S. winter and subsequent lower demand for heating oil. In addition, the weak economic conditions and rising unemployment in the United States adversely affected industrial and consumer demand for fuel oils and motor fuels. The United Kingdom and the Netherlands were the largest import suppliers, each accounting for approximately 25 percent of U.S. imports of energy-related products from the EU. U.S. imports of coal from the EU decreased by 59 percent to $410 million in 2009 because of price declines and high inventories of coal in the United States during 2009 that reduced the demand for such imports.

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India

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $1.9 billion (23 percent) to $6.6 billion
U.S. exports: Decreased by $2.7 billion (16 percent) to $14.6 billion
U.S. imports: Decreased by $4.6 billion (18 percent) to $21.2 billion

U.S. merchandise trade with India, the 14th-largest U.S. trading partner,[1] decreased by $7.3 billion (20 percent) in 2009 to $35.9 billion. The decline in bilateral trade corresponded with an overall decline in global trade as the world economy contracted during the year.[2] The weak U.S. economy contributed to a decline in U.S. imports from India, which decreased by $4.6 billion (18 percent). Similarly, U.S. merchandise exports to India declined by $2.7 billion (16 percent), but exports in most sectors declined less than imports (table IN.1). As a result, the U.S. trade deficit with India decreased by $1.9 billion to $6.6 billion.

India's gross domestic product (GDP) expanded by over 6 percent in 2009, down from growth rates that exceeded 7 percent in previous years.[3] Reduced demand in India as a result of slower growth contributed to a one-quarter decline in the total value of global Indian imports in 2009. The decline in U.S. exports was primarily due to lower exports of chemicals and related products, minerals and metals, and transportation equipment. Reduced global demand as a result of the global economic downturn shrank Indian global exports, which decreased by 17 percent in 2009.[4] U.S. imports from India fell by $4.6 billion (18 percent), chiefly owing to a $2.4 billion (32 percent) decline in mineral and metals product imports, as well as 10 to 25 percent declines in value in most other major U.S. import sectors during the year.

U.S. Exports

The value of U.S. exports to India, the 17th leading U.S. export market, declined in most sectors from 2008 to 2009. For the leading U.S. export sector to India—chemicals and related products—the decline was caused by a significant drop in prices. In fact, the value of fertilizer exports to India fell by $1.7 billion (61 percent) in 2009 (table IN.2), despite an 11 percent increase in the volume of exports during the year. The unit value of diammonium phosphate exports to India declined by 65 percent, as U.S. fertilizer prices decreased substantially in 2009 from the high prices in 2008. The 2008 prices were

[1] Compiled from official statistics of the U.S. Department of Commerce.
[2] Global GDP fell by nearly 1 percent in 2009. EIU, "India," March 2010, 6; USDOC, BEA. "Gross Domestic Product: Fourth Quarter 2009." March 26, 2010.
[3] CIA, "India," undated.
[4] GTIS, World Trade Atlas Database (accessed July 6, 2010).

TABLE IN.1 India: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	296	363	465	481	673	192	39.9
Forest products	225	239	378	460	412	–48	–10.4
Chemicals and related products	1,470	1,849	2,354	4,941	3,286	–1,655	–33.5
Energy-related products	381	414	429	933	996	64	6.8
Textiles and apparel	78	101	101	114	114	([a])	0.2
Footwear	8	7	4	6	5	–1	–15.3
Minerals and metals	719	902	1,981	2,868	2,176	–692	–24.1
Machinery	714	783	1,111	1,321	1,217	–104	–7.9
Transportation equipment	1,028	2,115	6,883	3,585	3,280	–305	–8.5
Electronic products	1,709	1,859	2,139	2,057	1,985	–72	–3.5
Miscellaneous manufactures	167	191	191	228	169	–59	–25.9
Special provisions	171	200	273	346	315	–31	–8.9
Total	6,965	9,025	16,309	17,340	14,629	–2,711	–15.6
U.S. imports of merchandise for consumption:							
Agricultural products	1,226	1,261	1,320	1,629	1,314	–315	–19.3
Forest products	94	109	134	145	117	–28	–19.2
Chemicals and related products	1,732	2,230	2,952	4,148	3,949	–200	–4.8
Energy-related products	579	287	767	349	437	88	25.4
Textiles and apparel	5,194	5,568	5,611	5,583	4,991	–592	–10.6
Footwear	139	155	164	188	164	–24	–12.7
Minerals and metals	5,091	5,816	6,424	7,534	5,136	–2,399	–31.8
Machinery	853	1,248	1,476	1,575	1,213	–362	–23.0
Transportation equipment	593	755	891	1,094	826	–268	–24.5
Electronic products	674	896	865	1,166	964	–202	–17.3
Miscellaneous manufactures	2,310	3,021	2,915	2,121	1,816	–304	–14.3
Special provisions	223	327	337	334	300	–34	–10.2
Total	18,710	21,674	23,857	25,866	21,228	–4,638	–17.9
U.S. merchandise trade balance:							
Agricultural products	–930	–898	–855	–1,148	–641	507	44.1
Forest products	131	131	244	316	295	–20	–6.4
Chemicals and related products	–263	–381	–598	792	–663	–1,456	([b])
Energy-related products	–199	127	–338	584	559	–25	–4.2
Textiles and apparel	–5,117	–5,467	–5,510	–5,470	–4,877	593	10.8
Footwear	–131	–148	–160	–182	–159	23	12.6
Minerals and metals	–4,372	–4,915	–4,443	–4,666	–2,959	1,707	36.6
Machinery	–139	–465	–365	–254	4	258	([b])
Transportation equipment	435	1,360	5,991	2,491	2,454	–38	–1.5
Electronic products	1,035	963	1,274	891	1,021	130	14.6
Miscellaneous manufactures	–2,144	–2,830	–2,724	–1,893	–1,647	245	13.0
Special provisions	–52	–127	–64	12	15	3	26.3
Total	–11,745	–12,649	–7,548	–8,526	–6,598	1,927	22.6

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a] Less than $500,000.
[b] Not meaningful for purposes of comparison.

TABLE IN.2 India: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Agricultural products:							
Animal or vegetable fats and oils (AG033)	17	19	15	3	122	119	3,994.4
Deciduous fruit (AG023)	19	23	29	21	43	23	110.7
Aircraft engines and gas turbines (TE001)	128	225	329	215	328	112	52.0
Decreases:							
Fertilizers (CH010)	415	587	778	2,791	1,077	–1,714	–61.4
Natural and synthetic gemstones (MM019)	63	241	510	1,239	502	–737	–59.5
Aircraft, spacecraft, and related equipment (TE013)	595	1,510	5,955	2,555	2,166	–389	–15.2
All other	5,728	6,420	8,692	10,517	10,391	–125	–1.2
Total	6,965	9,025	16,309	17,340	14,629	–2,711	–15.6
U.S. IMPORTS:							
Increases:							
Petroleum products (EP005)	559	277	749	345	419	75	21.6
Decreases:							
Minerals and metals:							
Steel mill products (MM025)	608	909	1,043	1,750	829	–921	–52.6
Natural and synthetic gemstones (MM019)	3,203	3,385	3,824	4,022	3,178	–844	–21.0
Apparel (TX005)	3,152	3,320	3,296	3,204	2,949	–255	–8.0
All other	11,188	13,782	14,945	16,545	13,853	–2,693	–16.3
Total	18,710	21,674	23,857	25,866	21,228	–4,638	–17.9

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

boosted by higher costs for energy (crude petroleum and natural gas), market speculation, and increased demand.[5]

U.S. exports of transportation equipment, the second leading U.S. export sector to India, fell by $305 million (9 percent) in 2009. This decline was primarily due to a decrease in shipments of aircraft, spacecraft, and related products, which fell by $389 million (15 percent).[6] U.S. exports of minerals and metals, the third leading U.S. export sector to India, declined by $692 million (24 percent). The decline was driven largely by one product category—natural and synthetic gemstones, primarily nonindustrial worked (cut and polished) diamonds—for which exports decreased by $737 million (60 percent) in value and 40 percent in quantity in 2009.[7] According to an industry representative, U.S. exports of cut and polished diamonds to India represent transshipments between suppliers in India and U.S. dealers. U.S. exports of diamonds do not reflect any value-added processing in the United States, but are return shipments to Indian suppliers of unsold consignment stock. For certain diamonds over one-half carat in size, Indian processors export diamonds to the United States for certification, after which they are exported back to India for distribution. The significant decline in these transshipments reflects a general decline in the diamond trade in 2009, as the global economic downturn decreased demand for diamonds.[8]

In 2009, the agricultural products sector was the only major sector that experienced growth in U.S exports to India. U.S. exports of agricultural products increased by 40 percent to $673 million, mostly driven by an increase in U.S. exports of vegetable oils (soybean oil) and deciduous fruit (primarily apples). U.S. soybean oil exports rose from zero in 2008 to $120 million in 2009, largely because of a supply shortage and high prices in India's traditional soybean oil supplier, Argentina.[9] U.S. exports of fresh apples more than doubled during the period to over $40 million, continuing a long-term increase, as per capita income growth in India has led to rising demand for high-quality imported fruit products.

U.S. Imports

The United States was India's second leading merchandise export market in 2009, behind the United Arab Emirates.[10] U.S. imports from India were $21.2 billion in 2009, a decline of $4.6 billion (18 percent) from 2008. The weak U.S. economy for most of 2009

[5] Compiled from official statistics of the U.S. Department of Commerce. See the "Fertilizers" section in the "Chemicals" chapter for more detailed information.

[6] Because certain products were reclassified into a new export code under the Harmonized Tariff System, it is not possible to determine the specific reasons for the shift in both the aircraft, spacecraft, and related equipment and the engines and gas turbines commodity groups. In 2009, 60 export commodity classification codes were consolidated into a single code covering all civilian aircraft, engines, equipment, and parts (Schedule B Commodity Code No. 8800.00.00). This new export code is classified within the aircraft, spacecraft, and related equipment commodity group. Because the new code does not differentiate between products and includes products that were previously classified in other commodity groups, it was not possible to determine the causes for the shift in trade on a product-by-product basis.

[7] Compiled from official statistics of the U.S. Department of Commerce.

[8] During the first quarter of 2009, the Indian diamond sector, one of the world's largest diamond cutting and polishing centers, was "nearly closed down" because of reduced demand, but recovered later in the year. Industry representative, telephone interview by USITC staff, April 14, 2010; International Diamond Exchange Website, "India More Than Triples Rough Diamond Imports in February," March 21, 2010.

[9] Industry representative, interview by Commission staff, Mumbai, India, May 28, 2009.

[10] Precious stones accounted for over one-half of the value of Indian exports to the United Arab Emirates in 2009. For all other products combined, the United States was India's leading export market in 2009. GTIS, World Trade Atlas Database (accessed July 6, 2010).

contributed to a decline in U.S. imports from India in most sectors except for energy-related products, which increased by $88 million. Rising U.S. imports in the sector were primarily the result of increased imports of petroleum products, which grew by 22 percent ($75 million) (table IN.2).

Leading sector imports from India included minerals and metals, textiles and apparel, and chemicals and related products. Among minerals and metals imports, U.S. imports of steel mill products fell by $921 million, primarily the result of decreased demand by major U.S. consumers of steel, specifically auto manufacturers and the commercial construction industry.[11] U.S. imports of natural and synthetic gemstones dropped by $844 million in 2009, mainly owing to weak demand for diamonds caused by a decline in consumer discretionary income as a result of the U.S. recession.[12] U.S. imports of Indian textile and apparel products declined by $592 million, including a $255 million fall in apparel imports. The decrease in apparel imports was driven by a $155 million (11 percent) decline in imports of shirts and blouses. The fall in imports is attributed to a decline in domestic consumption of these products caused by the weak U.S. economy in 2009.[13]

[11] AISI, "Steel Import Permits Decline," January 6, 2010. See the "Steel Mill Products" section in the "Minerals and Metals" chapter for more detailed information.

[12] See the "Natural and Synthetic Gemstones" section in the "Minerals and Metals" chapter for more detailed information.

[13] USDOC, BEA, March 1, 2010, Table 2.45U, "Personal Consumption Expenditures by Type of Product."

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Japan

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $28.8 billion (37 percent) to $48.9 billion
U.S. exports: Decreased by $14.4 billion (23 percent) to $47.1 billion
U.S. imports: Decreased by $43.1 billion (31 percent) to $96.0 billion

The total value of U.S. merchandise trade with Japan decreased by $57.5 billion (29 percent) to $143.1 billion in 2009. In 2009, the U.S. trade deficit with Japan decreased by $28.8 billion (37 percent) to $48.9 billion, as the decline in U.S. imports exceeded declines in U.S. exports (table JA.1). For the third consecutive year, Japan remained the United States' fourth-largest trading partner.[1]

The principal factors accounting for the $43.1 billion (31 percent) decline in U.S. imports from Japan include a lack of available credit in the United States (which made it harder for consumers to finance new purchases); the highest U.S. unemployment rate in more than 30 years;[2] and an appreciation of the yen relative to the U.S. dollar,[3] which made imports from Japan relatively more expensive. In 2009, the value of U.S. exports to Japan declined for several reasons, including price reductions in cereal crops and falling Japanese demand for vehicles stemming, in part, from Japan's mature vehicle market and high unemployment.

U.S. Exports

The industry sectors most affected by the $14.4 billion (23 percent) decrease in U.S. exports to Japan were transportation equipment and agricultural products (table JA.2). Together, these two sectors accounted for $6.1 billion (42 percent) of the total decline in U.S. exports to Japan.

U.S. exports of transportation equipment dropped by $3.6 billion (34 percent) to $7.1 billion (table JA.1) in 2009. Within this sector, U.S. exports of aircraft engines and gas turbines and aircraft, spacecraft, and related equipment collectively decreased by $2.5 billion (31 percent).[4] U.S. exports of motor vehicles to Japan, which fell by

[1] If the European Union is considered as a single entity, Japan is the fifth-largest U.S. trading partner.
[2] Andrews, "Americans Stop Buying," October 9, 2009.
[3] Board of Governors of the Federal Reserve System, "Japan/U.S. FX Rates," updated April 1, 2010.
[4] Because certain products were reclassified into a new export code under the Harmonized Tariff System, it is not possible to determine the specific reasons for the shift in both the aircraft, spacecraft, and related equipment and the engines and gas turbines commodity groups. In 2009, 60 export commodity classification codes were consolidated into a single code covering all civilian aircraft, engines, equipment, and parts (Schedule B Commodity Code No. 8800.00.00). This new export code is classified within the aircraft, spacecraft, and related equipment commodity group. Because the new code does not differentiate between products and includes products that were previously classified in other commodity groups, it was not possible to determine the causes for the shift in trade on a product-by-product basis.

TABLE JA.1 Japan: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	9,840	10,342	11,750	14,715	12,249	–2,467	–16.8
Forest products	1,907	1,964	1,859	2,019	1,712	–307	–15.2
Chemicals and related products	7,797	8,383	8,847	9,911	7,958	–1,953	–19.7
Energy-related products	1,394	1,348	1,556	2,286	1,707	–580	–25.4
Textiles and apparel	649	629	544	548	447	–101	–18.4
Footwear	27	28	33	53	56	3	5.8
Minerals and metals	2,385	3,221	4,094	3,995	2,043	–1,953	–48.9
Machinery	4,514	5,143	4,827	4,213	2,588	–1,626	–38.6
Transportation equipment	8,642	9,620	10,605	10,693	7,095	–3,598	–33.6
Electronic products	10,967	11,538	10,794	9,791	8,521	–1,269	–13.0
Miscellaneous manufactures	1,728	2,034	1,915	1,862	1,480	–382	–20.5
Special provisions	1,650	1,346	1,271	1,348	1,221	–128	–9.5
Total	51,499	55,596	58,096	61,435	47,074	–14,361	–23.4
U.S. imports of merchandise for consumption:							
Agricultural products	540	573	601	685	687	2	0.3
Forest products	692	649	648	642	482	–160	–24.9
Chemicals and related products	11,100	10,739	11,065	11,315	9,985	–1,330	–11.8
Energy-related products	534	970	1,191	601	303	–298	–49.6
Textiles and apparel	730	737	784	765	544	–221	–28.8
Footwear	3	2	2	3	2	–1	–31.4
Minerals and metals	5,013	5,871	5,780	5,996	4,468	–1,528	–25.5
Machinery	18,306	19,425	17,099	17,054	11,634	–5,420	–31.8
Transportation equipment	62,772	71,523	69,898	65,731	40,241	–25,490	–38.8
Electronic products	31,512	30,838	31,542	30,734	22,916	–7,818	–25.4
Miscellaneous manufactures	2,474	2,026	1,969	1,835	1,620	–216	–11.8
Special provisions	4,155	4,718	4,349	3,752	3,121	–631	–16.8
Total	137,831	148,071	144,928	139,112	96,002	–43,111	–31.0
U.S. merchandise trade balance:							
Agricultural products	9,301	9,769	11,149	14,030	11,562	–2,469	–17.6
Forest products	1,214	1,315	1,212	1,377	1,230	–147	–10.7
Chemicals and related products	–3,304	–2,356	–2,218	–1,404	–2,028	–624	–44.4
Energy-related products	859	378	365	1,685	1,404	–282	–16.7
Textiles and apparel	–81	–108	–240	–217	–97	120	55.2
Footwear	24	26	31	50	54	4	7.8
Minerals and metals	–2,628	–2,650	–1,687	–2,001	–2,425	–425	–21.2
Machinery	–13,793	–14,282	–12,272	–12,841	–9,046	3,795	29.6
Transportation equipment	–54,130	–61,903	–59,293	–55,038	–33,146	21,892	39.8
Electronic products	–20,545	–19,300	–20,748	–20,943	–14,395	6,548	31.3
Miscellaneous manufactures	–746	8	–54	27	–140	–166	[a]
Special provisions	–2,505	–3,372	–3,079	–2,404	–1,900	503	20.9
Total	–86,333	–92,475	–86,832	–77,677	–48,928	28,750	37.0

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a]Not meaningful for purposes of comparison.

$289 million (50 percent) to $293 million, also contributed to the decline in the transportation equipment sector (table JA.2). Japan's unemployment rate reached a three-year high in 2009,[5] which contributed to a 7.2 percent reduction in new passenger-car registrations,[6] as consumers reduced spending. In addition, the Japanese vehicle market is saturated with cars, as Japan boasts one of the Asia/Pacific region's highest vehicle-to-population ratios.[7] This situation has led to a steady decline in Japanese demand for cars over the past five years.

The value of U.S. exports of agricultural products to Japan also decreased, dropping by $2.5 billion (17 percent) to $12.2 billion; a large part of the decline involved cereals (primarily wheat, corn, and barley), which fell by $1.7 billion (29 percent) (table JA.2).

Despite slight gains in the total volume of cereal exports to Japan, overall declines in the price of cereals—largely owing to reductions in global demand associated with the economic downturn—reduced the value of trade in cereals.[8] The falling price of cereals can also be attributed to robust global harvests by leading international suppliers, including the EU-27, Russia, Ukraine, and Canada.[9]

U.S. Imports

U.S. imports from Japan decreased by $43.1 billion (31 percent), as imports in nearly every sector declined in 2009 (table JA.1). The most significant decreases were in transportation equipment and electronic products, which collectively fell by $33.3 billion (35 percent) to $63.2 billion and accounted for 77 percent of the overall reduction in U.S. imports from Japan.

U.S. imports of transportation equipment from Japan decreased by $25.5 billion (39 percent) to $40.2 billion, led by reduced imports of motor vehicles and certain motor-vehicle parts, which fell by $19.7 billion (40 percent). Tight credit markets in the United States during 2009[10] contributed to the declining domestic demand for automobiles—passenger vehicle registrations fell to the lowest level since the early 1980s at 10.3 million cars[11]—and for related parts, which are commonly supplied by Japan.[12] In the United States, 90 percent of all new cars are typically purchased on credit;[13] however, the U.S. economic recession, which extended well into 2009, reduced the availability of credit, as lending institutions became more risk averse. Therefore, the shortage of credit

[5] Trading Economics, "Japan Unemployment Rate," *Global Economic Research*, April 13, 2010.
[6] EIU, "Japan: Automotive Report," *Automotive Industry Briefing*, February 21, 2010.
[7] In Japan, there are nearly 500 vehicles per 1,000 people. EIU, "Japan: Automotive Report," *Automotive Industry Briefing*, February 21, 2010.
[8] See the "Cereals (Food and Feed Grains)" section of the "Agricultural Products" chapter for more detailed information.
[9] Ibid. USDA, ERS, *Wheat Outlook*, September 15, 2009, 4–5; USDA, ERS, *Wheat Outlook*, December 14, 2009, 4.
[10] Credit market conditions during 2009 were estimated to be the worst in over 25 years. Kubarych, "U.S. Credit Crunch Is Not Over," April 3, 2009.
[11] EIU, "United States of America: Automotive Report," *Automotive Industry Briefing*, February 24, 2010.
[12] For the past three years, Japan has been the United States' fourth-largest supplier of automobiles and certain related parts. Compiled from official statistics of the U.S. Department of Commerce.
[13] EIU, "World Automotive Outlook," *Automotive Industry Briefing*, January 8, 2010.

TABLE JA.2 Japan: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Decreases:							
Cereals (AG030)	2,428	2,895	3,768	5,890	4,164	–1,726	–29.3
Transportation equipment:							
Aircraft engines and gas turbines (TE001)	1,224	1,439	1,674	1,864	474	–1,389	–74.5
Aircraft, spacecraft, and related equipment (TE013)	5,182	5,721	6,528	6,247	5,134	–1,113	–17.8
Motor vehicles (TE009)	341	433	463	581	293	–289	–49.7
All other	42,324	45,106	45,662	46,852	37,009	–9,843	–21.0
Total	51,499	55,596	58,096	61,435	47,074	–14,361	–23.4
U.S. IMPORTS:							
Decreases:							
Transportation equipment:							
Motor vehicles (TE009)	35,947	44,609	44,965	42,407	24,818	–17,589	–41.5
Certain motor-vehicle parts (TE010)	9,003	8,612	8,257	7,339	5,232	–2,107	–28.7
Electronic products:							
Consumer electronics (EL003)	6,909	5,677	5,404	4,823	3,113	–1,710	–35.5
Computers, peripherals, and parts (EL017)	6,536	6,681	7,399	7,878	6,256	–1,622	–20.6
All other	79,436	82,492	78,903	76,664	56,582	–20,082	–26.2
Total	137,831	148,071	144,928	139,112	96,002	–43,111	–31.0

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

limited the financing options available to potential automobile consumers. Additionally, high unemployment throughout 2009[14] led to significant reductions in U.S. demand for automobiles, as consumers were more inclined to save rather than spend their money.[15]

The relatively high value of the Japanese yen, which appreciated by 20 percent against the U.S. dollar between December 2007 and December 2009,[16] raised the relative price of Japanese imports and contributed to falling U.S. demand for automobiles and related parts. The strength of the yen during this two-year period was primarily due to its widely perceived stability[17] and led investors to increase their purchases of Japanese treasury bonds.[18]

U.S. imports of electronic products declined by $7.8 billion (25 percent) to $22.9 billion in 2009. Within this group, U.S. imports of consumer electronics declined by $1.7 billion (36 percent) to $3.1 billion, and imports of computers, peripherals, and parts decreased by $1.6 billion (21 percent) to $6.3 billion. In 2009, the U.S. recession contributed to consumers' curtailed spending on electronic products and other discretionary products amid declining access to credit, rising unemployment, and significant reductions in equity values, all of which reduced consumer purchasing power and disposable income; every lost dollar of net wealth for U.S. consumers translated into an estimated 5 cent reduction in consumption.[19] In addition, in 2009 U.S. imports of electronics products continued to shift away from Japan to other lower cost suppliers, such as China and Korea.

[14] Unemployment averaged 9.3 percent throughout 2009. USDOL, "Labor Force Statistics," Bureau of Labor Statistics Database (accessed April 13, 2010).

[15] The personal savings rate of 2.9 percent towards the end of 2008 was the highest since 2002. This high savings rate persisted during 2009. Healy, "Consumers Are Saving More and Spending Less," February 2, 2009.

[16] During this two-year period, the Japanese yen appreciated—relative to the U.S. dollar—from 112.5 yen per dollar to 89.9 yen per dollar. Board of Governors of the Federal Reserve System, "Japan/U.S. FX Rates," updated April 1, 2010.

[17] As of November 2009, Japan's central bank held $1.1 trillion of foreign reserves, which is one measure of a currency's stability. Ostwald, "Japanese Bond Outlook," November 17, 2009.

[18] O'Neill, "Why the Yen is Overvalued," August 6, 2009.

[19] EIU, "USA: Consumer Goods Report," *Consumer Goods Briefing,* August 10, 2009.

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Republic of Korea

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $1.9 billion (14 percent) to $11.7 billion
U.S. exports: Decreased by $6.0 billion (18 percent) to $27.1 billion
U.S. imports: Decreased by $7.9 billion (17 percent) to $38.8 billion

The U.S. merchandise trade deficit with the Republic of Korea (Korea) declined by $1.9 billion (14 percent) to $11.7 billion between 2008 and 2009 (table KR.1).[1] U.S. exports to Korea fell by $6.0 billion (18 percent) in 2009, largely attributable to a 40 percent depreciation of the Korean won against the U.S. dollar and to a slowing of the Korean economy.[2] There was a $7.9 billion (17 percent) drop in U.S. merchandise imports from Korea in 2009 to $38.8 billion, in contrast to the 3 percent average annual growth in U.S. imports of merchandise between 2005 and 2008 (table KR.1). U.S. imports from Korea fell because of the U.S. economic downturn, which reduced demand from both U.S. consumers and the U.S. manufacturing sector.[3]

Agricultural products (mostly cereals) accounted for 28 percent ($1.7 billion) of the total drop in the value of U.S. exports to Korea in 2009 (table KR.1), primarily as a result of lower prices. U.S. exports of transportation equipment[4] and electronic products,[5] which together accounted for 34 percent of the drop in U.S. exports to Korea in 2009, decreased in the face of rising Korean domestic production of these products for home market sales.

Transportation equipment, minerals and metals, and electronic products accounted for 71 percent of the $7.9 billion decrease in U.S. imports from Korea in 2009 (table KR.1). The overall drop in U.S. imports from Korea was attributable to shifts in location of production from Korea to the United States and weak demand for these products in the U.S. market.

U.S. Export

U.S. exports to Korea decreased by $6.0 billion (18 percent) to $27.1 billion in 2009. Product sectors experiencing the greatest export shifts in value in 2009 were agricultural products, transportation equipment, and electronic products (table KR.1).

[1] The United States was Korea's second-largest trading partner in 2009. EIU, "South Korea: Country Report," December 2008, 6.
[2] EIU, "South Korea Economy: Stimulus Report Card," *EIU Viewswire*, January 25, 2010.
[3] EIU, "South Korea: Country Report," June 2009, 8.
[4] See the "Transportation Equipment" chapter for more detailed information.
[5] See the "Electronic Products" chapter for more detailed information.

TABLE KR.1 Korea: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	2,646	3,279	3,904	5,859	4,199	–1,660	–28.3
Forest products	688	683	814	863	765	–97	–11.3
Chemicals and related products	4,363	4,336	5,193	4,879	4,347	–532	–10.9
Energy-related products	690	1,081	1,073	1,412	1,415	3	0.2
Textiles and apparel	205	200	259	273	255	–19	–6.8
Footwear	19	42	40	49	43	–6	–12.1
Minerals and metals	1,447	1,823	2,723	3,385	2,658	–726	–21.5
Machinery	3,799	4,699	5,047	4,145	3,454	–691	–16.7
Transportation equipment	3,568	5,034	5,217	4,304	3,238	–1,067	–24.8
Electronic products	7,898	8,423	7,264	6,426	5,437	–988	–15.4
Miscellaneous manufactures	473	759	951	916	677	–239	–26.1
Special provisions	414	436	526	562	584	23	4.0
Total	26,210	30,794	33,012	33,074	27,074	–6,000	–18.1
U.S. imports of merchandise for consumption:							
Agricultural products	330	343	363	391	393	2	0.5
Forest products	544	601	559	527	373	–154	–29.3
Chemicals and related products	2,885	3,163	3,159	3,611	2,706	–905	–25.1
Energy-related products	1,110	1,863	2,341	1,504	1,103	–401	–26.6
Textiles and apparel	2,359	2,073	1,740	1,496	1,048	–448	–29.9
Footwear	45	26	33	29	18	–11	–38.2
Minerals and metals	2,783	3,611	3,328	4,174	2,387	–1,787	–42.8
Machinery	3,674	3,958	4,644	4,835	4,786	–49	–1.0
Transportation equipment	12,549	13,273	12,587	11,315	9,059	–2,257	–19.9
Electronic products	15,382	14,332	15,076	17,222	15,662	–1,560	–9.1
Miscellaneous manufactures	597	587	630	533	450	–83	–15.5
Special provisions	895	884	909	1,050	785	–265	–25.3
Total	43,155	44,714	45,368	46,687	38,770	–7,918	–17.0
U.S. merchandise trade balance:							
Agricultural products	2,316	2,936	3,541	5,468	3,806	–1,662	–30.4
Forest products	143	82	255	335	392	57	17.0
Chemicals and related products	1,478	1,174	2,034	1,268	1,641	373	29.4
Energy-related products	–420	–782	–1,268	–92	312	403	[a]
Textiles and apparel	–2,154	–1,874	–1,481	–1,223	–794	429	35.1
Footwear	–26	16	7	20	26	5	24.9
Minerals and metals	–1,335	–1,788	–604	–789	272	1,060	[a]
Machinery	124	741	403	–690	–1,331	–642	–93.0
Transportation equipment	–8,981	–8,240	–7,370	–7,011	–5,821	1,190	17.0
Electronic products	–7,485	–5,908	–7,812	–10,796	–10,225	571	5.3
Miscellaneous manufactures	–123	172	321	383	227	–156	–40.8
Special provisions	–481	–448	–383	–488	–200	288	59.0
Total	–16,944	–13,920	–12,357	–13,613	–11,696	1,918	14.1

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a]Not meaningful for purposes of comparison.

The value of U.S. exports of agricultural products declined by $1.7 billion (28 percent), accounting for approximately 28 percent of the overall decline in U.S. exports to Korea in 2009 (table KR.1). Exports of cereals (food grains and feed grains) fell by $1.3 billion (48 percent) in 2009, and accounted for 80 percent of the overall drop in exports of agricultural products (table KR.2). In 2009, corn and wheat—the largest U.S. cereal exports—fell in value by 49 percent and 48 percent, respectively, following a sharp decline in global cereal prices and a slight drop in demand. U.S. corn exports were hurt by Korean concerns about biotechnology products, increased use of Korean non-biotechnology corn from other global suppliers, and increased demand for wheat rather than corn for animal feed. U.S. wheat exports to Korea were lower in 2009 because of increased third-country (e.g., Australia) competition in the Korean market.[6]

The value of U.S. exports of transportation equipment to Korea declined by $1.1 billion (25 percent) to $3.2 billion in 2009 (table KR.1). Reduced exports of aircraft, spacecraft, and related equipment, and aircraft engines and gas turbines together accounted for $751 million (70 percent) of the decline in this sector (table KR.2).[7] In 2009, U.S. exports of motor vehicles and parts, telecommunications equipment, and electronic products to Korea fell because of rising competition from Korea's domestic automobile, telecommunications, and electronics industries,[8] along with falling Korean demand for parts as Korean automobile production shifted to the United States.

U.S. exports of electronic products to Korea decreased by $988 million (15 percent) to $5.4 billion in 2009 (table KR.1). The decline was driven by a $441 million decrease in U.S. exports of semiconductors and integrated circuits; a $144 million decline in measuring, testing, and control instruments; a $118 million decrease in computers, peripherals, and parts; and a $97 million decline in circuit apparatus assemblies. These product groups together accounted for 81 percent of the decline in the electronic products sector (table KR.2). Most of these products are used in industrial applications, such as automobiles, electronics, and telecommunications, and demand for such products fell because the Korean gross domestic product (GDP) (including the industrial sector) shrank by 10 percent in 2009.[9] Korean demand for semiconductors and integrated circuits and for circuit apparatus assemblies (such as processors, controllers, and memories) was down in 2009 because of decreased purchases by Korean downstream industries. Korean consumer demand for U.S. computers, peripherals, and parts, by both private consumers and businesses, fell in 2009 because of the weakened Korean economy and because purchases were delayed in expectation of markets stabilizing in Korea. Further, demand for U.S. consumer electronics by Korean companies fell in 2009 following a 12 percent rise in Korean production intended for domestic-market sales. U.S. exports to Korea of measuring, testing, and control instruments also experienced a substantial drop

[6] Smith and Choi, *Korea—Republic of: Lock-Up Report; Grain and Feed*, November 3, 2009, 3; Choi and Francom, *Korea—Republic of: Annual Grain and Feed Report*, April 30, 2009, 13.

[7] Because certain products were reclassified into a new export code under the Harmonized Tariff System, it is not possible to determine the specific reasons for the shift in both the aircraft, spacecraft, and related equipment and the engines and gas turbines commodity groups. In 2009, 60 export commodity classification codes were consolidated into a single code covering all civilian aircraft, engines, equipment, and parts (Schedule B Commodity Code No. 8800.00.00). This new export code is classified within the aircraft, spacecraft, and related equipment commodity group. Because the new code does not differentiate between products and includes products that were previously classified in other commodity groups, it was not possible to determine the causes for the shift in trade on a product-by-product basis.

[8] EIU, "South Korea: Competition and Price Regulations," July 1, 2008, 1.

[9] EIU, "South Korea Economy: Steep Downgrade," March 19, 2009, 1.

TABLE KR.2 Korea: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. EXPORTS:							
Decreases:							
Cereals (AG030)	426	943	1,202	2,765	1,430	–1,334	–48.3
Electronic products:							
Semiconductors and integrated circuits (EL015)	4,251	4,503	3,302	2,828	2,387	–441	–15.6
Measuring, testing, and controlling instruments (EL025)	782	754	810	822	677	–144	–17.5
Computers, peripherals, and parts (EL017)	570	617	536	463	345	–118	–25.4
Circuit apparatus assemblies (EL012)	28	135	207	246	148	–97	–39.6
Transportation equipment:							
Aircraft, spacecraft, and related equipment (TE013)	1,890	3,463	3,267	2,249	1,823	–426	–18.9
Aircraft engines and gas turbines (TE001)	635	574	582	616	292	–325	–52.7
Motor vehicles (TE009)	100	151	337	333	134	–198	–59.7
All other	17,528	19,654	22,769	22,753	19,837	–2,916	–12.8
Total	26,210	30,794	33,012	33,074	27,074	–6,000	–18.1
U.S. IMPORTS:							
Decreases:							
Transportation equipment:							
Motor vehicles (TE009)	8,970	9,104	8,792	7,853	6,473	–1,380	–17.6
Certain motor-vehicle parts (TE010)	1,161	1,586	1,721	1,612	1,192	–420	–26.1
Construction and mining equipment (TE004)	581	666	519	474	208	–266	–56.2
Forklift trucks and similar industrial vehicles (TE003)	197	235	252	195	83	–112	–57.6
Minerals and metals:							
Steel mill products (MM025)	1,285	1,813	1,499	2,207	1,105	–1,102	–49.9
Ferroalloys (MM022)	25	52	58	194	26	–168	–86.5
Electronic products:							
Semiconductors and integrated circuits (EL015)	2,984	2,939	2,490	2,619	2,206	–414	–15.8
Optical goods, including ophthalmic goods (EL020)	117	124	279	549	202	–347	–63.3
Telecommunications equipment (EL002)	6,435	5,742	7,144	9,452	9,119	–333	–3.5
Computers, peripherals, and parts (EL017)	2,995	3,120	3,130	2,639	2,372	–267	–10.1
All other	18,406	19,333	19,484	18,894	15,786	–3,108	–16.5
Total	43,155	44,714	45,368	46,687	38,770	–7,918	–17.0

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

in 2009 (table KR.2); Korean industries cut back their demand for imports of these goods following a decline in global sales of the high-value Korean products in which they are used.

U.S. Imports

U.S. imports from Korea decreased by $7.9 billion (17 percent) to $38.8 billion in 2009 (table KR.1). Transportation equipment, minerals and metals, and electronic products accounted for the largest sectoral decreases and together accounted for 71 percent of the overall decline in imports (table KR.1). The volume of U.S. imports from Korea of most goods fell in 2009 because of a slowing U.S. economy[10] and a shift in sales of Korean products to China where demand was strong throughout most of 2009.[11] Also, U.S. imports from Korea fell in 2009 as a result of a U.S. shift to imports from other countries.[12]

U.S. imports of transportation equipment from Korea decreased by $2.3 billion (20 percent) to $9.1 billion in 2009 (table KR.1). Within this sector, imports of motor vehicles and certain motor vehicle parts together declined by $1.8 billion (19 percent) from 2008 to 2009, accounting for about 80 percent of the drop in overall U.S. transportation equipment imports (table KR.2). As a result of the economic downturn in the United States and a decline in the availability of automobile loans, demand in the U.S. market for motor vehicles (especially for passenger cars and light trucks) fell substantially in 2009.[13] Also, as mentioned earlier, some of the reduction in U.S. imports of automobiles and parts can be attributed to a shift in the production of certain Hyundai and Kia automobile models from Korea to the United States during 2007–08. Hyundai and Kia, like many Japanese auto makers in past years, gained enough U.S. market share to justify producing their cars in the United States in order to decrease transportation costs and the time from factory to end use. A number of Korean auto parts manufacturers moved in 2009 as well.[14]

U.S. imports of construction and mining equipment (which is grouped within the transportation equipment sector) fell more sharply, dropping by $266 million (56 percent) from 2008 to 2009 (table KR.2), following a recession-driven 12 percent drop in U.S. construction spending[15] and a 6 percent drop in U.S. mining production.[16] U.S. imports of forklift trucks and similar industrial vehicles also declined by $112 million (58 percent) from 2008 to 2009 (table KR.2) as a result of the drop in U.S. manufacturing production.[17]

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[10] EIU, "South Korea Economy: Quick View-Economy Maintains Growth Trend," *EIU Viewswire*, October 26, 2009, 1.

[11] EIU, "South Korea Economy: Stimulus Report Card" *EIU Viewswire*, January 25, 2010, 2.

[12] Ibid., September 26, 2009, 1.

[13] See the "Motor Vehicles" section of the "Transportation Equipment" chapter for more detailed information. U.S. sales of medium and heavy duty trucks also slumped in 2009. Ward's Automotive Reports. "Ward's U.S. Truck Sales by Weight Class-Dec. 2009," January 18, 2010, 2.

[14] *Automotive News*, "Kia's Suppliers: Up Close and Personal," June 1, 2009; *The Birmingham News*, "Kia's New Georgia Auto Plant Brining Jobs to Alabama Communities," November 15, 2009.

[15] USDOC, Census, "December 2009 Construction at $902.5 Billion Annual Rate," February 1, 2010.

[16] Board of Governors of the Federal Reserve System. Economic Research and Data, "Industrial Production and Capacity Utilization." March 26, 2010.

[17] Ibid.

U.S. imports of minerals and metals from Korea decreased by $1.8 billion (43 percent) to $2.4 billion in 2009 (table KR.1). The decline in imports in this sector was driven by a $1.1 billion (50 percent) decline in steel mill product imports (table KR.2). The bulk of the decline in steel mill products was in pipes and tubes of carbon and alloy steels, and plates, sheets, and strips of carbon and alloy steels. Both product groups suffered from weakened U.S. demand in the two largest steel-consuming sectors—construction and automotive—because of the U.S. economic downturn.[18] Infrastructure and commercial construction, together with the automotive sector, accounted for about one-third of U.S. steel mill shipments in 2008 and much of the drop in 2009.[19] U.S. imports of ferroalloys from Korea fell by 87 percent ($168 million) from an unusually high level in 2008 to a more normal level in 2009 because of a drop in U.S. steel production and an accompanying drawdown of U.S. inventory (table KR.2).

The fall in U.S. imports of electronic products from Korea, though substantial, was less dramatic; these imports decreased by $1.6 billion (9 percent) to $15.7 billion in 2009 (table KR.1). The decline was driven by a $414 million (16 percent) decrease in imports of semiconductors and integrated circuits; a $347 million (63 percent) decline in optical goods, including ophthalmic goods; a $333 million (4 percent) decrease in telecommunications equipment; and a $267 million (10 percent) decline in computers, peripherals, and parts. Together, these product groups accounted for 87 percent of the drop in overall U.S. electronic products imports in 2009 (table KR.2). The U.S. market for all products in this sector (except optical goods) was impacted by a recession-driven decline in demand. Further, a 14 percent decline in global motor vehicle demand resulted in substantial production cuts in the U.S. automotive industry in 2009, which reduced U.S. demand for semiconductors used in cars. In addition, some semiconductors formerly imported from Korea were displaced in 2009 by large volumes of imports from a new semiconductor fabrication facility in Israel.[20] U.S. imports of optical goods fell because demand for liquid crystal devices and associated parts, used principally in computers and televisions, declined in response to the U.S. economic recession and rising unemployment, which resulted in falling consumer spending on such goods.

[18] Petry, "Analysts' Views Dim," October 8, 2008.
[19] American Iron and Steel Institute, *2008 Annual Statistical Report*, March 2009.
[20] Ackerman, "Intel's Israel Unit Exports Advanced 145 Percent in 2009," February 8, 2010.

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Mexico

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $14.2 billion (17 percent) to $70.6 billion
U.S. exports: Decreased by $25.8 billion (20 percent) to $105.7 billion
U.S. imports: Decreased by $40.0 billion (19 percent) to $176.3 billion

The U.S. merchandise trade deficit with Mexico declined by $14.2 billion (17 percent) to $70.6 billion in 2009, largely due to the financial crisis and the U.S. economic recession. The Mexican economy has become increasingly intertwined with that of the United States since the implementation of the North American Free Tree Trade Agreement (NAFTA) in 1994, and is strongly linked to the U.S. business cycle. Primarily, as a result of these ties, Mexico's economy suffered the steepest contraction in seven and a half decades, declining by 6.5 percent.[1]

U.S. exports of chemicals and related products, transportation equipment, electronic products, and agricultural products accounted for 61 percent of total exports by value to Mexico in 2009. The decrease in U.S. exports in these product sectors was largely the result of reduced economic activity and consumption due to the Mexican economic recession.[2]

The largest U.S. import sectors—electronic products, transportation equipment, energy-related products, and machinery—accounted for 73 percent of total imports from Mexico, by value, in 2009 (table MX.1). U.S. imports of electronic products from Mexico, the largest import category, declined by $2.9 billion (6 percent) to $50.3 billion in 2009. The decrease in U.S. demand for these products was largely due to the U.S. recession and tight credit conditions.[3]

U.S. Exports

Mexico's economic downturn reduced its demand for a wide range of U.S. exports. In 2009, significant declines in U.S. merchandise exports to Mexico were posted in the transportation equipment, agricultural products, chemicals and related products, energy-related products, minerals and metals, and forest products sectors (table MX.1).

U.S. exports of transportation equipment products to Mexico declined by $4.8 billion (22 percent) in 2009 to $16.8 billion. The largest absolute decrease in U.S. exports of transportation equipment to Mexico oin 2009 was in motor vehicles (table MX.2), which

[1] U.S. Department of State, U.S. Consulate, Monterrey, "Mexican Economists Expect Dismal Economy through 2010," February 23, 2009; CIA, "Mexico," undated.
[2] *Latin American Monitor*, "Mexico Key Sectors: Automotive," October 2009, 6.
[3] Ibid.

TABLE MX.1 Mexico: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	9,678	11,066	12,876	16,112	12,911	–3,201	–19.9
Forest products	3,860	4,258	4,312	4,837	4,162	–675	–13.9
Chemicals and related products	18,122	20,573	21,385	22,882	20,313	–2,569	–11.2
Energy-related products	5,508	5,925	7,015	11,329	7,948	–3,381	–29.8
Textiles and apparel	4,705	4,551	3,947	3,718	3,109	–609	–16.4
Footwear	46	47	44	79	63	–16	–20.7
Minerals and metals	9,258	11,635	11,896	13,492	9,603	–3,889	–28.8
Machinery	11,092	12,079	11,461	12,525	10,440	–2,086	–16.7
Transportation equipment	17,410	19,978	21,309	21,572	16,804	–4,768	–22.1
Electronic products	16,649	18,357	18,394	18,246	14,903	–3,343	–18.3
Miscellaneous manufactures	1,358	1,665	2,031	1,650	1,511	–140	–8.5
Special provisions	3,981	4,428	4,711	5,064	3,951	–1,113	–22.0
Total	101,667	114,562	119,381	131,507	105,718	–25,790	–19.6
U.S. imports of merchandise for consumption:							
Agricultural products	9,323	10,498	11,360	12,059	12,460	400	3.3
Forest products	1,420	1,559	1,584	1,457	1,201	–256	–17.6
Chemicals and related products	5,429	6,347	6,360	6,820	5,767	–1,053	–15.4
Energy-related products	25,029	32,116	33,549	42,626	24,214	–18,412	–43.2
Textiles and apparel	8,305	7,497	6,712	5,957	5,177	–780	–13.1
Footwear	247	274	248	255	254	–1	–0.4
Minerals and metals	11,366	13,266	13,877	14,715	12,142	–2,573	–17.5
Machinery	15,447	18,228	19,976	20,028	16,584	–3,444	–17.2
Transportation equipment	42,085	49,105	51,023	48,042	37,697	–10,345	–21.5
Electronic products	40,221	47,107	53,999	53,228	50,325	–2,903	–5.5
Miscellaneous manufactures	3,845	3,953	3,800	3,483	3,013	–470	–13.5
Special provisions	6,499	7,105	7,671	7,658	7,473	–185	–2.4
Total	169,216	197,056	210,159	216,328	176,309	–40,020	–18.5
U.S. merchandise trade balance:							
Agricultural products	355	568	1,516	4,053	452	–3,602	–88.9
Forest products	2,440	2,698	2,728	3,380	2,961	–419	–12.4
Chemicals and related products	12,694	14,226	15,025	16,062	14,546	–1,516	–9.4
Energy-related products	–19,522	–26,191	–26,534	–31,297	–16,267	15,031	48.0
Textiles and apparel	–3,600	–2,946	–2,765	–2,239	–2,068	171	7.6
Footwear	–201	–227	–204	–176	–191	–15	–8.6
Minerals and metals	–2,108	–1,631	–1,981	–1,223	–2,540	–1,317	–107.6
Machinery	–4,354	–6,148	–8,515	–7,502	–6,144	1,358	18.1
Transportation equipment	–24,675	–29,128	–29,715	–26,470	–20,892	5,578	21.1
Electronic products	–23,572	–28,750	–35,605	–34,981	–35,422	–441	–1.3
Miscellaneous manufactures	–2,488	–2,288	–1,769	–1,832	–1,502	330	18.0
Special provisions	–2,518	–2,677	–2,959	–2,594	–3,523	–929	–35.8
Total	–67,549	–82,493	–90,778	–84,821	–70,591	14,230	16.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

TABLE MX.2 Mexico: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Decreases:							
Petroleum products (EP005)	4,781	5,024	5,725	9,672	6,708	–2,964	–30.6
Transportation equipment:							
Motor vehicles (TE009)	4,350	3,990	4,504	4,503	2,255	–2,248	–49.9
Certain motor-vehicle parts (TE010)	6,004	7,130	7,724	7,932	6,788	–1,144	–14.4
Cereals (AG030)	1,553	2,038	2,711	4,078	2,661	–1,417	–34.7
Steel mill products (MM025)	1,690	1,998	2,189	3,022	2,042	–980	–32.4
All other	83,287	94,382	96,528	102,299	85,263	–17,036	–16.7
Total	101,667	114,562	119,381	131,507	105,718	–25,790	–19.6
U.S. IMPORTS:							
Decreases:							
Crude petroleum (EP004)	22,364	29,195	29,848	37,629	20,962	–16,668	–44.3
Transportation equipment:							
Certain motor-vehicle parts (TE010)	15,219	16,791	18,215	16,213	12,487	–3,727	–23.0
Motor vehicles (TE009)	18,521	23,548	23,300	22,205	18,628	–3,577	–16.1
Consumer electronics (EL003)	12,213	16,549	20,826	19,717	16,184	–3,533	–17.9
Steel mill products (MM025)	2,600	2,437	2,426	3,257	1,379	–1,878	–57.7
All other	98,299	108,535	115,546	117,307	106,669	–10,638	–9.1
Total	169,216	197,056	210,159	216,328	176,309	–40,020	–18.5

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

fell by $2.2 billion (50 percent) to $2.3 billion, reflecting declines in Mexican consumer spending and rising domestic interest rates.[4] However, Mexico continued to be the third leading export market destination for U.S. motor vehicles, accounting for approximately 6 percent of total U.S. motor vehicle exports in 2009.[5]

U.S. exports of agricultural products to Mexico declined by $3.2 billion (20 percent) in 2009 to $12.9 billion. Part of the reason for the decrease was a trade dispute between the United States and Mexico, in which Mexico imposed tariffs on 90 products, many of which were agricultural, in response to the cancellation of a U.S. program that provides some Mexican trucks with access to U.S. highways.[6] In addition, U.S. exports of corn to Mexico for feed were negatively affected by reduced meat production and consumption. The total value of U.S. corn exports to Mexico declined by about 40 percent to $1.4 billion, while the volume fell 22 percent to 7.2 million metric tons.[7] Nonetheless, U.S. corn exports to Mexico accounted for approximately 51 percent by value and 58 percent by volume of total cereal exports to Mexico in 2009.

U.S. exports of chemicals and related products to Mexico declined by $2.6 billion (11 percent) to $20.3 billion. The largest decreases in U.S. chemical exports were in polypropylene and polyethylene resins, as both product markets were adversely affected by the recession in Mexico. U.S. exports of polypropylene to Mexico fell by $368 million (31 percent) to $823 million in 2009. Numerous large commercial projects in Mexico were postponed or cancelled due to the recession and the resulting decreased Mexican demand for polypropylene. Polypropylene is used extensively in the production of polyvinyl chloride (PVC) piping, which is stongly linked to the downturn in the construction industry that started in 2008.

U.S. exports of polyethylene resins to Mexico declined by $265 million (16 percent) to $1.4 billion in 2009. Polyethylene plastics are used widely as plastic bags. The municipal governments in Mexico City (19 million inhabitants) and surrounding areas enacted ordinances that banned the use of single-use polyethylene bags, as most of these products are not considered biodegradable and end up in municipal landfills. As a result, reusable shopping and tote bags made of natural material are becoming an attractive alternative, and demand for polyethylene plastics has declined.[8]

The value of U.S. exports of energy-related products to Mexico decreased by $3.4 billion (30 percent) to $7.9 billion in 2009. Distillate fuel oils and unleaded gasoline account for the bulk of U.S. exports of energy-related products to Mexico. According to the government of Mexico, the country imports approximately 40 percent of its national energy requirements from abroad, principally unleaded gasoline from the United States.[9] The decrease in the export value of U.S. energy-related products is attributable to price declines for crude petroleum and natural gas. Lower prices for crude petroleum, which is the primary input in refined petroleum products, reduced the value of U.S. exports. The quantity of U.S. exports of refined petroleum products remained relatively stable at approximately 120 million barrels in both 2008 and 2009, and exports of natural gas declined only slightly by 6 percent by volume.

[4] *Business Monitor International*, "Key Sectors: Automotive", April 2009, 1.
[5] See the "Transportation-related Products" chapter of this report for more detailed information.
[6] *Inside U.S. Trade*, "Mexico Publishes Retaliation List After U.S. Cancels Truck Program," March 18, 2009.
[7] USDA, ERS, *Feed Outlook*, April 13, 2009, 11.
[8] CNN.com, "Mexico City Bans Stores from Distributing Plastic Bags," August 19, 2009.
[9] USDOE, EIA, "Mexico," February 17, 2009.

U.S. exports of minerals and metals to Mexico declined by $3.9 billion (29 percent) to $9.6 billion due to a decline in the price of raw materials, compounded by weak Mexican demand. U.S. exports of steel mill products to Mexico decreased by $980 million (32 percent) to $2.0 billion. Other U.S. exports of steel products, such as plates, sheets, and strips of carbon and alloy steels, fell by $493 million (32 percent) to $1.0 billion. These products are principally used in the production of automobiles, major household appliances, and infrastructure construction projects.[10] All three of these major industry sectors were adversely impacted by the downturn in the Mexican economy in 2009.

U.S. exports of forest products to Mexico declined by $675 million (14 percent) to $4.2 billion in 2009.[11] Two product groups—wood pulp, and wastepaper and industrial papers and paperboard—drove the decline in exports of forest products to Mexico. Mexican demand for U.S. exports of these products, which are often used in the packaging of manufactured goods, dropped as the downturn in the economy reduced manufacturing activity. In addition, reduced North American mill capacity and increased competition from Brazil, China, Indonesia, and other producing nations decreased U.S. exports.[12]

U.S. Imports

The sectors that experienced some of the largest percentage decreases among U.S. imports from Mexico in 2009 were energy-related products, transportation equipment, machinery, and minerals and metals. Collectively, these four industry sectors accounted for $90.6 billion (51 percent) of the total value of U.S. imports from Mexico and 87 percent of the total import decline.

U.S. imports of energy-related products from Mexico decreased by $18.4 billion (43 percent) to $24.2 billion in 2009. The decrease in the value of U.S. energy-related imports was due to declines in both price and quantity. Because of weak economic conditions and decreased U.S. consumption, U.S. imports of crude petroleum from Mexico declined from 434 million barrels in 2008 to 400 million barrels in 2009. At the same time, the price of crude petroleum declined from an average of $98 per barrel to $62 per barrel, and as a result, the total value of U.S. imports declined by $16.7 billion.[13] U.S. imports of refined petroleum products from Mexico, the bulk of which were residual fuel oils, remained relatively stable in 2009.

U.S. imports of transportation equipment from Mexico declined by $10.3 billion (22 percent) to $37.7 billion in 2009. The drop in U.S. imports of motor vehicles from Mexico of $3.6 billion (16 percent) was the main reason for the decline in transportation equipment sector imports. The decline in U.S. demand for motor vehicles from Mexico was the result of the U.S. economic recession, lower U.S. consumer confidence, rising interest rates, and a liquidity shortfall in the U.S. banking industry.[14]

U.S. imports of machinery from Mexico decreased by $3.4 billion (17 percent) to $16.6 billion in 2009 due, in large part, to a drop in residential housing starts and

[10] Fenton, "Iron and Steel Scrap," January 2010, 82–83.
[11] See the "Forest Products" chapter for more detailed information.
[12] Biderman, "Forest Products in the New Millennium: Tight Capacity," September 1, 2009, 58.
[13] See the "Energy-related Products" chapter for more detailed information.
[14] *Latin America Monitor,* "Mexico: Key Sectors: Automobiles," October 2009, 6.

commercial building permits caused by declining confidence in the economy.[15] Leading industry sectors particularly affected by the decline in U.S. imports of machinery from Mexico were air-conditioning equipment and parts, valves, and electric motors and generators.[16] In addition to the contraction of the U.S. economy in 2009, a decrease in private sector investment in new equipment reduced demand for these products.[17] These three major machinery sectors accounted for approximately $5.1 billion (31 percent) of U.S. machinery imports from Mexico in 2009.

U.S. imports of minerals and metals declined by $2.6 billion (18 percent) to $12.1 billion in 2009. U.S. imports of steel mill products from Mexico experienced the largest decrease in this sector, falling by $1.9 billion (58 percent) to $1.4 billion in 2009 due to a worldwide decline in raw material commodity prices and weak U.S. economic demand.[18] U.S. imports of steel slabs, which are principally used in the production of automobiles and infrastructure construction, were the leading imports of these products from Mexico. In addition, U.S. imports of miscellaneous products made of base metals (e.g., copper, zinc, and nickel) from Mexico fell by $405 million (21 percent) to $1.6 billion. Again, this decrease was due to the economic recession, which depressed manufacturing demand and prices. Base metal products are used in residential housing construction (e.g., copper wiring) and the production of major household appliances.

[15] National Association of Home Builders, "Housing Starts State & Metro Forecasts for 2009–2010," April 23, 2009, 1.

[16] Datamonitor, *Emerson Electric, Company Profile* (accessed April 16, 2010).

[17] USDOC, BEA, "Gross Domestic Product: Fourth Quarter 2009 (Final)," February 2010.

[18] See the "Minerals and Metals Products" chapter for more detailed information.

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Russia

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $5.5 billion (31 percent) to $12.3 billion
U.S. exports: Decreased by $3.8 billion (42 percent) to $5.2 billion
U.S. imports: Decreased by $9.3 billion (35 percent) to $17.4 billion

The U.S. trade deficit with Russia decreased by $5.5 billion (31 percent) to $12.3 billion, as decreases in imports outpaced export decreases (table RU.1). The top three U.S. export categories—agricultural products, transportation equipment, and machinery—accounted for the majority of U.S. exports to Russia. Exports in all three product groups fell because of a contracting Russian economy. U.S. imports were predominantly petroleum products, and the decrease in U.S. imports was primarily due to a drop in petroleum prices.

The Russian economy was hard hit by the global financial crisis that began in the last quarter of 2008. The resulting drop in global demand, the tightening of credit, and the fall in commodity prices (especially petroleum products) contributed to an 8 percent decrease in Russia's 2009 gross domestic product (GDP).[1] Russia's economy relies on the production and export of commodity products (especially petroleum products) and is therefore sensitive to commodity price fluctuations. In an effort to respond to the crisis, the Russian government depreciated the ruble. The ruble/dollar exchange rate depreciated from 27.94 rubles to the dollar at the beginning of December 2008 to 30.24 rubles to the dollar at the end of 2009, while falling to as low as 36.43 rubles to the dollar in February 2009.[2] This depreciation contributed to the decline in U.S. exports to Russia as U.S. exports became more expensive in the Russian market.

U.S. Exports

U.S. exports to Russia decreased by $3.8 billion (42 percent) in 2009 largely due to the effects of the depreciation of the ruble, the global financial crisis, and the resulting difficulties in obtaining bank loans in Russia. The major categories of U.S. exports to Russia—agricultural products, transportation equipment, and machinery—all declined in 2009 (table RU.1) after relatively steady increases during 2005–08. The largest U.S. export declines to Russia were in the transportation equipment and machinery sectors, which accounted for 67 percent of the total decrease in exports.

[1] U.S. Department of State, Bureau of European and Eurasian Affairs, *Background Note: Russia*, April 30, 2009. Russian GDP statistics are from the Russian Federal State Statistics Service, *Russia in Figures: Main indicators of System of National Accounts*, undated.

[2] Central Bank of the Russian Federation, "Foreign Currency Market: Dynamics of the Official Exchange Rates," n.d. (accessed May 10, 2010).

TABLE RU.1 Russia: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Agricultural products	991	883	1,367	1,865	1,455	–411	–22.0
Forest products	34	30	50	77	34	–42	–55.0
Chemicals and related products	295	408	577	762	526	–236	–31.0
Energy-related products	81	48	84	116	103	–13	–11.1
Textiles and apparel	74	69	62	101	82	–18	–18.3
Footwear	3	3	4	2	1	–1	–57.1
Minerals and metals	91	136	162	338	202	–136	–40.2
Machinery	622	751	1,447	1,791	992	–799	–44.6
Transportation equipment	946	1,223	2,031	2,932	1,210	–1,723	–58.7
Electronic products	416	574	706	735	468	–267	–36.3
Miscellaneous manufactures	90	74	141	190	71	–119	–62.7
Special provisions	14	15	51	28	16	–12	–44.1
Total	3,657	4,215	6,681	8,936	5,160	–3,777	–42.3
U.S. imports of merchandise for consumption:							
Agricultural products	416	507	585	456	466	10	2.2
Forest products	223	177	165	142	83	–60	–41.9
Chemicals and related products	1,026	1,254	1,360	2,686	928	–1,758	–65.5
Energy-related products	8,471	10,195	11,234	17,313	12,768	–4,546	–26.3
Textiles and apparel	95	59	12	9	5	–3	–39.6
Footwear	3	3	2	1	1	[a]	–9.3
Minerals and metals	4,687	6,915	5,207	5,344	2,581	–2,763	–51.7
Machinery	21	28	43	43	42	–1	–2.8
Transportation equipment	132	140	161	123	146	23	18.7
Electronic products	63	64	67	85	58	–27	–31.8
Miscellaneous manufactures	99	122	201	367	264	–103	–28.1
Special provisions	117	179	107	152	79	–73	–47.8
Total	15,353	19,642	19,143	26,721	17,420	–9,301	–34.8
U.S. merchandise trade balance:							
Agricultural products	576	376	782	1,409	989	–421	–29.8
Forest products	–189	–147	–115	–66	–48	18	26.6
Chemicals and related products	–731	–845	–783	–1,925	–402	1,522	79.1
Energy-related products	–8,390	–10,147	–11,150	–17,197	–12,664	4,533	26.4
Textiles and apparel	–20	10	50	92	77	–15	–16.3
Footwear	[a]	[a]	3	1	[a]	–1	[b]
Minerals and metals	–4,596	–6,779	–5,045	–5,007	–2,380	2,627	52.5
Machinery	601	723	1,404	1,748	950	–798	–45.6
Transportation equipment	814	1,084	1,870	2,810	1,064	–1,746	–62.1
Electronic products	353	510	639	650	410	–240	–36.9
Miscellaneous manufactures	–9	–47	–59	–176	–193	–16	–9.3
Special provisions	–102	–164	–57	–124	–64	60	48.7
Total	–11,695	–15,427	–12,462	–17,785	–12,261	5,524	31.1

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a] Less than $500,000.
[b] Not meaningful for purposes of comparison.

Within the transportation sector, U.S. exports of motor vehicles declined dramatically, falling by $1.1 billion (93 percent) to $84 million (table RU.2). The depreciation of the ruble, rising unemployment, falling disposable income, and a doubling of bank interest rates on car loans all lowered demand for imported cars in Russia.[3] U.S. cars were not the only ones affected; the volume of Russia's 2009 automobile imports from all countries fell by 74 percent from 2008.[4]

Russia is a major agricultural equipment market for the United States. U.S. exports of farm and garden machinery and equipment products dropped sharply, however, decreasing by $600 million (83 percent) to $122 million (table RU.2). During 2009, Russia reportedly took measures to protect its domestic agricultural equipment manufacturers by imposing a duty of 15 percent but no less than 120 euros per kilowatt of engine power on imports of agricultural equipment.[5] There were also reports that the leading Russian agricultural bank and other Russian state-owned agricultural banks would not grant loans for the purchase of imported agricultural equipment. Both measures were significant factors in the decline of U.S. exports of agricultural equipment to Russia during 2009.[6]

Russia was the tenth largest export market for U.S. agricultural products in 2009, despite a $411 million (22 percent) decline in exports of these products to Russia between 2008 and 2009 (table RU.1). The majority of U.S. agricultural exports to Russia were poultry and pork products. Poultry exports declined by $61 million (7.4 percent) to $763 million (table RU.2), largely as a result of changes in Russia's chicken tariff-rate quota.[7] Russia has lowered the U.S. poultry quota every year since 2007. In 2009, the quota was reduced to 750,000 metric tons (mt) from 931,000 mt in 2008, and the out-of-quota tariff was more than doubled, rising to 95 percent from 40 percent.[8]

The largest decrease in U.S. agricultural sector exports was of swine and pork, which fell by $166 million (43 percent) to $223 million. A major factor in the export decline was Russia's temporary ban on pork imports during the "swine flu" epidemic.[9] Other factors include the increase in Russia's out-of-quota tariff to 75 percent from 40 percent (albeit with a quota increase to 100 mt from 50.7 mt), as well as the Russian government's decision to "delist" (refusing to allow a company to export to Russia) several large U.S. pork facilities due to alleged violations of Russian veterinary standards.[10]

[3] Kansky, *Russia: Automotive Industry Update*, August 2009, 4.
[4] International Car Dealership Programme, *Newsletter on Russian Market*, January 2010.
[5] USTR, "Russia," 2009, 412.
[6] Sweeney, *Agricultural Equipment Industry Assessment*, February 2009.
[7] On January 1, 2010, Russia banned all imports of U.S. poultry that were washed by chlorine as a pathogen-reduction treatment, which effectively banned U.S. exports to Russia. On June 24, 2010, President Obama announced that an agreement was reached to allow U.S. poultry exports treated with three alternative pathogen-reduction treatments, but not chlorine. Olejnik, "U.S. to Resume Russia Exports," July 12, 2010.
[8] Hansen and Maksimenko, *Russian Federation: Poultry and Products; Poultry Semi-Annual Report*, March 13, 2009, 9.
[9] Hass and Maksimenko, *Russian Federation: Livestock and Products Annual; Meat Consumption Falls*, September 21, 2009, 16.
[10] Ibid., 15; Hansen and Maksimenko, *Russian Federation: Livestock and Products; Livestock Semi-Annual Report*, March 9, 2009, 4.

TABLE RU.2 Russia: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Decreases:							
Motor vehicles (TE009)	253	367	712	1,164	84	–1,080	–92.8
Farm and garden machinery and equipment (MT009)	167	190	434	721	122	–600	–83.1
Agricultural products:							
Swine and pork (AG003)	59	145	182	389	223	–166	–42.6
Poultry (AG005)	653	462	766	823	763	–61	–7.4
All other	2,525	3,051	4,587	5,838	3,968	–1,870	–32.0
Total	3,657	4,215	6,681	8,936	5,160	–3,777	–42.3
U.S. IMPORTS:							
Decreases:							
Energy-related products:							
Petroleum products (EP005)	5,741	7,392	8,238	12,838	9,176	–3,662	–28.5
Crude petroleum (EP004)	1,500	1,271	1,524	2,974	2,065	–909	–30.6
Fertilizers (CH010)	350	444	716	1,913	410	–1,504	–78.6
Minerals and metals:							
Precious metals and non-numismatic coins (MM020)	565	699	832	1,263	356	–907	–71.8
Steel mill products (MM025)	860	1,763	661	976	358	–618	–63.4
All other	6,337	8,073	7,172	6,757	5,056	–1,701	–25.2
Total	15,353	19,642	19,143	26,721	17,420	–9,301	–34.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

U.S. Imports

The value of U.S. imports from Russia fell by $9.3 billion (35 percent) (table RU.1) in 2009, largely because of the decline in prices for crude petroleum and petroleum products, as well as decreases in imports of minerals and metals and of chemicals. Energy-related products accounted for 73 percent of U.S. imports from Russia and roughly half of the drop in value of all Russian imports. The volume of petroleum product imports decreased by 10.3 million barrels (8 percent) to 117 million barrels.[11] However, because of the decline in prices, the value of these imports fell by $3.7 billion (29 percent) to $9.2 billion (table RU.2). In addition, although the volume of imports of crude petroleum actually increased by 1.6 million barrels (4 percent) to 42.4 million barrels,[12] the value of these imports decreased by $909 million (31 percent) to $2.1 billion (table RU.2) due to the decline in prices.[13]

Within the minerals and metals sector, U.S. imports declined by $2.8 billion (52 percent) to $2.6 billion (table RU.1), largely due to falling imports of precious metals and steel mill products. U.S. imports of precious metals declined by $907 million (72 percent) to $356 million. The import declines were almost all for platinum-group metals—iridium, palladium, platinum, and rhodium. These metals are primarily used in automobile catalytic converters, and imports were affected by decreased U.S. demand for and production of automobiles.[14]

U.S. imports of steel mill products decreased by $618 million (63 percent) to $358 million, largely as a result of decreased domestic demand and a decline in global prices. The two largest domestic markets for steel mill products—the automotive and construction sectors—depend heavily on the availability of credit. When credit tightened in the United States in the last quarter of 2008, automobile sales and construction activity both fell, depressing steel demand.[15]

During 2009, U.S. chemical sector imports also fell sharply, decreasing by $1.8 billion (66 percent) to $928 million. Most of this decrease is accounted for by lower U.S. fertilizer imports. Lower prices contributed to a decline of $1.5 billion (79 percent) in U.S. fertilizer imports as the volume of decreased by 2.1 million mt to 1.5 million mt (58 percent). Factors in decreased U.S. fertilizer consumption include an 8 percent decline in U.S. corn acreage (corn production consumes the most fertilizer nutrients)[16] and a reduction in U.S. net farm income of about $30 billion, or 35 percent,[17] which caused farmers to reduce fertilizer application rates in order to cut costs.

[11] Official statistics of the U.S. Department of Energy.
[12] Ibid.
[13] See the Energy-related products chapter for additional information.
[14] Loferski, "Platinum-Group Metals," January 2010, 120.
[15] Petry, "Analysts' Views Dim as Credit Woes Threaten to Choke Steel," October 8, 2008.
[16] USDA, WAOB, *USDA World Agricultural Supply and Demand Estimates*, March 10, 2010.
[17] Covey and McGath, "Farm Income Expected to Increase While Net Worth Declines in 2010," March 10, 2010.

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Agricultural Products

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Change in 2009 from 2008:

U.S. trade surplus: Decreased by $9.0 billion (36 percent) to $15.9 billion
U.S. exports: Decreased by $17.9 billion (15 percent) to $103.2 billion
U.S. imports: Decreased by $8.9 billion (9 percent) to $87.3 billion

The U.S. trade surplus in agricultural products declined by $9.0 billion (36 percent) to $15.9 billion as the value of U.S. exports decreased by almost twice as much as U.S. imports (table AG.1). The decline in U.S. agricultural exports was due primarily to an $11.4 billion decrease in cereal exports. U.S. exports of cotton and dairy also fell by $1.4 billion each. Exports to Mexico showed the largest decrease ($3.2 billion) to any country, mainly because of declines in the export values of cereals, oilseeds, and dairy products. Japan had the second largest country decline ($2.5 billion), chiefly due to the lower value of U.S. cereal exports. In general, the decrease in U.S. exports was principally caused by lower commodity prices.

The decrease in U.S. agricultural imports in 2009 was driven by lower imports of animal or vegetable fats and oils (edible oils), which declined by $1.5 billion. Additionally, imports of shellfish, cattle and beef, ethyl alcohol for nonbeverage purposes, and cereals all declined between $688 and $792 million each and together accounted for $2.9 billion of the total decrease in agricultural imports. U.S. imports from Canada, the largest U.S. agricultural trading partner, showed the greatest country decrease ($3.6 billion), mainly owing to declines in the value of U.S. imports of cattle and beef, cereals, and edible oils. Like the decline in exports, the decrease in U.S. imports was caused principally by lower prices.

U.S. Exports

The largest absolute trade shift among agricultural product exports in 2009 was the $11.4 billion (40 percent) decline in U.S. exports of cereals (table AG.2). More than 80 percent of the $17.2 billion in U.S. cereal exports to Mexico consisted of corn and wheat. In 2009, the value of U.S. wheat and corn exports to Mexico declined by $5.9 billion (52 percent) and $4.7 billion (35 percent), respectively, whereas wheat and corn export volumes fell by 27 percent and 12 percent, respectively. The decline in U.S. export values therefore primarily reflected lower cereal prices, as the export unit values for U.S. non-durum wheat and corn decreased by 35 percent and 26 percent, respectively, in 2009.[1] The price declines were caused by weakened demand, following the global economic slowdown, and increased supplies owing to good harvests. The value of cereal exports to the United States' two largest cereal markets, Japan and Mexico, declined by $1.7 billion and $1.4 billion, respectively.[2]

[1] Compiled from official statistics of the U.S. Department of Commerce.
[2] See the "Cereals (Food and Feed Grains)" section in this chapter for more detailed information.

TABLE AG.1 Agricultural products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	11,151	12,514	14,882	17,241	16,571	–670	–3.9
Mexico	9,678	11,066	12,876	16,112	12,911	–3,201	–19.9
China	5,648	7,264	8,981	12,811	13,762	951	7.4
Japan	9,840	10,342	11,750	14,715	12,249	–2,467	–16.8
Korea	2,646	3,279	3,904	5,859	4,199	–1,660	–28.3
Thailand	687	717	919	1,082	1,056	–27	–2.5
Italy	777	736	918	1,027	869	–158	–15.4
Indonesia	950	1,100	1,531	2,222	1,784	–438	–19.7
France	573	632	686	764	571	–193	–25.2
Netherlands	1,260	1,789	1,680	1,973	1,434	–539	–27.3
All other	25,487	27,485	37,916	47,269	37,777	–9,492	–20.1
Total	68,698	76,924	96,041	121,077	103,184	–17,894	–14.8
EU-27	8,160	8,704	10,210	11,527	8,582	–2,945	–25.5
OPEC	2,581	2,847	4,334	6,592	4,301	–2,291	–34.7
Latin America	15,157	17,502	21,446	28,188	22,009	–6,180	–21.9
Asia	25,594	29,015	35,321	46,987	43,002	–3,985	–8.5
Sub-Saharan Africa	1,508	1,349	1,967	2,655	1,956	–699	–26.3
U.S. imports for consumption:							
Canada	14,963	16,128	17,919	20,691	17,136	–3,555	–17.2
Mexico	9,323	10,498	11,360	12,059	12,460	400	3.3
China	3,365	4,303	4,945	5,588	4,850	–739	–13.2
Japan	540	573	601	685	687	2	0.3
Korea	330	343	363	391	393	2	0.5
Thailand	2,291	2,742	2,830	3,258	3,266	7	0.2
Italy	2,927	3,173	3,464	3,645	3,197	–447	–12.3
Indonesia	1,467	1,580	1,656	2,175	1,967	–209	–9.6
France	2,935	3,277	3,723	3,713	2,986	–728	–19.6
Netherlands	2,044	2,293	2,472	2,370	2,105	–265	–11.2
All other	32,865	36,546	38,803	41,662	38,256	–3,406	–8.2
Total	73,050	81,456	88,136	96,238	87,301	–8,937	–9.3
EU-27	14,871	16,220	17,558	17,569	15,534	–2,035	–11.6
OPEC	1,413	1,475	1,516	1,591	1,679	88	5.5
Latin America	22,876	26,589	28,109	29,943	28,912	–1,031	–3.4
Asia	12,421	14,418	15,931	19,115	16,926	–2,189	–11.5
Sub-Saharan Africa	1,334	1,285	1,157	1,375	1,459	84	6.1

See footnote(s) at end of table.

TABLE AG.1 Agricultural products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–3,811	–3,614	–3,037	–3,450	–565	2,885	83.6
Mexico	355	568	1,516	4,053	452	–3,602	–88.9
China	2,283	2,961	4,036	7,223	8,913	1,690	23.4
Japan	9,301	9,769	11,149	14,030	11,562	–2,469	–17.6
Korea	2,316	2,936	3,541	5,468	3,806	–1,662	–30.4
Thailand	–1,604	–2,025	–1,911	–2,176	–2,210	–34	–1.6
Italy	–2,150	–2,437	–2,546	–2,617	–2,328	289	11.0
Indonesia	–517	–479	–125	47	–182	–229	[a]
France	–2,361	–2,646	–3,037	–2,949	–2,414	535	18.1
Netherlands	–785	–504	–792	–397	–671	–274	–69.0
All other	–7,378	–9,061	–887	5,607	–479	–6,086	[a]
Total	–4,352	–4,532	7,906	24,839	15,883	–8,957	–36.1
EU-27	–6,712	–7,516	–7,348	–6,042	–6,952	–910	–15.1
OPEC	1,168	1,373	2,818	5,001	2,623	–2,378	–47.6
Latin America	–7,718	–9,087	–6,663	–1,754	–6,904	–5,149	–293.5
Asia	13,173	14,597	19,390	27,872	26,076	–1,796	–6.4
Sub-Saharan Africa	175	63	810	1,280	497	–783	–61.1

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Not meaningful for purposes of comparison.

TABLE AG.2 Agricultural products: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Oilseeds (AG032)	6,527	7,172	10,346	15,853	16,780	927	5.9
Edible nuts (AG020)	2,925	3,092	3,311	3,742	4,024	282	7.5
Pasta, cereals, and other bakery goods (AG034)	1,575	1,771	2,015	2,398	2,489	91	3.8
Nonalcoholic beverages, excluding fruit and vegetable juices (AG039)	478	554	643	819	887	68	8.3
Eggs (AG011)	227	235	293	297	347	49	16.6
Decreases:							
Cereals (AG030)	11,096	13,341	20,860	28,625	17,240	–11,385	–39.8
Cotton, not carded or combed (AG049)	3,920	4,501	4,578	4,829	3,384	–1,446	–29.9
Dairy produce (AG010)	1,195	1,387	2,358	3,188	1,755	–1,433	–44.9
Animal or vegetable fats and oils (AG033)	1,808	2,010	2,981	4,475	3,354	–1,121	–25.1
Hides, skins, and leather (AG046)	2,580	2,755	2,932	2,607	1,812	–795	–30.5
All other	36,367	40,106	45,724	54,243	51,111	–3,131	–5.8
Total	68,698	76,924	96,041	121,077	103,184	–17,894	–14.8
U.S. IMPORTS:							
Increases:							
Tropical fruit (AG021)	2,035	2,219	2,530	2,761	3,130	370	13.4
Other fresh fruit (AG024)	1,684	1,826	2,035	2,121	2,302	181	8.5
Sugar and other sweeteners (AG012)	1,323	1,868	1,391	1,748	1,919	171	9.8
Cocoa, chocolate, and confectionery (AG037)	3,927	3,846	3,882	4,534	4,659	125	2.8
Decreases:							
Animal or vegetable fats and oils (AG033)	2,294	2,753	3,358	5,261	3,779	–1,482	–28.2
Shellfish (AG009)	6,696	7,288	7,246	7,379	6,587	–792	–10.7
Cattle and beef (AG002)	4,410	4,443	4,844	4,524	3,784	–740	–16.4
Ethyl alcohol for nonbeverage purposes (AG050)	337	1,600	978	1,260	564	–696	–55.3
Cereals (AG030)	657	963	1,425	2,496	1,808	–688	–27.6
All other	49,686	54,652	60,446	64,154	58,768	–5,386	–8.4
Total	73,050	81,456	88,136	96,238	87,301	–8,937	–9.3

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

Cotton (not carded or combed) registered the second-largest absolute shift in U.S. exports, decreasing by $1.4 billion (30 percent) by value and 0.5 million metric tons (mmt) (15 percent) by volume in 2009. China accounted for over half of this decline as U.S. cotton exports to China fell by $807 million (50 percent) by value and 0.4 mmt (40 percent) by volume.[3] This reduction had two main causes: reduced demand and increased Chinese supply. The global economic downturn slowed demand for further processed textile items made in China, which, in turn, lowered China's demand for cotton.[4] In addition, a large Chinese cotton crop in crop year 2008/2009 led to government purchases of domestic cotton in order to prop up income for cotton farmers. Later in 2009, the Chinese government began to sell its cotton reserves, which increased domestic cotton availability, thus reducing the demand for imports. U.S. cotton exports to Indonesia underwent the second-largest absolute decrease—$220 million (48 percent)—as demand for U.S. cotton was reduced because the economic downturn lowered demand for textile products made in Indonesia.[5]

The value of U.S. dairy exports declined $1.4 billion (45 percent) in 2009.[6] Exports of nonfat dry milk had the largest decline of any dairy products, falling $860 million (62 percent) to $520 million.[7] Volume also declined, dropping by 36 percent to 0.2 mmt. Overall, dairy prices were down, due in part to weak domestic and global demand and a large drop in dairy exports, although global demand for nonfat dry milk began increasing towards the end of 2009.[8] Lower prices affected export values to virtually every country to which the United States exported in 2009, including its largest dairy market, Mexico, which had the largest absolute decline, totaling $243 million (31 percent).

U.S. Imports

U.S. agricultural imports decreased by $8.9 billion (9 percent) to $87.3 billion in 2009. Imports of animal or vegetable fats and oils experienced the largest decline of any product group in 2009, decreasing by $1.5 billion (28 percent). The chief reason for the decline was that there were increased global supplies of soybeans in 2009, largely due to the large soybean crops in Argentina and Brazil. This increased supply led to increased production and lower prices of soybean oil, which in turn, lowered prices for other edible oils that are highly substitutable for soybean oil. U.S. imports of animal or vegetable fats and oils from Canada recorded the largest decline, falling $525 million (32 percent) to $1.1 billion. The decrease was driven primarily by the decline in the value of imports of canola oil (low erucic acid rapeseed oil), which fell by $433 million (33 percent) by value, but only 6 percent by volume.[9] The drop in canola prices was in line with globally lower oil prices. U.S. imports of fats and oils from Malaysia, consisting mostly of palm oil, declined $383 million (32 percent) to $828 million. The story was much the same—Malaysian oil imports fell 32 percent by value but only 2 percent by volume in 2009.

[3] Compiled from official statistics of the U.S. Department of Commerce.
[4] Beckman and Xinping, *China: Peoples Republic of; Cotton Market Update,* September 4, 2009, 2–3.
[5] Meylinah, *Indonesia: Cotton and Products Annual; Cotton and Products Annual Report 2009,* March 20, 2009, 2–3.
[6] Compiled from official statistics of the U.S. Department of Commerce.
[7] Ibid.
[8] USDA, ERS, *Livestock, Dairy & Poultry Outlook,* May 19, 2009, 9; USDA, ERS, *Livestock, Dairy & Poultry Outlook,* November 17, 2009, 7.
[9] Canola oil imports made up most of the edible oil imports from Canada, approximately 79 percent by value and 99 percent by volume.

The second-largest decline in U.S. agricultural imports in 2009 was in U.S. imports of shellfish, which decreased by $792 million (11 percent) to $6.6 billion. Imports from Indonesia fell by $192 million (23 percent), which was the largest decline of any import supplier.[10] The majority of shellfish imported from Indonesia in 2009 was shrimp, which accounted for approximately 77 percent by value and 84 percent by volume.[11] The value of shrimp imports from Indonesia declined 22 percent to $492 million, while the volume declined 17 percent to approximately 69,000 mt. Shrimp prices were lower worldwide, owing to the global economic downturn and, in the United States, to higher domestic supply and reduced demand.[12] Additionally, Indonesian shrimp supplies declined in 2009 because of an outbreak of disease and disruptions caused by problems between exporters and farmers over sourcing of the shrimp.[13]

Imports of cattle and beef decreased $740 million (16 percent) to $3.8 billion; this was the third largest decrease experienced by any agricultural product group in 2009. Canada was by far the largest supplier of cattle and beef to the United States, accounting for 47 percent of imports; it also had the largest decline in imports of any U.S. supplier in 2009. U.S. imports of cattle and beef from Canada fell $648 million (27 percent) to $1.8 billion because of reduced demand from U.S. cattle feed lots. This drop in demand was caused, in part, by the fact that the Canadian dollar appreciated through the second half of the year, making Canadian cattle and beef more expensive for U.S. importers.[14]

In 2009, U.S. imports of ethyl alcohol for nonbeverage purposes (ethanol) declined by $696 million (55 percent) to $564 million, which was the fourth largest decrease in imports within the agricultural sector. Most of the decrease was accounted for by declines in imports, mostly of fuel ethanol, from Brazil (down $330 million) and the Caribbean Basin Initiative (CBI) countries of El Salvador, Jamaica, and Trinidad and Tobago (collectively down $308 million).[15] In 2009, the principal factor affecting imports of fuel ethanol imports from Brazil was a change in the duty drawback policy that effectively eliminated duty refunds on direct fuel ethanol imports from Brazil as of October 1, 2008.[16] However, the United States continued to import Brazilian industrial ethanol.[17] In addition, continued growth and strong demand in the domestic Brazilian market, coupled with an increase in the proportion of sugarcane used for sugar production (instead of ethanol) because of weather-related sugar supply shortages in India, limited the supply of wet ethanol available as feedstocks to dehydrators in CBI countries. As a result, imports from the three CBI countries, which make fuel ethanol and export to the United States,

[10] Compiled from official statistics of the U.S. Department of Commerce.

[11] Ibid. This includes cooked, uncooked, and preserved or prepared shrimp.

[12] FAO, "Shrimp," *Globefish*, February 2010, 8.

[13] Ibid., 4.

[14] This also coincided with the implementation of the United State's Country of Origin Labeling (COOL) law. Thoren, *Canada: Livestock and Products Annual*, August 31, 2009, 7; Canada claims the COOL system has reduced livestock exports to the United States and has filed a dispute with the World Trade Organization (WTO) regarding this issue. WTO, "Dispute DS384: United States—Certain Country of Origin Labeling (COOL) Requirements," n.d.

[15] Volumes imported from Brazil declined by 0.7 billion liters (73 percent) to 0.2 billion liters, while CBI imports declined by 0.4 billion liters (39 percent). The two types of ethanol imported from Brazil are fuel ethanol and industrial ethanol. Compiled from official statistics of the U.S. Department of Commerce.

[16] Before a change in duty drawback regulations in October 2008, U.S. importers of fuel ethanol could claim drawbacks against sales of jet fuel used by commercial airlines and military overseas flights. USITC, *The Economic Effects of Significant U.S. Import Restraints*, August 2009, 27–28.

[17] There was a major shift in the composition of imports from Brazil between 2008 and 2009. Fuel ethanol made up 87 percent of imports in 2008, but only 5 percent in 2009. Compiled from official statistics of the U.S. Department of Commerce.

declined as the availability of their raw input material fell.[18] Additionally, in 2009, the value of ethanol imports declined owing to low U.S. fuel ethanol prices, which decreased in line with the drop in petroleum and gasoline prices (U.S. fuel ethanol prices generally track gasoline prices).[19]

U.S. imports of cereal experienced the fifth-largest value decline within the U.S. agricultural sector, decreasing by $688 million (28 percent) to $1.8 billion in 2009. Canada, with 63 percent of the U.S. import market, was the primary source of cereals. Canada was also the main cause of the overall decline in cereal imports, as U.S. imports of Canadian cereal declined by 39 percent in value, to $1.1 billion, and 19 percent in volume to 4.7 mmt. The value of non-durum wheat and oats, which accounted for 65 percent by value of cereal imported from Canada, declined owing to increased global supply and decreased worldwide demand. The U.S. import volume of non-durum wheat and oats also declined for several reasons: a late harvest in Canada reduced supplies for wheat; producers held on to their stocks to wait for higher prices; and buyers, who overall had adequate stocks of oats, held off buying them.[20]

[18] Barros, *Brazil: Biofuels Annual; Ethanol Report*, July 15, 2009, 4.

[19] World prices for crude petroleum decreased from an average of $98 per barrel during 2008 to an average of $62 per barrel during 2009.

[20] Dessureault, *Canada: Lock-Up Report; Grain and Feed; July 31 Lock-Up Report*, July 30, 2009, 5; Beillard, *Canada: Lock-Up Report; Grain and Feed; October 31 Lock-Up Report*, October 29, 2009, 6. See the "Cereals (Food and Feed Grains)" section in this chapter for more detailed information.

Cereals (Food and Feed Grains)[21]

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Change in 2009 from 2008:

U.S. trade surplus: Decreased by $10.7 billion (41 percent) to $15.4 billion
U.S. exports: Decreased by $11.4 billion (40 percent) to $17.2 billion
U.S. imports: Decreased by $688 million (28 percent) to $1.8 billion

The U.S. trade surplus in cereals declined by $10.7 billion (41 percent) to $15.4 billion between 2008 and 2009, largely because of lower prices as well as somewhat smaller export volumes (table AG.3). Corn and wheat continued to be the dominant U.S. cereal exports by value, accounting for about 80 percent of total cereal exports and 94 percent of the total decline in the value of cereal exports.[22] U.S. exports to the three largest U.S. cereal markets—Japan, Mexico, and Korea—declined by $4.5 billion dollars, mainly owing to a decline in the value of corn exports.

U.S. cereal imports decreased by 28 percent to $1.8 billion between 2008 and 2009, also largely because of lower prices. By far the largest decline was in U.S. imports from Canada, falling $728 million as all major cereal imports from Canada decreased. By contrast, U.S. cereal imports from Thailand, the second-largest source, showed an increase in value of approximately 9 percent.

U.S. Exports

The value of U.S. cereal exports declined 40 percent in 2009, both because prices were lower, especially for wheat, and because smaller volumes were exported. U.S. wheat exports fell more sharply than corn exports, both by value and by volume. In 2009, the value of U.S. wheat exports fell by $5.9 billion (52 percent) to $5.4 billion, while corn exports declined by $4.7 billion (35 percent) to $8.9 billion.[23] Export volumes fell by approximately 27 percent for wheat and 12 percent for corn. Among the major markets for U.S. cereals in 2009, U.S. exports to Japan decreased by $1.7 billion (29 percent) to $4.2 billion, to Mexico by $1.4 billion (35 percent) to $2.7 billion, and to Korea by $1.3 billion (48 percent) to $1.4 billion.

The sluggish global economy reduced demand for both of these cereals and lowered prices worldwide. For example, the average export price of U.S. corn declined 26 percent, from $251 per metric ton (mt) in 2008 to $186 per mt in 2009. U.S. corn exports were further reduced by increased domestic use in the early part of 2009.[24] In the later part of the year, U.S. corn export volumes were lower because of increased competition (both from other countries, such as Ukraine, and from feed wheat), the slow

[21] This product group includes rice, wheat, barley, corn, sorghum, oats, and rye. Milled grain products, such as wheat flour, are not included.
[22] Compiled from official statistics of the U.S. Department of Commerce.
[23] Ibid.
[24] USDA, ERS, *Feed Outlook*, February 12, 2009, 6.

TABLE AG.3 Cereals (AG030): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Japan	2,428	2,895	3,768	5,890	4,164	–1,726	–29.3
Mexico	1,553	2,038	2,711	4,078	2,661	–1,417	–34.7
Canada	345	355	576	753	569	–184	–24.5
Korea	426	943	1,202	2,765	1,430	–1,334	–48.3
Taiwan	749	747	1,123	1,158	996	–162	–14.0
Nigeria	513	457	653	927	769	–158	–17.0
Egypt	553	685	1,346	1,240	509	–732	–59.0
Thailand	62	83	111	168	157	–11	–6.6
Venezuela	184	177	321	881	397	–485	–55.0
Colombia	355	456	728	966	383	–583	–60.3
All other	3,927	4,502	8,321	9,798	5,204	–4,594	–46.9
Total	11,096	13,341	20,860	28,625	17,240	–11,385	–39.8
EU-27	340	257	1,083	927	252	–675	–72.8
OPEC	1,293	1,462	2,432	3,786	1,703	–2,083	–55.0
Latin America	3,500	4,335	6,261	9,396	5,771	–3,625	–38.6
Asia	4,185	5,322	7,174	11,471	7,565	–3,906	–34.1
Sub-Saharan Africa	921	776	1,167	1,550	1,180	–370	–23.8
U.S. imports for consumption:							
Japan	(a)	1	1	(a)	(a)	(a)	–18.9
Mexico	7	14	41	41	15	–27	–64.2
Canada	389	622	996	1,872	1,144	–728	–38.9
Korea	(a)	(a)	1	1	1	(a)	42.0
Taiwan	(a)	(a)	(a)	(a)	(a)	(a)	–45.7
Nigeria	0	0	0	0	0	0	0.0
Egypt	(a)	10	9	2	32	29	1,397.9
Thailand	150	184	218	335	365	30	8.8
Venezuela	(a)	(a)	0	0	0	0	0.0
Colombia	0	(a)	(a)	(a)	(a)	(a)	–79.2
All other	111	133	160	245	252	7	2.9
Total	657	963	1,425	2,496	1,808	–688	–27.6
EU-27	48	14	14	51	56	5	10.6
OPEC	2	2	1	3	4	1	45.2
Latin America	9	23	47	49	43	–6	–12.2
Asia	209	291	356	518	527	9	1.7
Sub-Saharan Africa	(a)	(a)	(a)	(a)	(a)	(a)	5,796.6

See footnote(s) at end of table.

TABLE AG.3 Cereals (AG030): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Japan	2,428	2,894	3,767	5,890	4,164	–1,726	–29.3
Mexico	1,546	2,025	2,670	4,037	2,647	–1,390	–34.4
Canada	–44	–266	–419	–1,118	–575	543	48.6
Korea	426	943	1,201	2,764	1,430	–1,335	–48.3
Taiwan	749	747	1,123	1,157	996	–162	–14.0
Nigeria	513	457	653	927	769	–158	–17.0
Egypt	553	675	1,338	1,238	477	–761	–61.5
Thailand	–88	–101	–107	–167	–208	–41	–24.3
Venezuela	184	177	321	881	397	–485	–55.0
Colombia	355	456	728	966	383	–583	–60.3
All other	3,816	4,370	8,161	9,553	4,952	–4,601	–48.2
Total	10,439	12,378	19,435	26,129	15,432	–10,697	–40.9
EU-27	293	243	1,069	876	196	–681	–77.7
OPEC	1,291	1,460	2,431	3,783	1,698	–2,084	–55.1
Latin America	3,490	4,312	6,213	9,347	5,728	–3,619	–38.7
Asia	3,977	5,031	6,818	10,953	7,038	–3,915	–35.7
Sub-Saharan Africa	921	776	1,167	1,550	1,180	–370	–23.9

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.

pace of the U.S. harvest, concerns about harvest quality, and rising U.S. corn prices during the final four months of 2009, partly owing to the increased purchases of corn futures by investment funds.[25]

Some of the sharp decline in the value of wheat exports stemmed from 2009 prices that were, although still historically high on average, well below the 2008 prices.[26] For example, the average export price of U.S. non-durum wheat declined 35 percent, from $374 per mt in 2008 to $244 per mt in 2009,[27] largely because of a global decline in demand and increased supplies worldwide. In addition to the economic downturn, global wheat demand was further reduced by increased efficiency in converting wheat to flour for food use in the United States[28]and lower wheat feed use in the European Union (EU).[29] Larger global supplies were the result of good harvests by many traditional producers, including the EU, Russia, Ukraine, and Canada.[30]

U.S. cereal exports to the three biggest markets (Japan, Mexico, and Korea) declined in value in 2009. Corn was by far the largest U.S. cereal export to each of these countries. In 2009, U.S. corn exports to Japan totaled $2.8 billion and 15.3 million metric tons (mmt), which accounted for about 68 percent by value and 79 percent by volume of total U.S. cereal exports to Japan.[31] These exports to Japan declined approximately 27 percent by value, but rose half a percent by volume. The export volume remained stable because corn is a very important part of both animal feed and food starch; moreover, its strong Japanese demand, which is substantial, generally remains stable even when prices fluctuate.[32] U.S. corn exports to Mexico accounted for approximately 51 percent by value and 58 percent by volume of total cereal exports to Mexico in 2009. From 2008 to 2009, the value of U.S. corn exports to Mexico declined by about 40 percent to $1.4 billion, while the volume fell 22 percent to 7.2 mmt as demand for feed declined due to sluggish meat production.[33] U.S. corn exports to Korea totaled $1.1 billion and 6.1 mmt, which accounted for approximately 78 percent by value and 84 percent by volume of total U.S. cereal exports to that market in 2009.[34] These figures represent declines of about 48 percent by value and 24 percent by volume compared with 2008. Corn exports to Korea were affected by concerns about the use of U.S. biotechnology in corn cultivation, increased use of corn from countries that do not use biotech enhancements, increased use of wheat for feed, and a slight contraction in the use of corn by the swine industry.[35]

[25] USDA, ERS, *Feed Outlook*, November 13, 2009, 1.

[26] USDA, ERS, *Wheat Outlook*, September 15, 2009, 3–4.

[27] Compiled from official statistics of the U.S. Department of Commerce.

[28] This increased efficiency was the result of two factors—a supply of plump wheat kernels that allowed more wheat flour to be extracted and prices that were still high by historical standards. The high prices prompted companies to pay employees to spend extra time ensuring that systems were working at the optimal level to extract wheat flour. U.S. government official, telephone interview by Commission staff, April 25, 2010.

[29] USDA, ERS, *Wheat Outlook*, December 14, 2009, 1–2.

[30] USDA, ERS, *Wheat Outlook*, September 15, 2009, 4–5; USDA, ERS, *Wheat Outlook*, December 14, 2009, 4.

[31] Compiled from official statistics of the U.S. Department of Commerce.

[32] Fukuda, *Japan, Grain and Feed Annual 2010*. March 11, 2010, 1 and 14.

[33] USDA, ERS, *Feed Outlook*, April 13, 2009, 11.

[34] Compiled from official statistics of the U.S. Department of Commerce.

[35] Smith and Choi, *Korea—Republic of: Lock-Up Report Grain and Feed*, November 3, 2009, 9; Choi and Francom, *Korea—Republic of: Annual Grain and Feed Report*, April 30, 2009, 13.

U.S. Imports

U.S. imports of cereal declined $688 million (28 percent) to $1.8 billion in 2009. The largest U.S. imports of cereal during 2009 were of wheat, rice, and oats, which together accounted for 88 percent of the total value and 86 percent of the total volume of cereal imports.[36]

In 2009, the largest supplier of cereals to the United States was Canada. Canada supplied 63 percent ($1.1 billion) of all U.S. grain imports with the vast majority being wheat and oats.[37] Non-durum wheat and oats made up 65 percent of the value and 71 percent of the volume of cereals from Canada. However, non-durum wheat imports from Canada decreased by 41 percent by value to $454 million and 11 percent by volume to 1.7 mmt, while oats fell 40 percent by value to $303 million and 24 percent by volume to 1.6 mmt. Canadian wheat prices were down for the same reasons as U.S. wheat export prices—a worldwide decline in demand and increased global supplies. U.S. imports of non-durum wheat from Canada declined because the Canadian wheat harvest occurred much later in the crop year than normal, which reduced available export supplies. Also, the appreciation of the Canadian dollar against the U.S. dollar through the second half of 2009 raised prices of Canada's exports and contributed to lower overall volumes of Canadian wheat being exported to the United States. In addition, the United States had a large 2009 wheat harvest, which lowered domestic prices and demand for imports.[38] Similarly, oat prices were low and supplies were high, which resulted in suppressed trade as producers held on to their stocks to wait for higher prices and buyers, who overall had adequate stocks, held off buying more oats.[39]

The second-largest cereal supplier was Thailand, with 20 percent of the value of imports. The value of imports from Thailand rose 9 percent to $365 million, while the volume increased less than 1 percent to 0.4 mmt. The vast majority (95 percent) of imports from Thailand was rice.[40] Thailand is the primary supplier of rice to the United States, accounting for 62 percent of the value and 66 percent of the volume of total U.S. rice imports in 2009. Overall rice imports rose 9 percent by value and 3 percent by volume in 2009. Most U.S. rice imports are of aromatic varieties, such as jasmine from Thailand, and consumers do not tend to substitute rice varieties, which keeps demand steady.[41]

[36] Wheat represents 38 percent, rice 33 percent, and oats 17 percent of the total value of U.S. cereal imports. However, wheat represents approximately 45 percent, rice approximately 12 percent, and oats approximately 29 percent of total volume.

[37] Compiled from official statistics of the U.S. Department of Commerce.

[38] Industry representative, telephone conversation with Commission staff, Washington, DC, April 9, 2010.

[39] Dessureault, *Canada: Lock-Up Report; Grain and Feed; July 31 Lock-Up Report*, July 30, 2009, 5; Beillard, *Canada: Lock-Up Report; Grain and Feed; October 31 Lock-Up Report*, October 29, 2009, 6.

[40] Compiled from official statistics of the U.S. Department of Commerce.

[41] USDA, ERS, *U.S. Rice Industry*, April 30, 2008.

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Chemicals and Related Products

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $17.1 billion (51 percent) to $16.6 billion
U.S. exports: Decreased by $23.8 billion (13 percent) to $165.9 billion
U.S. imports: Decreased by $41.0 billion (18 percent) to $182.5 billion

In 2009, the value of the U.S. trade deficit in chemicals and related products decreased by $17.1 billion (51 percent) to $16.6 billion, following an increase of 35 percent in 2008 (table CH.1). The volume of trade also decreased throughout most of 2009, as world demand for consumer products made from chemicals and related products declined significantly in response to the global economic downturn.[1] The decrease in the U.S. trade deficit in chemicals resulted from a greater decline in U.S. imports than in U.S. exports. The decrease in U.S. trade moderated toward the end of the year, as the economy began to recover and stimulated demand in the chemicals industry.[2]

The decline in demand for chemical products used for industrial purposes, such as construction, was the most significant factor negatively affecting the global chemical industry in 2009.[3] Chemical products, such as construction chemicals, paints, coatings, and various plastics, are primary inputs used by the construction sector. In 2009, as the global economic downturn depressed activity in the real estate market, construction industries reduced output, and demand for chemical products declined.

In addition to reduced demand from the construction industry, the cost of many of the primary inputs needed for the production of chemicals declined in 2009, which decreased prices for chemicals and the value of trade. In particular, the price of natural gas—a feedstock for many U.S. chemical producers—was lower in every month of 2009 than it had been in 2008. After the average annual U.S. wellhead price for natural gas rose to $7.96 per thousand cubic feet in 2008, the average annual wellhead price for natural gas in 2009 fell back to $3.71, the lowest it had been since 1999.[4] In addition, the average price of crude petroleum, the feedstock generally used by the chemical industries in Europe and Asia, declined from an average of $98 per barrel during 2008 to an average of $62 per barrel during 2009.[5]

[1] Rangarajan, "Impact of Financial Crisis in the Chemical Industry," January 2010, 6–7.
[2] Pearlman, "Indicator Bounces Back," March 22–29, 2010, 44.
[3] Materials showing large declines in demand during 2009 were chemical products such as construction chemicals, paints, coatings, and various plastics. Deloitte, "The Decade Ahead," December 2009, 11.
[4] U.S. Energy Information Administration, *U.S. Natural Gas Wellhead Prices,* (accessed April 19, 2010).
[5] See the "Energy-related products" chapter for more detailed information.

TABLE CH.1 Chemicals and related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	26,412	28,475	29,033	30,657	26,743	–3,914	–12.8
China	5,831	6,863	8,975	9,885	10,643	758	7.7
Mexico	18,122	20,573	21,385	22,882	20,313	–2,569	–11.2
Germany	5,235	6,601	8,941	10,658	10,580	–78	–0.7
United Kingdom	6,183	7,492	7,746	7,844	7,488	–356	–4.5
Ireland	1,656	1,475	1,721	1,788	1,732	–56	–3.1
Japan	7,797	8,383	8,847	9,911	7,958	–1,953	–19.7
Belgium	7,457	8,793	10,061	10,581	8,568	–2,012	–19.0
France	4,311	4,418	5,107	5,186	4,973	–213	–4.1
Netherlands	7,659	8,956	9,345	11,201	9,137	–2,063	–18.4
All other	42,071	47,819	58,248	69,192	57,812	–11,379	–16.4
Total	132,734	149,848	169,409	189,784	165,948	–23,836	–12.6
EU-27	37,550	43,015	49,656	55,958	51,116	–4,842	–8.7
OPEC	2,461	3,320	4,141	5,236	4,130	–1,106	–21.1
Latin America	29,910	35,134	39,506	44,974	37,042	–7,933	–17.6
Asia	29,618	32,443	37,591	43,047	37,564	–5,483	–12.7
Sub-Saharan Africa	958	1,235	1,387	1,533	1,459	–74	–4.8
U.S. imports for consumption:							
Canada	25,535	28,036	29,939	33,124	25,021	–8,103	–24.5
China	12,240	14,389	16,889	20,918	17,510	–3,408	–16.3
Mexico	5,429	6,347	6,360	6,820	5,767	–1,053	–15.4
Germany	12,116	13,370	15,251	17,067	14,922	–2,145	–12.6
United Kingdom	9,772	12,207	13,523	14,904	15,004	100	0.7
Ireland	20,409	20,884	22,082	21,839	19,953	–1,887	–8.6
Japan	11,100	10,739	11,065	11,315	9,985	–1,330	–11.8
Belgium	2,376	3,444	3,407	4,614	5,209	595	12.9
France	8,171	8,262	8,527	9,755	8,005	–1,751	–17.9
Netherlands	1,969	2,280	2,305	2,262	1,973	–290	–12.8
All other	53,933	59,452	64,984	80,872	59,166	–21,706	–26.8
Total	163,050	179,410	194,331	223,492	182,515	–40,977	–18.3
EU-27	68,160	74,042	78,521	84,791	77,571	–7,220	–8.5
OPEC	10,841	10,667	12,851	18,403	8,071	–10,332	–56.1
Latin America	13,950	14,453	15,668	19,472	12,927	–6,545	–33.6
Asia	36,805	41,739	46,520	53,187	45,795	–7,392	–13.9
Sub-Saharan Africa	875	778	992	1,415	988	–428	–30.2

See footnote(s) at end of table.

TABLE CH.1 Chemicals and related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	878	439	–906	–2,467	1,722	4,189	[a]
China	–6,409	–7,526	–7,914	–11,033	–6,867	4,166	37.8
Mexico	12,694	14,226	15,025	16,062	14,546	–1,516	–9.4
Germany	–6,881	–6,769	–6,310	–6,409	–4,342	2,068	32.3
United Kingdom	–3,588	–4,714	–5,777	–7,060	–7,516	–456	–6.5
Ireland	–18,754	–19,409	–20,360	–20,051	–18,221	1,830	9.1
Japan	–3,304	–2,356	–2,218	–1,404	–2,028	–624	–44.4
Belgium	5,081	5,349	6,654	5,966	3,359	–2,607	–43.7
France	–3,860	–3,844	–3,421	–4,570	–3,032	1,538	33.7
Netherlands	5,689	6,676	7,040	8,938	7,165	–1,774	–19.8
All other	–11,862	–11,633	–6,736	–11,680	–1,353	10,327	88.4
Total	–30,317	–29,562	–24,923	–33,708	–16,567	17,141	50.9
EU-27	–30,610	–31,027	–28,865	–28,833	–26,455	2,378	8.2
OPEC	–8,379	–7,347	–8,710	–13,168	–3,941	9,227	70.1
Latin America	15,960	20,681	23,838	25,502	24,115	–1,387	–5.4
Asia	–7,187	–9,295	–8,929	–10,140	–8,232	1,909	18.8
Sub-Saharan Africa	83	457	396	118	472	354	300.1

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Not meaningful for purposes of comparison.

U.S. Exports

The value of U.S. exports of chemicals decreased by $23.8 billion (13 percent) to $165.9 billion in 2009. Although the steep decline in U.S. exports during the last quarter of 2008 continued into early 2009, the decrease slowed during the third quarter of 2009. At that time, the global economic downturn moderated, and shipments from U.S. chemical producers slowly began to rise in response to improving demand.[6] Exports primarily consisted of construction chemicals and paints; fertilizers; primary petrochemicals; and medicinal chemicals.

Industry sources attribute much of the decrease in U.S. exports during 2009 to drops in specific segments of the industry, such as construction chemicals and paint ingredients, which, as noted earlier, were affected by the decline in construction as a result of the global economic downturn.[7] However, the global demand for paints and their ingredients rebounded strongly in certain markets during the second half of 2009, particularly in China, Southeast Asia, and Brazil.

U.S. exports of fertilizers decreased sharply in 2009, falling by $3.5 billion (49 percent) to $3.7 billion and returning to the levels recorded during 2005–07. The decline largely reflects sharp average price reductions of about 45 percent, from about $590 per metric ton in 2008, when fertilizer prices surged globally, to $320 per ton in 2009. Volume was down by a more moderate 8 percent.[8] Exports of ammonium phosphates accounted for approximately 70 percent of both total value and volume of fertilizer exports, with diammonium phosphate (DAP) accounting for about 50 percent of the total and monoammonium phosphate (MAP), 20 percent. Total ammonium phosphate export values and prices each declined about 55 percent, while aggregate volume increased by about 10 percent.[9] Ammonium phosphate prices fell back to more sustainable historic levels in 2009 principally due to increased inventories and lower energy prices.

U.S. exports of primary petrochemicals, the building blocks for much of the rest of the chemical and chemical product industries, decreased by $378 million (21 percent) to $1.4 billion in 2009. The global economic downturn, coupled with newly operational production capacity in the Middle East and Asia, contributed to supplies outpacing demand for primary petrochemicals.[10]

Medicinal chemicals accounted for the only significant rise in U.S. exports in the sector, growing by about $4.2 billion (table CH.2), after having increased by $5.1 billion in 2008. U.S. exports of medicinals to Germany increased by nearly 18 percent to about $1.1 billion in 2009. A major share of this increase was likely the result of related-company transfers of products, such as monoclonal antibodies, a relatively new

[6] Pearlman, "Indicator Bounces Back," March 22–29, 2010, 44; *Chemical & Engineering News*, "Construction Recovery from Recession Will Be Long and Slow," January 11, 2010, 12–13; *Chemical & Engineering News*, "United States Chemical Industry Prepares for a Slow Recovery in 2010," January 11, 2010, 13.

[7] *Chemical & Engineering News*, "Construction Recovery from Recession Will Be Long and Slow," January 11, 2010, 12–13; Ford, "Not Out of the Woods Yet," *ICIS Chemical Business*, November 2, 2009, 12–13.

[8] Compiled from official statistics of the U.S. Department of Commerce.

[9] The U.S. is a major producer and exporter of phosphate fertilizers.

[10] Venkataraman, "Capacity Creation versus Demand Creation in Global Chemical Projects," December 2009, 6–8.

TABLE CH.2 Chemicals and related products: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Medicinal chemicals (CH019)	29,296	32,460	37,041	42,146	46,359	4,214	10.0
Primary aromatics (CH003)	548	375	392	478	531	53	11.2
Decreases:							
Fertilizers (CH010)	3,005	3,014	3,470	7,171	3,684	–3,487	–48.6
All other	99,885	114,000	128,506	139,989	115,374	–24,616	–17.6
Total	132,734	149,848	169,409	189,784	165,948	–23,836	–12.6
U.S. IMPORTS:							
Increases:							
Medicinal chemicals (CH019)	56,104	65,218	71,777	79,943	82,417	2,474	3.1
Decreases:							
Fertilizers (CH010)	7,439	7,525	9,507	16,485	7,373	–9,112	–55.3
Major primary olefins (CH001)	7,774	8,062	9,472	12,812	5,931	–6,881	–53.7
All other	91,733	98,604	103,576	114,251	86,794	–27,457	–24.0
Total	163,050	179,410	194,331	223,492	182,515	–40,977	–18.3

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

class of therapeutics increasingly being used in the European Union (EU).[11] Exports of medicinals also increased to India and China, rising by 33 percent ($247 million) and 17 percent ($652 million), respectively.

The two largest markets for U.S. exports of chemicals and related products in 2009 were Canada and Mexico, which accounted for a combined 28 percent of total exports in 2009. U.S. exports to those markets, however, declined in value in 2009 by 13 percent and 11 percent, respectively. As noted above, the general decline in exports to most markets, including Canada and Mexico, resulted from the decreased demand for chemical products used principally in construction (construction chemicals, paints, coatings, and various plastics construction products).[12] China, the third largest market, was the only country to register an increase in U.S. exports of chemicals and related products, rising by 8 percent to $10.6 billion.

U.S. Imports

In 2009, U.S. imports of chemicals and related products decreased by $41.0 billion (18 percent) to $182.5 billion. The decrease was driven largely by reduced demand for both consumer and industrial products owing to the U.S. economic recession.[13] Lower demand in the industrial sector was in particular related to a decline in home construction, as single-family housing starts in the United States dropped by 28 percent in 2009 to historic lows.[14]

The primary petrochemical and fertilizer product groups within the chemical and related products sector showed the most significant declines in imports. The value of U.S. imports of petrochemicals, described previously as the building blocks[15] for much of the rest of the chemical and chemical product industries, decreased by 52 percent to $8.4 billion in 2009. U.S. imports of fertilizers also dropped sharply, falling by 55 percent to $7.4 billion in 2009, and the volume of imported fertilizers fell by about 49 percent. These declines largely resulted from delays in purchasing fertilizers in order to cut costs, and the lack of available credit.

The two largest sources of U.S. imports of chemicals and related products were Canada and Ireland, together accounting for 25 percent of total sector imports. Canada is well situated, both logistically and geographically, to serve U.S. fertilizer markets, and it also has a large indigenous supply of raw materials. Major U.S. imports of fertilizers from Canada include potash, nitrogen fertilizers, and sulfur. Ireland has maintained a strong role in pharmaceuticals as a result of strong government support, the country's development of a life sciences infrastructure, the lowest tax on corporations in Europe (about 13 percent), and a young, skilled, and well-educated workforce.[16] The value of

[11] Frost & Sullivan, "Use of Therapeutic Monoclonal Antibodies Increasing in Europe," September 15, 2008.

[12] Deloitte, "The Decade Ahead, Preparing for an Unpredictable Future in the Global Chemical Industry," December 2009, 11.

[13] *Chemical & Engineering News*, "Construction Recovery from Recession Will Be Long and Slow," January 11, 2010, 12–13; Ford, "Not Out of the Woods Yet," November 2, 2009, 12–13.

[14] USDOC, Census, "New Privately Owned Housing Units Started in the United States by Purpose and Design" (accessed March 30, 2010).

[15] Petrochemicals are the primary feedstock for many of the chemicals that are used in the construction and building industries, as well as for plastics and synthetic rubbers, pharmaceuticals, soaps, detergents, toiletries, pigments, dyes, adhesives, etc.

[16] Duke, "Life Sciences in Ireland," July 1, 2008.

imports of fertilizers from Canada, the largest source of fertilizers, was down $2.3 billion (41 percent) in 2009, while imports of medicinal chemicals from the largest supplier, Ireland, decreased by $1.6 billion (8 percent).

Primary Petrochemicals[17]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $86 billion (55 percent) to $7.0 billion
U.S. exports: Decreased by $378 million (21 percent) to $1.4 billion
U.S. imports: Decreased by $9.0 billion (52 percent) to $8.4 billion

The U.S. trade deficit in primary petrochemicals fell by $86 billion (55 percent), as global trade in chemical products decreased, both in volume and price.[18] The decline gradually moderated toward the end of 2009; U.S. producers indicated that worldwide demand for petrochemicals bottomed out in the first half of the year. However, an increase in worldwide petrochemical production capacity —principally from a series of new Middle East petrochemical plants that began operating in 2009—provided additional competitive pressures and may make it more difficult for U.S. producers to regain all of their previous export business.[19] A major expansion of olefin production that began in China in 2009 has also increased the global oversupply of primary petrochemicals.[20] This oversupply contributed to lower global prices of petrochemicals in 2009.

In addition to the growth in supply and reduced demand for petrochemicals, lower prices for natural gas and crude petroleum, which are primary production inputs, resulted in a decline in the costs of production and thus the prices of petrochemicals. Together with the contraction in trade due to decreased demand, these lower prices reduced the U.S. trade deficit.

U.S. Exports

U.S. exports of primary petrochemicals decreased by $378 million (21 percent) to $1.4 billion in 2009 (table CH.3), partially owing to reductions in demand as a result of the global economic downturn. The oversupply of petrochemicals in the global market following production capacity increases in the Middle East and Asia, along with the reduction of energy prices, a primary feedstock, was responsible for lower global petrochemical prices and the resulting decline in the value of U.S. exports.[21]

[17] This industry/commodity group includes major primary olefins, other olefins, and primary aromatics.
[18] Bewley, "Petrochemicals: Ready for Recovery," January 11, 2010; *Chemical Week*, "NPRA: U.S. Olefins Rose in Late 2009," January 11, 2010.
[19] *Business Monitor International*, "United States Petrochemical Report Q2 2010," n.d. (accessed April 14, 2010), 12; *Chemical & Engineering News*, "Middle East: A Big Chunk of Ethylene Capacity Is Coming Onstream This Year," January 11, 2010, 17; Bewley, "Petrochemicals: Ready for Recovery," *Chemical Week*, January 11, 2010; Zhang, "Ethylene Explosion," February 22–28, 2010, 26–28; *Chemical Week*, "Petrochemicals," March 22/29, 2010, 25–33.
[20] Zhang, "Ethylene Explosion," February 22–28, 2010.
[21] Venkataraman, "Capacity Creation Versus Demand Creation in Global Chemical Projects," *Chemical Business*, December 2009, 6–8.

TABLE CH.3 Primary petrochemicals (CH001, CH002, CH003): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Saudi Arabia	34	7	(a)	1	(a)	–1	–86.5
Canada	239	375	337	469	301	–168	–35.9
Iraq	0	0	0	0	0	0	0.0
Algeria	0	0	0	(a)	0	(a)	–100.0
Venezuela	32	38	40	33	33	(a)	0.1
Korea	326	144	159	125	141	16	12.9
Brazil	15	4	4	18	6	–12	–65.8
Kuwait	(a)	(a)	(a)	(a)	(a)	(a)	–65.5
Mexico	76	103	179	237	123	–114	–48.2
Russia	(a)	(a)	(a)	(a)	(a)	(a)	–42.5
All other	696	869	936	895	796	–99	–11.1
Total	1,419	1,541	1,656	1,778	1,400	–378	–21.3
EU-27	268	423	466	327	325	–2	–0.5
OPEC	75	56	49	35	43	8	22.6
Latin America	304	358	512	643	355	–288	–44.8
CBERA	9	9	10	5	3	–2	–39.4
Asia	558	350	311	322	378	56	17.5
Sub-Saharan Africa	2	9	5	6	13	7	103.6
U.S. imports for consumption:							
Saudi Arabia	1,475	1,528	2,218	3,261	1,314	–1,947	–59.7
Canada	1,025	1,387	1,503	1,832	853	–978	–53.4
Iraq	1,336	1,199	1,281	2,309	1,020	–1,289	–55.8
Algeria	1,970	2,518	2,871	3,013	982	–2,032	–67.4
Venezuela	1,552	911	1,156	1,916	934	–982	–51.2
Korea	276	493	556	748	335	–412	–55.2
Brazil	304	279	421	416	353	–63	–15.1
Kuwait	409	260	377	515	313	–202	–39.3
Mexico	81	359	161	110	186	76	69.2
Russia	372	447	360	458	300	–158	–34.5
All other	2,036	2,224	2,471	2,744	1,769	–975	–35.5
Total	10,837	11,605	13,374	17,322	8,360	–8,962	–51.7
EU-27	606	717	577	546	399	–147	–26.9
OPEC	6,952	6,857	8,582	12,051	5,282	–6,769	–56.2
Latin America	2,160	1,721	1,953	2,651	1,635	–1,016	–38.3
CBERA	54	78	74	48	7	–41	–85.4
Asia	466	607	878	995	533	–462	–46.4
Sub-Saharan Africa	171	120	184	378	350	–28	–7.4

See footnote(s) at end of table.

TABLE CH.3 Primary petrochemicals (CH001, CH002, CH003): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2009 from 2008	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Saudi Arabia	–1,441	–1,521	–2,218	–3,260	–1,313	1,947	59.7
Canada	–787	–1,012	–1,166	–1,362	–552	810	59.5
Iraq	–1,336	–1,199	–1,281	–2,309	–1,020	1,289	55.8
Algeria	–1,970	–2,518	–2,871	–3,013	–982	2,032	67.4
Venezuela	–1,520	–872	–1,115	–1,883	–901	982	52.1
Korea	51	–350	–396	–622	–194	429	68.8
Brazil	–289	–275	–417	–398	–347	51	12.8
Kuwait	–409	–260	–377	–515	–313	202	39.3
Mexico	–5	–255	18	126	–64	–190	(b)
Russia	–372	–447	–360	–458	–300	158	34.5
All other	–1,340	–1,355	–1,535	–1,849	–974	876	47.4
Total	–9,418	–10,064	–11,719	–15,544	–6,960	8,585	55.2
EU-27	–338	–294	–111	–219	–73	145	66.4
OPEC	–6,876	–6,801	–8,532	–12,016	–5,239	6,777	56.4
Latin America	–1,856	–1,363	–1,442	–2,009	–1,281	728	36.2
CBERA	–45	–69	–65	–43	–4	39	90.9
Asia	92	–257	–568	–674	–155	518	76.9
Sub-Saharan Africa	–169	–112	–179	–371	–337	34	9.2

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

[a]Less than $500,000.
[b]Not meaningful for purposes of comparison.

U.S. exports to Canada and Mexico declined by 36 percent and 48 percent, respectively, accounting for two of the largest declines in value in exports to an individual country. The decline in U.S. exports to these two markets was primarily because of weak demand caused by the global economic downturn.[22] In addition, both Canada and Mexico have significant domestic petrochemical production and growing capacity, which also reduced the demand for imports.[23]

U.S. exports of primary olefins, the feedstock for major polymers including polyethylene, polypropylene, and polyvinyl chloride,[24] declined by 36 percent, from $685 million in 2008 to $439 million in 2009. Uniformly, these declines in U.S. exports of primary olefins resulted from lessened demand and lower prices in the consuming industries.[25] U.S. exports of primary aromatic petrochemicals, such as benzene and toluene, however, increased. U.S. exports of these products, which are used to produce stable derivative products such as polystyrene, polycarbonate, and nylon, increased from $478 million to $531 million. Benzene accounts for the majority of U.S. aromatic petrochemical exports, and U.S. production is estimated to have accounted for 20 percent of global production in 2009.[26]

U.S. Imports

The value of U.S. imports of primary petrochemicals decreased by $9.0 billion (52 percent) to $8.4 billion in 2009. Most of this decrease was in U.S imports of primary olefins and aromatics, which declined by $6.8 billion and $2.0 billion, respectively. Declining demand for consumer products and certain industrial products contributed significantly to this change.[27] However, import unit values also decreased as the oversupply conditions and the lower price of natural gas and crude petroleum—primary inputs for many petrochemical producers—drove prices down.[28] Declines were seen from each of the four major supplier nations: Saudi Arabia, Canada, Iraq, and Algeria. Among the United States' leading suppliers, only imports from Mexico increased in 2009. This increase was primarily due to an abundant supply of certain products in the Mexican market, which resulted from increased Mexican petrochemical production. In addition, demand in Mexico declined as a result of the economic downturn.[29]

[22] *Industry Canada*, "Canadian Chemical Industry Profile," March 31, 2010 (accessed May 6, 2010).
[23] Beacham, "Global Impact," *ICIS Chemical Business*, September 21–27, 2009, 19.
[24] These products are the primary products comprising the new production capacity overseas.
[25] *Chemical Week*, "NPRA: U.S. Olefins Rose in Late 2009," January 11, 2010.
[26] Global benzene capacity expansions projected through 2014 for China, Thailand, and Saudi Arabia are expected to cut into U.S. benzene export markets; there are no anticipated expansions of U.S. benzene production capacity. *Business Monitor International*, "United States Petrochemical Report Q2 2010," (accessed April 14, 2010), 12; *Chemical & Engineering News*, "Middle East: A Big Chunk of Ethylene Capacity Is Coming Onstream This Year," January 11, 2010, 28; Brice, "Peak Performance," February 22–28, 2010, 18–21.
[27] Bewley, "Petrochemicals: Ready for Recovery," January 11, 2010; Hodges, "Be a Winner, Not a Victim," March 22–28, 2010, 22; Zhang, "Ethylene Explosion," February 22–28, 2010, 26–28; *Chemical Week*, "Petrochemicals," March 22/29, 2010, 25–33.
[28] See the "Energy-related Products" chapter for more detailed information.
[29] Reade, "Mexican Wave," September 3, 2009.

Fertilizers[30]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $5.6 billion (60 percent) to $3.7 billion
U.S. exports: Decreased by $3.5 billion (49 percent) to $3.7 billion
U.S. imports: Decreased by $9.1 billion (55 percent) to $7.4 billion

The U.S. trade deficit in fertilizers declined by $5.6 billion (60 percent) as consumption and prices fell sharply (table CH.4). The U.S. fertilizer industry is cyclical in nature and subject to dramatic shifts in trade, as demonstrated by the relatively large decrease of export, import, and trade deficit values in 2009. Imports of the most commonly traded fertilizers—ammonia, urea, and potash (potassium chloride)—declined in the aggregate by approximately 55 percent in value and 49 percent in volume. Import prices for ammonia and urea, both nitrogen fertilizers, decreased by about 50 percent. U.S. exports of phosphate fertilizers, principally diammonium and monoammonium phosphate (DAP/MAP), fell by about 54 percent in value, largely as a result of a 57 percent decline in price.[31] Phosphate fertilizers account for the majority of U.S. fertilizer exports.

Domestic fertilizer consumption is driven to a large extent by planted crop acreage, fertilizer pricing, and economic conditions. After strong industry performance through mid-2008, reflected by all-time record high prices and industry profitability,[32] grain prices and wholesale fertilizer prices dropped significantly. Industry executives described the decline in U.S. fertilizer prices during the fourth quarter of 2008 as a "perfect storm" brought about by increased inventories and reduced consumption because of a late harvest season and because of the combined effect of the tightening of U.S. credit and the global economic downturn.[33] Other factors contributing to the decline in consumption in 2009 included an estimated decline of about 8 percent in planted corn acreage (the largest consumer of fertilizer nutrients)[34] and a decline in U.S. net farm income of about $30 billion, or 35 percent.[35] Moreover, the ripple effect of the global economic downturn that began in late 2008[36] curbed economic growth in nearly every country, resulting in continued downward pressure on fertilizer prices and consumption.[37]

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[30] This industry/commodity group includes finished nitrogen, phosphate, and potassium (potash) fertilizers, together with ammonia, a nitrogen fertilizer and feedstock for a large variety of other nitrogen fertilizers, other miscellaneous intermediate fertilizer process chemicals, and various mineral ores.

[31] Compiled from official statistics of the U.S. Department of Commerce.

[32] Green Markets. *Fertilizer Market Intelligence Weekly*, July–August 2009.

[33] Schnitkey, *Fertilizer Prices Likely to Decline in 2009*, January 23, 2009; Hergert, *Fertilizer Prices and Availability for 2009*, February 14, 2009. Energy price volatility in 2008 contributed to the U.S. and global financial slowdown that extended into 2009 and to the fluctuating prices of fertilizers.

[34] USDA, WAOB, *World Agricultural Supply and Demand Estimates*, March 10, 2010.

[35] Covey and McGath, *Farm Income Expected to Increase While Net Worth Declines in 2010*, March 10, 2010.

[36] Peters, Shane, and Torgerson, *What the 2008/2009 World Economic Crisis Means for Global Agricultural Trade*, August 2009.

[37] Schnitkey, *Fertilizer Prices Likely to Decline in 2009*, January 14, 2009; Heffer and Prud'homme, *Short-Term Fertilizer Outlook 2009–2010*, December 2009.

TABLE CH.4 Fertilizers (CH010): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	319	341	433	676	403	–273	–40.3
India	415	587	778	2,791	1,077	–1,714	–61.4
Trin & Tobago	(a)	(a)	1	2	3	1	81.3
Saudi Arabia	2	1	4	2	1	–2	–60.7
Brazil	242	256	414	692	458	–234	–33.9
Venezuela	8	24	22	20	12	–8	–38.9
Russia	1	1	1	(a)	(a)	(a)	–58.8
Mexico	326	390	390	464	262	–202	–43.5
China	354	226	115	186	160	–26	–14.1
Iraq	0	0	(a)	(a)	0	(a)	–100.0
All other	1,338	1,188	1,311	2,337	1,307	–1,030	–44.1
Total	3,005	3,014	3,470	7,171	3,684	–3,487	–48.6
EU-27	37	33	37	61	83	22	36.6
OPEC	31	64	70	87	47	–40	–46.5
Latin America	999	1,210	1,549	2,216	1,272	–944	–42.6
Asia	1,302	1,181	1,152	3,583	1,526	–2,057	–57.4
Sub-Saharan Africa	38	71	29	74	166	93	126.1
U.S. imports for consumption:							
Canada	2,470	2,422	2,947	5,529	3,263	–2,266	–41.0
India	1	1	1	27	2	–25	–94.0
Trin & Tobago	1,375	1,253	1,419	2,221	938	–1,283	–57.8
Saudi Arabia	628	801	953	1,488	654	–834	–56.1
Brazil	25	29	32	74	45	–29	–38.9
Venezuela	428	489	587	874	447	–427	–48.9
Russia	350	444	716	1,913	410	–1,504	–78.6
Mexico	37	59	73	284	33	–251	–88.3
China	60	74	229	398	107	–291	–73.2
Iraq	248	252	256	578	244	–334	–57.7
All other	1,816	1,699	2,294	3,098	1,230	–1,868	–60.3
Total	7,439	7,525	9,507	16,485	7,373	–9,112	–55.3
EU-27	454	327	518	626	213	–414	–66.1
OPEC	1,762	2,043	2,504	3,992	1,816	–2,175	–54.5
Latin America	1,944	1,922	2,182	3,587	1,591	–1,996	–55.6
Asia	186	131	300	487	140	–347	–71.3
Sub-Saharan Africa	8	4	9	30	44	14	45.1

See footnote(s) at end of table.

TABLE CH.4 Fertilizers (CH010): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–2,151	–2,082	–2,514	–4,853	–2,860	1,993	41.1
India	413	586	778	2,764	1,075	–1,688	–61.1
Trin & Tobago	–1,374	–1,253	–1,418	–2,219	–935	1,284	57.9
Saudi Arabia	–625	–799	–949	–1,485	–653	832	56.1
Brazil	217	227	382	618	412	–206	–33.3
Venezuela	–419	–465	–565	–854	–434	420	49.1
Russia	–349	–443	–716	–1,913	–409	1,503	78.6
Mexico	288	331	317	180	229	49	27.2
China	293	151	–114	–212	53	265	[b]
Iraq	–248	–252	–256	–578	–244	334	57.7
All other	–479	–512	–983	–762	77	838	[b]
Total	–4,434	–4,512	–6,037	–9,314	–3,689	5,625	60.4
EU-27	–417	–294	–480	–565	–129	436	77.1
OPEC	–1,731	–1,980	–2,434	–3,905	–1,770	2,135	54.7
Latin America	–944	–712	–633	–1,371	–320	1,051	76.7
Asia	1,116	1,050	852	3,096	1,386	–1,710	–55.2
Sub-Saharan Africa	30	67	19	44	123	79	181.9

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a] Less than $500,000.
[b] Not meaningful for purposes of comparison.

U.S. Exports

The value of U.S. exports of fertilizers fell sharply in 2009, declining by $3.5 billion (49 percent) from $7.2 billion in 2008 to $3.7 billion. This fall was largely due to price declines related to the global economic slowdown, reduced energy prices, slowing product prices, and growing inventories (table CH.4). Average fertilizer prices fell by about 45 percent, from around $590 per metric ton (mt) in 2008 to $320 in 2009, as volume decreased at a slower pace of 8 percent.

Ammonium phosphates accounted for roughly 70 percent of total 2009 U.S. fertilizer exports, by both value and volume. DAP accounted for about 50 percent of the total; MAP, 20 percent. The decline in value of U.S. exports of ammonium phosphate was largely the result of a 55 percent decrease in unit values.[38] After increasing to an all-time record high of $1,062 per mt in the third quarter of 2008, in part because of the volatility in energy prices that year, the unit value of U.S. DAP exports declined to an average of $330 per mt in 2009, largely because of the global economic downturn, increased inventories, and lower energy prices. India was the largest U.S. export market for DAP in 2009 (57 percent by value); Canada and Brazil were major markets for U.S. exports of MAP (50 percent).

U.S. potash and associated potassium fertilizers accounted for about 10 percent of total U.S. fertilizer exports in 2009.[39] Potash exports decreased by $39 million (16 percent) in 2009 by value and 47 percent in volume, largely because of the economic downturn. Brazil continued to be the major market for U.S. potash export trade by value, accounting for 64 percent of the total. Mexico, Costa Rica, Colombia, Canada, Peru, Switzerland, and Trinidad and Tobago, in decreasing order, accounted for another 25 percent of total U.S. exports of potash by value.[40]

U.S. Imports

The value of U.S. imports of fertilizers declined by $9.1 billion (55 percent) from $16.5 billion in 2008 to $7.4 billion in 2009, as volume declined by about 49 percent (table CH.4). The decrease in value and volume was related to a combination of factors, including price declines as inventories increased, reduced consumption because of a late harvest season, and the reduced buying power of farmers because of a decline in farm income and the economic downturn. In 2009, imports of the major nitrogen fertilizers, ammonia and urea, along with potash fertilizers—all commodities in which the United States annually has large trade deficits—accounted for about 88 percent of total finished fertilizer imports. The United States is self-sufficient in phosphate fertilizers, another major fertilizer nutrient.

Ammonia and urea nitrogen fertilizers in 2009 each accounted for about 25 percent of total U.S. finished fertilizer imports by value.[41] U.S. ammonia imports decreased in 2009 by $2.7 billion, or 66 percent, in value and 25 percent in volume. Urea followed a similar pattern, decreasing by $1.3 billion, or 50 percent, in value and 13 percent by volume.

[38] The United States is a major producer and exporter of phosphate fertilizers.

[39] The United States traditionally experiences large trade deficits in potash. Canada is the world's largest producer and exporter of potash; the world's largest reserves of potash are located in Saskatchewan.

[40] Compiled from official statistics of the U.S. Department of Commerce.

[41] The United States is a major producer and importer of ammonia and urea.

After peaking at or near record highs in the third quarter of 2008, the unit values (per mt) of ammonia and urea each declined by 42 percent in 2009.

In 2009, three traditional suppliers provided more than 90 percent of U.S. ammonia imports by value: Trinidad and Tobago (59 percent), Canada (25 percent), and Russia (8 percent). These countries, especially Trinidad and Tobago and Russia, possess abundant supplies of competitively priced natural gas feedstock used in both ammonia and urea production and typically enjoy favorable production cost advantages. Exporters in Trinidad and Tobago and Canada also have corporate ties with the U.S. market, as well as significant logistical advantages.[42] Urea was imported principally (41 percent) from Canada.

In 2009, potash imports accounted for 37 percent of U.S. finished fertilizer imports by value. The value of U.S. potash imports declined by $1.8 billion (46 percent) in 2009 and by volume imports declined by 63 percent as the unit values fluctuated widely. After peaking at $539 per mt of potash in the first quarter of 2009, unit values declined thereafter to a low of $419 per mt in the fourth quarter.[43]

A number of factors contributed to the fluctuation in potash prices. In July 2009, a representative of the Potash Corporation of Saskatchewan, Canada (PCS), the largest global producer, stated that retail prices for potash had hit record highs near $1,000 per ton in 2008, but gradually slipped as farmers reduced fertilizer applications during the economic downturn to save money. The representative said that potash consumption during the spring season of 2009 was thought to be the lowest in 40 years, with prices reaching a low of $460 per ton in July 2009 because of a Russian agreement with India which established the global benchmark import price. This price was considered to be quite favorable under the circumstances and well above the $214 per ton historical averages.[44] Sources at the U.S. Geological Survey in Reston, VA, reported that relatively high potash prices during the first half of 2009 prompted farmers to delay purchases until prices declined. World production of potash declined by more than 10 million tons (30 percent) in 2009, as companies temporarily closed mines to reduce stocks and waited for demand to increase.[45] Also in 2009, U.S. imports continued to be sourced primarily from Canada (93 percent), the largest global producer and holder of reserves, and Russia (5 percent).

[42] Industry representative, telephone interview by Commission staff, April 13, 2010.
[43] Compiled from official statistics of the U.S. Department of Agriculture.
[44] Ladurantaye, *The Fertilizer Depression Is Over*, July 24, 2009.
[45] Jasinski, "Potash," January 2010.

Natural Rubber[46]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $1.6 billion (56 percent) to $1.2 billion
U.S. exports: Increased by $2 million (5 percent) to $45 million
U.S. imports: Decreased by $1.6 billion (55 percent) to $1.3 billion

In 2009, the U.S. trade deficit in natural rubber declined by $1.6 billion (56 percent) as the global economic downturn caused a large decrease in international and U.S. automotive production and demand. This, in turn, led to a major decline in demand for the natural rubber (NR) used in original equipment (OE) tires for the entire gamut of vehicles, from motor car tires to heavy equipment tires;[47] demand for replacement tires also declined, but at a slower pace.[48] As a result, both sales and the price of NR fell significantly.

Natural rubber is a large-volume commodity rubber integral to the production of tires and allied products for vehicles because of its exceptional strength, toughness, and durability. In addition, liquid latex NR is also integral to the production of a large variety of dipped goods, including rubber gloves, prophylactics, medical supplies, and other products. Natural rubber is produced from the latex saps of rubber trees found only in certain tropical regions near the equator, particularly on large plantations in the Southeast Asian countries of Thailand, Indonesia, Malaysia, and Vietnam.[49] Other suppliers include Liberia, Côte d'Ivoire, and Italy. Consequently, the United States is must rely upon NR supplies from a limited number of producing countries.

U.S. Exports

Although natural rubber is not produced in the United States, 3.5 percent of U.S. imports in 2009 were re-exported by NR traders.[50] The value of U.S. exports of NR increased by $2 million (5 percent) to $45 million. Technically specified rubber was the leading product exported, principally to Mexico, followed by latex, shipped predominately to Hong Kong, Mexico, and Canada. Smoked sheets of NR ranked third in order of importance with primary shipments to Mexico and the Netherlands. Balata and other gum shipments were negligible.

[46] This industry/commodity group includes several forms of natural rubber (NR), including "technically specified NR," usually shipped in several grades of purified NR in compressed bales; "smoked sheets of NR," ribbed sheets of smoked (aged) NR designed to eliminate deleterious agents; "latex NR" forms, aqueous colloidal liquid NR that is typically 30–40 percent solids; and natural gums, including balata and other forms.

[47] Titan International, Inc., "Fourth Quarter and Year-End Results," February 25, 2010.

[48] Goodyear Tire and Rubber Company, *2009 Annual Report*, 2010, 6, 18.

[49] IRSG, *Rubber Statistical Bulletin*, January–March 2010.

[50] James McGraw (CEO, International Institute of Synthetic Rubber Producers, Inc.), telephone interview by Commission staff, April 22, 2010.

U.S. Imports

U.S. imports of NR decreased in value by $1.6 billion (55 percent) to $1.3 billion in 2009 (table CH.5); the volume of U.S. imports decreased by 33 percent 400 million kilograms (kg) to 0.7 billion kg; and import unit values declined by 33 percent to $1.81 in 2009. The decline in both volume and value occurred largely as a result of decreased consumption of NR in OE and replacement tires. In 2009, technically specified rubber accounted for 80 percent of total NR imports by value; smoked sheet accounted for 12 percent; latex for 7 percent; and balata and other gums for the remaining 1 percent. Indonesia was the principal U.S. import source of technically specified rubber, Thailand for smoked sheet, Liberia for latex, and Italy for balata and other gums.[51]

The decline in U.S. imports of NR in 2009 was primarily due to significant downward trends in shipment volumes of the major categories of motorized vehicle tires, including passenger car, light truck, larger truck and bus, and heavy equipment tires used in agriculture, construction, and mining. In the aggregate, OE tire shipment volume in the United States, excluding heavy equipment tires, declined 33 percent compared to 2008, while replacement tire shipment volume was down by 3 percent.[52] Goodyear, a major producer of passenger car and truck tires in the United States, reported that its North American unit's sales decreased by 8.4 million units, or by 12 percent, from the 2008 period—an income loss of $305 million—because of economic conditions and related declines in vehicle production.[53] The company's OE volume declined 36 percent, while replacement tire volume also declined but at a slower pace (3 percent), because many motorists chose to drive their current cars longer and extend tire mileage.[54]

Titan International, Inc., a major producer of heavy equipment tires in the United States, also reported a net loss for year-end 2009 ($24.6 million, compared to net income of $13.3 million in 2008) as sales declined because of the U.S. recession and global economic downturn. Many of Titan's major customers implemented extended shutdowns during the second half of 2009, and Titan, in turn, did the same at its own production facilities in order to address the lower demand. Representatives from Titan International attributed much of the decline to the stagnant construction sector and a rundown of tire inventories in the mining sector.[55]

[51] Compiled from official statistics of the U.S. Department of Commerce.
[52] Rubber Manufacturers Association, *Tire Shipment Report*, December 2009, 1.
[53] See the "Motor Vehicles" section in the "Transportation Equipment" chapter for more detailed information.
[54] Goodyear Tire and Rubber Company, *2009 Annual Report*, 2010, 18.
[55] Titan International, Inc., "Fourth Quarter and Year-End Results," February 25, 2010, 1–2.

TABLE CH.5 Natural rubber (CH036): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Indonesia	(a)	(a)	(a)	0	(a)	(a)	(b)
Thailand	2	2	1	1	1	(a)	–15.3
Liberia	2	0	(a)	0	0	0	0.0
Malaysia	3	6	5	8	9	2	23.1
Vietnam	(a)	(a)	0	(a)	2	2	2,295.1
Cote d`Ivoire	(a)	0	0	0	0	0	0.0
Guatemala	(a)	(a)	(a)	(a)	(a)	(a)	–36.7
Mexico	6	5	7	12	13	(a)	2.5
Nigeria	0	0	(a)	(a)	(a)	(a)	10,301.6
India	(a)	(a)	(a)	1	(a)	(a)	–14.9
All other	21	20	32	22	20	–2	–8.4
Total	34	33	44	44	45	2	4.6
EU-27	8	5	12	6	6	(a)	–5.6
OPEC	(a)	(a)	1	1	1	(a)	23.4
Latin America	7	8	13	16	17	(a)	2.0
Asia	12	15	15	15	18	3	18.8
Sub-Saharan Africa	2	(a)	(a)	(a)	(a)	(a)	181.0
U.S. imports for consumption:							
Indonesia	965	1,222	1,301	1,718	732	–986	–57.4
Thailand	324	409	477	630	294	–336	–53.3
Liberia	89	129	114	141	74	–66	–47.1
Malaysia	112	151	126	179	56	–123	–68.7
Vietnam	23	31	36	46	31	–15	–32.5
Cote d`Ivoire	4	8	11	30	22	–8	–27.3
Guatemala	2	4	8	30	19	–11	–37.2
Mexico	(a)	(a)	(a)	(a)	(a)	(a)	47.6
Nigeria	3	9	8	23	11	–12	–51.9
India	4	11	2	10	10	(a)	–0.9
All other	25	54	37	49	24	–26	–51.7
Total	1,552	2,029	2,119	2,857	1,274	–1,583	–55.4
EU-27	2	1	2	1	1	(a)	–23.7
OPEC	3	9	8	23	11	–12	–51.9
Latin America	3	4	9	31	19	–12	–37.6
Asia	1,441	1,845	1,964	2,609	1,132	–1,476	–56.6
Sub-Saharan Africa	104	157	143	214	117	–97	–45.4

See footnote(s) at end of table.

TABLE CH.5 Natural rubber (CH036): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Indonesia	–965	–1,222	–1,301	–1,718	–732	986	57.4
Thailand	–322	–407	–476	–629	–293	335	53.4
Liberia	–88	–129	–114	–141	–74	66	47.1
Malaysia	–109	–145	–121	–171	–47	125	72.8
Vietnam	–23	–31	–36	–46	–29	17	36.2
Cote d`Ivoire	–4	–8	–11	–30	–22	8	27.3
Guatemala	–2	–4	–8	–30	–19	11	37.2
Mexico	6	5	7	12	12	[a]	2.0
Nigeria	–3	–9	–8	–23	–11	12	53.3
India	–3	–11	–1	–10	–10	[a]	0.1
All other	–4	–35	–5	–27	–4	24	86.5
Total	–1,517	–1,996	–2,074	–2,813	–1,228	1,585	56.3
EU-27	7	4	10	5	5	[a]	–2.0
OPEC	–3	–9	–7	–22	–10	12	55.8
Latin America	4	4	4	–15	–3	12	81.4
Asia	–1,428	–1,830	–1,949	–2,593	–1,114	1,479	57.0
Sub-Saharan Africa	–102	–157	–143	–214	–117	98	45.5

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.
[b]Not meaningful for purposes of comparison.

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Electronic Products

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $8.3 billion (5 percent) to $168.5 billion
U.S. exports: Decreased by $31.9 billion (18 percent) to $143.0 billion
U.S. imports: Decreased by $40.2 billion (11 percent) to $311.4 billion

The long-standing trade deficit in electronic products decreased by $8.3 billion (5 percent) as U.S. imports declined more than U.S. exports on an absolute basis (table EL.1). Computers, peripherals, and parts; telecommunications equipment; and consumer electronics accounted for 65 percent of total U.S. imports of electronic products in 2009, and almost half (47 percent) of the decrease in imports (table EL.2). Semiconductors and integrated circuits; computers, peripherals, and parts; telecommunications equipment; and measuring, testing, and controlling equipment together accounted for 54 percent of total U.S. exports of electronic products in 2009, and for 76 percent of the decrease in exports.

U.S. Exports

U.S. exports decreased by $31.9 billion (18 percent) in 2009, reflecting declines in almost all industries. Industries experiencing the largest decreases were semiconductors and integrated circuits, down by $10.8 billion (30 percent); computers, peripherals, and parts, down by $6.8 billion (26 percent); telecommunications equipment, down by $3.7 billion (22 percent); and measuring, testing, and controlling equipment, down by $2.9 billion (13 percent).

U.S. exports of computers, peripherals, and parts declined because of the global economic downturn, as purchases of such goods are generally deferred during times of economic hardship. Furthermore, the decline in U.S. exports of semiconductors and integrated circuits is closely linked to the decline in demand for computers and peripherals, as semiconductors are used as inputs to computer production. In addition, the decline in exports of telecommunications equipment was in large part a result of the decreased demand for network equipment by companies during the economic downturn.

The medical goods market, accounting for 20 percent of total sector exports in 2009, was the only significant electronic products industry for which U.S. exports increased. The less than 1 percent increase was driven by exports to China; these grew by $200 million (20 percent) as the Chinese government attempted to reform the country's healthcare system and provide universal healthcare to its 1.3 billion citizens by 2011.[1]

[1] *China Daily*, "China Allocates 10b Yuan for Public Health Care Service," July 7, 2009.

TABLE EL.1 Electronic products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
China	7,952	11,113	11,433	12,375	11,133	–1,242	–10.0
Mexico	16,649	18,357	18,394	18,246	14,903	–3,343	–18.3
Japan	10,967	11,538	10,794	9,791	8,521	–1,269	–13.0
Canada	18,941	18,378	18,183	18,474	15,227	–3,247	–17.6
Malaysia	6,314	6,960	5,832	6,812	4,889	–1,923	–28.2
Korea	7,898	8,423	7,264	6,426	5,437	–988	–15.4
Taiwan	5,464	5,911	6,296	6,391	3,732	–2,658	–41.6
Germany	7,947	9,114	9,345	8,892	7,639	–1,253	–14.1
Singapore	6,039	6,035	6,658	6,512	4,709	–1,803	–27.7
United Kingdom	7,527	7,513	6,907	6,907	5,295	–1,611	–23.3
All other	59,854	66,038	71,395	73,984	61,469	–12,516	–16.9
Total	155,552	169,381	172,502	174,810	142,955	–31,855	–18.2
EU-27	39,009	41,767	43,632	43,636	35,455	–8,181	–18.7
OPEC	3,846	4,829	5,352	5,960	5,461	–499	–8.4
Latin America	27,591	31,773	33,877	35,510	29,102	–6,408	–18.0
Asia	59,420	65,108	63,345	62,934	50,163	–12,771	–20.3
Sub-Saharan Africa	1,009	1,232	1,275	1,451	1,285	–166	–11.4
U.S. imports for consumption:							
China	86,858	103,289	116,467	117,986	110,793	–7,192	–6.1
Mexico	40,221	47,107	53,999	53,228	50,325	–2,903	–5.5
Japan	31,512	30,838	31,542	30,734	22,916	–7,818	–25.4
Canada	12,480	11,958	12,141	11,830	9,626	–2,204	–18.6
Malaysia	27,554	29,401	25,265	22,608	17,142	–5,466	–24.2
Korea	15,382	14,332	15,076	17,222	15,662	–1,560	–9.1
Taiwan	16,333	18,431	18,034	16,561	14,221	–2,339	–14.1
Germany	9,969	10,926	11,960	12,259	9,717	–2,542	–20.7
Singapore	9,853	10,296	10,852	8,476	6,788	–1,688	–19.9
United Kingdom	5,413	5,532	5,701	5,812	4,585	–1,227	–21.1
All other	50,092	50,376	51,973	54,909	49,645	–5,264	–9.6
Total	305,667	332,485	353,009	351,622	311,419	–40,203	–11.4
EU-27	36,184	36,405	38,114	40,399	32,502	–7,897	–19.5
OPEC	34	74	35	33	25	–8	–25.2
Latin America	43,590	50,280	57,046	56,466	55,269	–1,197	–2.1
Asia	205,380	224,948	236,023	232,665	203,563	–29,102	–12.5
Sub-Saharan Africa	76	85	94	95	81	–14	–14.4

See footnote(s) at end of table.

TABLE EL.1 Electronic products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
China	–78,906	–92,176	–105,034	–105,611	–99,660	5,950	5.6
Mexico	–23,572	–28,750	–35,605	–34,981	–35,422	–441	–1.3
Japan	–20,545	–19,300	–20,748	–20,943	–14,395	6,548	31.3
Canada	6,461	6,419	6,041	6,644	5,601	–1,043	–15.7
Malaysia	–21,240	–22,441	–19,433	–15,795	–12,252	3,543	22.4
Korea	–7,485	–5,908	–7,812	–10,796	–10,225	571	5.3
Taiwan	–10,870	–12,520	–11,737	–10,170	–10,489	–319	–3.1
Germany	–2,022	–1,813	–2,614	–3,367	–2,078	1,289	38.3
Singapore	–3,813	–4,260	–4,194	–1,963	–2,079	–115	–5.9
United Kingdom	2,114	1,981	1,207	1,095	711	–384	–35.1
All other	9,763	15,662	19,423	19,076	11,824	–7,252	–38.0
Total	–150,115	–163,105	–180,507	–176,812	–168,465	8,348	4.7
EU-27	2,825	5,362	5,519	3,237	2,953	–284	–8.8
OPEC	3,812	4,756	5,317	5,926	5,436	–491	–8.3
Latin America	–15,999	–18,508	–23,169	–20,955	–26,167	–5,211	–24.9
Asia	–145,961	–159,840	–172,678	–169,732	–153,400	16,331	9.6
Sub-Saharan Africa	933	1,147	1,181	1,356	1,204	–152	–11.2

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

TABLE EL.2 Electronic products: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Medical goods (EL022)	21,114	23,443	25,446	28,415	28,647	232	0.8
Decreases:							
Semiconductors and integrated circuits (EL015)	34,195	37,227	35,487	35,809	25,058	–10,751	–30.0
Computers, peripherals, and parts (EL017)	28,862	29,969	28,051	26,554	19,770	–6,784	–25.5
Telecommunications equipment (EL002)	14,183	14,779	16,882	17,151	13,417	–3,734	–21.8
Measuring, testing, and controlling instruments (EL025)	17,399	19,669	20,963	22,195	19,251	–2,944	–13.3
All other	39,799	44,294	45,673	44,686	36,811	–7,875	–17.6
Total	155,552	169,381	172,502	174,810	142,955	–31,855	–18.2
U.S. IMPORTS:							
Decreases:							
Consumer electronics (EL003)	48,577	54,831	57,581	55,257	47,186	–8,071	–14.6
Computers, peripherals, and parts (EL017)	93,950	102,468	106,789	102,338	95,391	–6,947	–6.8
Semiconductors and integrated circuits (EL015)	25,425	27,022	26,259	25,298	21,190	–4,108	–16.2
Telecommunications equipment (EL002)	49,220	53,318	60,699	64,331	60,299	–4,033	–6.3
Measuring, testing, and controlling instruments (EL025)	15,359	16,573	18,678	18,764	14,912	–3,851	–20.5
All other	73,136	78,275	83,004	85,634	72,442	–13,192	–15.4
Total	305,667	332,485	353,009	351,622	311,419	–40,203	–11.4

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

Canada and Mexico continued as the largest export markets for U.S. electronic products, due to their proximity and membership in the North American Free Trade Agreement (NAFTA); they accounted for 21 percent of U.S. exports in 2009. Nevertheless, U.S.exports to Canada decreased $3.2 billion to $15.2 billion, while U.S. exports to Mexico declined $3.3 billion to $14.9 billion.

U.S. Imports

In 2009, U.S. imports declined in all product industries within the electronic products sector. The industries experiencing the largest decreases were consumer electronics, down by $8.1 billion (15 percent); computers, peripherals, and parts, down by $6.9 billion (7 percent); semiconductors and integrated circuits, down by $4.1 billion (16 percent); telecommunications equipment, down by $4.0 billion (6 percent); and measuring, testing, and controlling equipment, down by $3.9 billion (21 percent).

Consumer electronics (audio and video products) are generally considered to be discretionary purchases, so imports in this industry declined as the weak economy eroded demand.[2] Decreases in imports of still-image video cameras, television set-top boxes, and flat panel color television receivers with screen sizes over 13 inches accounted for half of the decrease in consumer electronics imports. Since computers and peripherals are also discretionary purchases, U.S. imports of these goods also declined in 2009. As noted above, semiconductors and integrated circuits are closely linked to computers and peripherals, so as trade in computer hardware declined, global trade in semiconductors and integrated circuits also fell.

Imports of telecommunications equipment declined, in large part, because of reduced demand for and investments in network equipment as businesses cut costs during the U.S. economic recession. The only product within telecommunications that registered significant growth was cellphones, imports of which rose by $1.8 billon (6 percent) and accounted for 54 percent of telecommunications equipment industry imports in 2009. The average unit price of cellphones rose by 23 percent because of the demand for smartphones incorporating the ability to browse the Internet; the price rise more than offset a reduction in the quantity of cellphones imported.

China and Mexico continued as the two largest sources of U.S. imports of electronic products, accounting for just over half of imports in 2009. Imports from both countries declined by about 6 percent each from 2008–09. The greatest decrease in U.S. imports from China was in the computers and peripherals, consumer electronics, and telecommunications industries, which declined by $1.7 billion, $1.7 billion, and $1.4 billion, respectively. The greatest decrease in U.S. imports from Mexico was consumer electronics, which declined by $3.5 billion (18 percent) to $16.2 billion. Imports of color television receivers over 13 inches in screen size, which decreased by $1.3 billion (9 percent) to $12.9 billion, and of television set top boxes, which decreased by $1.3 billion (75 percent) to $431 million, together accounted for 73 percent of the total decline in U.S. imports from Mexico of consumer electronics in 2009.

[2] Consumer Electronics Association, "CEA-CNET Consumer Sentiment Indexes," January 2009.

Semiconductors and Integrated Circuits[3]

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Change in 2009 from 2008:

U.S. trade surplus: Decreased by $6.6 billion (63 percent) to $3.9 billion
U.S. exports: Decreased by $10.8 billion (30 percent) to $25.1 billion
U.S. imports: Decreased by $4.1 billion (16 percent) to $21.2 billion

U.S. exports and imports of semiconductors and integrated circuits declined in 2009 due to sharply reduced demand from customers in industries heavily affected by the global economic downturn (table EL.3). The U.S. trade surplus declined by 63 percent in 2009, as exports fell more steeply than imports due, in part, to the ongoing shift in the industry toward manufacturing in Asia.[4]

Demand from many of the semiconductor industry's primary customers dropped substantially in 2009 due to the global economic downturn.[5] Among those primary customers are computer, wireless handset, consumer electronic, medical device, automotive, and energy equipment manufacturers. Many of these industries tend to be particularly affected by global economic conditions because consumers and businesses often delay purchases of these items during a recession.[6] As a result of decreased demand from downstream industries, semiconductor industry sales declined worldwide in 2009. The most challenging period was the first quarter of the year, which witnessed the most severe semiconductor sales decline on record.[7]

U.S. Exports

The $10.8 billion (30 percent) decline in U.S. exports of semiconductors and integrated circuits in 2009 reflected both the general weakness in demand for semiconductors worldwide and the ongoing shift of production away from the United States. Worldwide semiconductor industry sales contracted by 10 percent in 2009 due to the combined effects of a 7 percent decline in unit shipments and a 3 percent decline in the average selling price of integrated circuits.[8] Capacity utilization in the global semiconductor industry hit an all-time low in the first quarter of 2009;[9] in the United States, capacity utilization was just 37 percent in the first quarter.[10] This contraction was due to lower demand from all of the semiconductor industry's major customers, including the

[3] This industry/commodity group includes various types of semiconductors, of which electronic integrated circuits are the largest subset. Among integrated circuits, major products included in this group are processors and controllers, and memories. Semiconductors and integrated circuits are components in nearly all electronic devices.

[4] Currently, production of semiconductors is globally distributed, with major producers located in the United States, Europe, Japan, Korea, and Taiwan.

[5] EIU, "Semiconductor Market Update July 2009," August 4, 2009.

[6] Montevirgen, "Industry Surveys: Semiconductors," November 2009, 21.

[7] IC Insights, *The McClean Report 2010 Edition*, 2010, 2–44.

[8] Ibid., 2–49.

[9] Montevirgen, "Industry Surveys: Semiconductors," November 2009, 2.

[10] USDOC, Census, "Survey of Plant Capacity Utilization," n.d. (accessed April 12, 2010).

TABLE EL.3 Semiconductors and integrated circuits (EL015): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
China	2,676	4,633	4,880	5,305	4,164	–1,141	–21.5
Malaysia	4,602	5,101	4,296	5,341	3,551	–1,790	–33.5
Taiwan	3,103	3,369	3,886	4,430	2,174	–2,256	–50.9
Korea	4,251	4,503	3,302	2,828	2,387	–441	–15.6
Philippines	3,811	4,173	3,803	3,513	1,729	–1,784	–50.8
Japan	1,281	1,279	1,014	797	674	–123	–15.4
Mexico	2,307	2,338	2,053	1,988	1,536	–452	–22.7
Singapore	1,913	2,115	2,928	2,432	1,433	–999	–41.1
Israel	241	223	125	119	100	–19	–15.6
Canada	1,993	1,292	1,074	1,114	1,054	–59	–5.3
All other	8,018	8,201	8,127	7,943	6,256	–1,686	–21.2
Total	34,195	37,227	35,487	35,809	25,058	–10,751	–30.0
EU-27	3,167	3,659	3,590	3,500	2,342	–1,158	–33.1
OPEC	52	60	78	124	110	–14	–11.5
Latin America	3,489	3,793	3,427	3,607	2,956	–651	–18.1
Asia	25,017	27,994	26,956	27,012	18,233	–8,779	–32.5
Sub-Saharan Africa	58	55	36	28	27	–1	–3.6
U.S. imports for consumption:							
China	1,734	2,128	2,279	2,053	1,981	–71	–3.5
Malaysia	3,455	3,214	2,876	2,914	2,171	–743	–25.5
Taiwan	3,697	4,406	4,455	4,524	3,189	–1,335	–29.5
Korea	2,984	2,939	2,490	2,619	2,206	–414	–15.8
Philippines	2,387	2,452	2,149	1,965	1,588	–377	–19.2
Japan	2,788	3,264	3,393	3,336	2,331	–1,005	–30.1
Mexico	750	831	819	777	866	88	11.4
Singapore	1,483	1,925	1,732	1,367	940	–426	–31.2
Israel	265	391	141	76	2,106	2,030	2,677.8
Canada	1,628	1,039	915	839	873	34	4.1
All other	4,253	4,432	5,010	4,828	2,937	–1,890	–39.2
Total	25,425	27,022	26,259	25,298	21,190	–4,108	–16.2
EU-27	2,540	2,639	2,985	2,918	1,652	–1,266	–43.4
OPEC	1	1	1	(a)	(a)	(a)	–27.3
Latin America	1,095	1,097	1,038	1,006	993	–13	–1.3
Asia	19,612	21,611	20,954	20,168	15,388	–4,780	–23.7
Sub-Saharan Africa	2	2	3	1	1	(a)	10.8

See footnote(s) at end of table.

TABLE EL.3 Semiconductors and integrated circuits (EL015): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
China	941	2,505	2,600	3,252	2,182	–1,070	–32.9
Malaysia	1,146	1,887	1,420	2,427	1,380	–1,048	–43.2
Taiwan	–594	–1,037	–569	–95	–1,015	–921	–973.5
Korea	1,267	1,564	812	209	181	–28	–13.3
Philippines	1,424	1,721	1,653	1,548	141	–1,407	–90.9
Japan	–1,507	–1,985	–2,379	–2,540	–1,657	882	34.7
Mexico	1,557	1,506	1,233	1,211	670	–540	–44.6
Singapore	430	190	1,196	1,065	492	–573	–53.8
Israel	–23	–168	–16	43	–2,005	–2,049	([b])
Canada	364	253	160	275	181	–94	–34.0
All other	3,765	3,768	3,117	3,115	3,319	204	6.5
Total	8,770	10,205	9,227	10,511	3,869	–6,642	–63.2
EU-27	626	1,021	605	582	690	108	18.6
OPEC	51	59	78	123	109	–14	–11.4
Latin America	2,394	2,697	2,389	2,601	1,963	–638	–24.5
Asia	5,405	6,383	6,002	6,844	2,845	–3,999	–58.4
Sub-Saharan Africa	56	54	33	27	26	–1	–4.2

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.
[b]Not meaningful for purposes of comparison.

computer, telecommunications, consumer electronics, and automotive industries. Production levels in industries that buy semiconductors fell by an aggregate 11 percent between 2008 and 2009.[11] The only end market for semiconductors that grew in 2009 was the (relatively small) government and military equipment market.[12]

Also contributing to the decline in U.S. exports was the continuing increase in Asia's share of global semiconductor production. As manufacturing of electronics containing semiconductors has moved to Asia, the semiconductor industry has largely followed in order to be closer to its customers.[13] This has led to the increasing prevalence of fabless and "fab-lite" semiconductor companies in the United States. Fabless companies are those that do not produce the wafers they design, instead contracting with foundries, often overseas, to perform this activity. "Fab-lite" firms contract with foundries for a portion of their wafer production. Half of worldwide industry revenues are expected to come from these types of design and sales firms in 2010, up from only 15 percent in 2001.[14] U.S. firms continued to shift toward fabless and "fab-lite" business models in 2009.[15] The main beneficiaries of this shift to date have been Taiwanese foundries, but in the past several years, investment has increasingly been moving to China.[16] While China's share of global semiconductor production remains fairly small at present, it is becoming an attractive location for the major producers in the industry, including U.S. firms.[17] For example, Intel, which does not outsource its wafer production, plans to open its first Asian wafer fabrication facility in China later in 2010.[18]

In general, the semiconductor manufacturing activities that remain in the United States tend to yield products with higher unit values. This is likely due to both the product mix in which the U.S. specializes and to the fixed costs involved in relocating capital-intensive activities such as wafer fabrication.[19] The higher unit values of U.S. exports are also a factor in the sharper decline in the value of exports as compared with imports, in 2009, as the reductions in the volume exported resulted in larger value declines.

U.S. Imports

U.S. imports of semiconductors and integrated circuits from 7 of the 10 leading import sources[20] declined in 2009 due to the ongoing effects of the U.S. recession,[21] resulting in an overall $4.1 billion (16 percent) decline in U.S. imports of semiconductors. As U.S. customers of semiconductors in many industries continued to experience weak demand, they cut production, which in turn lowered their demand for semiconductor products. Semiconductor customers in transportation equipment industries faced a particularly

[11] IC Insights, *The McClean Report 2010 Edition*, 2010, 2–20.
[12] Ibid.
[13] IC Insights, *The McClean Report 2010 Edition*, 2010, 2–57.
[14] Montevirgen, "Industry Surveys: Semiconductors," November 2009, 19.
[15] IC Insights, *The McClean Report 2010 Edition*, 2010, 3–10.
[16] Montevirgen, "Industry Surveys: Semiconductors," November 2009, 13.
[17] KPMG and SIA, *The Road to Recovery in the Global Semiconductor Industry*, December 2009.
[18] Industry official, interview by Commission staff, Singapore, March 5, 2010.
[19] Byrne, Kovak, and Michaels, "Offshoring and Price Measurement in the Semiconductor Industry," April 2010.
[20] The seven leading import sources that registered declines in 2009 were: Taiwan, Japan, Korea, Malaysia, China, the Philippines, and Singapore.
[21] For data on the U.S. recession, see Robert E. Hall, "Program Report: Economic Fluctuations and Growth," *NBER Reporter Online*, 2010 no. 1.

challenging year in 2009. The U.S. automotive industry, for example, cut production in response to a 14 percent decline in worldwide demand for vehicles.[22]

The United States did increase its imports of semiconductors and integrated circuits from three countries in 2009. Imports from Mexico and Canada increased only slightly, but imports from Israel grew dramatically; after averaging $218 million annually from 2005 through 2008, imports of semiconductors from Israel grew to over $2 billion in 2009. In fact, the value of imports from Israel in 2009 was nearly on par with imports from established leading suppliers such as Korea and Japan.[23] The increase in imports from Israel was due primarily to location decisions on the part of the world's largest semiconductor company, Intel, which ramped up production at a new wafer fabrication facility in southern Israel in 2009.[24]

[22] EIU, "World: Automotive Outlook," January 8, 2010.

[23] U.S. imports of semiconductors from Korea and Japan in 2009 were $2.2 billion and $2.3 billion, respectively.

[24] Ackerman, "Intel's Israel Unit Exports Advanced 145% in 2009," February 8, 2010.

Medical Goods[25]

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Change in 2009 from 2008:

U.S. trade surplus: Increased by $1.8 billion (207 percent) to $2.7 billion
U.S. exports: Increased by $232 million (1 percent) to $28.6 billion
U.S. imports: Decreased by $1.6 billion (6 percent) to $25.9 billion

A slight increase in U.S. exports and a decrease in U.S. imports of medical goods in 2009 resulted in a $1.8 billion (207 percent) increase in the U.S. trade surplus for this commodity group (table EL.4). U.S. imports fell principally due to decreased demand for medical goods stemming from U.S. consumers delaying or foregoing healthcare procedures, coupled with the growing incidence of healthcare providers implementing cost-containment measures. U.S. exports of medical goods increased primarily as a result of heightened demand in China. In addition, the markets receiving U.S. medical goods have shifted, as the Netherlands has emerged as a distribution hub for Europe's large medical devices market.

U.S. Exports

U.S. exports of medical goods increased slightly by $232 million (1 percent) to $28.6 billion in 2009 (table EL.4). This growth was largely driven by exports to China, which increased by $200 million (20 percent) to $1.2 billion. During the past year, China has gone from being the 11th leading market for U.S. medical goods to the 6th.[26] This growth reflects the Chinese government's attempts to reform the country's healthcare system, allocating $1.5 billion towards the sector in 2009[27]—and proposing to spend $125 billion on it over the next three years[28]—with much of this money aimed at increasing the availability and accessibility of various healthcare services in China.[29] As a result, in 2009, U.S. exports to China rose across a wide variety of medical goods, led by a $62 million (26 percent) increase in diagnostic equipment exports, a $38 million (45 percent) gain in catheter exports, a $28 million (14 percent) growth in x-ray machines and related equipment, a $7 million (65 percent) rise in orthopedic equipment, and a $6 million (27 percent) increase in exports of syringes.

The expansion of U.S. medical goods exports was also fueled by a $184 million (6 percent) increase in shipments to the Netherlands. Gains in medical, surgical, and dental equipment ($38 million or 15 percent); artificial joints and related parts ($43 million or 91 percent); and orthopedic equipment ($24 million or 30 percent) accounted for the majority of the growth in exports of this industry group. Transfer ports

[25] This industry/commodity group includes diagnostic equipment, electrocardiographs, orthopedic devices, hearing aids, syringes, x-rays, and related parts.
[26] Official Statistics of the U.S. Department of Commerce.
[27] *China Daily*, "China Allocates 10b Yuan for Public Health Care Service," July 7, 2009.
[28] *Economist*, "Will Patients Be Rewarded?" April 16, 2009.
[29] *China Daily*, "China Outlines Plans on Health Care Reform in 2009," July 24, 2009.

TABLE EL4 Medical goods (EL022): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Mexico	1,203	1,379	1,341	1,593	1,539	–54	–3.4
Germany	1,717	2,060	2,235	2,380	2,284	–95	–4.0
Ireland	1,344	980	1,126	931	918	–13	–1.4
Japan	2,628	2,731	2,834	3,073	3,111	39	1.3
Netherlands	2,284	2,693	2,599	3,197	3,382	184	5.8
China	594	633	793	1,000	1,200	200	20.0
Canada	1,748	1,906	2,069	2,240	2,167	–73	–3.3
Switzerland	534	651	791	859	864	5	0.6
Belgium	782	1,052	1,356	1,874	1,972	99	5.3
France	986	1,077	1,143	1,245	1,150	–96	–7.7
All other	7,294	8,281	9,159	10,023	10,060	37	0.4
Total	21,114	23,443	25,446	28,415	28,647	232	0.8
EU-27	10,033	11,114	11,887	13,143	13,241	98	0.7
OPEC	352	437	537	745	749	4	0.6
Latin America	2,294	2,666	2,952	3,600	3,385	–216	–6.0
Asia	4,862	5,175	5,647	6,196	6,580	384	6.2
Sub-Saharan Africa	155	165	171	162	162	1	0.3
U.S. imports for consumption:							
Mexico	3,077	3,515	4,101	4,459	4,558	99	2.2
Germany	3,314	3,641	4,030	4,068	3,697	–371	–9.1
Ireland	3,707	3,471	3,480	4,659	4,138	–521	–11.2
Japan	1,696	1,695	1,708	1,747	1,651	–96	–5.5
Netherlands	608	610	657	705	566	–139	–19.7
China	1,006	1,356	1,622	1,976	2,061	85	4.3
Canada	574	647	595	565	485	–80	–14.2
Switzerland	1,071	1,074	1,158	1,449	1,512	63	4.3
Belgium	57	26	32	67	64	–4	–5.6
France	639	695	810	886	717	–169	–19.1
All other	5,198	5,842	6,684	6,949	6,479	–470	–6.8
Total	20,947	22,573	24,878	27,531	25,928	–1,603	–5.8
EU-27	10,250	10,662	11,499	12,915	11,378	–1,537	–11.9
OPEC	2	1	1	1	2	(a)	23.6
Latin America	4,058	4,557	5,213	5,784	5,923	138	2.4
Asia	4,055	4,440	5,061	5,418	5,358	–60	–1.1
Sub-Saharan Africa	15	17	15	15	10	–5	–33.3

See footnote(s) at end of table.

TABLE EL.4 Medical goods (EL022): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Mexico	–1,874	–2,137	–2,760	–2,865	–3,019	–154	–5.4
Germany	–1,597	–1,582	–1,796	–1,688	–1,412	276	16.3
Ireland	–2,364	–2,491	–2,354	–3,728	–3,220	508	13.6
Japan	932	1,036	1,127	1,325	1,460	135	10.2
Netherlands	1,676	2,083	1,942	2,493	2,816	323	13.0
China	–412	–723	–830	–977	–861	115	11.8
Canada	1,174	1,259	1,474	1,675	1,682	7	0.4
Switzerland	–537	–423	–366	–590	–647	–58	–9.8
Belgium	725	1,027	1,324	1,806	1,909	102	5.7
France	347	382	333	359	432	73	20.5
All other	2,095	2,439	2,475	3,073	3,581	507	16.5
Total	166	871	569	884	2,719	1,835	207.4
EU-27	–217	452	387	228	1,863	1,635	716.6
OPEC	350	436	536	743	747	4	0.5
Latin America	–1,764	–1,891	–2,261	–2,184	–2,538	–354	–16.2
Asia	807	735	586	778	1,222	444	57.0
Sub-Saharan Africa	140	148	155	147	152	6	3.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.

in Rotterdam and Antwerp have enabled the Netherlands to serve as a key medical equipment distribution center for U.S. companies exporting to Europe.[30] Therefore, increased U.S. exports to the Netherlands do not necessarily reflect changes in the Dutch market, as evidenced by the country's 9 percent reduction in healthcare spending in 2009.[31]

U.S. Imports

U.S. imports of medical goods declined by $1.6 billion (6 percent) to $25.9 billion in 2009 (table EL.4). The reduction in U.S. imports of medical goods, the first reported decline in 20 years,[32] resulted primarily from significant retrenchments in U.S. consumer spending on elective procedures and other healthcare services.[33] High unemployment, which averaged 9.3 percent in 2009, resulted in the loss of health insurance for many, causing them to delay or forego health-related these expenditures.[34] Additionally, healthcare providers in the United States reduced spending on medical technology amid pressures to contain costs during the recession.[35]

Reductions in U.S. healthcare spending are reflected in contractions of imports of medical goods across nearly every major category, including artificial body parts ($575 million or 22 percent), x-ray machines and related equipment ($522 million or 16 percent), and medical, surgical, and dental instruments ($252 million or 6 percent). Moreover, the decline in U.S. healthcare consumption is evidenced by the $892 million (10 percent) combined reduction in imports from Germany and Ireland—two of the United States' leading suppliers of x-ray equipment and medical, surgical, and dental instruments.

[30] USITC, "Shifts in U.S. Merchandise Trade 2008: Electronic Products," July 2009.
[31] EIU, "Netherlands: Healthcare and Pharmaceuticals Report," October 23, 2009.
[32] U.S. imports of medical devices had increased every year since 1990. GTIS, Global Trade Atlas (accessed March 16, 2010).
[33] Including, for example, hip replacements, LASIK surgeries, diabetes testing, and dental procedures. *Medical Product Outsourcing*, "Still on Target," July/August 2009.
[34] USDOL, "Labor Force Statistics," Bureau of Labor Statistics Database (accessed April 13, 2010); EIU, "United States of America: Healthcare and Pharmaceuticals," February 1, 2010.
[35] *Medical Product Outsourcing*, "Still on Target," July/August 2009.

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Energy-related Products

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $189.5 billion (49 percent) to $201.1 billion
U.S. exports: Decreased by $21.9 billion (27 percent) to $59.8 billion
U.S. imports: Decreased by $211.4 billion (45 percent) to $260.9 billion

The U.S. trade deficit in the energy-related products sector decreased by 49 percent in 2009, due to falling prices and import quantity declines resulting from increased domestic production (table EP.1).[1] This was primarily because of decreasing prices for crude petroleum, which is the feedstock for the production of refined petroleum products. Most other energy-related products (natural gas, coal, and electricity) tended to follow the trends in crude petroleum prices.

Crude petroleum

In recent decades, the United States has maintained a large and growing trade deficit with respect to crude petroleum; however, in 2009, the trade deficit decreased by 45 percent to $149.2 billion, primarily because of the drop in crude petroleum prices.[2] World prices for crude petroleum decreased from an average of $98 per barrel during 2008 to an average of $62 per barrel during 2009.[3] Crude petroleum prices, which had reached record high levels in July 2008, fell rapidly during the rest of 2008 and into 2009, reaching a low of $35 per barrel in January 2009, a level not witnessed since early 2004. This drop in price was the result of several factors, including the global economic downturn; decreased U.S. demand, which fell by about 6 percent during 2009; increased U.S. production; and relatively high inventories.[4]

While the Organization of Petroleum Exporting Countries (OPEC) cut production by 2.2 million barrels per day, U.S. and North Sea production increased during the second and third quarters of 2009, resulting in an overall increase of 1.0 million barrels per day available on the world market.[5] As a result of the increase in available crude petroleum and the lower demand caused by the economic downturn, prices stabilized at lower levels.

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[1] The quantity and price data presented in this chapter are derived primarily from official statistics of the U.S. Department of Energy.

[2] The quantity of U.S. net imports of crude petroleum also fell in 2009, from an average of 9.75 million barrels per day in 2008 to 9.02 million barrels in 2009.

[3] World prices for crude petroleum in 2008 ranged from a low of $59 per barrel on average during the fourth quarter to a high of $126 per barrel on average during the second quarter. In 2009, the average per barrel price for crude petroleum ranged from a low of $42 during the first quarter to a high of $77 during the fourth quarter on average. During the first week of January 2009, crude petroleum reached a low of $35 per barrel on average.

[4] The quantity and price data presented in this chapter are derived primarily from official statistics of the U.S. Department of Energy.

[5] The increase in production by members of the Organization for Economic Cooperation and Development (OECD) was the first increase since 2004.

TABLE EP.1 Energy–related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	8,487	8,953	10,563	16,772	10,127	–6,644	–39.6
Mexico	5,508	5,925	7,015	11,329	7,948	–3,381	–29.8
Venezuela	202	636	644	637	797	160	25.1
Nigeria	38	120	84	448	325	–123	–27.4
Saudi Arabia	57	49	69	94	70	–23	–25.1
Russia	81	48	84	116	103	–13	–11.1
Angola	2	3	7	9	47	38	447.7
Algeria	30	47	191	54	86	32	58.5
United Kingdom	834	1,126	732	1,313	1,922	609	46.4
Netherlands	1,061	2,148	2,920	6,256	5,304	–951	–15.2
All other	13,593	19,944	24,365	44,710	33,097	–11,613	–26.0
Total	29,892	38,999	46,674	81,737	59,827	–21,910	–26.8
EU-27	4,119	6,896	7,449	15,653	12,581	–3,072	–19.6
OPEC	742	1,822	1,732	1,921	2,652	731	38.0
Latin America	11,644	15,311	19,151	31,722	23,444	–8,278	–26.1
Asia	4,117	5,258	6,014	8,978	8,146	–833	–9.3
Sub-Saharan Africa	233	548	667	1,538	1,166	–372	–24.2
U.S. imports for consumption:							
Canada	66,116	73,748	79,138	111,953	64,367	–47,587	–42.5
Mexico	25,029	32,116	33,549	42,626	24,214	–18,412	–43.2
Venezuela	28,016	32,598	34,031	45,277	25,044	–20,233	–44.7
Nigeria	23,713	27,800	32,431	38,028	19,136	–18,892	–49.7
Saudi Arabia	23,268	28,154	31,381	48,651	18,916	–29,734	–61.1
Russia	8,471	10,195	11,234	17,313	12,768	–4,546	–26.3
Angola	8,393	11,467	12,148	18,618	9,225	–9,393	–50.5
Algeria	8,517	12,062	14,325	15,994	9,122	–6,872	–43.0
United Kingdom	8,298	7,478	8,561	9,598	6,977	–2,620	–27.3
Netherlands	3,759	5,218	4,720	6,606	3,458	–3,149	–47.7
All other	69,616	78,331	83,310	117,661	67,650	–50,011	–42.5
Total	273,197	319,168	344,829	472,325	260,878	–211,448	–44.8
EU-27	22,623	26,057	28,011	33,956	18,970	–14,987	–44.1
OPEC	108,315	132,176	144,043	201,637	98,097	–103,540	–51.3
Latin America	77,970	90,843	92,898	124,181	73,035	–51,146	–41.2
Asia	5,348	7,311	8,178	7,055	4,223	–2,832	–40.1
Sub-Saharan Africa	40,327	47,814	54,238	71,727	37,674	–34,053	–47.5

See footnote(s) at end of table.

TABLE EP.1 Energy–related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–57,629	–64,796	–68,575	–95,182	–54,239	40,943	43.0
Mexico	–19,522	–26,191	–26,534	–31,297	–16,267	15,031	48.0
Venezuela	–27,814	–31,962	–33,387	–44,640	–24,248	20,392	45.7
Nigeria	–23,675	–27,679	–32,347	–37,579	–18,811	18,769	49.9
Saudi Arabia	–23,211	–28,106	–31,312	–48,557	–18,846	29,711	61.2
Russia	–8,390	–10,147	–11,150	–17,197	–12,664	4,533	26.4
Angola	–8,391	–11,464	–12,141	–18,609	–9,178	9,431	50.7
Algeria	–8,487	–12,015	–14,135	–15,940	–9,036	6,903	43.3
United Kingdom	–7,464	–6,352	–7,829	–8,285	–5,055	3,230	39.0
Netherlands	–2,698	–3,070	–1,800	–350	1,847	2,197	[a]
All other	–56,022	–58,388	–58,945	–72,951	–34,553	38,398	52.6
Total	–243,304	–280,170	–298,155	–390,588	–201,051	189,538	48.5
EU-27	–18,504	–19,161	–20,563	–18,303	–6,388	11,915	65.1
OPEC	–107,573	–130,354	–142,311	–199,716	–95,445	104,271	52.2
Latin America	–66,326	–75,532	–73,748	–92,459	–49,591	42,868	46.4
Asia	–1,230	–2,053	–2,164	1,923	3,923	1,999	104.0
Sub-Saharan Africa	–40,094	–47,266	–53,571	–70,188	–36,508	33,680	48.0

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Not meaningful for purposes of comparison.

Petroleum products[6]

The trade deficit in petroleum products decreased by 55 percent to $30.5 billion in 2009 as a result of falling prices coupled with a moderate decline in U.S. consumption, which fell from 7.1 billion barrels in 2008 to 6.8 billion barrels in 2009 (or 4 percent). Like crude petroleum and natural gas, overall prices for most petroleum products that are produced by refining crude petroleum decreased in 2009. The average refiner acquisition cost of crude petroleum (the price that refiners pay for a barrel of crude petroleum) decreased from an all-time high of $94.74 per barrel in 2008 to $59.20 per barrel in 2009.

Natural gas

The U.S. trade deficit in natural gas decreased by 53 percent to $21.6 billion in 2009. Like the price of crude petroleum, the average natural gas city gate[7] price also decreased sharply from $9.18 per thousand cubic feet in 2008 to $6.47 per thousand cubic feet in 2009. Natural gas prices decreased as a result of a warmer-than-expected winter in 2008–09 and high inventories of natural gas stockpiled in early 2009.

Other energy-related products

The trade surplus for coal increased by $2.8 billion to $4.0 billion in 2009. Coal prices showed the smallest decline for energy products, falling from $69 per metric ton in 2008 to $63 per metric ton in 2009. This relatively small decrease reflects the fact that coal prices are generally set via long-term contracts. The trade deficit for electricity improved, decreasing by 34 percent to $1.5 billion in 2009. Electricity prices also declined, based on the price declines for the feedstocks used for electricity generation.

U.S. Exports

The value of U.S. exports of energy-related products decreased by 27 percent to $59.8 billion in 2009. Canada and Mexico continued to be the primary markets for U.S. exports. Most of the decrease is attributed to falling prices (table EP.1).

Crude petroleum

U.S. exports of crude petroleum, which accounted for less than 0.5 percent of domestic production in 2009, are prohibited, with certain exceptions.[8] In terms of quantity, U.S. exports of crude petroleum increased from 10.6 million barrels in 2008 to 15.0 million barrels in 2009. During the same period, the value of U.S. exports decreased from $2.3 billion in

[6] Petroleum products are those products obtained from processing crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

[7] The city gate price is the point or measuring station at which a gas distribution company receives natural gas from a pipeline company or transmission system.

[8] U.S. exports of crude petroleum have been prohibited since 1973, except as approved by the U.S. government. Canada has been the only consistent market for these exports, which are part of a commercial exchange agreement between U.S. and Canadian refiners that has been approved by the secretary of the Department of Energy. In May 1996, the president determined that allowing exports of Alaskan North Slope (ANS) crude was in the national interest, thus ending the 23-year ban on ANS crude exports. However, the president can impose new export restrictions in the event of severe crude petroleum supply shortages.

2008 to $1.6 billion in 2009 due to price declines. Canada, which received 100 percent of the of U.S. crude petroleum exports in 2009, has been the only consistent market for these exports, with the level of exports fluctuating based on refinery needs on either side of the border.

Petroleum products

The value of U.S. exports of petroleum products decreased by $16.7 billion to $42 billion in 2009 (table EP.2). In terms of quantity, however, U.S. exports of these products increased from 647.1 million barrels in 2008 to 722.7 million barrels in 2009. The volume of U.S. exports of petroleum products is relatively small, accounting for only about 7 percent of total U.S. production in 2009. The primary markets for U.S. exports are Mexico and Canada, which together account for about 40 percent of the total quantity of exports. These exports generally fluctuate based on refinery output and maintenance schedules on either side of the border.[9] The primary petroleum products exported in 2009 were distillate and residual fuel oils, which are used primarily for home and industrial heating and other industrial purposes.

Other markets for petroleum products include the Netherlands, which is the shipping point for U.S. exports of distillate and residual fuel oils to Western Europe; Venezuela, which purchases U.S.-produced petroleum coke for industrial fuel use; the United Kingdom, which purchases U.S. exports of specialty lubricants and greases for drilling and other industrial applications; and Singapore, which is a shipping point for exports to the Pacific Rim. There were also small shipments of petroleum products to Russia, Saudi Arabia, Algeria, and Iraq in 2009. These exports were primarily specialty lubricating oils and greases used in the process of drilling.

Natural gas

U.S. exports of natural gas (pipeline and liquefied natural gas (LNG) fell from $6.9 billion in 2008 to $5.3 billion (24 percent) in 2009, primarily because of lower prices in 2009. The price decrease is largely attributed to higher than usual inventories combined with increased U.S. production during 2009. The quantity of natural gas exports (pipeline and LNG combined) decreased slightly from 1.0 trillion cubic feet in 2008 to 943 billion cubic feet in 2009.

U.S. exports of pipeline natural gas increased from 590.5 billion cubic feet in 2008 to 698.7 billion cubic feet in 2009. However, the price of U.S. exports decreased sharply, falling from $8.65 per thousand cubic feet in 2008 to $4.34 per thousand cubic feet in 2009. Canada remains the primary U.S. export market, as most of the U.S. trade in natural gas is via pipelines shared with Canada and, to a lesser extent, Mexico; trade fluctuates from year to year based on market demands along the pipeline. U.S. exports to Canada have experienced an upward trend in recent years as several new and larger pipelines became operational in 2008. These were designed to carry natural gas to Western Canada, where natural gas production has been difficult due to climate and terrain.[10] In addition, some of the increase in U.S. exports is destined for storage facilities in and around Ontario.[11]

[9] For example, if a refinery in Canada initiates routine maintenance or product turnaround, U.S. exports of petroleum products could increase to supplement the decrease in Canadian production.

[10] Because of the level of trade along the 22 existing border crossing points for U.S.-Canadian pipelines, some experts feel that the United States and Canada are actually one market.

[11] Statistics Canada, "International Trade Statistics," 2009.

TABLE EP.2 Energy–related products: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Decreases:							
Petroleum products (EP005)	18,302	26,407	31,484	58,765	42,048	–16,717	–28.4
Coal, coke, and related chemical products (EP003)	4,318	5,179	5,877	10,255	8,079	–2,176	–21.2
Natural gas and components (EP006)	4,045	3,688	4,905	6,893	5,270	–1,623	–23.5
All other	3,227	3,726	4,409	5,824	4,430	–1,393	–23.9
Total	29,892	38,999	46,674	81,737	59,827	–21,910	–26.8
U.S. IMPORTS:							
Decreases:							
Crude petroleum (EP004)	137,331	171,243	186,476	274,950	150,809	–124,141	–45.2
Petroleum products (EP005)	77,684	89,448	98,577	126,441	72,581	–53,860	–42.6
Natural gas and components (EP006)	46,211	45,118	44,910	52,757	26,840	–25,917	–49.1
All other	11,970	13,359	14,866	18,177	10,647	–7,530	–41.4
Total	273,197	319,168	344,829	472,325	260,878	–211,448	–44.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

By contrast, U.S. exports of LNG, primarily to Japan and Korea, increased in value by approximately 84 percent, but decreased in quantity by 46 percent during 2009. The price of LNG increased from $7.68 per thousand cubic feet in 2008 to $8.30 per thousand cubic feet in 2009, in response to rising global demand for the product as consuming countries attempted to diversify their energy sources away from crude petroleum.

Other energy-related products

U.S. exports of coal decreased in value by 21 percent between 2008 and 2009 to $8.1 billion; the quantity of exports also decreased, from 81.5 million short tons in 2008 to 59.1 million short tons in 2009. The decline is attributable in part to the fact that U.S. exports of coal in 2008 were unusually high to in response to China's increased domestic consumption and resulting reduction of coal exports to the world market, and also because demand for both metallurgical coals (used for industrial purposes) and steam coals (used for heating) increased in Europe as crude petroleum prices rose and natural gas deliveries from Russia were halted. U.S. export levels in 2009 returned to the average level witnessed during most of the 2000s. U.S. exports of coal to Canada showed the single largest decline, as a mild winter resulted in lower demand for steam coals. Also, lower prices for crude petroleum and natural gas made those energy sources more attractive to Canadian consumers.

The value of U.S. exports of electricity decreased by 59 percent to $575 million in 2009; the quantity of U.S. exports decreased by 22 percent. Canada is the only market for U.S. exports of electricity, as the two nations share an interconnected grid across the border. The value decrease is attributable to the drop in prices for natural gas and coal, the primary fossil fuels used to power most electricity generating plants. The quantity of U.S. exports to Canada annually fluctuates across the border as one side or the other of the grid is down for maintenance.

U.S. Imports

In 2009, U.S. imports of energy-related products decreased by 45 percent to $260.9 billion. Both price and quantity decreases contributed to these declines. Canada remained the leading source of U.S. imports of energy-related products, with Venezuela, Mexico, Nigeria, and Saudi Arabia being the other major U.S. import suppliers. Other minor U.S. import sources included Russia, Angola, Algeria, the United Kingdom, and the Netherlands. Crude petroleum is the primary energy product imported, making up 58 percent of total sector imports; petroleum products account for 28 percent, natural gas for 10 percent, and the remaining is accounted for primarily by coal and electricity.

Crude petroleum

The United States is the world's largest net importer of crude petroleum, the feedstock for the production of refined products.[12] The value of U.S. imports of crude petroleum decreased by 45 percent to $150.8 billion in 2009. As noted earlier, the decrease in the value of U.S. imports was primarily the result of a 37 percent drop between 2008 and 2009 in the average world per barrel price of crude petroleum. In terms of quantity, U.S. imports of crude petroleum declined from 3.6 billion barrels in 2008 to 3.3 billion barrels in 2009 because of declines in domestic consumption, primarily as a result of reduced economic activity coupled

[12] The United States accounts for 2 percent of the world's reserves of crude petroleum and 7 percent of the world's total production. The United States was third in crude petroleum production at 1.9 billion barrels in 2009 (behind Russia with 3.7 billion barrels and Saudi Arabia with 3.3 billion barrels).

with increased U.S. production in the Gulf of Mexico. Canada, which has been the primary U.S. import source of crude petroleum for decades, continued to be the largest single supplier of crude petroleum to the U.S. market, accounting for 27 percent of the total volume of imports. Large multinational energy companies operate in both countries and exchange crude petroleum and petroleum products across the border. Also, an integrated system of shared pipelines crossing the U.S.-Canadian border eases the transporting of crude petroleum from the wellhead to refineries. The North American Free Trade Agreement (NAFTA) countries (Canada and Mexico) together accounted for 36 percent of the total quantity imported, while OPEC members together accounted for 50 percent. U.S. imports of crude petroleum continued to account for more than 60 percent of domestic consumption.

Petroleum products

The value of U.S. petroleum product imports decreased by 43 percent in 2009, because of both price declines for crude petroleum and, to a lesser extent, reduced domestic demand. The quantity of U.S. imports decreased by 9 percent to 977.5 million barrels in 2009. The primary sources of U.S. imports of petroleum products in 2009 continued to be Canada (which accounted for 20 percent of the total), Russia (10 percent), Algeria (9 percent), Venezuela (7 percent), the United Kingdom (5 percent), Mexico (4 percent), and Saudi Arabia (2 percent). Residual fuel oils (used primarily as industrial heating and bunker fuels for heating and power), motor fuels, and jet fuels accounted for nearly all of the quantity decrease in U.S. imports.

Natural gas

The value of U.S. imports of natural gas fell by 49 percent to $26.8 billion in 2009, due largely to decreases in prices, as well as weaker domestic demand. In terms of quantity, U.S. imports of natural gas decreased by only 7 percent to 3.6 trillion cubic feet. About 90 percent of U.S. trade in natural gas is via pipelines, with the remainder being in the form of LNG. Canada continues to be the primary U.S. import source, accounting for 99 percent of pipeline natural gas imports. In terms of quantity, U.S. imports of pipeline natural gas decreased by 10 percent to 3.3 trillion cubic feet in 2009, primarily because of Canada's difficulties in producing natural gas in the rough terrain and harsh climate of the Western Canadian Sedimentary Basin, coupled with decreased drilling in other regions of Canada as the country concentrated more drilling efforts on developing oil sands projects.

The quantity of U.S. imports of LNG rose by 28 percent to 452 million cubic feet in 2009. The increase is attributed to greater U.S. imports from Egypt and Norway as new liquefaction facilities came onstream in those countries. Recent global capacity expansions resulted in a 60 percent in reduction in LNG prices in 2009.[13] U.S. imports of LNG from Trinidad, which accounted for more than 60 percent of total U.S. LNG imports in 2009, declined as Trinidad shut down or reduced production at some locations because of low global prices. Also, Trinidad increased exports of LNG to India in an effort to diversify its export markets.[14]

U.S. imports of propane and butane (components of natural gas) from Saudi Arabia increased by about 2 percent in 2009, while imports of these products from Iraq decreased by about

[13] The price for LNG averages about 50 to 60 percent higher than that of pipeline natural gas because of the high costs of liquefaction and transportation. In an effort to diversify sourcing of LNG, the United States imports small quantities from countries other than Trinidad.

[14] U.S. DOE, EIA, *Short-Term Energy Outlook*, March 2010.

3 percent. U.S. imports of these products, which account for less than 1 percent of domestic consumption, fluctuate annually based on demand and economic conditions.

Other energy-related products

The United States, which accounts for the largest share of the world's economically recoverable coal reserves (25 percent), is a major world supplier of coal and a net exporter. U.S. imports of coal decreased by 55 percent in value to $4.1 billion in 2009; the quantity of imports also decreased, falling by 34 percent to 22.6 million short tons.[15] The decrease is attributed to reduced demand by electric utilities for coal in favor of natural gas, coupled with lower demand for electricity because of a relatively mild winter in 2009. Most of the imports in 2009 consisted of coal delivered to Gulf Coast and West Coast power plants. Colombia and Canada remain the leading suppliers of low-sulfur coals, which U.S. power plants consume, to the U.S. market.

U.S. imports of electricity decreased by 43 percent to $2.1 billion in 2009 while the quantity of U.S. imports increased by only 16 percent. The value decrease is largely attributable to lower costs for natural gas and coal. Canada remains the only source of U.S. imports of electricity, which is transmitted across the interconnected grid.

[15] The quantity and price data presented in this chapter are derived primarily from official statistics of the U.S. Department of Energy.

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Forest Products[1]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $5.9 billion (85 percent) to $1.0 billion
U.S. exports: Decreased by $4.9 billion (14 percent) to $30.5 billion
U.S. imports: Decreased by $10.8 billion (26 percent) to $31.5 billion

The U.S. trade deficit in forest products declined by 85 percent in 2009, as a significant decrease in exports was more than offset by an even larger decline in imports (table FP.1). Continued weakness in the U.S. residential housing market and falling U.S. and global demand for paper played important roles in this trend. The trade deficit in forest products declined by 95 percent between 2005 and 2009, from $22.2 billion to $1.0 billion.

Reflecting the worldwide decline in economic activity during 2009, U.S. trade in forest products contracted across all product categories, with declines in both exports and imports. Wood pulp, wastepaper, industrial papers, and paperboards accounted for 43 percent of the decrease in the value of U.S. exports; lumber, wood pulp and wastepaper, and printing and writing papers accounted for 44 percent of the decline in U.S. imports (table FP.2).[2]

Canada is the United States' largest trading partner in forest products, followed by China, Mexico, and Japan. During the past five years, the United States has had a trade deficit in forest products with Canada and China and a trade surplus with Mexico and Japan. In 2009, the value of the U.S. trade deficit in forest products with Canada and China declined by 43 percent and 34 percent, respectively; the U.S trade surplus with Mexico and Japan decreased by 12 percent and 11 percent, respectively.

U.S. Exports

U.S. exports of forest products declined by $4.9 billion (14 percent) to $30.5 billion in 2009. Canada was the largest market for U.S. exports of forest products in 2009, followed by Mexico, China, and Japan. U.S. exports to Canada, Mexico, and Japan declined in 2009, while exports to China rose. Much of the increase in the value of exports to China was accounted for by an increase in wood pulp exports. The Chinese paper industry, a large importer of wood pulp, expanded production in 2009 as the Chinese economy and demand for paper recovered quickly from the global economic downturn.[3]

[1] The products covered in this sector include logs, wood products, wood pulp and wastepaper, paper products, and printed matter.
[2] Trade statistics for all industry/commodity groups in this sector are presented in app. A, table A.5.
[3] Oinonen, "Focus on the Far East," March/April 2010.

TABLE FP.1 Forest products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	9,111	9,846	10,236	10,557	9,142	–1,415	–13.4
China	1,995	2,572	3,272	3,518	3,720	202	5.7
Mexico	3,860	4,258	4,312	4,837	4,162	–675	–13.9
Japan	1,907	1,964	1,859	2,019	1,712	–307	–15.2
Germany	685	717	902	988	762	–227	–22.9
Brazil	241	251	329	409	359	–50	–12.2
United Kingdom	1,191	1,220	1,300	1,393	1,117	–276	–19.8
Korea	688	683	814	863	765	–97	–11.3
Italy	788	839	954	945	727	–218	–23.0
France	370	382	377	393	327	–66	–16.8
All other	6,975	7,424	8,732	9,440	7,696	–1,744	–18.5
Total	27,809	30,156	33,088	35,362	30,489	–4,872	–13.8
EU-27	4,745	4,947	5,539	5,698	4,476	–1,222	–21.4
OPEC	490	536	669	787	685	–102	–12.9
Latin America	6,014	6,645	7,076	7,930	6,647	–1,283	–16.2
Asia	6,403	7,090	8,228	8,868	8,284	–584	–6.6
Sub-Saharan Africa	164	185	206	276	206	–69	–25.1
U.S. imports for consumption:							
Canada	28,224	26,717	23,435	20,496	14,781	–5,715	–27.9
China	5,463	6,630	7,317	7,371	6,281	–1,090	–14.8
Mexico	1,420	1,559	1,584	1,457	1,201	–256	–17.6
Japan	692	649	648	642	482	–160	–24.9
Germany	1,664	1,733	1,602	1,493	1,055	–438	–29.4
Brazil	2,305	2,365	2,064	1,928	1,300	–628	–32.6
United Kingdom	825	702	748	700	478	–221	–31.6
Korea	544	601	559	527	373	–154	–29.3
Italy	424	455	470	479	307	–172	–36.0
France	569	607	545	582	428	–154	–26.5
All other	7,872	8,397	7,588	6,616	4,826	–1,790	–27.1
Total	50,003	50,416	46,561	42,291	31,511	–10,780	–25.5
EU-27	6,668	6,797	6,140	5,671	3,974	–1,696	–29.9
OPEC	83	77	71	77	68	–9	–11.5
Latin America	5,180	5,603	4,980	4,515	3,384	–1,131	–25.1
Asia	8,806	10,213	10,983	10,642	8,693	–1,948	–18.3
Sub-Saharan Africa	191	166	183	169	79	–90	–53.2

See footnote(s) at end of table.

TABLE FP.1 Forest products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–19,113	–16,871	–13,199	–9,939	–5,639	4,300	43.3
China	–3,468	–4,058	–4,045	–3,853	–2,561	1,292	33.5
Mexico	2,440	2,698	2,728	3,380	2,961	–419	–12.4
Japan	1,214	1,315	1,212	1,377	1,230	–147	–10.7
Germany	–978	–1,016	–699	–505	–293	212	42.0
Brazil	–2,064	–2,113	–1,736	–1,519	–941	578	38.1
United Kingdom	366	518	551	693	639	–54	–7.8
Korea	143	82	255	335	392	57	17.0
Italy	363	384	483	466	421	–45	–9.7
France	–199	–225	–168	–189	–101	88	46.7
All other	–898	–974	1,144	2,824	2,870	46	1.6
Total	–22,194	–20,260	–13,473	–6,930	–1,022	5,908	85.3
EU-27	–1,923	–1,850	–602	27	501	474	1,764.1
OPEC	407	459	597	710	617	–93	–13.1
Latin America	833	1,041	2,096	3,415	3,264	–152	–4.4
Asia	–2,404	–3,123	–2,755	–1,774	–410	1,364	76.9
Sub-Saharan Africa	–28	19	23	107	127	21	19.5

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

TABLE FP.2 Forest products: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. EXPORTS:							
Decreases:							
Wood pulp and wastepaper (FP009)	5,081	5,749	6,916	7,809	6,751	–1,058	–13.5
Industrial papers and paperboards (FP011)	6,287	6,788	7,518	8,281	7,265	–1,016	–12.3
Printed matter (FP016)	4,906	5,217	5,652	5,825	5,162	–663	–11.4
All other	11,536	12,402	13,003	13,446	11,311	–2,135	–15.9
Total	27,809	30,156	33,088	35,362	30,489	–4,872	–13.8
U.S. IMPORTS:							
Decreases:							
Lumber (FP002)	9,005	8,335	6,508	4,404	2,639	–1,764	–40.1
Wood pulp and wastepaper (FP009)	3,074	3,194	3,750	4,023	2,449	–1,573	–39.1
Printing and writing papers (FP013)	5,972	6,149	5,754	5,672	4,285	–1,387	–24.5
Wood veneer and wood panels (FP004)	7,218	6,623	5,169	3,941	2,961	–980	–24.9
Moldings, millwork, and joinery (FP003)	4,433	4,750	3,894	3,040	2,125	–915	–30.1
All other	20,301	21,366	21,487	21,211	17,051	–4,160	–19.6
Total	50,003	50,416	46,561	42,291	31,511	–10,780	–25.5

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

Exports of wood pulp and wastepaper as well as industrial papers and paperboards accounted for nearly one-half of all U.S. exports of forest products in 2009. A decline in foreign demand for paper and paperboard, caused by the worldwide economic downturn, led to a decrease in U.S. exports of wood pulp and wastepaper, the raw materials used to make paper and paperboard. The downturn also caused an overall contraction in foreign manufacturing activity, which reduced demand for U.S. exports of industrial papers and paperboards, much of which are used in the packaging of manufactured goods.

U.S. Imports

U.S. imports of forest products fell by $10.8 billion (26 percent) to $31.5 billion in 2009. Canada was the largest source of imports in 2009, accounting for 47 percent of the total. China was the second-largest supplier to the United States, followed by Brazil, Mexico, and Germany. Imports of forest products from all five of these suppliers declined in 2009.

Large declines in U.S. imports of lumber, wood veneer and wood panels, and moldings, millwork, and joinery were caused by a continued deterioration in the U.S. residential housing market, which reduced both the demand and the prices for these products. In 2009, housing starts in the United States totaled only 555,000 units, a drop of 39 percent from 2008 and a drop of 73 percent from its most recent peak in 2005.[4] Prices for these wood products also fell in 2009, continuing a steady decline from 2005.[5] A downturn in the residential repair and remodeling market further weakened demand for imports of these wood products.[6]

Lower levels of business and consumer economic activity in the United States during 2009 as a result of the recession reduced demand and prices for U.S. imports of printing and writing papers. Lower demand also caused a decline in U.S. production of printing and writing papers, which weakened demand and prices for imports of wood pulp and wastepaper, the raw materials used to make printing and writing papers. Demand for printing and writing papers in the United States also came under pressure as the increasing popularity of the Internet and other electronic media have continued to displace many traditional uses of paper.

[4] USDOC, Census, "New Privately Owned Housing Units Started," u.d. (accessed March 16, 2010).
[5] Weyerhaeuser Company, *2009 Annual Report and Form 10-K*, 2010.
[6] Ibid.

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Minerals and Metals

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $32.6 billion (50 percent) to $32.7 billion
U.S. exports: Decreased by $35.4 billion (30 percent) to $84.4 billion
U.S. imports: Decreased by $68.0 billion (37 percent) to $117.0 billion

For a third year in a row, the deficit in U.S. trade of minerals and metals narrowed, as the decline in U.S. exports was exceeded by the decline in U.S. imports in 2009 (table MM.1). Having inadequate domestic resources to meet its consumption needs, the United States has historically run trade deficits for most minerals and metals. In 2009, both U.S. exports and imports of most minerals and metals declined significantly, as the key downstream demand sectors—construction (e.g., for steel and cement),[1] durable goods manufacturing (e.g., for most minerals and metals)[2] and consumer spending (e.g., for gemstones)[3]—were afflicted by the economic downturn both in the United States and the economies of most trade partners.[4] Moreover, lower global prices for raw materials and semi-manufactured forms of many minerals and metals further dampened U.S. trade values.

In 2009, the United States narrowed its trade deficit in several key product areas—most notably in steel mill products, where the deficit declined by $13.8 billion (68 percent) to $6.3 billion. Large declines also affected U.S. trade deficits in natural and synthetic gemstones, which fell by $3.7 billion (25 percent) to $11.2 billion; in ferroalloys, which fell by $3.2 billion (77 percent) to $934 million; in copper and related articles, which decreased by $3.0 billion (67 percent) to $1.5 billion; and in primary iron products, which fell by $2.7 billion (69 percent) to $1.2 billion. At the same time, however, U.S. trade surpluses declined for certain other products; these included the surplus in iron and steel waste and scrap, down by $2.6 billion (29 percent) to $6.3 billion, and precious metals and non-numismatic coins, down by $3.4 billion (43 percent) to $4.4 billion.

The U.S. trade deficit for minerals and metals (table MM.1) narrowed the most with China; this deficit declined by $8.8 billion (46 percent) to $10.4 billion. Other trade deficit declines were recorded with the European Union (EU) and Canada. By contrast, the greatest expansion of the U.S. trade deficit for minerals and metals involved the deficit with Switzerland, which increased by $39 billion (39 percent) to $5.9 billion.

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[1] The value (not seasonally adjusted) of put-in-place construction fell by $97 billion (27 percent) for the residential segment of the U.S. construction industry in 2009 compared to 2008. Likewise, the value of the commercial segment fell by $36 billion (5 percent) over this same period. USDOC, Census, "December 2009 Construction," February 1, 2010.

[2] The value (not seasonally adjusted) of U.S. shipments of durable manufactured goods in 2009 fell by $397 billion (16 percent) compared to a year ago. USDOC, Census, "Advance Report on Durable Goods Manufacturers' Shipments," January 28, 2010.

[3] Personal consumption expenditures on durable goods by U.S. consumers was down by $60.2 billion in 2009 compared to a 2008. USDOC, BEA, "Personal Consumption Expenditures," March 26, 2010.

[4] See the "Overall Economic Performance" chapter in this report for more detailed information.

TABLE MM.1 Minerals and metals: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	19,110	22,687	24,689	27,816	18,907	–8,909	–32.0
China	5,215	7,736	9,043	9,701	8,703	–998	–10.3
Mexico	9,258	11,635	11,896	13,492	9,603	–3,889	–28.8
United Kingdom	3,429	6,587	8,379	9,865	9,311	–555	–5.6
Switzerland	3,202	4,612	6,905	10,950	7,035	–3,916	–35.8
India	719	902	1,981	2,868	2,176	–692	–24.1
Germany	1,848	2,569	3,292	3,635	2,371	–1,264	–34.8
Israel	1,359	2,026	2,746	2,516	737	–1,779	–70.7
Japan	2,385	3,221	4,094	3,995	2,043	–1,953	–48.9
Korea	1,447	1,823	2,723	3,385	2,658	–726	–21.5
All other	14,939	19,146	24,512	31,529	20,807	–10,722	–34.0
Total	62,911	82,944	100,260	119,753	84,351	–35,403	–29.6
EU-27	11,040	16,389	20,757	22,965	17,339	–5,627	–24.5
OPEC	1,502	1,903	2,521	3,275	2,222	–1,053	–32.2
Latin America	11,745	14,716	15,728	18,807	13,399	–5,408	–28.8
Asia	13,447	18,380	24,393	28,714	21,194	–7,520	–26.2
Sub-Saharan Africa	405	655	610	861	789	–72	–8.4
U.S. imports for consumption:							
Canada	25,590	32,155	34,562	36,695	22,533	–14,163	–38.6
China	17,553	23,462	25,749	28,975	19,146	–9,829	–33.9
Mexico	11,366	13,266	13,877	14,715	12,142	–2,573	–17.5
United Kingdom	3,093	3,748	4,158	4,041	2,139	–1,902	–47.1
Switzerland	778	1,011	947	1,168	1,102	–66	–5.6
India	5,091	5,816	6,424	7,534	5,136	–2,399	–31.8
Germany	5,495	6,611	7,175	7,443	4,496	–2,947	–39.6
Israel	8,543	9,069	10,065	9,995	5,966	–4,029	–40.3
Japan	5,013	5,871	5,780	5,996	4,468	–1,528	–25.5
Korea	2,783	3,611	3,328	4,174	2,387	–1,787	–42.8
All other	52,063	64,890	62,141	64,258	37,512	–26,746	–41.6
Total	137,367	169,510	174,207	184,994	117,025	–67,969	–36.7
EU-27	24,533	27,836	29,375	29,376	18,305	–11,071	–37.7
OPEC	1,677	1,681	1,335	1,682	707	–975	–58.0
Latin America	25,402	30,991	29,985	31,453	22,469	–8,984	–28.6
Asia	37,898	47,885	49,892	55,456	36,410	–19,047	–34.3
Sub-Saharan Africa	4,565	5,961	7,391	7,274	3,813	–3,460	–47.6

See footnote(s) at end of table.

TABLE MM.1 Minerals and metals: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–6,480	–9,468	–9,873	–8,879	–3,625	5,254	59.2
China	–12,339	–15,726	–16,707	–19,274	–10,443	8,831	45.8
Mexico	–2,108	–1,631	–1,981	–1,223	–2,540	–1,317	–107.6
United Kingdom	335	2,839	4,221	5,824	7,172	1,348	23.1
Switzerland	2,424	3,601	5,959	9,783	5,933	–3,850	–39.4
India	–4,372	–4,915	–4,443	–4,666	–2,959	1,707	36.6
Germany	–3,646	–4,041	–3,882	–3,808	–2,125	1,683	44.2
Israel	–7,184	–7,043	–7,319	–7,478	–5,229	2,249	30.1
Japan	–2,628	–2,650	–1,687	–2,001	–2,425	–425	–21.2
Korea	–1,335	–1,788	–604	–789	272	1,060	[a]
All other	–37,124	–45,744	–37,630	–32,728	–16,705	16,024	49.0
Total	–74,456	–86,567	–73,947	–65,240	–32,674	32,566	49.9
EU-27	–13,493	–11,446	–8,618	–6,410	–966	5,444	84.9
OPEC	–175	222	1,186	1,594	1,515	–79	–4.9
Latin America	–13,657	–16,274	–14,256	–12,646	–9,070	3,576	28.3
Asia	–24,451	–29,506	–25,499	–26,743	–15,216	11,527	43.1
Sub-Saharan Africa	–4,161	–5,306	–6,781	–6,412	–3,024	3,388	52.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Not meaningful for purposes of comparison.

U.S. Exports

In 2009, U.S. exports of minerals and metals decreased by $35.4 billion (30 percent) to $84.4 billion. Most (36 percent) of the decline in this sector was in exports to North American Free Trade Agreement (NAFTA) partners. Steel mill products recorded the greatest decline among all minerals and metals (table MM.2), falling by $6.1 billion (36 percent) to $10.6 billion. Exports of steel mill products to Canada declined by $2.9 billion (40 percent) to $4.3 billion, while exports to Mexico decreased by $980 million (32 percent) to $2.0 billion. Shipments of flat-rolled products (e.g., plates and sheets) of carbon and alloy steels declined the greatest amount among steel mill products, falling by $2.3 billion (36 percent) to $3.9 billion, as automotive industries scaled back production abroad, especially in both NAFTA markets.[5] U.S. exports of pipes and tubes of carbon and alloy steels declined $1.0 billion (29 percent) to $2.6 billion reflecting reduced energy production abroad, particularly in neighboring Canada.[6]

The precious metal and non-numismatic coins[7] industry/commodity group accounted for the largest share (25 percent) of U.S. exports in the mineral and metals sector in 2009. However, after increasing quickly between 2005 and 2008, U.S. exports in this industry/product group declined by $5.8 billion (22 percent) to $20.7 billion. Seventy-five percent ($4.4 billion) of this decline consisted of gold in the unwrought forms of unrefined doré[8] and refined bullion and grains,[9] and occurred despite higher gold prices in 2009 compared to the previous year.[10] The United States exported smaller quantities of refined bullion and grains to foreign destinations in 2009[11] as consumers worldwide cut back purchases of precious jewelry (the largest end-use consumption sector for gold) due to the economic downturn and higher gold prices.[12] Switzerland was the largest foreign destination for U.S. exports of precious metals and non-numismatic coins despite recording the largest decline ($3.7 billion).

U.S. exports of natural and synthetic gemstones fell in value by $3.8 billion (61 percent) to $2.4 billion as a result of decreased worldwide demand for gemstones and other luxury goods during the global economic downturn. Cut and finished nonindustrial diamonds, which account for the majority of U.S. gemstone exports, declined by $3.8 billion, or64 percent. U.S. exports of gemstones declined to each of the major global precious-jewelry markets of Israel, India, Belgium, and Hong Kong in 2009.[13]

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[5] See the "Steel Mill Products" in this chapter and the "Motor Vehicles" section in the "Transportation Equipment" chapter for more detailed information.

[6] See the "Steel Mill Products" section in this chapter for more detailed information.

[7] This industry/commodity group includes gold, silver, and platinum-group metals (platinum, palladium, rhodium, iridium, osmium, and ruthenium) in unwrought or semi-manufactured forms; precious-metal waste and scrap; and precious-metal non-numismatic coins. Monetary gold held as official reserves by central banks is specifically excluded from this group.

[8] Doré is an unrefined mixture of precious and base metals from the initial smelting of precious-metal ores and concentrates. Subsequent refining produces high-purity precious metals in the unwrought forms of bullion, grains and nuggets, and powder.

[9] Unwrought gold is available in the forms of grains and nuggets for manufacturers who need precise weights to produce gold alloys of proper fineness for precious jewelry, medallions, and other items.

[10] The average annual London final price for gold rose $101.98 per troy ounce (11.6 percent) in 2008 to $972.98 per troy ounce in 2009. Compiled from statistics of the LBMA.

[11] U.S. exports of refined unwrought gold fell by 178 metric tons (38 percent) to 289 metric tons in 2009. Compiled from official statistics of the U.S. Department of Commerce.

[12] Shah, "RBI's Gold Purchases Helps Sustain Physical Demand in India." December 2009, 5. See the "Miscellaneous Manufactures" chapter in this report for more detailed information.

[13] See the "Natural and Synthetic Gemstones" section in this chapter for more detailed information.

TABLE MM.2 Minerals and metals: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. EXPORTS:							
Decreases:							
Steel mill products (MM025)	9,331	10,479	12,535	16,737	10,648	–6,089	–36.4
Precious metals and non-numismatic coins (MM020)	7,522	13,360	19,289	26,534	20,699	–5,835	–22.0
Natural and synthetic gemstones (MM019)	2,765	4,087	5,572	6,248	2,447	–3,801	–60.8
Iron and steel waste and scrap (MM023)	3,451	4,256	6,910	10,384	7,125	–3,259	–31.4
Copper and related articles (MM036)	3,405	6,052	6,684	6,691	4,636	–2,055	–30.7
Certain base metals and chemical elements (MM041)	2,882	3,792	4,119	4,453	2,735	–1,718	–38.6
All other	33,554	40,917	45,151	48,706	36,061	–12,645	–26.0
Total	62,911	82,944	100,260	119,753	84,351	–35,403	–29.6
U.S. IMPORTS:							
Increases:							
Unrefined and refined gold (MM020A)	4,112	5,029	3,934	5,454	7,928	2,473	45.3
Decreases:							
Steel mill products (MM025)	23,534	31,500	29,204	36,870	16,995	–19,875	–53.9
Natural and synthetic gemstones (MM019)	17,352	18,452	20,239	21,072	13,608	–7,464	–35.4
Copper and related articles (MM036)	7,766	13,803	12,577	11,153	6,125	–5,028	–45.1
Certain base metals and chemical elements (MM041)	4,417	5,924	7,959	7,253	3,822	–3,431	–47.3
Unwrought aluminum (MM037)	8,153	10,317	9,462	9,168	5,761	–3,406	–37.2
Ferroalloys (MM022)	1,834	1,954	2,788	4,310	1,062	–3,248	–75.4
Primary iron products (MM021)	2,033	2,227	2,236	3,856	1,184	–2,672	–69.3
Cement, stone, and related products (MM009)	7,144	8,151	7,637	6,499	4,536	–1,963	–30.2
All other	61,022	72,154	78,169	79,359	56,004	–23,354	–29.4
Total	137,367	169,510	174,207	184,994	117,025	–67,969	–36.7

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

The global reduction of steelmaking in 2009 drove down the value of U.S. exports of iron and steel waste and scrap (ferrous scrap)[14] by $3.3 billion (31 percent). The volume of U.S. ferrous scrap exports fell by only 4 percent, but the value of ferrous scrap exports declined more substantially as ferrous scrap prices fell by 44 percent.[15] U.S. exports in this product group to Turkey declined by $1.1 billion (55 percent); exports to Taiwan decreased by $447 million (38 percent); and exports to Canada declined by $413 million (64 percent).

U.S. Imports

In 2009, U.S. imports of minerals and metals decreased by $68.0 billion (37 percent) to $117.0 billion. Steel mill products recorded the greatest decline among all minerals and metals (table MM.2), falling by $19.9 billion (54 percent) to $17.0 billion. Leading import declines are attributable to reduced purchases in key downstream end-use sectors.[16] The product groups accounting for this decrease include various carbon and alloy steels in the forms of pipes and tubes, which declined $6.2 billion (48 percent); flat-rolled products (e.g., plates and sheets), which decreased by $4.3 billion (49 percent); and semi-finished forms (e.g., billets and slabs), which fell by $3.3 billion (79 percent). The leading U.S. import sources registered the largest declines, with imports from China, the world's largest steel producer,[17] decreasing by nearly $4.0 billion (67 percent) and imports from Canada decreasing by $3.5 billion (50 percent).

The downturn in the U.S. economy and in domestic industrial operations also led to declines in U.S. imports of numerous other minerals and metals. Natural and synthetic gemstones (especially cut and finished nonindustrial diamonds) imported by the United States declined by $7.5 billion (35 percent) to $13.6 billion as U.S. consumers scaled back their purchases of gemstone-mounted precious jewelry and other luxury goods.[18] Israel, a long-established global center for gemstone cutting, was the largest source of U.S. gemstone imports and accounted for the largest decline U.S. imports of copper and related articles fell by $5.0 billion (45 percent) to $6.1 billion, as U.S. copper fabricators consumed lesser amounts of unwrought forms (such as unrefined anodes and refined cathodes) in response to fewer orders for copper mill products from construction and manufacturing customers.[19] The leading U.S. import declines were from major copper-mining countries. U.S. imports of copper from Canada decreased by $1.8 billion (48 percent) to $1.9 billion; U.S. imports from Chile fell by $1.3 billion (47 percent) to $1.5 billion.

[14] This industry/commodity group includes iron and steel recovered in various forms from primary production (ironmaking and steelmaking), casting, machining, stamping, forging, and other processes.

[15] Although fluctuating during 2009, the average annual price for No. 1 Heavy Melting composite (the *Iron Age a*verage) for Pittsburgh, Philadelphia, and Chicago, was $195 per metric ton delivered—$154 per metric ton (44 percent) lower than the previous year's average. Fenton, "Iron and Steel Scrap," January 2010, 82; Crude steel output worldwide declined by 8 percent from the previous year's level to reach 1.2 billion metric tons in 2009. WSA, "World Crude Steel Output Decreases," January 22, 2010; U.S. exports of iron and steel waste and scrap fell by 813,000 metric tons (4 percent) to 22 million metric tons in 2009. Compiled from official statistics of the U.S. Department of Commerce.

[16] See the "Steel Mill Products" section in this chapter for more detailed information.

[17] In contrast to most other steel-producing nations, crude steel output in China increased by 13 percent to reach almost 568 million metric tons in 2009, or 47 percent of the global total in that year. WSA, "World Crude Steel Output Decreases," January 22, 2010.

[18] See the "Natural and Synthetic Gemstones" section in this chapter for more detailed information.

[19] See the "Copper and Related Articles" section in this chapter for more detailed information.

U.S. high-technology industries consumed less of certain base metals and chemical elements,[20] as this sector, too, was afflicted by the economic downturn. Although the United States relies heavily on foreign sources for these strategic metals, U.S. imports declined for almost all types (with the exception of thallium) in 2009; together these goods recorded an overall decline of $3.4 billion (47 percent) to $3.8 billion. The decline in imports of nickel and cobalt together accounted for more than two-thirds (68 percent) of the overall decrease in the import value of these metals. Canada, the largest source for U.S. imports of nickel and cobalt, registered the largest decline, falling by $1.1 billion (64 percent) in 2009. Characterized by extensively developed mining and processing industries,[21] Canada is ranked among the world's leading producers of nickel, cobalt, and many other types of minerals and metals.[22]

The global economic downturn was reflected in falling imports of two other commodities in this sector. Due to declining demand from domestic aluminum fabricators and weaker aluminum price,[23] U.S. imports of unwrought aluminum[24] fell by $3.4 billion (37 percent) to $5.8 billion. U.S. imports from major global aluminum producer Canada[25] decreased by $2.3 billion (37 percent) and accounted for two-thirds (66 percent) of the overall decline. Ferroalloy imports by the United States fell even more sharply, dropping by $3.2 billion (75 percent) to $1.1 billion, as U.S. steel mills scaled back their production of various alloy and stainless steels in response to declining orders by their customers.[26] Reduced U.S. imports from the top global ferroalloy producers—South Africa and China—together accounted for 40 percent of this overall decline.

[20] This industry/commodity group includes unwrought and semi-fabricated forms of antimony, beryllium, bismuth, cadmium, chromium, cobalt, gallium, germanium, hafnium, indium, magnesium, manganese, molybdenum, nickel, niobium, rhenium, tantalum, thallium, tin, titanium, tungsten, vanadium, and zirconium. These "minor," "strategic," or "rare" metals are essential alloys for numerous high-technology manufacturing applications.

[21] Mobbs, "The Mineral Industry of Canada," August 2009, 5.2.

[22] In 2009, Canada produced 181,000 metric tons of nickel, which was 13 percent of the global total, and produced 5,000 metric tons of cobalt, which was 20 percent of the global total. Kuck, "Nickel," January 2010, 109; Shedd, "Cobalt," January 2010, 47; Mobbs, "The Mineral Industry of Canada," August 2009, 5.1.

[23] The average annual U.S. spot market price for unwrought aluminum ingots fell by 42.5 cents per pound (35 percent) to 78.0 cents per pound in 2009. Bray, "Aluminum," January 2010, 16.

[24] This industry/commodity group includes aluminum in the forms of ores and concentrates, ash and residues, refined aluminum whether or not alloyed with other metals, and waste and scrap.

[25] Canada produced 3.0 million metric tons of aluminum, which was 8 percent of the global total in 2009. Bray, "Aluminum," January 2010, 17.

[26] See the "Ferroalloys" section in this chapter for more detailed information.

Cement, Stone, and Related Products[27]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $1.5 billion (38 percent) to $2.5 billion
U.S. exports: Decreased by $485 million (19 percent) to $2.1 billion
U.S. imports: Decreased by $2 billion (30 percent) to $4.5 billion

In 2009, the U.S. trade deficit in cement, stone, and related products decreased by approximately 38 percent, primarily because the overall decline in U.S. imports in this product group outpaced the decline in U.S. exports of these products. The largest decrease ($393.3 million) was in U.S. imports of cement and cement-related articles (table MM.3). The continued decline of the U.S. construction market, which drives domestic demand for cement, stone, and related products, was an important factor in this trend.[28]

Most of the product groups within the cement, stone, and related products sector registered decreases in U.S. imports between 2008 and 2009, with articles of cement, Portland cement, and building stone accounting for the largest declines. With respect to exports, the majority of product groups also saw decreases. Again, three product groups—articles of graphite, natural silica and quartz sands, and articles of asphalt—registered the largest declines in U.S. exports in 2009 (table MM.3).

Canada, followed by China, Mexico, and Brazil, had the largest shifts in total trade, resulting in a smaller U.S. trade deficit with regard to cement, stone, and related products. Trade with these four countries accounted for 28 percent, 16 percent, 7 percent, and 7 percent, respectively, of total U.S. trade in cement and stone products in 2009.

U.S. Exports

U.S. exports of cement, stone, and related products decreased by $485 million (19 percent) to $2.1 billion in 2009. Canada was the largest market for U.S. exports of cement and stone products in 2009, followed by China, Mexico, Italy, and Brazil. Exports to all of these countries declined (table MM.3). Three product groups—articles of graphite, natural silica and quartz sands, as well as articles of asphalt—accounted for nearly 40 percent of all U.S. exports of cement and stone products in 2009. Together they also registered the largest decreases in exports within the product group, accounting for slightly more than half of the total decline in exports.

[27] Products discussed in this industry/commodity group include natural graphite, natural sands, quartz, siliceous fossil meals, slate, marble, travertine and other calcareous monumental or building stone, pebbles, gravel, broken or crushed stone, dolomite, natural magnesium carbonate, gypsum, limestone, quicklime, Portland cement, asbestos, mica, natural steatite, cryolite, natural borates and concentrates, feldspar, natural stone, monumental or building stone and articles thereof, roofing slate, slag wool, asphalt, articles of plaster, building blocks and bricks, floor and wall tiles, tiles, flagstones, and similar articles.

[28] G. van Oss, "Cement," January 2010, 38.

TABLE MM.3 Cement, stone, and related products (MM009): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	617	690	780	926	825	–101	–10.9
China	99	118	129	157	142	–15	–9.4
Mexico	128	176	166	150	116	–34	–22.6
Brazil	23	21	21	21	17	–4	–21.1
Italy	46	57	78	97	49	–47	–48.9
Japan	140	163	205	159	89	–71	–44.4
Turkey	6	9	7	8	4	–4	–52.0
India	9	13	14	15	13	–2	–10.7
Germany	64	108	79	106	98	–8	–7.7
Spain	23	35	33	37	30	–6	–17.2
All other	699	1,009	999	879	685	–193	–22.0
Total	1,853	2,399	2,512	2,554	2,069	–485	–19.0
EU-27	370	565	621	549	413	–136	–24.8
OPEC	78	96	61	68	55	–13	–18.6
Latin America	309	396	395	381	293	–88	–23.1
Asia	407	498	559	522	399	–123	–23.5
Sub-Saharan Africa	35	121	29	34	25	–9	–26.8
U.S. imports for consumption:							
Canada	1,192	1,308	1,370	1,289	1,030	–259	–20.1
China	1,314	1,737	1,600	1,397	935	–462	–33.1
Mexico	539	643	569	475	327	–147	–31.0
Brazil	556	725	741	583	417	–165	–28.4
Italy	689	704	683	587	323	–265	–45.1
Japan	216	183	180	186	164	–22	–11.6
Turkey	399	460	460	366	239	–127	–34.6
India	333	394	372	336	218	–118	–35.2
Germany	153	150	103	88	85	–3	–3.5
Spain	275	286	256	205	144	–61	–29.6
All other	1,478	1,561	1,303	988	654	–334	–33.9
Total	7,144	8,151	7,637	6,499	4,536	–1,963	–30.2
EU-27	1,562	1,600	1,447	1,207	799	–408	–33.8
OPEC	131	62	24	6	4	–2	–37.6
Latin America	1,454	1,699	1,568	1,250	851	–399	–31.9
Asia	2,339	2,901	2,595	2,191	1,491	–701	–32.0
Sub-Saharan Africa	15	16	15	12	10	–2	–19.4

See footnote(s) at end of table.

TABLE MM.3 Cement, stone, and related products (MM009): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–574	–617	–589	–363	–205	158	43.6
China	–1,215	–1,619	–1,471	–1,240	–792	448	36.1
Mexico	–412	–467	–403	–325	–211	113	34.9
Brazil	–533	–703	–720	–562	–401	161	28.7
Italy	–643	–647	–604	–491	–273	217	44.3
Japan	–76	–21	25	–27	–76	–49	–185.1
Turkey	–394	–452	–453	–358	–236	123	34.2
India	–324	–381	–359	–321	–205	117	36.3
Germany	–89	–42	–24	18	13	–5	–28.0
Spain	–251	–251	–222	–168	–114	54	32.3
All other	–779	–552	–304	–110	32	141	[a]
Total	–5,291	–5,753	–5,125	–3,945	–2,467	1,478	37.5
EU-27	–1,193	–1,035	–826	–658	–387	271	41.2
OPEC	–53	34	37	61	51	–10	–16.6
Latin America	–1,144	–1,303	–1,173	–869	–558	311	35.8
Asia	–1,932	–2,404	–2,036	–1,669	–1,091	578	34.6
Sub-Saharan Africa	21	105	14	22	15	–7	–30.7

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Not meaningful for purposes of comparison.

Much of the fall in demand for U.S. exports of cement and stone products in 2009 was due to decreased global demand from the construction industry, which lowered consumption of natural silica and quartz sands, and articles of asphalt. U.S. exports to Canada experienced the largest decline ($101 million) as total Canadian housing starts fell by 30 percent from approximately 211,000 in 2008 to 149,000 in 2009, resulting in decreased demand from the construction industry.[29] U.S. exports of cement and stone products to China fell by only $15 million to $142 million in 2009. China's stimulus plan helped bolster the construction industry by financing the building of housing structures, the development of rural area infrastructure, and the building of roads, railways, and airports, which helped mitigate declining demand in other end-markets requiring cement and stone products.[30]

U.S. Imports

U.S. imports of cement, stone, and related products fell by $2.0 billion (30 percent) to $4.5 billion in 2009. Canada was the largest source of imports in 2009, accounting for almost 23 percent of all U.S. imports. China was the second-largest supplier to the U.S. market, followed by Mexico, Brazil, and Italy. Due to decreased demand in the U.S. construction industry, these countries also recorded the largest decreases in U.S. imports from 2008 to 2009.

The sharp decline in U.S. imports of cement, stone, and related products in 2009 was caused by the continued weakness in the U.S. construction market. In 2009, single-family housing starts in the United States declined by 28 percent and were at historic lows.[31] Total U.S. spending on construction decreased by 15 percent from 2008 ($1,067.6 billion) to 2009 ($907.8 billion).[32] The decline in imports in 2009 was mirrored by the drop in U.S. production of cement, which decreased by 21 percent to 129.8 million metric tons (mt), and U.S. crushed stone production, which decreased by approximately 23 percent to 1.1 million mt.[33]

[29] *Pulse Survey*, Canadian Home Builders' Association, Winter 2010, 3.

[30] Yanping and Wong, "China Unveils 4 Trillion Yuan Spending As World Faces Recession," November 10, 2009; Organisation for Economic Co-operation and Development, "Brazil," July 2009, 54.

[31] USDOC, Census, "New Privately Owned Housing Units Started in the United States by Purpose and Design," (accessed March 30, 2010).

[32] USDOC, Census, "Annual Value of Construction Put in Place 2002-2009," August 2, 2010.

[33] G. van Oss, "Cement," January 2010, 38; Willett, "Stone (Crushed)," January 2010, 152.

Natural and synthetic gemstones[34]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $3.7 billion (25 percent) to $11.2 billion
U.S. exports: Decreased by $3.8 billion (61 percent) to $2.4 billion
U.S. imports: Decreased by $7.5 billion (35 percent) to $13.6 billion

The U.S. trade deficit in natural and synthetic gemstones narrowed by 25 percent in 2009 to $11.2 billion, principally due to a substantial decline in imports of higher-valued diamonds (table MM.4), that more than offset the large decrease in U.S. exports. The overall decline in trade in this product category can be attributed primarily to the weak U.S. and global economies, which significantly reduced worldwide consumer demand for jewelry, the principal end use for natural and synthetic gemstones. In terms of value, diamonds accounted for over 90 percent of total U.S. imports of natural and synthetic gemstones in 2009.[35] As the world's largest market [36] for diamonds, and with little or no natural deposits of its own, the United States relies on imports to supply most of its demand.[37]

Diamond sales are strongly tied to the health of the U.S. and global economies, particularly changes in disposable personal income. Diamonds are a luxury jewelry item, and consumers often postpone purchases or turn to less expensive items during difficult economic times, such as in 2009. Reportedly, better-quality stones were also in short supply in 2009, as mining slowed and in some cases was suspended completely at operations around the world because of the lack of demand.[38] Prior to the 2008/09 economic downturn, diamonds had more than two decades of almost uninterrupted price increases amid heavy demand. However, in 2009, the global diamond business, along with many other luxury product businesses, was adversely impacted by the global economic conditions; diamond prices dropped significantly, thereby further contributing to the drop in value of U.S. trade.[39]

[34] This commodity group includes natural or synthetic gemstones such as diamonds, rubies, sapphires, jade, or emeralds.
[35] Diamonds were the dominant import category in 2009, registering imports valued at $12.8 billion, a 36 percent decline from 2008.
[36] *The Economic Times*, "China Now World's Second Largest Diamond Market," January 24, 2010.
[37] The United States does not have major diamond-mining operations, but it is an internationally recognized diamond cutting and trading center. The United States does produce synthetic diamonds, though they only meet a small share of overall U.S. demand for diamonds.
[38] Jewelers' Circular Keystone (JCK), "Gem Pricing Report," January 2010, 54.
[39] Werdigier, "Diamond Sales, and Prices, Plunge," February 20, 2009.

TABLE MM.4 Natural and synthetic gemstones (MM019): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Israel	1,092	1,706	2,397	2,135	484	–1,651	–77.3
India	63	241	510	1,239	502	–737	–59.5
Belgium	539	727	894	687	150	–537	–78.2
South Africa	6	16	14	7	3	–4	–60.2
Hong Kong	327	460	578	882	481	–401	–45.4
Switzerland	90	136	162	281	157	–124	–44.2
Thailand	39	53	74	89	71	–17	–19.5
Canada	69	103	92	128	78	–50	–39.3
China	8	12	12	19	31	12	63.7
United Arab Em	44	62	111	119	49	–69	–58.4
All other	488	571	729	663	441	–222	–33.5
Total	2,765	4,087	5,572	6,248	2,447	–3,801	–60.8
EU-27	656	902	1,173	970	344	–626	–64.6
OPEC	44	63	111	120	50	–70	–58.5
Latin America	226	228	240	217	155	–61	–28.3
Asia	563	889	1,300	2,331	1,144	–1,188	–50.9
Sub-Saharan Africa	7	20	34	11	7	–4	–36.6
U.S. imports for consumption:							
Israel	8,131	8,618	9,533	9,423	5,581	–3,842	–40.8
India	3,203	3,385	3,824	4,022	3,178	–844	–21.0
Belgium	2,828	2,818	3,023	3,261	2,270	–991	–30.4
South Africa	756	951	1,085	1,067	660	–407	–38.1
Hong Kong	329	317	205	470	177	–294	–62.4
Switzerland	227	275	298	451	276	–175	–38.9
Thailand	216	240	283	260	131	–129	–49.7
Canada	126	127	121	124	112	–12	–9.8
China	156	209	244	235	126	–110	–46.5
United Arab Em	99	150	108	160	97	–63	–39.4
All other	1,280	1,362	1,516	1,596	999	–597	–37.4
Total	17,352	18,452	20,239	21,072	13,608	–7,464	–35.4
EU-27	3,000	3,016	3,242	3,497	2,413	–1,084	–31.0
OPEC	158	187	152	196	147	–49	–24.9
Latin America	202	219	247	248	187	–61	–24.7
Asia	4,123	4,378	4,773	5,209	3,753	–1,456	–28.0
Sub-Saharan Africa	1,153	1,354	1,528	1,567	929	–638	–40.7

See footnote(s) at end of table.

TABLE MM.4 Natural and synthetic gemstones (MM019): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Israel	–7,038	–6,913	–7,137	–7,289	–5,098	2,191	30.1
India	–3,140	–3,144	–3,313	–2,783	–2,676	107	3.8
Belgium	–2,290	–2,091	–2,129	–2,574	–2,120	454	17.6
South Africa	–750	–936	–1,071	–1,061	–658	403	38.0
Hong Kong	–2	143	373	412	304	–107	–26.1
Switzerland	–137	–139	–136	–170	–119	51	30.0
Thailand	–177	–187	–209	–172	–60	112	65.3
Canada	–57	–23	–29	4	–34	–38	[a]
China	–148	–197	–232	–216	–95	122	56.2
United Arab Em	–55	–88	3	–41	–47	–6	–15.5
All other	–793	–791	–787	–933	–559	375	40.2
Total	–14,587	–14,366	–14,667	–14,823	–11,161	3,663	24.7
EU-27	–2,344	–2,115	–2,069	–2,526	–2,069	457	18.1
OPEC	–114	–124	–41	–76	–97	–21	–28.0
Latin America	23	9	–6	–32	–32	[b]	–0.1
Asia	–3,560	–3,488	–3,473	–2,878	–2,609	269	9.3
Sub-Saharan Africa	–1,146	–1,333	–1,493	–1,556	–922	634	40.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a] Not meaningful for purposes of comparison.
[b] Less than $500,000.

U.S. Exports

The large decline in U.S. exports of natural and synthetic gemstones was largely focused in diamonds. It reflects the reported 30 percent drop in global diamond consumption in 2009, resulting from the weakened worldwide economic conditions. Within the diamond category, the United States is primarily an exporter of finished/cut diamonds. Since the United States has minimal domestic diamond resources, the vast majority of U.S. exports of finished/cut diamonds were previously imported as rough/uncut diamonds. Not surprisingly, the 64 percent decrease in U.S. exports of cut and polished diamonds closely tracks the 61 percent decline in U.S. imports of rough diamonds during the period.[40]

In 2009, India, Israel, Hong Kong, and Belgium were the top markets for U.S. exports of natural and synthetic gemstones, of which the majority were diamonds. All four are major diamond-trading centers, while Hong Kong (along with the rest of China) and India are also large and growing centers for jewelry manufacturing. These four markets accounted for $1.6 billion (66 percent) of all U.S natural and synthetic gemstone exports in 2009, a decrease of $3.3 billion from 2008. U.S. exports to Israel alone fell by $1.7 billion (77 percent) to $484 million, while exports to Belgium fell by $537 million (78 percent) to $150 million. Reportedly, demand for diamonds in Israel and Belgium was more seriously affected by the impact of the recession than other U.S. export markets. Continuing a trend of the last several years, India and Hong Kong are increasing their share of U.S. exports at the expense of Israel and Belgium.

U.S. Imports

U.S. imports of natural and synthetic gemstones decreased by $7.5 billion (35 percent) to $13.6 billion in 2009. Diamonds were the major import item from all sources, and accounted for nearly 95 percent of U.S. imports in this product sector. The import decline is primarily attributable to strongly reduced U.S. consumption, which fell by a reported 30 percent in 2009. In addition, U.S. imports of rough diamonds also fell as U.S. diamond cutters and polishers were less able to find export markets for their finished products.

As in previous years, Israel, India, and Belgium—major diamond cutting and trading centers—remained the principal suppliers of U.S. imports of natural and synthetic gemstones. U.S. imports from Israel, the leading supplier,[41] decreased by $3.8 billion (41 percent) to $5.6 billion, while imports from India, the second-largest source, fell by $844 million (21 percent) to $3.2 billion. In recent years, India (which specializes in lower-priced and smaller diamonds) has increasingly taken U.S. import shares from the more traditional suppliers—Israel and Belgium.

[40] U.S. Department of Commerce data for nonindustrial diamonds, unworked or simply sawn, cleaved, or bruted (HTS 7102.31.0000).

[41] The United States is Israel's leading export destination for polished diamonds, accounting for nearly half of all its shipments.

Primary Iron Products[42]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $2.7 billion (69 percent) to $1.2 billion
U.S. exports: Decreased by $12 million (62 percent) to $7 million.
U.S. imports: Decreased by $2.7 billion (69 percent) to $1.2 billion

The U.S. trade deficit in primary iron products decreased in 2009 to an amount less than that in any of the previous four years (table MM.5). The decrease was due entirely to reduced imports, as U.S. exports of these products are negligible in comparison to imports. Primary iron products are used as raw material, mostly by electric-arc furnace steelmakers, for the production of flat-rolled steel products used in the automotive, appliance, and construction industries. Steel production dropped significantly beginning in September 2008, and full-year steel production in the United States during 2009 was 37 percent less than that in 2008.[43] As a result, demand for these raw materials declined. The decrease in demand was worldwide, and prices for primary iron products in both domestic and foreign markets in 2009 were lower than those in 2008.

U.S. Exports

Substantial amounts of primary iron are produced in the United States in the form of molten pig iron. Once produced, however, the pig iron is all consumed during the manufacturing of steel, which takes place in the same location where the pig iron was produced. As a result, there are virtually no shipments abroad of U.S. produced primary iron products, and U.S. exports are negligible in comparison to imports.

U.S. Imports

U.S. imports of primary iron products decreased by 69 percent in 2009, and in so doing, more than offset the record increase of imports in 2008. Both the quantity imported and the unit value of the pig iron and direct-reduced iron decreased in the face of falling demand from the major downstream steel consumers, such as the automotive and construction industries. Whereas the rise in imports during 2008 was solely due to unit-value increases, during 2009 the quantity of imports decreased by 54 percent to 3.4 million tons, and the unit value decreased by 33 percent.

[42] This industry/commodity group includes pig iron and ferrous products obtained from direct reduction of iron ore (DRI or hot-briquetted iron (HBI)). It also includes spiegeleisen, roasted iron pyrites, spongy iron products, and iron having a minimum purity of 99.94 percent, in lumps, pellets or similar forms; however, these products account for only about 2 percent of reported trade for this digest.

[43] American Iron and Steel Institute, "Pig Iron and Raw Steel Production," December 2009.

TABLE MM.5 Primary iron products (MM021): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Brazil	(a)	(a)	0	(a)	(a)	(a)	–40.2
Russia	0	0	(a)	0	0	0	0.0
Trin & Tobago	(a)	(a)	(a)	0	(a)	(a)	(b)
Venezuela	(a)	0	(a)	(a)	(a)	(a)	15.1
Ukraine	0	0	0	0	0	0	0.0
South Africa	0	0	0	(a)	(a)	(a)	35.4
Canada	3	1	2	12	2	–10	–84.2
Sweden	0	(a)	0	0	0	0	0.0
Japan	(a)	(a)	(a)	1	(a)	–1	–95.0
Mexico	4	1	3	2	2	–1	–29.5
All other	5	10	3	4	4	(a)	–9.1
Total	12	12	8	19	7	–12	–61.6
EU-27	2	3	1	1	(a)	–1	–63.9
OPEC	(a)	(a)	(a)	(a)	(a)	(a)	–14.4
Latin America	6	1	3	3	2	–1	–38.8
Asia	1	1	1	2	3	(a)	1.8
Sub-Saharan Africa	(a)	(a)	(a)	(a)	(a)	(a)	119.7
U.S. imports for consumption:							
Brazil	1,198	1,126	1,124	1,993	478	–1,515	–76.0
Russia	218	504	354	413	275	–138	–33.3
Trin & Tobago	68	96	343	508	244	–263	–51.9
Venezuela	318	308	218	553	60	–494	–89.2
Ukraine	77	48	96	207	47	–160	–77.3
South Africa	44	46	46	56	38	–19	–33.1
Canada	84	79	41	102	27	–74	–73.1
Sweden	0	(a)	(a)	20	12	–8	–40.2
Japan	3	3	2	3	2	–1	–17.7
Mexico	(a)	2	0	0	0	0	0.0
All other	22	15	10	1	1	(a)	–40.7
Total	2,033	2,227	2,236	3,856	1,184	–2,672	–69.3
EU-27	1	(a)	2	21	12	–8	–39.8
OPEC	318	308	218	553	60	–494	–89.2
Latin America	1,592	1,532	1,686	3,054	781	–2,273	–74.4
Asia	17	9	2	3	3	–1	–17.2
Sub-Saharan Africa	44	46	46	56	38	–19	–33.1

See footnote(s) at end of table.

TABLE MM.5 Primary iron products (MM021): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Brazil	–1,198	–1,126	–1,124	–1,993	–478	1,515	76.0
Russia	–218	–504	–354	–413	–275	138	33.3
Trin & Tobago	–68	–96	–343	–508	–244	263	51.9
Venezuela	–318	–308	–218	–553	–60	494	89.2
Ukraine	–77	–48	–96	–207	–47	160	77.3
South Africa	–44	–46	–46	–56	–38	19	33.2
Canada	–81	–78	–40	–90	–25	64	71.6
Sweden	0	(a)	(a)	–20	–12	8	40.2
Japan	–3	–3	–2	–2	–2	(a)	–3.5
Mexico	4	–1	3	2	2	–1	–29.5
All other	–17	–6	–8	3	3	(a)	–0.8
Total	–2,021	–2,215	–2,229	–3,837	–1,176	2,660	69.3
EU-27	2	2	–1	–20	–12	8	38.4
OPEC	–318	–308	–218	–553	–59	494	89.2
Latin America	–1,586	–1,531	–1,682	–3,051	–779	2,271	74.5
Asia	–16	–8	–1	–1	(a)	1	97.1
Sub-Saharan Africa	–44	–46	–46	–56	–38	19	33.2

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a] Less than $500,000.
[b] Not meaningful for purposes of comparison.

U.S. imports of primary iron products consist of pig iron, primarily from Brazil, Russia, and Ukraine, and of direct-reduced iron from Trinidad and Tobago and Venezuela. A decrease in the value of imports of pig iron from Brazil, which is the largest source of imports of primary iron products, accounted for most (57 percent) of the total decrease in imports of primary iron products. U.S. imports from Brazil decreased by 76 percent, with a 65 percent decrease in quantity and a 32 percent decrease in unit value. There are numerous producers of pig iron in Brazil, and many were forced to suspend operations temporarily as demand declined and prices fell to levels that made continued operation unprofitable.[44] The value of imports of direct-reduced iron from Venezuela decreased even more dramatically—by 89 percent—and accounted for 18 percent of the total decline in U.S. imports of primary iron products. The quantity of such imports fell by 78 percent and the unit value by 43 percent.

[44] *Metal Bulletin,* "Worst Still to Come for Pig Iron Market," November 24, 2008; *Metal Bulletin,* "Brazilian Pig Iron Output Down to 21.6% of Capacity," March 16, 2009.

Ferroalloys[45]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $3.2 billion (77 percent) to $935 million
U.S. exports: Decreased by $93 million (42 percent) to $128 million
U.S. imports: Decreased by $3.2 billion (75 percent) to $1.1 billion

In 2009, the U.S. trade deficit in ferroalloys decreased by 77 percent as a result of a major decline in imports (table MM.6). Ferroalloys are alloys of iron used primarily in the production of steel, and in 2009, U.S. steel production dropped by 37 percent in comparison to that in 2008. While this decline did lower domestic consumption of ferroalloys, it cut imports of ferroalloys far more sharply.[46] The reason for this was that U.S. inventories in the hands of both dealers and end users were high as a result of the rapid drop-off in usage in late 2008, and consumption of these largely took the place of imports during 2009.[47] In addition, steel production fell by 8 percent worldwide, resulting in a global reduction in demand for ferroalloys and prices for ferroalloys that were broadly lower in 2009 than during 2008.

U.S. Exports

The value of U.S. exports of ferroalloys decreased by 42 percent due to lower prices for most commodities and a 21 percent decline in the quantity exported. The United States is not a major exporter of ferroalloys because, for most ferroalloys, there is no U.S. production of the basic raw materials needed to produce the alloys or of the ferroalloys themselves. On a commodity-by-commodity basis, the picture was mixed in 2009, with small increases in both the quantities and the unit values of exports of manganese ferroalloys (ferromanganese and silicomanganese) that were offset by large decreases in both quantities and unit values of other ferroalloys. Exports of ferromolybdenum fell by 35 percent in quantity and 45 percent in unit value, resulting in a decrease of $40 million (64 percent) and accounting for 43 percent of the overall drop in exports of ferroalloys. The price of ferromolybdenum had been at historically high levels during 2007 and 2008 as a result of high demand and uncertainty over supply of ferromolybdenum from China, the largest source. With global demand lower in 2009, the average unit value of U.S. exported ferromolybdenum dropped to under $19 per kilogram in 2009 from about $34 per kilogram in 2008. The value of U.S. exports of ferrochromium also fell sharply, dropping by $35 million (84 percent) because of an 80 percent decline in the quantity of exports and an18 percent fall in export unit values. U.S. exports of ferrochromium accounted for 38 percent of the overall decrease in total exports of ferroalloys.

[45] This industry/commodity group includes alloys of iron with other metals for use in steelmaking. The alloys of most importance are those of iron with manganese, chromium, silicon, nickel, molybdenum, vanadium, and niobium.
[46] American Iron and Steel Institute, "Pig Iron and Raw Steel Production," December 2009.
[47] Poole, "Suppliers Looking for Signs of Demand Recovery in Alloys," January 5, 2009; Poole, "US Silicomanganese Prices Slump on Consumer Deal," May 4, 2009.

TABLE MM.6 Ferroalloys (MM022): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
South Africa	0	(a)	1	1	(a)	–1	–77.6
Russia	0	0	(a)	4	0	–4	–100.0
Canada	88	72	87	107	53	–54	–50.5
Brazil	6	4	4	11	3	–7	–69.1
Kazakhstan	0	0	0	0	0	0	0.0
China	4	2	1	3	5	2	66.5
Colombia	(a)	(a)	(a)	1	(a)	(a)	–42.9
Mexico	24	24	36	33	33	(a)	–0.1
Chile	(a)	(a)	(a)	(a)	1	(a)	150.2
Norway	0	0	0	0	(a)	(a)	(b)
All other	39	44	77	61	32	–29	–47.1
Total	162	146	206	220	128	–93	–42.0
EU-27	37	38	56	50	17	–34	–66.6
OPEC	1	(a)	10	1	(a)	(a)	–48.9
Latin America	31	31	41	46	39	–7	–15.4
Asia	5	4	4	9	16	7	80.5
Sub-Saharan Africa	0	(a)	1	2	(a)	–2	–84.7
U.S. imports for consumption:							
South Africa	279	368	556	1,048	288	–760	–72.6
Russia	157	127	149	332	139	–192	–58.0
Canada	79	74	111	123	83	–39	–32.1
Brazil	83	119	180	256	85	–171	–66.8
Kazakhstan	143	113	203	367	68	–299	–81.5
China	351	280	376	602	52	–550	–91.4
Colombia	46	66	133	61	52	–8	–13.8
Mexico	43	29	33	72	17	–56	–77.2
Chile	22	45	93	119	41	–77	–65.3
Norway	82	90	81	156	39	–117	–75.2
All other	549	641	873	1,175	198	–977	–83.1
Total	1,834	1,954	2,788	4,310	1,062	–3,248	–75.4
EU-27	220	155	142	106	38	–67	–63.9
OPEC	36	41	43	47	22	–25	–53.4
Latin America	354	512	813	723	222	–500	–69.2
Asia	397	358	469	992	103	–889	–89.6
Sub-Saharan Africa	343	411	580	1,135	288	–847	–74.7

See footnote(s) at end of table.

TABLE MM.6 Ferroalloys (MM022): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
South Africa	–279	–368	–555	–1,046	–287	759	72.5
Russia	–157	–127	–149	–328	–139	189	57.6
Canada	9	–3	–24	–15	–30	–15	–96.1
Brazil	–77	–115	–177	–246	–82	164	66.7
Kazakhstan	–143	–113	–203	–367	–68	299	81.5
China	–347	–278	–375	–599	–47	552	92.1
Colombia	–46	–66	–133	–60	–52	8	13.4
Mexico	–18	–6	3	–40	16	56	(b)
Chile	–22	–45	–92	–118	–41	78	65.8
Norway	–82	–90	–81	–156	–38	118	75.3
All other	–510	–597	–797	–1,114	–166	948	85.1
Total	–1,673	–1,807	–2,582	–4,090	–935	3,156	77.2
EU-27	–184	–117	–86	–55	–21	34	61.3
OPEC	–35	–41	–33	–46	–21	25	53.5
Latin America	–322	–482	–771	–676	–183	493	72.9
Asia	–392	–353	–465	–983	–87	896	91.2
Sub-Saharan Africa	–343	–411	–578	–1,133	–287	846	74.6

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.
[b]Not meaningful for purposes of comparison.

U.S. Imports

U.S. imports of ferroalloys decreased by 75 percent as both the quantities and unit values of imports of all ferroalloys declined. The quantity of ferroalloys consumed fell in the United States because steel production was 37 percent lower in 2009 than in 2008 as a result of reduced demand from the primary steel consumers—the automotive and construction industries. Prices were also down because of lower demand worldwide, as world steel production declined by 8 percent.

Manganese ferroalloys accounted for the largest share of imports in 2008 and accounted for the largest change in U.S. imports of ferroalloys in 2009. Imports of manganese ferroalloys decreased by $1.47 billion (81 percent), accounting for 45 percent of the total decrease in U.S. imports of ferroalloys. The quantity of imports of manganese ferroalloys fell by 65 percent and the unit value by 44 percent. As the source of the majority of U.S. imports of manganese ferroalloys, South Africa was the country most affected by reduced U.S. demand, with its imports declining by $557 million, or by 38 percent of the total decrease in U.S. manganese ferroalloy imports. U.S. imports from China declined by $293 million, accounting for 20 percent of the total decrease in U.S. imports of manganese ferroalloy imports.

Imports of chromium ferroalloys decreased by $872 million (75 percent) and accounted for 27 percent of the total change in U.S. imports of all ferroalloys. The quantity of chromium ferroalloys imported dropped by 54 percent and the unit value by 46 percent. U.S. imports from Kazakhstan, the largest source of chromium ferroalloys, fell by the largest amount of any one country, accounting for $299 million (34 percent) of the decrease in U.S. imports of chromium ferroallows, and U.S. imports from South Africa accounted for another $206 million (24 percent) of the decrease.

Imports of silicon ferroalloys decreased by $269 million (68 percent), accounting for 8 percent of the total change in U.S. imports of all ferroalloys. The quantity of imports of silicon ferroalloys fell by 63 percent, and the import unit value decreased by 13 percent. U.S. imports from China declined by $192 million, accounting for 71 percent of the total decrease in U.S. imports of silicon ferroalloys.

U.S. imports of ferroniobium decreased by $136 million (56 percent) during 2008–09. The quantity of imports declined by 59 percent and the import unit value fell by 8 percent. Imports of ferroniobium from Brazil decreased by 67 percent, but imports from Canada increased by 73 percent. Although Brazil remained the principal source of U.S. imports of ferroniobium, its share of these imports decreased to 69 percent in 2009 from 91 percent in 2008. Before July 1, 2008, imports of ferroniobium from Brazil were duty-free under the Generalized System of Preferences because Brazil had a competitive-need-limits waiver for this commodity.[48] The waiver expired on that date, however, and imports of ferroniobium from Brazil became subject to a 5 percent duty on that date, whereas imports of ferroniobium from Canada are duty free under the North American Free Trade Agreement.[49]

[48] Proclamation No. 7689, 68 Fed. Reg. 39795 (July 2, 2003).
[49] Proclamation No. 8272, 73 Fed. Reg. 38297 (July 3, 2008).

Steel Mill Products[50]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $13.8 billion (69 percent) to $6.3 billion
U.S. exports: Decreased by $6.1 billion (36 percent) to $10.6 billion
U.S. imports: Decreased by $19.9 billion (54 percent) to $17.0 billion

The trade deficit in steel mill products decreased by 69 percent, due to a sharp decline ($19.9 billion) in the value of imports (table MM.7) that significantly exceeded the drop ($6.1 billion) in exports. During the first three quarters of 2008, the U.S. steel industry enjoyed historically high sales. However, starting in the last quarter of 2008 and into 2009, the U.S. market and industry began a steep decline, triggered largely by the global economic downturn.[51] In particular, the downturn was a primary factor in the decreased end-use demand of the two largest domestic steel-consuming sectors—automotive and construction. The decline in U.S. exports coincided with declining demand in many of the leading export markets. The drop in import value reflected decreases in both volume and import unit values.

U.S. Exports

Exports decreased by $6.1 billion (36 percent) to $10.6 billion in 2009 (table MM.7), after reaching a five-year high for steel exports in 2008. Most of the decline was accounted for by decreases in exports to Canada and Mexico (table MM.7), which were caused by the fall in automotive demand throughout the North America Free Trade Agreement (NAFTA) region and the decline in Canada's energy market.[52] Although exports fell in 2009 compared to 2008, during the early months of 2009, U.S. export levels were high. A major factor for the relatively high export level during the first part of 2009 was the continued depreciation of the U.S. dollar.[53]

Flat-rolled products and pipe and tube accounted for 53 percent of the overall decrease in steel mill product exports in 2009. Exports of carbon and alloy flat products decreased by 37 percent in value, with exports to the NAFTA countries accounting for 65 percent of the value decrease. The automotive sector, which declined in the NAFTA countries, is an

[50] The major products in this commodity group are steel plates, sheets, strips, pipes, tubes, and structural products such as beams.

[51] For example, the United States Steel Corporation, the largest U.S.-headquartered steel company, "set new records for financial performance" in 2008, and Nucor Corporation in 2008 had had "three quarters of record earnings followed by a dramatic reversal in all of our markets in the final three months of the year." Nucor Corporation, *2008 Annual Report*, February 17, 2009, 3; U.S. Steel Corporation, *2008 Annual Report*, February 24, 2009, 1; Petry, "Analysts' Views Dim As Credit Woes Threaten to Choke Steel," October 8, 2008.

[52] Statistics Canada, *International Merchandise Trade*, 2009, 16.

[53] Haflich, "A Weak Dollar Makes a Strong Case for U.S. Mills to Court Steel Export Market," January 1, 2010.

TABLE MM.7 Steel mill products (MM025): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	5,009	5,600	6,085	7,245	4,372	–2,873	–39.7
Mexico	1,690	1,998	2,189	3,022	2,042	–980	–32.4
China	402	321	532	1,023	700	–323	–31.5
Japan	79	63	72	64	37	–26	–41.3
Korea	94	104	124	208	158	–50	–23.9
Germany	176	168	252	273	138	–135	–49.4
India	170	152	203	259	233	–25	–9.8
Italy	132	90	164	278	115	–163	–58.6
Brazil	61	75	173	527	212	–315	–59.7
Taiwan	77	68	71	171	105	–67	–38.9
All other	1,441	1,841	2,671	3,667	2,535	–1,132	–30.9
Total	9,331	10,479	12,535	16,737	10,648	–6,089	–36.4
EU-27	754	843	1,417	1,619	823	–796	–49.2
OPEC	284	382	541	735	615	–120	–16.3
Latin America	2,124	2,500	2,976	4,846	3,047	–1,799	–37.1
Asia	1,014	909	1,346	2,146	1,617	–530	–24.7
Sub-Saharan Africa	106	202	167	178	227	49	27.5
U.S. imports for consumption:							
Canada	4,334	4,702	5,275	6,950	3,448	–3,501	–50.4
Mexico	2,600	2,437	2,426	3,257	1,379	–1,878	–57.7
China	1,687	3,605	3,968	5,995	2,007	–3,988	–66.5
Japan	1,392	1,886	1,727	2,128	1,580	–549	–25.8
Korea	1,285	1,813	1,499	2,207	1,105	–1,102	–49.9
Germany	1,384	1,428	1,635	1,949	1,004	–945	–48.5
India	608	909	1,043	1,750	829	–921	–52.6
Italy	591	823	954	902	644	–258	–28.6
Brazil	1,374	1,629	1,411	1,114	450	–663	–59.6
Taiwan	673	1,511	1,227	1,129	492	–637	–56.4
All other	7,608	10,757	8,040	9,489	4,058	–5,431	–57.2
Total	23,534	31,500	29,204	36,870	16,995	–19,875	–53.9
EU-27	5,988	6,753	7,348	7,597	4,214	–3,383	–44.5
OPEC	266	158	112	87	60	–27	–31.3
Latin America	4,619	4,566	4,281	4,961	2,059	–2,901	–58.5
Asia	5,983	10,410	9,960	13,599	6,183	–7,416	–54.5
Sub-Saharan Africa	222	344	164	109	30	–79	–72.2

See footnote(s) at end of table.

TABLE MM.7 Steel mill products (MM025): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	675	898	809	295	923	628	213.0
Mexico	–910	–440	–237	–235	663	898	[a]
China	–1,284	–3,284	–3,436	–4,972	–1,307	3,665	73.7
Japan	–1,313	–1,823	–1,655	–2,064	–1,542	522	25.3
Korea	–1,191	–1,709	–1,375	–1,999	–947	1,053	52.7
Germany	–1,208	–1,261	–1,383	–1,675	–865	810	48.3
India	–438	–757	–840	–1,492	–595	896	60.1
Italy	–458	–733	–791	–624	–529	95	15.2
Brazil	–1,313	–1,554	–1,238	–587	–238	349	59.4
Taiwan	–596	–1,443	–1,156	–958	–387	571	59.6
All other	–6,167	–8,915	–5,369	–5,822	–1,523	4,299	73.8
Total	–14,203	–21,020	–16,670	–20,133	–6,347	13,786	68.5
EU-27	–5,234	–5,910	–5,931	–5,978	–3,391	2,587	43.3
OPEC	18	223	430	648	555	–92	–14.2
Latin America	–2,495	–2,066	–1,304	–115	987	1,102	[a]
Asia	–4,968	–9,501	–8,614	–11,452	–4,566	6,886	60.1
Sub-Saharan Africa	–116	–142	3	69	196	127	184.9

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Not meaningful for purposes of comparison.

important market for this product.[54] Carbon and alloy pipe and tube exports also decreased by 29 percent in value. The largest export market for this product, Canada, accounted for 74 percent of the decrease in export value. The Canadian energy sector is an important market for pipe and tube exports, and demand in this sector dropped as a result of lower energy prices throughout 2009.[55]

U.S. Imports

U.S imports decreased by $19.9 billion (54 percent) to $17.0 billion in 2009 (table MM.7). The import decrease was primarily due to lower U.S. steel demand, which fell by 40 percent.[56] Finished steel mill product imports, as a share of the U.S. market, remained relatively stable for most of the past decade.[57]

Imports of carbon and alloy pipes and tubes fell by 48 percent ($6.2 billion) in value in 2009 from 2008. China was the largest source of imports and accounted for 35 percent of the decrease. Several antidumping and countervailing duty investigations were in progress or completed in 2009, and another antidumping and countervailing duty investigation ended in January 2010 on imported products in this category from China.[58] According to some industry sources, these investigations may have had a restraining effect on imports during 2009.[59] Also, decreased demand in the U.S. energy and industrial end-use markets was a factor in the lower level of imports.

Imports of flat-rolled products decreased in value by 49 percent ($4.3 billion). The U.S. automotive markets consume the largest amount of the sheet steel supply,[60] and the reduced demand and production in the automotive markets was a major factor in the import decline.[61] Canada, by far the largest source, accounted for 29 percent of the value decrease.

U.S. imports of semifinished products, which are the raw materials for finished steel mill products, decreased by 79 percent. This product category showed a sharp import decline during a period of decreased U.S. demand for finished steel mill products, as U.S. producers were able to substitute U.S.-produced product using available capacity. The largest import source in 2009 was Canada, but Russia, Mexico, and Brazil were also major suppliers. Canada replaced Mexico as the leading import source due to the $962 million decrease (the largest in absolute terms of all import sources) in imports from Mexico.

[54] Statistics Canada, *International Merchandise Trade*, 2009, 15.
[55] Guzzo, "Weak Demand Sinks Tenaris Net 62.4% in 3d Qtr.," November 9, 2009.
[56] Raw steel production in 2009 was 60 percent of 2008 production. American Iron and Steel Institute, "Pig Iron and Raw Steel Production," December 2009.
[57] In 2003, U.S. imports were lower due to Section 201 trade relief. American Iron and Steel Institute, "Steel Import Permits Decline," January 6, 2010.
[58] USITC, AD CVD Investigations, "Completed Investigations"; "Active Investigations."
[59] Guzzo, "OCTG Imports Set to Fall as US Duties Imposed," November 6, 2009.
[60] American Iron and Steel Institute, "Executive Summary," *2008 Annual Statistical Report*, 2008.
[61] See "Motor Vehicles" section in the Transportation Equipment chapter for more detailed information.

Copper and Related Articles[62]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $3.0 billion (67 percent) to $1.5 billion
U.S. exports: Decreased by $2.1 billion (31 percent) to $4.6 billion
U.S. imports: Decreased by $5.0 billion (45 percent) to $6.1 billion

The U.S. trade deficit in copper and related articles decreased in 2009, for a third successive year, as the decline in U.S. imports exceeded the decline in exports (table MM.8). In 2009, the United States imported significantly less of several key products—particularly unrefined and refined (unwrought) copper, but also refined copper wire and refined copper pipe and tube. Despite fewer exports of copper waste and scrap and of refined copper wire, increased exports from the unrefined and refined copper industry also contributed to the narrowing of the trade deficit.

Lower values for U.S. trade in copper and related products reflected the economic downturns in both the United States and most of its major trade partners in 2009.[63] Because of its combination of favorable physical properties (e.g., malleability, ductility, electrical conductivity, and thermal transfer capability), copper is a key raw material for a wide variety of products,[64] especially in the copper-intensive construction[65] and durable goods manufacturing sectors,[66] which were especially hard hit throughout the year. Trade values were also muted by lower prices for refined copper in 2009, which fell by approximately 26 percent from $3.15 per pound in 2008 to $2.33 per pound in 2009[67] as production exceeded consumption worldwide[68] and refined copper accumulated in both commodity-exchange warehouses and commercial inventories.[69]

[62] This industry/commodity group includes unrefined and refined copper and copper alloys in unwrought forms, refined copper and copper alloys in various semi-manufactured forms (e.g., bars, rods, profiles, and wires; plates, sheets, strips, and foils; and tubes, pipes, and fittings) and refined copper and copper alloy waste, scrap, ash, and residues.

[63] See the "Overall Economic Performance" chapter for more detailed information.

[64] Of the copper mill products shipped to the domestic market in 2008, one-half (50 percent) was for building construction, followed by 21 percent for electrical and electronic products, 11 percent for transportation equipment, 10 percent for consumer and general products, and 8 percent for industrial machinery and equipment. CDA, *Annual Data 2009.*

[65] USDOC, Census, "December 2009 Construction," February 1, 2010.

[66] USDOC, Census, "Advance Report on Durable Goods Manufacturers' Shipments," January 28, 2010.

[67] London Metals Exchange (LME) grade-A cash price. Prices for unwrought and fabricated copper products are generally set at a premium, to reflect conversion charges, over the producers' delivered price of copper cathodes.

[68] WBMS, "Copper," February 18, 2010, 41–42.

[69] Commodity exchanges held 298.0 metric tons more of refined copper in their registered warehouses at the end of 2009 than a year ago. Likewise, producers, merchants, and consuming industries held 244,000 metric tons more refined copper in commercial inventories. WBMS, "Copper," February 18, 2010, 49.

TABLE MM.8 Copper and related articles (MM036): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	663	1,241	1,381	1,339	766	–573	–42.8
China	852	1,665	2,051	1,982	1,705	–278	–14.0
Mexico	959	1,594	1,519	1,463	923	–540	–36.9
Chile	3	2	2	2	2	–1	–23.3
Peru	1	1	3	2	2	(a)	–13.2
Germany	76	185	154	172	119	–53	–30.8
Hong Kong	98	144	182	318	231	–87	–27.3
Japan	103	167	180	204	113	–91	–44.5
Korea	130	234	295	266	133	–132	–49.9
Taiwan	99	223	133	89	59	–30	–34.0
All other	422	596	785	853	583	–270	–31.6
Total	3,405	6,052	6,684	6,691	4,636	–2,055	–30.7
EU-27	247	439	523	576	406	–170	–29.5
OPEC	34	41	45	62	43	–19	–30.9
Latin America	1,016	1,672	1,611	1,572	995	–577	–36.7
Asia	1,416	2,603	3,065	3,085	2,385	–700	–22.7
Sub-Saharan Africa	4	11	12	14	8	–6	–42.9
U.S. imports for consumption:							
Canada	2,073	3,364	3,561	3,696	1,922	–1,774	–48.0
China	319	653	708	807	458	–348	–43.2
Mexico	774	1,060	1,277	960	581	–379	–39.5
Chile	1,788	4,145	3,407	2,759	1,465	–1,294	–46.9
Peru	592	1,045	1,065	928	583	–345	–37.2
Germany	381	592	534	469	326	–143	–30.4
Hong Kong	4	5	6	7	3	–4	–51.3
Japan	155	223	225	202	91	–111	–54.9
Korea	78	116	119	124	68	–56	–45.0
Taiwan	112	133	123	98	58	–40	–40.7
All other	1,489	2,466	1,552	1,104	569	–535	–48.5
Total	7,766	13,803	12,577	11,153	6,125	–5,028	–45.1
EU-27	928	1,245	1,125	967	582	–385	–39.8
OPEC	5	5	3	4	2	–3	–65.0
Latin America	3,435	6,633	5,989	4,728	2,716	–2,012	–42.5
Asia	801	1,345	1,406	1,445	782	–663	–45.9
Sub-Saharan Africa	8	17	10	25	4	–21	–82.7

See footnote(s) at end of table.

TABLE MM.8 Copper and related articles (MM036): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–1,410	–2,123	–2,179	–2,357	–1,156	1,201	51.0
China	532	1,012	1,344	1,176	1,247	71	6.0
Mexico	184	533	242	504	343	–161	–32.0
Chile	–1,785	–4,142	–3,405	–2,756	–1,463	1,293	46.9
Peru	–591	–1,044	–1,063	–926	–581	345	37.2
Germany	–305	–407	–380	–297	–208	90	30.2
Hong Kong	93	139	176	311	228	–83	–26.8
Japan	–51	–56	–45	2	22	20	977.5
Korea	51	117	176	142	65	–77	–54.1
Taiwan	–13	90	10	–8	1	9	[b]
All other	–1,067	–1,870	–768	–251	14	265	[b]
Total	–4,360	–7,751	–5,893	–4,462	–1,488	2,974	66.6
EU-27	–681	–806	–602	–391	–176	215	55.0
OPEC	28	36	42	58	41	–16	–28.4
Latin America	–2,418	–4,961	–4,378	–3,156	–1,721	1,435	45.5
Asia	615	1,258	1,659	1,640	1,602	–38	–2.3
Sub-Saharan Africa	–4	–6	2	–12	3	15	[b]

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a] Less than $500,000.
[b] Not meaningful for purposes of comparison.

The U.S. trade deficit for these products with selected trade partners (table MM.8) narrowed most noticeably with Chile, the world's largest producer of mined copper; the deficit with Chile declined by $1.3 billion (47 percent) to $1.5 billion.[70] Similarly, the U.S. deficit with Canada narrowed by $1.2 billion (51 percent) to $1.2 billion, as both countries engaged in less extensive cross-border trade of copper in various unwrought, semi-fabricated, and finished forms than in the previous year.

U.S. Exports

In 2009, U.S. exports of copper and related articles declined by $2.1 billion (31 percent) to $4.6 billion. Exports of copper waste and scrap declined by $954 million (32 percent) to $2.0 billion and accounted for the greatest share (46 percent) of the overall export decline. China registered the largest decline of U.S. exports of copper waste and scrap, falling by $454 million (26 percent). However, the country remained the predominant foreign market destination for U.S. shipments abroad of these forms of copper, as the Chinese economy continued to expand in 2009.[71] Global supplies of copper waste and scrap were especially limited during the year, as the reduced economic activity in the major industrialized economies restricted production. Hence, China's import-dependent copper-fabricating mills switched to higher-grade refined copper as their raw material for manufacturing copper mill products.[72]

U.S. exports of refined copper wire decreased by $490 million (42 percent) to $668 million. U.S. exports of refined copper to Mexico and Canada registered the greatest U.S. export declines for these products, falling by $361 million (45 percent) and by $96 million (34 percent), respectively. Mexican and Canadian manufacturing and construction sectors engaged in less extensive cross-border trade with the United States, attributable to the reduced economic growth among these three North American Free Trade Agreement (NAFTA) countries.[73] Together these two NAFTA partners accounted for 94 percent of the U.S. export decline in refined copper wire.

Only two categories of copper and related products experienced an increase in U.S. exports in 2009; the product category with the greatest increase was in unrefined (anode for electrolytic refining) and refined (electrolytic cathode) copper in unwrought forms, which increased by $207 million (84 percent) to $452 million. Not only was China the predominant foreign market destination, but it also registered the largest increase in U.S. exports of unrefined and refined copper (up $176 million). The Chinese increased their purchases of refined copper on world markets from February through July 2009, reportedly to take advantage of lower global copper prices. Likewise, as noted earlier, Chinese fabricators increasingly turned to refined copper, as the global copper waste and scrap supply was reduced world markets. [74] Increased U.S. exports to China accounted for 85 percent of the overall rise in U.S. exports of these forms of copper worldwide.

[70] Chilean mines produced 5.3 million metric tons of copper in 2009 or approximately one-third (34 percent) of the world's total of 15.8 million metric tons. Edelstein, "Copper," January 2010, 49.

[71] See the "Overall Economic Performance" and "China" chapters for more detailed information.

[72] China consumed 1.7 million metric tons more of refined copper but 1.6 million metric tons less of copper and copper alloy waste and scrap in 2009 than in the previous year. WBMS, "Copper," February 18, 2010, 56.

[73] See the "Overall Economic Performance" chapter for more detailed information.

[74] Shumsky, "China Copper Imports," February 11, 2010.

U.S. Imports

In 2009, the value of U.S. imports of copper declined by $5.0 billion (45 percent) to $6.1 billion. The overall import decline is principally attributable to lower imports of unrefined and refined copper, which decreased by $2.6 billion (44 percent) to $3.4 billion, and accounted for over one-half (52 percent) of the overall decline. U.S. imports from Canada and Chile, the largest suppliers of copper and related products to the United States, each declined by $1.2 billion and accounted for almost all (90 percent) of the overall decline of imported unrefined and refined copper from all U.S. trade partners. Copper fabricators consumed far less refined copper from both domestic and foreign sources in 2009; several even shut down operations in response to a fall-off in shipment orders for copper mill products from the construction and manufacturing sectors.[75]

The next-largest decline in U.S. imports was in refined copper wire, which decreased by $625 million (51 percent). The decline principally affected imports from Canada and Russia, which fell by $405 million (47 percent) and $133 million (69 percent), respectively. Downstream demand for electrical wiring fell with declining activity in both the residential and commercial segments of the U.S. construction industry.[76] As a result, imports, as well as shipments of refined copper wire by U.S. wire mills, were down in 2009.[77]

U.S. imports of refined copper pipe and tube also fell significantly, by $481 million (49 percent) to $504 million. U.S. imports of copper pipe and tube from China and Mexico declined by $200 million and $145 million, respectively, accounting for the majority of this import decline. Fewer plumbing installations due to less construction activity[78] reduced the demand for refined copper pipe and tube in the United States during 2009.[79]

[75] Edelstein, "Copper," January 2010, 49.

[76] USDOC, Census, "December 2009 Construction," February 1, 2010.

[77] Output of U.S. refined copper wire mills was 459,000 metric tons (28 percent) less in 2009 than the previous year's amount. WBMS, "Copper," February 18, 2010, 79.

[78] USDOC, Census, "December 2009 Construction," February 1, 2010.

[79] Output of U.S. refined copper pipe and tube mills rose by 28,000 metric tons (8 percent) in 2009 over the previous year's amount. WBMS, "Copper," February 18, 2010, 79.

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Miscellaneous Manufactures[1]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $13.3 billion (18 percent) to $59.7 billion
U.S. exports: Decreased by $3.1 billion (11 percent) to $24.8 billion
U.S. imports: Decreased by $16.4 billion (16 percent) to $84.4 billion

The U.S. trade deficit in miscellaneous manufactures contracted by $13.3 billion (18 percent) to $59.7 billion in 2009, as imports declined at a faster pace than exports (table MS.1). The deficit with China experienced the largest drop of any of the bilateral deficits in this product group, falling by $9.0 billion (15 percent) to $49.5 billion and accounting for over two-thirds of the total decrease in the U.S. trade deficit in this sector in 2009. The next largest reductions in bilateral deficits were accounted for by Italy, France, Switzerland, and Canada. In particular, U.S. imports of furniture, works of art, and toys and games decreased, as did U.S. exports of works of art and furniture, reflecting the effects of the U.S. and global economic downturn, sharply reduced housing starts, and lower prices for video game consoles. Arms, ammunition, and armored fighting vehicles accounted for the largest increases in sector exports and imports (table MS.2).[2]

In 2009, the United States maintained a trade surplus in only three commodity groups in this sector: prefabricated buildings ($410 million); apparel fasteners ($48 million); and arms, ammunition, and armored vehicles ($216 million), totaling $674 million. The largest U.S. trade deficits were in toys and games ($18.8 billion) and furniture ($16.7 billion).

U.S. Exports

U.S. exports of miscellaneous manufactures fell by $3.1 billion (11 percent) to $24.8 billion in 2009. The decrease in exports was fueled by declines in exports of works of art and miscellaneous manufactures, which fell by $895 million (15 percent); furniture by $836 million (20 percent); sporting goods by $422 million (21 percent); and jewelry, by $335 million (8 percent). Decreases in these groups more than offset an increase in U.S. exports of arms, ammunition, and armored fighting vehicles, which rose by $353 million (9 percent).

[1] The miscellaneous manufactures sector encompasses a variety of industry groups, including luggage, handbags, umbrellas, silverware, jewelry, furniture, lamps, prefabricated buildings, writing instruments, musical instruments, bicycles, toys, games, sporting goods, arms and ammunition, tanks and other armored vehicles, brooms and brushes, hair grooming articles, and apparel fasteners. For the most part, the manufacturing processes used to make these articles are mature, and imports supply a significant share of the U.S. market.

[2] Trade statistics for all industry/commodity groups in this sector are presented in app. A, table A-7.

TABLE MS.1 Miscellaneous manufactures: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
China	185	207	307	367	362	–5	–1.4
Canada	3,918	4,425	5,067	5,449	4,664	–785	–14.4
United Kingdom	1,703	2,458	2,949	3,362	2,772	–590	–17.5
Mexico	1,358	1,665	2,031	1,650	1,511	–140	–8.5
Japan	1,728	2,034	1,915	1,862	1,480	–382	–20.5
France	458	687	775	1,125	736	–388	–34.5
Switzerland	685	1,056	1,459	1,362	1,941	579	42.6
Italy	305	249	327	335	346	11	3.3
Taiwan	430	380	385	279	217	–62	–22.3
Germany	604	675	685	786	670	–116	–14.7
All other	7,062	8,603	10,053	11,245	10,067	–1,179	–10.5
Total	18,435	22,438	25,954	27,821	24,765	–3,056	–11.0
EU-27	4,461	5,684	6,639	7,862	6,340	–1,522	–19.4
OPEC	625	718	907	1,183	1,237	54	4.6
Latin America	2,951	3,630	4,278	4,336	3,997	–339	–7.8
Asia	4,030	4,887	5,293	5,508	4,584	–925	–16.8
Sub-Saharan Africa	145	156	192	237	188	–49	–20.8
U.S. imports for consumption:							
China	46,122	51,068	58,306	58,917	49,892	–9,025	–15.3
Canada	5,903	6,013	5,825	5,264	4,052	–1,212	–23.0
United Kingdom	1,961	2,274	2,895	2,671	1,897	–774	–29.0
Mexico	3,845	3,953	3,800	3,483	3,013	–470	–13.5
Japan	2,474	2,026	1,969	1,835	1,620	–216	–11.8
France	2,618	3,037	3,937	3,302	2,191	–1,111	–33.7
Switzerland	474	604	653	964	944	–20	–2.1
Italy	3,520	3,464	3,804	3,329	2,448	–882	–26.5
Taiwan	2,337	2,256	2,297	2,405	1,956	–449	–18.7
Germany	1,536	1,713	1,816	1,890	1,448	–441	–23.4
All other	15,769	17,691	18,603	16,777	14,977	–1,801	–10.7
Total	86,559	94,099	103,905	100,837	84,437	–16,400	–16.3
EU-27	12,473	13,602	15,931	14,520	10,955	–3,565	–24.6
OPEC	59	64	59	52	40	–12	–23.5
Latin America	5,434	5,496	5,295	4,835	4,102	–733	–15.2
Asia	60,228	65,901	73,454	72,600	61,450	–11,150	–15.4
Sub-Saharan Africa	132	185	183	140	135	–5	–3.9

See footnote(s) at end of table.

TABLE MS.1 Miscellaneous manufactures: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
China	–45,938	–50,861	–57,999	–58,550	–49,530	9,020	15.4
Canada	–1,985	–1,588	–758	184	612	428	232.3
United Kingdom	–259	184	53	691	875	184	26.6
Mexico	–2,488	–2,288	–1,769	–1,832	–1,502	330	18.0
Japan	–746	8	–54	27	–140	–166	[a]
France	–2,160	–2,350	–3,162	–2,177	–1,454	723	33.2
Switzerland	211	451	806	398	997	599	150.7
Italy	–3,216	–3,215	–3,476	–2,994	–2,102	893	29.8
Taiwan	–1,906	–1,875	–1,912	–2,126	–1,739	386	18.2
Germany	–932	–1,038	–1,131	–1,104	–778	326	29.5
All other	–8,707	–9,088	–8,550	–5,532	–4,910	622	11.2
Total	–68,124	–71,661	–77,951	–73,015	–59,672	13,343	18.3
EU-27	–8,012	–7,918	–9,292	–6,658	–4,615	2,043	30.7
OPEC	566	654	848	1,131	1,198	67	5.9
Latin America	–2,484	–1,866	–1,017	–499	–105	394	78.9
Asia	–56,198	–61,014	–68,161	–67,092	–56,866	10,226	15.2
Sub-Saharan Africa	12	–29	10	97	53	–44	–45.3

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Not meaningful for purposes of comparison.

TABLE MS.2 Miscellaneous manufactures: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Arms, ammunition, and armored vehicles (MS019)	3,060	3,616	4,097	3,939	4,292	353	9.0
Decreases:							
Works of art and miscellaneous manufactured goods (MS017)	2,423	3,837	5,011	6,064	5,169	–895	–14.8
Furniture (MS009)	3,020	3,354	3,691	4,229	3,392	–836	–19.8
Sporting goods (MS014)	1,735	1,813	1,882	1,972	1,550	–422	–21.4
All other	8,197	9,818	11,274	11,618	10,362	–1,256	–10.8
Total	18,435	22,438	25,954	27,821	24,765	–3,056	–11.0
U.S. IMPORTS:							
Increases:							
Arms, ammunition, and armored vehicles (MS019)	1,718	2,240	2,976	3,280	4,076	796	24.3
Silverware and related articles of precious metal (MS005)	85	302	294	849	1,398	550	64.8
Decreases:							
Furniture (MS009)	24,296	26,078	26,731	25,285	20,057	–5,228	–20.7
Works of art and miscellaneous manufactured goods (MS017)	9,943	11,228	13,359	11,849	8,621	–3,229	–27.2
Toys and games (MS013)	17,069	17,840	22,778	23,809	21,256	–2,554	–10.7
Precious jewelry and related articles (MS006)	8,359	9,553	9,463	7,322	5,755	–1,567	–21.4
Luggage, handbags, and flat goods (MS001)	6,151	6,834	7,535	7,833	6,395	–1,438	–18.4
Lamps and lighting fittings (MS011)	5,831	6,180	6,211	5,988	4,709	–1,279	–21.4
Sporting goods (MS014)	4,978	5,600	5,847	5,817	4,688	–1,129	–19.4
All other	8,129	8,242	8,712	8,804	7,483	–1,321	–15.0
Total	86,559	94,099	103,905	100,837	84,437	–16,400	–16.3

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

Nearly all of the decrease in U.S. exports of works of art and miscellaneous manufactured goods can be attributed to a $823 million decline in U.S. exports of art and antiques. The most notable decline occurred in exports of paintings, which decreased by $546 million (14 percent). Most trade in works of art and antiques is accounted for by touring exhibits of such works. They are reported as imports when they arrive in the United States and as exports when they depart. The second leading venue for international trade in works of art and antiques is auction houses. The leading destinations for works of art and antiques departing the United States in 2009 were Switzerland, the United Kingdom, and France, with decreased exports to the United Kingdom and France (down $549 million and $238 million, respectively) more than offsetting the increase in exports to Switzerland (up $568 million). The decrease in U.S. exports (and imports) of touring works of art may reflect the expectation by exhibitors that the public is less inclined to pay admission to exhibits during recessionary times, and therefore exhibitors are less likely to schedule tours of works of art during a recession.

Whereas U.S. exports to Europe largely reflect the return of touring exhibits of art and antiques, U.S. exports to Asia chiefly involve sales to investors and collectors in that region. The global economic downturn led to reduced purchases by collectors in Asia, with U.S. exports to Korea, Japan, Hong Kong, and China collectively falling by 41 percent ($222 million) in 2009.[3]

Total U.S. exports of furniture declined by $836 million (20 percent) in 2009, with exports to Canada and Mexico falling by $390 million and $93 million, respectively. The economic downturn and lower activity in real estate markets[4] led to reduced sales of domestically produced furniture in 2009.[5] U.S. exports of furniture also declined as the leading markets for U.S. exports of office furniture, Canada and Mexico, contracted during the economic downturn.[6]

The global economic downturn also took its toll on the sporting goods industry, particularly in the golf equipment segment, as golfers limited their play to save on greens fees and postponed purchases of new clubs.[7] Whereas U.S. total exports of sporting goods declined by $422 million (21 percent) in 2009, exports of golf equipment fell by $220 million (32 percent), led by a 46 percent decrease ($78 million) to the United Kingdom.

In contrast to other sector categories, international arms trade was impervious to the global economic downturn, reflecting continued conflict and security threats throughout

[3] During an economic downturn, the demand for art by investors in Asia, particularly in Japan, falls, leading to lower prices for art at international auctions. Therefore, the decline in U.S. exports of art to Asian markets in 2009 likely represents decreased prices for works of art as well as a fewer number of pieces sold. Hiraki et al., "How Did Japanese Investments Influence International Art Prices?" December 2009, 1489–1514.

[4] The number of new privately owned housing units started in the United States declined by 70 percent during 2006–09, falling from 1.5 million units in 2006 to 445,000 units in 2009. USDOC, Census, *New Privately-Owned Housing Units Started*, n.d.

[5] Buehlmann and Schuler, "The U.S. Household Furniture Industry: Status and Opportunities," September 2009, 20.

[6] The U.S. furniture industry competes most effectively with imports from Asia in the office furniture market, where standardization and the use of plastics and metal rather than wood lend themselves to more automated manufacturing process. Two of the world's leading office furniture producers are headquartered in Michigan, from which the companies supply markets in North America and the Caribbean Basin. Both companies have manufacturing facilities in Europe, China, and Japan to supply regional markets. IBISWorld, *Furniture Stores in the U.S.: 44211*, July 11, 2008.

[7] Global Industry Analysts Inc., *World Golf Equipment Market*, April 2009.

the world. U.S. exports of arms, ammunition, and armored fighting vehicles rose by $353 million (9 percent) in 2009, fueled by a $308 million (17 percent) increase in exports of bombs, grenades, and missiles. The largest increases in exports of bombs, grenades, and missiles were to Israel, Poland, and the United Kingdom.

U.S. Imports

The value of U.S. imports of miscellaneous manufactures declined by $16.4 billion (16 percent) to $84.4 billion in 2009 (table MS.2), largely because of the effects of the recession in the United States, but also because of lower prices for video games consoles. China accounted for over one-half of the decrease, as imports from China dropped by $9.0 billion (15 percent) to $49.9 billion. Imports decreased from each of the 10 leading sources of sector imports and in all but 2 of the 19 product categories in the sector; the 2 that rose were arms, ammunition, and armored fighting vehicles and silverware and related articles of precious metal (table MS.2).

U.S. imports of furniture declined by $5.2 billion (21 percent) in 2009, as the continuing economic recession and limited availability of financing for purchasing or renovating homes led to decreased sales and production of household furniture.[8] U.S. imports from China, the leading import supplier, fell by $2.4 billion (18 percent), while imports from Canada, the second leading supplier, decreased by $1.2 billion (36 percent).

U.S. imports of works of art and antiques fell by $2.4 billion (33 percent) in 2009 and accounted for three-quarters of the total decline in imports in the works of art and miscellaneous manufactured goods product group. Fewer tours of artwork from Europe likely accounted for the bulk of the reduction in U.S. imports of works of art and antiques in 2009, as imports from France and the United Kingdom declined by $860 million (42 percent) and $682 million (39 percent), respectively.

The maturing of the market for the latest generation of video games accounted for nearly half of the $2.6 billion (11 percent) decline in U.S. imports of toys and games in 2009. Concern regarding the safety of toys from China also contributed to reduced imports in this group. Imports of video games of a kind used with television receivers more than doubled during 2006–08, from $3.8 billion to $8.4 billion, reflecting the introduction of a new generation of video game consoles by all three leading suppliers (Microsoft, Sony, and Nintendo). By late 2009, however, all three companies were lowering prices to reduce inventory, and U.S. imports of these video games contracted by $1.2 billion (15 percent) in 2009.[9] China is the principal manufacturing location for the leading video game companies and supplied 98 percent of total U.S. imports of video games and parts in 2009.

[8] U.S. manufacturers' shipments of furniture and related products declined by 19 percent in 2009 to $61.6 billion, from $76.1 billion in 2008. USDOC, Census, "Full Report on Manufacturers' Shipments, Inventories and Orders, December 2009," February 4, 2010, table 1.

[9] According to research by The NPD Group, U.S. sales of all types of video games, including portable and console hardware, software, and accessories, grew by 19 percent in 2008 compared with 2007, to $21.33 billion. In 2009, however, NPD reported that U.S. video game sales were 13 percent lower in January 2010 than in January 2009. NPD attributed the reduction to a 16 percent decline in the price of video game consoles over the year rather than to a decrease in the actual number of units that were sold. French, "Ranking the Top Shops," *Playthings*, November/December 2009, 14; Terdiman, "Video Game Industry Finally Sees a Rebound," April 15, 2010.

U.S. imports of all other types of toys and games contracted by $1.3 billion (9 percent) in 2009. Despite negative press regarding the safety of toys from China and the recall of several models of toys in 2009,[10] China's share of total U.S. imports of toys and games (other than video games) slipped only one percentage point in 2009, to 84 percent.

Reflecting cautious spending by U.S. consumers during the recession in 2009, U.S. imports of precious metal jewelry declined by $1.6 billion (21 percent). Imports from China fell by $261 million (21 percent); from India, by $211 million (14 percent); from Italy, by $207 million (32 percent); and from Thailand, by $145 million (17 percent). Most of the decrease was in imports of gold necklaces and neck chains. Also, whereas in the past investors may have purchased jewelry or art as a hedge against the declining value of the U.S. dollar, such investors in recent years have been more inclined to invest in gold or other precious metals.[11]

U.S. imports of luggage, handbags, and flatgoods[12] declined by $1.4 billion (18 percent) in 2009,[13] with reduced imports from China accounting for almost 70 percent of the decrease. The decrease reflected cautious consumer spending on vacations and other travel during the recession.[14] The bulk of the U.S. market for travel goods is supplied by imports. Even sales of designer luggage and handbags were hurt by the recession as imports from Italy and France collectively decreased by $301 million (29 percent).

As noted earlier, trade in arms, ammunition, and armored fighting vehicles appear have been immune to the current recession. U.S. imports in this category expanded by $796 million (24 percent) in 2009 to meet increased U.S. Department of Defense requirements for armored fighting vehicles in Afghanistan and a surge in civilian demand for handguns. Imports of tanks and other armored fighting vehicles rose by $336 million (36 percent) as contractors turned to foreign facilities to help them fulfill supply commitments to the U.S. Department of Defense. Canada was the leading supplier, with U.S. imports from Canada climbing by $215 million (54 percent). Concern regarding gun control and the future availability of handguns may have contributed to the $171 million (53 percent) increase in U.S. imports of non-military revolvers and pistols in 2009.

The only other category in the miscellaneous manufactures sector experiencing an increase in U.S. imports in 2009 was silverware and related articles of precious metal, with imports in the category expanding by $550 million (65 percent). The sharp rise in imports reflects a shift in the preference of investors, seeking a hedge[15] against the

[10] *CHINAdaily.com.cn*, "Frequent Recalls Challenge Rebouncing Toy Exports," September 16, 2009; *International Trade Daily*, "Lower Lead Limits, Higher Civil Penalties Effective Aug. 14 to Improve Kids' Products," August 14, 2009; Mills-Winkler, "Getting the Lead Out: Why Recalls Persist Despite Industry Progress," March 2010, 16.

[11] Wernau, "Fear of Markets Pushes Some to Precious Stones, Gold," April 14, 2010.

[12] The trade also refers to flatgoods as "personal leather goods." Goods in this category include wallets, coin purses, and other cases typically carried in a woman's handbag.

[13] U.S. manufacturers' shipment of leather and allied products, including luggage, handbags, and flatgoods, declined by 13 percent (down $717 million) in 2009 to $5.0 billion. USDOC, Census, "Full Report on Manufacturers' Shipments, Inventories and Orders, December 2009," February 4, 2010, table 1.

[14] The global recession has reduced travel and the demand for travel goods. This has led to a consolidation in the world-wide industry. Research and Markets, *2010 Plimsoll Analysis: Luggage & Travel Goods; A Comprehensive Profile of 145 Companies Operating in the UK Market* (accessed April 16, 2010).

[15] Investors concerned that their assets are too heavily dependent on the value of a currency that is depreciating may protect the value of their assets by using the depreciating currency to purchase items that will better hold their value. Traditionally, such stores of value have included gold, silver, and other precious metals; gems; jewelry; works of art; and real estate. Purchases of such stores of value are also made as a hedge against inflation, which can lower the values of multiple currencies simultaneously.

declining value of the U.S. dollar, to invest in gold bars rather than in articles such as jewelry and works of art.[16] Nearly all of the growth in U.S. imports of silverware and related articles of precious metal in 2009 was accounted for by a $526 million (197 percent) increase in imports of minted gold bars from Australia.[17]

[16] Wernau, "Fear of Markets Pushes Some to Precious Stones, Gold," April 14, 2010; Godt and Assis, "Gold Futures End Higher, Drawing More Investors," April 14, 2010.

[17] Compiled from official statistics of the U.S. Department of Commerce.

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Machinery

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $10.7 billion (30 percent) to $24.7 billion
U.S. exports: Decreased by $21.4 billion (20 percent) to $85.4 billion
U.S. imports: Decreased by $32.0 billion (23 percent) to $110.1 billion

The U.S. machinery trade deficit decreased by $10.7 billion (30 percent) to $24.7 billion in 2009 as U.S. machinery imports dropped faster than machinery exports (table MT.1). Both imports and exports fell for most product groups in this sector as decreases in consumer spending, new home construction, capital investment by businesses, and available financing led to declines in both product prices and trade volumes.[1] There was a significant decrease in trade with all major regions (table MT.1). Even though imports from China declined by 13 percent, China continued to be the largest source of U.S. imports of machinery ($26.0 billion) in 2009. Canada continued to be the largest U.S. export market for machinery despite a 17 percent decrease in such exports.

U.S. Exports

U.S. exports of machinery decreased by $21.4 billion (20 percent) in 2009 to $85.4 billion, with the global economic downturn and the financial crisis negatively affecting exports in almost all product groups. Only exports of boilers, turbines, and related machinery increased significantly, with exports in this product group increasing by $251 million (16 percent) to $1.8 billion (table MT.2) due to a $225 million (36 percent) increase in U.S. exports of steam turbines and parts.[2] U.S. exports of steam turbines may have increased due to rising demand for replacement parts as industrialized countries upgraded aging steam turbines. In addition, a growing need for new power generation in developing countries increased demand for turbines.[3]

U.S. exports of semiconductor manufacturing equipment[4] and robotics decreased by $3.7 billion (30 percent) in 2009 due to a 46 percent global decline in semiconductor equipment spending.[5] Economic conditions had a significant impact on semiconductor producers (the purchasers of semiconductor manufacturing equipment), with the economic downturn contributing to a significant decline in semiconductor sales and almost every market decreased. U.S. exports to Japan fell by $855 million (53 percent); to Singapore by $624 million (49 percent); to China by $439 million (40 percent); and

[1] U.S. manufacturers' shipments of machinery decreased from $347.1 billion in 2008 to $277.1 billion in 2009 (20 percent). Based on preliminary 2009 data. USDOC, Census, "Full Report on Manufacturers' Shipments," February 4, 2010, 2.
[2] Compiled from official statistics of the U.S. Department of Commerce.
[3] Alstom, *Annual Report 2008/09*, May 26, 2009, 18, 21, 23.
[4] See the "Semiconductor and Integrated Circuits" section in the "Electronic Products" chapter for more detailed information.
[5] SEMI, "SEMI Reports 2009 Global Semiconductor Equipment Sales," March 10, 2010.

TABLE MT.1 Machinery: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
China	4,239	5,270	6,086	6,628	5,424	–1,204	–18.2
Canada	17,256	19,331	20,013	21,080	17,428	–3,652	–17.3
Mexico	11,092	12,079	11,461	12,525	10,440	–2,086	–16.7
Japan	4,514	5,143	4,827	4,213	2,588	–1,626	–38.6
Germany	3,328	3,779	4,134	4,262	2,869	–1,392	–32.7
Korea	3,799	4,699	5,047	4,145	3,454	–691	–16.7
Taiwan	4,255	4,696	5,428	3,798	3,276	–521	–13.7
Italy	912	1,067	1,071	1,170	918	–252	–21.5
United Kingdom	2,691	2,962	3,177	3,301	2,426	–875	–26.5
France	1,726	1,942	1,832	1,976	1,699	–277	–14.0
All other	26,227	31,469	37,159	43,668	34,889	–8,780	–20.1
Total	80,038	92,438	100,235	106,766	85,410	–21,356	–20.0
EU-27	14,530	16,350	17,352	18,605	13,543	–5,062	–27.2
OPEC	3,504	4,489	6,198	7,670	6,487	–1,183	–15.4
Latin America	17,178	19,229	19,956	23,720	19,463	–4,258	–17.9
Asia	23,097	27,875	30,016	27,619	22,216	–5,403	–19.6
Sub-Saharan Africa	875	1,097	1,391	1,790	1,834	44	2.4
U.S. imports for consumption:							
China	21,038	25,569	28,386	29,923	25,996	–3,927	–13.1
Canada	11,818	13,076	13,675	13,613	10,352	–3,261	–24.0
Mexico	15,447	18,228	19,976	20,028	16,584	–3,444	–17.2
Japan	18,306	19,425	17,099	17,054	11,634	–5,420	–31.8
Germany	13,447	14,370	15,099	16,086	11,063	–5,023	–31.2
Korea	3,674	3,958	4,644	4,835	4,786	–49	–1.0
Taiwan	3,212	3,395	3,441	3,382	2,324	–1,058	–31.3
Italy	4,964	5,246	5,514	5,832	4,492	–1,340	–23.0
United Kingdom	3,481	3,743	3,865	3,929	2,818	–1,111	–28.3
France	2,625	2,595	2,825	2,804	1,966	–838	–29.9
All other	17,916	21,202	24,154	24,612	18,048	–6,564	–26.7
Total	115,929	130,809	138,676	142,098	110,062	–32,036	–22.5
EU-27	33,396	36,486	39,775	41,416	29,322	–12,094	–29.2
OPEC	55	77	93	122	73	–48	–39.8
Latin America	17,262	20,124	22,159	21,908	17,885	–4,023	–18.4
Asia	49,769	56,936	58,625	60,362	48,808	–11,554	–19.1
Sub-Saharan Africa	273	314	422	359	226	–133	–36.9

See footnote(s) at end of table.

TABLE MT.1 Machinery: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
China	–16,799	–20,299	–22,300	–23,295	–20,572	2,723	11.7
Canada	5,438	6,255	6,338	7,467	7,076	–391	–5.2
Mexico	–4,354	–6,148	–8,515	–7,502	–6,144	1,358	18.1
Japan	–13,793	–14,282	–12,272	–12,841	–9,046	3,795	29.6
Germany	–10,119	–10,592	–10,965	–11,824	–8,194	3,631	30.7
Korea	124	741	403	–690	–1,331	–642	–93.0
Taiwan	1,043	1,301	1,988	415	952	537	129.3
Italy	–4,052	–4,179	–4,443	–4,662	–3,574	1,088	23.3
United Kingdom	–790	–781	–687	–628	–392	236	37.5
France	–899	–652	–993	–828	–268	561	67.7
All other	8,311	10,268	13,005	19,056	16,841	–2,215	–11.6
Total	–35,890	–38,370	–38,441	–35,331	–24,652	10,679	30.2
EU-27	–18,866	–20,136	–22,423	–22,811	–15,779	7,032	30.8
OPEC	3,448	4,412	6,105	7,548	6,413	–1,135	–15.0
Latin America	–84	–896	–2,203	1,812	1,577	–235	–12.9
Asia	–26,672	–29,061	–28,610	–32,743	–26,591	6,151	18.8
Sub-Saharan Africa	602	783	969	1,431	1,608	176	12.3

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

TABLE MT.2 Machinery: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Boilers, turbines, and related machinery (MT022)	1,124	1,130	1,235	1,522	1,773	251	16.5
Decreases:							
Semiconductor manufacturing equipment and robotics (MT019)	11,435	14,733	17,476	12,385	8,687	–3,698	–29.9
Farm and garden machinery and equipment (MT009)	6,518	7,085	8,191	10,454	7,667	–2,787	–26.7
Miscellaneous machinery (MT030)	8,299	9,509	8,982	10,805	8,510	–2,295	–21.2
All other	52,663	59,980	64,351	71,600	58,774	–12,826	–17.9
Total	80,038	92,438	100,235	106,766	85,410	–21,356	–20.0
U.S. IMPORTS:							
Increases:							
Boilers, turbines, and related machinery (MT022)	1,098	1,001	1,542	1,773	1,899	126	7.1
Decreases:							
Electric motors, generators, and related equipment (MT023)	8,533	10,305	12,358	12,888	10,075	–2,813	–21.8
Miscellaneous machinery (MT030)	9,343	10,527	9,474	10,284	7,717	–2,567	–25.0
Metal cutting machine tools (MT015)	3,618	4,092	4,009	4,654	2,173	–2,481	–53.3
Air-conditioning equipment and parts (MT002)	9,531	10,748	11,266	10,859	8,576	–2,284	–21.0
Taps, cocks, valves, and similar devices (MT020)	7,589	8,942	9,628	9,760	7,542	–2,218	–22.7
All other	76,215	85,194	90,400	91,879	72,080	–19,799	–21.5
Total	115,929	130,809	138,676	142,098	110,062	–32,036	–22.5

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

almost every market decreased. U.S. exports to Japan fell by $855 million (53 percent); to Singapore by $624 million (49 percent); to China by $439 million (40 percent); and overcapacity in the industry.[6] U.S. exports of semiconductor manufacturing equipment to To Korea by $411 million (23 percent). However, exports to Taiwan, the largest U.S. export market in 2008 and 2009, decreased by less than 0.2 percent.[7]

U.S. exports of farm and garden machinery and equipment steadily increased from $6.5 billion in 2005 to $10.5 billion in 2008, as farm income rose along with agricultural prices. However, U.S. exports of these products decreased by $2.8 billion (27 percent) to $7.7 billion in 2009. U.S. exports to Russia fell by $600 million (83 percent) to $122 million in 2009, exports to Canada by $328 million (12 percent) to $2.4 billion, and exports to Ukraine by $294 million (76 percent) to $90 million.[8] The farm and garden machinery and equipment market is primarily driven by the overall economic condition of the farm production sector—more specifically by farm income. On a global basis, the economic downturn and an abundance of stocks of grains in 2009 resulted in an estimated 14 percent decrease in global agricultural prices, which contributed to the decrease in U.S. exports of farm and garden machinery and equipment.[9]

U.S. Imports

U.S. imports of machinery decreased by $32.0 billion (23 percent) to $110.1 billion in 2009. China was the largest source of such imports in 2009 ($26.0 billion), followed by Mexico ($16.6 billion). The largest declines in U.S. machinery imports were from Japan, Germany, and China (table MT.1). Machinery imports decreased in all sectors except two, with decreases of at least $2 billion in electric motors, generators and related equipment; miscellaneous machinery; metal cutting machine tools; air-conditioning equipment and parts; and taps, cocks, valves, and similar devices (table MT.2). Imports decreased across many product groups due to a common set of factors related primarily to the financial crisis and the U.S. recession. Factors that contributed to a decline in U.S. imports of machinery included (1) fewer new housing starts and, therefore, less demand for related products, such as electric motors, air conditioners, and valves; (2) fewer product sales due to lower consumer spending (e.g., electric motors, air conditioners, and valves); (3) less available capital to finance projects, and thus lower demand for goods used in those projects (e.g., wind turbines); (4) lower prices (e.g., electric motors); and (5) less capital spending by business due to market uncertainty (e.g., electric motors and metal cutting machine tools).

U.S. imports increased, however, in two product groups in this sector. Imports of boilers, turbines, and related machinery increased by $126 million (7 percent), primarily due to an increase in imports of parts for goods in this product group. Metal rolling mill imports rose by $35 million (7 percent). The largest import increases in imports of these goods were from Germany (up by $99 million or 106 percent) and China (up by $52 million or 77 percent).

[6] Gartner, Inc., "Gartner Says Outlook," June 15, 2009; SEMI, "Silicon Wafer Shipments Bounce Back," February 16, 2010.

[7] Compiled from official statistics of the U.S. Department of Commerce.

[8] Ibid.

[9] IBRD, *Global Economic Prospects: Crisis, Finance, and Growth 2010*, 34; USDA, *USDA Agricultural Projections to 2019*, February 2010, 18.

The value of U.S. imports of electric motors, generators, and related machinery decreased by $2.8 billion (22 percent) as a result of the economic downturn and financial crisis. There was a significant decline in imports of electric motors and parts of motors due to a decrease in new home construction, less consumer spending, and a decline in capital investment by businesses. A 15 percent decrease in motor sales in 2009 also led to a decline in prices.[10]

There was also a decrease in imports of most types of generators and related parts, with lower imports of wind turbine equipment being one reason for the significant decline in imports in this product group. A decrease in imports of wind-powered generating sets (down by $223 million or 9 percent) and generators of an output exceeding 750 kilovolt-amperes (kVA), the size used in wind turbines (down by $274 million or 33 percent), resulted from a decline in new orders and a slowdown in project construction due to the financial crisis. The slowdown in orders and project construction did not abate until the rules for relevant provisions of the American Recovery and Reinvestment Act of 2009 (ARRA or Stimulus Bill) were finalized.[11] However, imports of wind-powered generating sets in 2009 were more than 350 percent higher than in 2005.[12]

U.S. imports of metal cutting machine tools decreased dramatically, falling by $2.5 billion (53 percent). The decline was due to challenging market conditions, which led machine tool customers to reduce production levels; constraints in the financial system, which made it difficult for customers to obtain financing for new equipment expenditures; and market uncertainty, which led customers to delay orders. The largest decrease in imports was from Japan, which fell by $1.4 billion (66 percent).[13]

The decrease in air conditioning equipment and parts imports (down by $2.3 billion or 21 percent) reflects decreases in new home and commercial construction and fewer sales of replacement units due to the economic downturn.[14] U.S. imports from China decreased by $358 million (11 percent) to $2.8 billion, and imports from Mexico decreased by $401 million (17 percent) to $2.0 billion. However, the share of U.S. imports of air conditioning equipment and parts accounted for by China and Mexico increased from 51 percent to 56 percent due to more significant declines in imports from Canada, Japan, Germany, and other countries.[15] U.S. factory shipments of central air conditioners and air-source heat pumps decreased from 5.8 million to 5.2 million units (12 percent) from 2008 to 2009.[16]

[10] Jacoby, "The Outlook for Motors and Drives in 2010," April/May 2010, 8.

[11] AWEA, *Year End 2009 Market Report*, January 2010, 5, 9, 11, 13; Hall, "A Double Edged Sword: Examining Section 1603," February 2010, 18–22; Magee, "American Reinvestment and Recovery Act," May 16, 2009; Clipper Windpower, Inc., "Operational and Trading Update," March 9 2010; trade data compiled from official statistics of the U.S. Department of Commerce.

[12] Compiled from official statistics of the U.S. Department of Commerce.

[13] Ibid.

[14] Harris, "HVACR Manufacturers Discuss Business," March 23, 2009; Lennox International Inc., *Form 10−K for the Fiscal Year Ended December 31, 2009*, 2010, 11, 19–20, 25–26.

[15] Compiled from official statistics of the U.S. Department of Commerce.

[16] Air-Conditioning, Heating, and Refrigeration Institute, "AHRI Releases December 2009," February 22, 2010.

Metal Cutting Machine Tools[17]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $1.7 billion (72 percent) to $650 million
U.S. exports: Decreased by $790 million (34 percent) to $1.5 billion
U.S. imports: Decreased by $2.5 billion (53 percent) to $2.2 billion

The U.S. trade deficit in metal cutting machine tools declined by $1.7 billion (72 percent) to $650 million in 2009 after rising to $2.3 billion in 2008 (table MT.3). The sharp decline in the U.S. trade deficit resulted from a much larger fall in U.S. imports as compared to the decline in U.S. exports. Metal cutting machine tools are used in a broad range of industries to manufacture durable goods, with notable markets being the aerospace, motor vehicle, mold and die, medical goods, and general industrial machinery industries.

The global economic downturn adversely affected consumption and manufacturing in many countries during 2008–09.[18] As a result, global orders for metal cutting machine tools fell significantly in 2008 as manufacturers curtailed capital expenditures for machinery. Typically, orders for metal cutting machine tools occur between two and three quarters before shipment, so orders that were cancelled or not made in 2008 would be reflected as lower shipment levels in 2009.

U.S. Exports

U.S. exports of metal cutting machine tools declined by $790 million (34 percent) to $1.5 billion in 2009 (table MT.3). During 2009, U.S. exports to the EU-27, the largest market in 2009, fell by $310 million (47 percent), as the automotive sector in Europe curtailed spending on machine tools as an initial cost-cutting measure during the global economic downturn.[19] U.S. exports to Canada decreased by $137 million (44 percent), while exports to Mexico fell by $85 million (33 percent). The decline in U.S. exports of these goods to both Canada and Mexico reflected decisions by manufacturers in those countries to reduce capital expenditures for metal cutting machine tools used to produce goods for the U.S. market, which was adversely affected by the U.S. recession.

In 2009, although U.S. exports to China fell by $49 million (18 percent), China surpassed Canada to become the largest single-country U.S. market for metal cutting machine tools. The Chinese market was supported, in part, by Chinese government efforts to stimulate

[17] This industry/commodity group covers a range of metal cutting machines tools and parts thereof that are used in cutting metal parts. Such machines include electrical discharge machines; machining centers; lathes; drilling, boring, milling, grinding, honing or lapping, deburring, planning, shaping or slotting, broaching, gear cutting and grinding, sawing and cutting-off machines; and other miscellaneous metal cutting machine tools.

[18] IBRD, "Overview," *Global Economic Prospects: Crisis, Finance, and Growth 2010*, 2010, 8.

[19] CECIMO - European Association of the Machine Tool Industries, "European Machine Tool Industry Hit by the Economic Downturn," June 11, 2009.

TABLE MT.3 Metal cutting machine tools (MT015): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Japan	151	175	103	85	64	–21	–24.7
Germany	101	129	146	178	93	–84	–47.4
China	166	201	201	270	221	–49	–18.3
Italy	32	38	55	70	59	–11	–15.8
Canada	245	279	286	310	173	–137	–44.2
Mexico	162	208	173	255	170	–85	–33.3
Korea	125	166	68	52	39	–12	–24.1
Taiwan	114	153	69	30	20	–10	–34.4
Switzerland	11	10	11	13	10	–3	–24.2
United Kingdom	77	93	86	127	62	–65	–51.4
All other	548	753	826	923	613	–310	–33.6
Total	1,732	2,205	2,026	2,313	1,524	–790	–34.1
EU-27	419	547	603	662	352	–310	–46.9
OPEC	22	43	54	72	58	–13	–18.8
Latin America	249	330	309	466	304	–162	–34.8
Asia	711	915	652	664	522	–142	–21.4
Sub-Saharan Africa	10	17	32	29	36	7	23.6
U.S. imports for consumption:							
Japan	1,652	1,926	1,813	2,127	718	–1,410	–66.3
Germany	635	639	565	727	416	–311	–42.7
China	116	138	163	172	110	–62	–36.2
Italy	138	173	181	218	183	–35	–16.0
Canada	118	107	115	136	67	–69	–50.9
Mexico	3	2	4	11	4	–7	–63.1
Korea	195	252	279	296	134	–163	–54.9
Taiwan	245	308	343	329	135	–194	–58.9
Switzerland	246	235	197	240	140	–100	–41.5
United Kingdom	41	59	56	56	43	–13	–23.0
All other	232	252	293	342	223	–118	–34.6
Total	3,618	4,092	4,009	4,654	2,173	–2,481	–53.3
EU-27	952	1,014	994	1,211	796	–415	–34.3
OPEC	(a)	(a)	(a)	1	(a)	–1	–95.7
Latin America	21	18	22	42	30	–12	–27.6
Asia	2,258	2,683	2,653	2,998	1,121	–1,877	–62.6
Sub-Saharan Africa	(a)	(a)	1	3	1	–2	–81.7

See footnote(s) at end of table.

TABLE MT.3 Metal cutting machine tools (MT015): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Japan	–1,500	–1,750	–1,710	–2,043	–654	1,389	68.0
Germany	–535	–510	–418	–549	–323	226	41.2
China	51	62	38	99	111	13	12.8
Italy	–105	–135	–125	–148	–124	24	16.1
Canada	127	172	171	175	106	–68	–39.0
Mexico	160	207	169	244	166	–78	–32.0
Korea	–70	–87	–211	–245	–94	150	61.5
Taiwan	–132	–155	–274	–299	–116	184	61.3
Switzerland	–235	–226	–186	–227	–130	96	42.5
United Kingdom	37	34	30	71	19	–52	–73.8
All other	316	500	533	581	389	–192	–33.1
Total	–1,886	–1,887	–1,983	–2,341	–650	1,691	72.3
EU-27	–533	–467	–391	–549	–444	105	19.1
OPEC	22	43	54	71	58	–13	–17.9
Latin America	228	312	287	425	274	–151	–35.5
Asia	–1,547	–1,768	–2,001	–2,333	–598	1,735	74.4
Sub-Saharan Africa	10	16	31	26	36	9	35.2

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.

the economy, which generated strong demand for metal cutting machine tools used in the manufacturing industry and also for parts used in the information technology industry. [20]

U.S. Imports

Due in large part to the U.S. recession, U.S. imports of metal cutting tools declined dramatically, falling by $2.5 billion (53 percent) to $2.2 billion in 2009, after reaching a 5-year high of $4.7 billion in 2008 (table MT.3). U.S. imports from all major suppliers fell by at least 16 percent. U.S. imports from Japan, its largest supplier, fell by $1.4 billion (66 percent) from a high of $2.1 billion in 2008. U.S. imports from the EU-27 fell by $415 million (34 percent) to $796 million in 2009, and those from Germany fell by $311 million (43 percent) to $416 million.

During 2008–09, in response to the U.S. recession, U.S. manufacturers reduced capacity levels and capacity utilization rates, particularly in the automotive and home appliance industries. [21] U.S. manufacturing production fell by almost 17 percent; machinery production fell by 22 percent; motor vehicle and parts production declined by 28 percent; and aerospace and miscellaneous transportation fell by 4 percent.[22] Contraction in the motor vehicle market, which occurred partly due to liquidity issues in the banking sector, caused many suppliers to delay or curtail purchases. Consequently, U.S. demand for metal cutting machine tools was eroded by the reduced availability of credit that limited the ability of customers to obtain financing for capital expenditures. In addition, consumers became more conservative in their spending habits and cancelled or reduced orders.[23] In the U.S. market, many small manufacturers that provide machining services to larger manufacturers frequently buy Japanese metal cutting machine tools, which are less expensive than German machine tools. These small manufacturers were adversely affected by the lack of available credit and the U.S. recession, which is reflected in the large decline in U.S. imports of Japanese machine tools.

[20] Gildemeister AG, *Annual Report 2008*, 31–33, March 12, 2009; and *Annual Report 2009*, March 19, 2010, 31–33; *Metalworking Insiders' Report*, "The 2010 World Machine-Tool Output & Consumption Survey," February 23, 2010, 3–5; Okuma Corp., *Okuma Corporation Second Quarter Fiscal Year 2009 Financial Results*, November, 4, 2009, 13–15.

[21] National Bureau of Economic Research, "Determination of the December 2007 Peak in Economic Activity," December 11, 2008.

[22] The Federal Reserve Board, Data Download Program, *G.17:Industrial Production and Capacity Utilization* (accessed April 13, 2010).

[23] Hardinge, Inc., *Form 10-K*, March 19, 2010, A-24; Hurco Companies, Inc., *Form 10-K*, January 12, 2010, 16.

Taps, Cocks, Valves, and Similar Devices[24]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $1.7 billion (52 percent) to $1.6 billion
U.S. exports: Decreased by $498 million (8 percent) to $5.9 billion
U.S. imports: Decreased by $2.2 billion (23 percent) to $7.5 billion

The U.S. trade deficit in taps, cocks, and valves, and similar devices (hereafter collectively referred to as valves) declined by $1.7 billion (52 percent) as the decrease in imports far outpaced that of exports (table MT.4). The continued decline in the valve trade deficit was principally due to the continuing effect of the U.S. economic recession[25] and the shortage of available credit to finance both trade and construction projects.[26]

While China, Japan, Germany, and Mexico continued to be the four largest import sources, accounting for 60 percent of total U.S. imports in 2009, imports of valves from all four countries declined sharply in 2009. The U.S. economic recession depressed import demand for particular valve sectors, such as in the residential construction and process manufacturing industries.[27] The largest and most technically advanced valve producers are located in developed nations such as Japan, Germany, and Canada.

However, valve imports from China are beginning to evolve from commodity-type standard products to valves that are more sophisticated.[28]

U.S. Exports

U.S. valve exports declined by $498 million (8 percent) to $5.9 billion in 2009 as worldwide demand for U.S. exports of all types of valves decreased; the principal reasons were the global economic downturn and increased costs associated with obtaining international trade financing.[29] China, Mexico, and Canada were the leading U.S. markets in 2009, accounting for approximately 47 percent of total U.S. exports of these products.

The bulk of U.S. valve exports to China consisted of hand-operated valves and parts made of copper, iron, and steel (e.g., gate, globe, plug, and butterfly), representing

[24] Valves are used to control the flow of liquids, gases, and solids through pipes or piping systems. These devices may be operated by hand, or by motors, solenoids, floats, thermostats, pressure capsules, or electronic sensors. Valves are produced from copper, iron or steel, cast iron, and a variety of other materials. Common types of valves include gate, globe, check, safety, and pressure, which vary in design and material composition in accordance with the functions to be performed. U.S. valve markets are broad based and include such diverse industries as shipbuilding and repair, petroleum refining, petrochemicals, pulp and paper, water and wastewater treatment, processed food and beverages, and household consumer goods.
[25] USDOC, BEA, *Survey of Current Business*, January 2009.
[26] World Bank, *Global Economic Prospect: Crisis, and Growth*, January 10, 2010.
[27] National Association of Home Builders, *Housing Starts State & Metro Forecasts for 2009–2010*, n.d.,1.
[28] IBIS World Inc., *Valve Manufacturing in the US*, June 11, 2009, 26.
[29] World Bank, *Global Economic Prospects: Crisis, Finance, and Growth*, January 10, 2010, 83.

TABLE MT.4 Taps, cocks, valves, and similar devices (MT020): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
China	294	364	381	527	521	–5	–1.0
Mexico	727	874	906	982	840	–142	–14.5
Canada	1,389	1,534	1,609	1,647	1,446	–201	–12.2
Germany	144	174	224	249	183	–65	–26.2
Japan	150	169	192	168	124	–44	–26.3
Italy	56	65	69	78	68	–11	–13.6
United Kingdom	177	194	233	268	206	–62	–23.1
Taiwan	70	79	92	80	61	–18	–23.1
France	76	80	93	101	138	38	37.4
Korea	95	118	139	140	166	25	18.0
All other	1,057	1,358	1,819	2,187	2,176	–12	–0.5
Total	4,235	5,010	5,757	6,427	5,929	–498	–7.7
EU-27	648	739	889	996	865	–131	–13.2
OPEC	168	254	456	583	484	–99	–16.9
Latin America	963	1,201	1,274	1,498	1,292	–207	–13.8
Asia	867	1,031	1,199	1,381	1,371	–10	–0.7
Sub-Saharan Africa	51	59	99	129	189	60	46.2
U.S. imports for consumption:							
China	1,272	1,763	2,113	2,382	1,909	–473	–19.9
Mexico	1,157	1,313	1,349	1,349	1,141	–207	–15.4
Canada	612	688	716	661	531	–130	–19.7
Germany	941	1,008	999	952	718	–234	–24.6
Japan	1,061	1,105	1,093	1,053	760	–294	–27.9
Italy	461	554	613	591	455	–136	–23.0
United Kingdom	279	301	297	347	266	–81	–23.4
Taiwan	454	575	598	581	368	–212	–36.6
France	182	214	312	301	253	–48	–15.9
Korea	170	186	209	220	183	–36	–16.4
All other	999	1,235	1,330	1,325	958	–367	–27.7
Total	7,589	8,942	9,628	9,760	7,542	–2,218	–22.7
EU-27	2,300	2,569	2,734	2,710	2,041	–668	–24.7
OPEC	2	3	3	3	4	(a)	10.7
Latin America	1,254	1,470	1,515	1,475	1,217	–259	–17.5
Asia	3,197	3,950	4,397	4,680	3,569	–1,112	–23.8
Sub-Saharan Africa	3	6	6	4	2	–2	–55.7

See footnote(s) at end of table.

TABLE MT.4 Taps, cocks, valves, and similar devices (MT020): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
China	–978	–1,398	–1,732	–1,855	–1,388	468	25.2
Mexico	–430	–439	–443	–367	–302	65	17.8
Canada	777	846	893	986	915	–71	–7.2
Germany	–798	–833	–775	–704	–535	169	24.0
Japan	–911	–937	–901	–885	–636	249	28.2
Italy	–405	–488	–544	–512	–387	125	24.5
United Kingdom	–103	–107	–64	–79	–60	19	24.1
Taiwan	–384	–496	–506	–501	–307	194	38.7
France	–106	–134	–219	–200	–115	85	42.7
Korea	–75	–68	–69	–79	–18	61	77.4
All other	58	123	489	862	1,218	356	41.2
Total	–3,354	–3,932	–3,871	–3,333	–1,613	1,720	51.6
EU-27	–1,651	–1,831	–1,845	–1,713	–1,176	537	31.3
OPEC	166	251	453	580	481	–99	–17.1
Latin America	–291	–269	–240	23	75	52	226.7
Asia	–2,330	–2,919	–3,197	–3,299	–2,197	1,101	33.4
Sub-Saharan Africa	48	54	93	126	187	62	49.1

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.

75 percent of product group exports to China in 2009. These types of valves are used in manufacturing, energy-related applications, and infrastructure projects. U.S. exports of valves to China decreased by $5 million (1 percent) to $521 million in 2009. While Chinese demand for U.S. valves declined slightly in 2009, the decrease was minimized as China responded to the economic downturn by introducing an economic stimulus package in 2009, which consisted of a combination of monetary, fiscal, and bank-lending measures.[30]

U.S. valve exports to Mexico declined by $142 million (15 percent) to $840 million in 2009, owing to the economic recession in that country in 2009.[31] Hand-operated valves made of iron and steel and pneumatic transmission valves represented nearly 80 percent of product group exports to Mexico. The bulk of U.S. valve exports to Mexico are employed in the building construction and oil/natural gas pipeline sectors. The decrease in U.S. valve export demand coincides with a decline in Mexico's oil production.[32]

U.S. valve exports to Canada decreased by $201 million (12 percent) to $1.4 billion in 2009. Weak domestic demand for oil and low natural gas prices during the first part of 2009 drove a decline of U.S. exports of certain types of valves and parts used in the energy-related industries. Principal U.S. valve exports to Canada were multi-turn gate, globe, butterfly, and pressure relief valves. These decreases in Canadian demand for U.S. valve exports are attributable to lingering recessionary forces and to capital spending cutbacks in major consuming Canadian industries, such as the manufacturing, mining, and construction sectors. [33]

U.S. Imports

The financial crisis and the resulting liquidity shortfall in the United States triggered a decline in economic activity by consumers of commodity-type valves, thus causing U.S. valve imports to decrease by $2.2 billion (23 percent) to $7.5 billion in 2009. The construction and infrastructure sectors were two of the valve import sectors most impacted by the U.S. recession. In 2009, the value of U.S. construction contracts declined by 13 percent in real terms, although the number of contracts for infrastructure projects fell by less than 6 percent.[34] As a result, demand for U.S. imports of commodity-type valves principally used in construction, infrastructure projects, and other manufacturing applications declined.[35]

China remained the leading supplier of valves to the U.S. market, accounting for 25 percent of total imports in 2009. U.S. valve imports from China decreased by $473 million (20 percent) to $1.9 billion. Approximately 95 percent of all U.S. valve imports from China consist of low technology, labor-intensive, and commodity-type valves. Commodity-type valves, such as water and wastewater systems valves, are produced from iron bodies, which are typically made of bronze, mounted, and are generally larger than valves produced for other industries. These types of valves are used in the water-treatment and wastewater industries and building piping systems. The decline in demand for water and wastewater treatment valves from China was largely due

[30] China's gross domestic product grew by 8.7 percent in 2009. World Bank, *Global Economic Prospects: Crisis, Finance, and Growth*, January 10, 2010, 83.
[31] EIU, *Country Report: Mexico*, April 2010, 14.
[32] DataMonitor Group, *Petróleos Mexicanos (PEMEX): Company Profile*, November 3, 2009, 20.
[33] EIU, *Country Report: Canada; Year-End Review, 2009*, March 2010.
[34] Business Monitor International Ltd, "United States Infrastructure Report Q1," 2010, 82–83.
[35] IBIS World Inc., *Valve Manufacturing in the US*, June 11, 2009, 26.

to reduced U.S. investment in municipal and industrial pollution abatement processes during the first quarter of 2009.[36]

U.S. valve imports from Mexico, the second leading supplier, declined by $207 million (15 percent) to $1.1 billion in 2009. Nearly 80 percent of total U.S. valve imports from Mexico are commodity-type valves and parts used in numerous industry applications. Valves found in the pulp and paper products industry, the food and beverage industry, and the production of metals, such as iron and steel, were the leading types of valves imported from Mexico in 2009.[37] The decline in demand for valves used in pulp and paper products, food and beverage, and iron and steel production was primarily due to the U.S. recession. The bulk of U.S. valve imports from Mexico are from assembly plants that are either subsidiaries of U.S. manufacturers or have contracts with them.

[36] Kompass (China) Information Service, *ChinaToday 2010,* April 14, 2010.
[37] Smith, "The Oil Crisis Slamming Mexico," May 2009, 36.

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Transportation Equipment

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $25.5 billion (82 percent) to $5.7 billion
U.S. exports: Decreased by $63.4 billion (25 percent) to $194.1 billion
U.S. imports: Decreased by $88.9 billion (31 percent) to $199.8 billion

The long-standing deficit in transportation equipment declined by 82 percent to $5.7 billion as a result of a significant decrease in U.S. imports that exceeded the decline in exports in virtually every industry (table TE.1).[1] Motor vehicles and certain motor-vehicle parts, combined, accounted for almost half of the decrease in sector exports and 70 percent of the decrease in sector imports (table TE.2). Canada continued to be the largest market for U.S. exports of transportation equipment, passing Japan to return to its position as the largest source of imports.

The decline in U.S. imports and exports reflected the global economic downturn and the resulting decrease in demand for transportation equipment. A lack of consumer confidence resulting from higher unemployment, and more limited credit opportunities, combined with the ability to postpone the purchase of new vehicles led to the downturn and severely affected trade in the transportation equipment sector among the North American Free Trade Agreement (NAFTA) partners, especially Canada and the United States, because of the integration of the motor vehicle industry in North America.

U.S. Exports

U.S. exports within the transportation equipment sector decreased by $63.4 billion (25 percent) to $194.1 billion as a result of poor global economic conditions. Exports to the major markets for U.S. goods decreased significantly. Canada, Mexico, and Germany, combined, accounted for 38 percent of U.S. transportation equipment exports in 2009. Canada remained by far the largest export market, receiving 23 percent of U.S. exports; however, exports to Canada in 2009 decreased by $19.5 billion (31 percent).

U.S. exports of motor vehicles decreased by $20.9 billion (37 percent), with Canada, Mexico, and Germany accounting for 58 percent of the decrease. In addition, U.S. exports of motor vehicle parts also fell significantly by $8.3 billion (27 percent), with Canada and Mexico accounting for 70 percent of the decrease. The decline in exports of

[1] Because certain products were reclassified into a new export code under the Harmonized Tariff System, it is not possible to determine the specific reasons for the shift in both the aircraft, spacecraft, and related equipment and the engines and gas turbines commodity groups. In 2009, 60 export commodity classification codes were consolidated into a single code covering all civilian aircraft, engines, equipment, and parts (Schedule B Commodity Code No. 8800.00.00). This new export code is classified within the aircraft, spacecraft, and related equipment commodity group. Because the new code does not differentiate between products and includes products that were previously classified in other commodity groups, it was not possible to determine the causes for the shift in trade on a product-by-product basis.

TABLE TE.1 Transportation equipment: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	59,898	64,493	69,460	63,980	44,447	–19,533	–30.5
Mexico	17,410	19,978	21,309	21,572	16,804	–4,768	–22.1
Japan	8,642	9,620	10,605	10,693	7,095	–3,598	–33.6
Germany	6,911	11,171	13,333	16,196	11,659	–4,537	–28.0
France	6,965	7,696	9,237	8,364	9,161	797	9.5
China	6,513	9,020	11,077	9,659	9,193	–466	–4.8
United Kingdom	7,393	8,460	10,379	11,072	8,208	–2,865	–25.9
Korea	3,568	5,034	5,217	4,304	3,238	–1,067	–24.8
Brazil	3,990	5,656	7,248	9,108	6,407	–2,701	–29.7
United Arab Em	4,934	7,526	5,801	7,972	5,487	–2,486	–31.2
All other	56,874	70,120	86,809	94,595	72,384	–22,211	–23.5
Total	183,098	218,773	250,475	257,516	194,082	–63,434	–24.6
EU-27	37,397	45,180	55,680	59,168	44,357	–14,811	–25.0
OPEC	12,072	17,703	18,554	23,304	18,164	–5,140	–22.1
Latin America	28,372	34,932	39,569	43,810	34,594	–9,216	–21.0
Asia	31,172	39,558	48,438	43,056	35,712	–7,344	–17.1
Sub-Saharan Africa	4,055	4,616	5,419	6,791	4,969	–1,822	–26.8
U.S. imports for consumption:							
Canada	78,421	76,816	77,823	63,547	43,301	–20,246	–31.9
Mexico	42,085	49,105	51,023	48,042	37,697	–10,345	–21.5
Japan	62,772	71,523	69,898	65,731	40,241	–25,490	–38.8
Germany	32,221	31,304	32,931	31,252	20,809	–10,443	–33.4
France	7,455	9,463	11,257	11,404	9,478	–1,925	–16.9
China	6,493	8,656	10,185	10,837	8,553	–2,285	–21.1
United Kingdom	12,510	12,403	11,375	11,008	7,690	–3,318	–30.1
Korea	12,549	13,273	12,587	11,315	9,059	–2,257	–19.9
Brazil	4,772	4,485	4,126	4,898	2,066	–2,832	–57.8
United Arab Em	11	6	9	6	7	1	17.1
All other	23,852	27,227	29,164	30,657	20,908	–9,749	–31.8
Total	283,140	304,262	310,378	288,697	199,808	–88,889	–30.8
EU-27	67,002	70,056	73,281	70,232	48,048	–22,184	–31.6
OPEC	205	176	95	55	25	–31	–55.5
Latin America	47,741	54,625	56,216	53,852	40,391	–13,461	–25.0
Asia	86,690	98,918	98,805	94,340	63,267	–31,073	–32.9
Sub-Saharan Africa	391	589	670	2,052	1,549	–503	–24.5

See footnote(s) at end of table.

TABLE TE.1 Transportation equipment: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–18,524	–12,323	–8,363	433	1,146	713	164.5
Mexico	–24,675	–29,128	–29,715	–26,470	–20,892	5,578	21.1
Japan	–54,130	–61,903	–59,293	–55,038	–33,146	21,892	39.8
Germany	–25,309	–20,133	–19,597	–15,056	–9,150	5,906	39.2
France	–490	–1,767	–2,019	–3,040	–317	2,722	89.6
China	19	364	892	–1,178	640	1,818	[a]
United Kingdom	–5,117	–3,943	–997	64	518	454	709.8
Korea	–8,981	–8,240	–7,370	–7,011	–5,821	1,190	17.0
Brazil	–782	1,172	3,122	4,210	4,341	131	3.1
United Arab Em	4,923	7,519	5,792	7,966	5,479	–2,487	–31.2
All other	33,022	42,893	57,644	63,938	51,476	–12,462	–19.5
Total	–100,042	–85,489	–59,903	–31,181	–5,726	25,456	81.6
EU-27	–29,605	–24,876	–17,601	–11,064	–3,691	7,373	66.6
OPEC	11,867	17,527	18,459	23,248	18,139	–5,109	–22.0
Latin America	–19,369	–19,693	–16,647	–10,041	–5,797	4,244	42.3
Asia	–55,518	–59,360	–50,367	–51,284	–27,555	23,729	46.3
Sub-Saharan Africa	3,664	4,027	4,749	4,738	3,420	–1,319	–27.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Not meaningful for purposes of comparison.

TABLE TE.2 Transportation equipment: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Aircraft, spacecraft, and related equipment (TE013)	47,981	64,374	73,406	69,516	77,700	8,183	11.8
Decreases:							
Motor vehicles (TE009)	35,312	44,437	52,739	56,898	35,963	–20,936	–36.8
Aircraft engines and gas turbines (TE001)	20,771	21,631	25,780	28,638	9,457	–19,181	–67.0
Construction and mining equipment (TE004)	15,950	19,038	24,425	29,603	19,777	–9,826	–33.2
All other	63,084	69,293	74,124	72,860	51,186	–21,674	–29.7
Total	183,098	218,773	250,475	257,516	194,082	–63,434	–24.6
U.S. IMPORTS:							
Decreases:							
Motor vehicles (TE009)	146,308	159,537	158,895	142,541	94,348	–48,193	–33.8
Certain motor-vehicle parts (TE010)	50,998	53,307	55,619	49,190	35,296	–13,894	–28.2
All other	85,834	91,418	95,865	96,966	70,163	–26,803	–27.6
Total	283,140	304,262	310,378	288,697	199,808	–88,889	–30.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

motor vehicles and motor vehicle parts accounted for 46 percent of the total decrease in the transportation equipment sector exports. The decrease occurred as a result of reduced production by auto and truck makers as demand decreased because of poor economic conditions. U.S. exports of nearly all motor vehicle categories exhibited sharp declines, reflecting lower vehicle demand in many major markets.[2] The largest export decreases occurred in passenger vehicles and light trucks, reflecting, in part, the 34 percent decline in U.S. vehicle production to nearly 5.8 million units in 2009,[3] as automakers sought to adjust motor vehicle supply to significantly lower demand.

Exports of forklift trucks declined by $1.8 billion (53 percent), with the largest decreases occurring in Canada, the United Kingdom, and Mexico. The drop in U.S. exports of forklift trucks and similar industrial vehicles is attributed to decreased manufacturing production in each of these countries in 2009. In Canada, real manufacturing production declined by approximately 12 percent, while Mexico's and the United Kingdom's were each down by 10 percent.[4] During periods of declining demand for manufactured products, an investment in additional forklift trucks is a common budget target for cutting manufacturing costs.

U.S. Imports

U.S. imports within the transportation equipment sector declined by $88.9 billion (31 percent). Motor vehicles, certain parts of motor vehicles, and internal combustion piston engines, other than for aircraft, accounted for 71 percent of these imports in 2009, only a slightly smaller share than in 2008 despite a 33 percent decrease in import value. U.S. imports from all leading sources decreased significantly from 2008, with Canada, Mexico, and Japan supplying 61 percent of total imports in 2009.

U.S. imports of complete vehicles, which accounted for 47 percent of sector imports, fell by $48.2 billion, or 34 percent, more than half of the decrease in imports of transportation equipment. U.S. imports of certain motor-vehicle parts fell by $13.9 billion (28 percent) and imports of internal combustion piston engines, other than for aircraft, fell by $6.9 billion (37 percent). The decrease in imports of complete vehicles and vehicle parts, including engines, reflected decreased demand for vehicles, resulting from the U.S. recession, the bankruptcies of General Motors and Chrysler, and tighter credit.[5] U.S. sales of automobiles[6] declined by 20 percent to 5.5 million units from 2008 to 2009.[7]

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[2] World registrations of passenger cars and commercial vehicles were forecast to fall by 14 percent in 2009 to 61.8 million vehicles. EIU, "World: Automotive Outlook," January 8, 2010.

[3] U.S. vehicle output by Chrysler and General Motors, both of which filed for bankruptcy in 2009, fell by 60 percent in 2009 to 482,588 units and by 48 percent to nearly 1.2 million units, respectively. *Automotive News*, "North America Car and Truck Production," January 11, 2010.

[4] Canada's manufacturing data is based on chained 2002 C$. EIU, *Country Report: Canada*, 2010, 17; Mexico's manufacturing data is based on a production index (2003=100). EIU, *Country Report: Mexico*, 2010, 18; The United Kingdom's manufacturing data is based on a production index (2005=100). EIU, *Country Report: United Kingdom*, 2010, 20.

[5] The decrease in demand was softened by the Consumer Assistance to Recycle and Save Program, popularly known as "cash for clunkers," in which purchasers of new, more economical cars were given rebates by the Government of either $3,500 or $4,500. 74 Fed. Reg. 37878-37879 (July 29, 2009).

[6] U.S. producers of automobiles and light motor vehicles operated at a rate of only 40 percent of capacity in 2009. Monthly average for 2009. Federal Reserve Board, Data Download Program, G.17: Industrial Production and Capacity Utilization (accessed April 27, 2010).

[7] Wardsauto.com, Key Automotive Database, April 27, 2010.

Forklift Trucks and Similar Industrial Vehicles[8]

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Change in 2009 from 2008:

U.S. trade surplus: Decreased by $497 million (56 percent) to $394 million
U.S. exports: Decreased by $1.8 billion (53 percent) to $1.6 billion
U.S. imports: Decreased by $1.3 billion (52 percent) to $1.2 billion

The decrease in the U.S. trade surplus for forklift trucks and similar industrial vehicles was driven by the $1.8 billion (53 percent) decline of U.S. exports, which exceeded the drop in U.S. imports (table TE.3). The decreased value of merchandise trade for this product group was largely attributable to the ongoing global economic downturn in 2009, which was accompanied by decreased demand and thus a decline in manufacturing output in the United States and many of its major export markets.[9] The global market for forklift trucks and other materials handling equipment,[10] which is driven by the manufacturing sector, was estimated to have dropped by nearly 40 percent in 2009 from 2008.[11] During periods of declining product demand, an investment in additional forklift trucks is a common budget target for cutting manufacturing costs.

U.S. Exports

The decreased value of U.S. exports of forklift trucks and similar industrial vehicles was due primarily to a weaker manufacturing sector in several of the major U.S. export markets in 2009. In terms of quantity, U.S. exports of forklift trucks and similar industrial vehicles decreased by 41,392 trucks (44 percent) to 52,837 trucks in 2009; the unit value of truck exports also decreased by $2,702 (13 percent) to $18,568.[12] Canada and Mexico continued to be the leading markets for U.S. exports of forklifts and similar industrial vehicles, together accounting for $556 million (35 percent) of all such exports. However, U.S. exports to these two countries and the United Kingdom together dropped by $604 million (49 percent) and accounted for a major share (34 percent) of this product

[8] This industry/commodity group covers forklift trucks (also called lift, high/low, stacker, trailer loader, side loader, fork, tow-motor, or fork hoist trucks) that are self-propelled and used to hoist and transport materials.

[9] The global gross domestic product was estimated to have decreased by 2.2 percent in 2009 from 2008. IBRD, "Overview," *Global Economic Prospects: Crisis, Finance, and Growth 2010*, 2010, 2.

[10] Forklift trucks and other material handling equipment are used to move, store, control, and protect input materials and end products throughout the manufacturing, distribution, consumption, and disposal processes.

[11] Barnett, "Thank Goodness That's Over," December 24, 2009, 1.

[12] Not all parts for this product group record units of quantity for U.S. exports. However, in terms of value, U.S. exports of parts for this product group decreased by $286.4 million (42 percent) to $390.9 million and accounted for 25 percent of U.S. exports of the overall product group in 2009. Compiled from official statistics of the U.S. Department of Commerce.

TABLE TE.3 Forklift trucks and similar industrial vehicles (TE003): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	482	611	714	699	360	–339	–48.5
Mexico	146	167	231	289	196	–94	–32.4
Japan	45	43	63	61	9	–52	–85.3
Germany	36	70	84	86	22	–64	–74.4
China	44	35	54	73	52	–21	–28.6
United Kingdom	166	268	314	235	64	–171	–72.7
Korea	26	29	59	57	25	–32	–55.8
Netherlands	63	65	107	116	67	–49	–42.3
Australia	162	165	175	166	92	–74	–44.7
Venezuela	21	31	42	68	84	16	23.8
All other	568	688	1,096	1,484	606	–878	–59.2
Total	1,760	2,172	2,939	3,333	1,576	–1,757	–52.7
EU-27	476	714	1,039	989	242	–746	–75.5
OPEC	73	82	137	249	187	–62	–24.9
Latin America	342	392	573	901	557	–343	–38.1
Asia	186	168	256	280	154	–126	–45.0
Sub-Saharan Africa	20	26	46	72	51	–21	–29.5
U.S. imports for consumption:							
Canada	509	561	556	489	200	–289	–59.1
Mexico	114	123	141	181	117	–64	–35.4
Japan	341	400	369	356	211	–145	–40.7
Germany	185	227	234	205	148	–57	–27.7
China	112	151	212	259	102	–157	–60.5
United Kingdom	489	423	265	183	61	–122	–66.6
Korea	197	235	252	195	83	–112	–57.6
Netherlands	96	114	124	122	38	–84	–69.1
Australia	2	1	2	3	4	(a)	9.9
Venezuela	(a)	0	(a)	0	0	0	0.0
All other	391	481	427	449	218	–231	–51.4
Total	2,435	2,717	2,581	2,442	1,182	–1,261	–51.6
EU-27	1,123	1,200	1,001	913	443	–470	–51.5
OPEC	(a)	(a)	(a)	(a)	(a)	(a)	–40.3
Latin America	119	128	145	183	118	–65	–35.6
Asia	677	819	868	847	414	–432	–51.1
Sub-Saharan Africa	1	(a)	1	1	(a)	–1	–76.1

See footnote(s) at end of table.

TABLE TE.3 Forklift trucks and similar industrial vehicles (TE003): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–27	50	158	209	160	–49	–23.7
Mexico	32	44	90	108	79	–30	–27.4
Japan	–296	–358	–305	–295	–202	93	31.5
Germany	–148	–157	–150	–119	–126	–7	–6.1
China	–68	–116	–158	–186	–50	136	73.0
United Kingdom	–323	–155	49	52	3	–49	–94.3
Korea	–171	–205	–193	–137	–57	80	58.3
Netherlands	–33	–50	–17	–6	29	35	[b]
Australia	160	164	174	163	88	–75	–45.9
Venezuela	21	31	42	68	84	16	23.8
All other	177	207	668	1,035	388	–647	–62.5
Total	–675	–545	358	891	394	–497	–55.7
EU-27	–647	–486	38	76	–200	–276	[b]
OPEC	73	82	137	249	187	–62	–24.9
Latin America	223	263	428	718	440	–278	–38.8
Asia	–490	–652	–612	–566	–260	306	54.1
Sub-Saharan Africa	19	25	44	71	50	–20	–28.9

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a] Less than $500,000.
[b] Not meaningful for purposes of comparison.

group's drop in U.S. exports in 2009.[13] The drop in U.S. exports of forklift trucks and similar industrial vehicles is attributed to decreased manufacturing production in each of these countries in 2009. In Canada, real manufacturing production declined by approximately 12 percent, while that of both Mexico and the United Kingdom were down by 10 percent.[14]

U.S. Imports

The decrease in U.S. imports of forklift trucks and similar industrial vehicles in 2009 was primarily due to a weaker U.S. manufacturing sector, with production estimated to have fallen by almost 13 percentage points from 2008.[15] In terms of quantity, U.S. imports of this product group dropped by 171,941 trucks (39 percent) to 272,212 trucks in 2009; the unit value of truck imports decreased by 17 percent.[16]

All of the major sources of U.S. imports of this product group recorded large decreases in shipments to the United States, with Canada, China, Japan, Korea, and the United Kingdom recording a combined decrease of $825 million. U.S. imports from Australia were the anomaly, as imports increased by $342,000 (10 percent) to $4 million. The growth in U.S. imports from Australia was due to a rise in U.S. imports of parts for forklift trucks, which increased by 169 percent to $2.8 million. This reflects this product group's global supply chain, as a leading U.S. manufacturer of forklift trucks has a manufacturing facility in Australia.

[13] The rise in U.S. exports to Venezuela was the anomaly for which no substantiated reason could be identified. These exports increased by $16 million (24 percent) despite the country's continued economic downturn in 2009 and 14 percent decrease in manufacturing production. Sanchez, "Venezuelan Economy Shrank 3.3 Percent in 2009," February 24, 2010, 1.

[14] Canada's manufacturing data is based on chained 2002 C$. EIU, *Country Report: Canada*, 2010, 17; Mexico's manufacturing data is based on a production index (2003=100). EIU, *Country Report: Mexico*, 2010, 18; The United Kingdom's manufacturing data is based on a production index (2005=100). EIU, *Country Report: United Kingdom*, 2010, 20.

[15] U.S. manufacturing data are based on a production index (2002=100). Federal Reserve, Industrial Production and Capacity Utilization.

[16] Not all parts for this product group record units of quantity for U.S. imports. However, in terms of value, U.S. imports of parts for this product group decreased by $523.0 million (55 percent) to $421.0 million and accounted for 27 percent of U.S. imports of the overall product group in 2009. Compiled from official statistics of the U.S. Department of Commerce.

Motor Vehicles

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $27.3 billion (32 percent) to $58.4 billion
U.S. exports: Decreased by $20.9 billion (37 percent) to $36.0 billion
U.S. imports: Decreased by $48.2 billion (34 percent) to $94.3 billion

The decline in U.S. imports of motor vehicles outpaced the decrease in U.S. exports, leading to a 32 percent decrease in the U.S. trade deficit in motor vehicles (table TE.4). The decline in U.S. motor vehicle trade principally reflects the effects of the global economic downturn on worldwide vehicle supply and demand, the bankruptcies of U.S. automakers General Motors and Chrysler[17] and subsequent vehicle production cuts, and tight credit conditions[18] that impacted purchasers' access to vehicle financing as well as the availability of financing options.

U.S. Exports

U.S. exports of motor vehicles declined by $20.9 billion (37 percent) in 2009 to $36.0 billion. U.S. exports of nearly all motor vehicle categories exhibited sharp declines, reflecting lower vehicle demand in many major markets.[19] The largest export decreases occurred in passenger vehicles and light trucks, reflecting, in part, the 34 percent decline in U.S. vehicle production to nearly 5.8 million units in 2009,[20] as automakers sought to adjust motor vehicle supply to significantly lower demand. U.S. exports of mid-size and large gasoline-engine powered passenger vehicles fell by a combined $15.1 billion (58 percent), and those of large diesel-engine powered passenger vehicles fell by $2.6 billion (43 percent). The decline in these three export categories represented 533,055 passenger vehicles.

Canada, Germany, and Mexico are the leading markets for exports of U.S. motor vehicles. While Canada remained the leading destination for these exports in 2009, accounting for 44 percent ($15.8 billion) of total U.S. exports, exports declined by 29 percent. The Canadian light vehicle market fell by only 11 percent in 2009, to 1.5 million vehicles, but troubled U.S. automakers General Motors and Chrysler posted steep declines in their Canadian sales and market share.[21]

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[17] Sherefkin and Guildford, "Bankruptcy: Chrysler's Rebirth?" May 4, 2009; *Automotive News*, "GM, Fallen Symbol of U.S. Might," June 1, 2010; General Motors, "GM Pulls Ahead U.S. Plant Closures," June 1, 2009.

[18] Guilford, Harris, and Roland, "Credit Crunch (Cont'd.)," September 7, 2009.

[19] World registrations of passenger cars and commercial vehicles were forecast to fall by 14 percent in 2009 to 61.8 million vehicles. EIU, "World: Automotive Outlook," January 8, 2010.

[20] U.S. vehicle output by Chrysler and General Motors, both of which filed for bankruptcy in 2009, fell by 60 percent in 2009 to 482,588 units and by 48 percent to nearly 1.2 million units, respectively. *Automotive News*, "North America Car and Truck Production," January 11, 2010.

[21] *Ward's Automotive Reports*, "Korean OEMs Shine in Canada," January 11, 2010, 7.

TABLE TE.4 Motor vehicles (TE009): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
Canada	20,639	22,936	25,135	22,320	15,806	–6,514	–29.2
Japan	341	433	463	581	293	–289	–49.7
Mexico	4,350	3,990	4,504	4,503	2,255	–2,248	–49.9
Germany	1,774	4,881	5,853	7,903	4,621	–3,282	–41.5
Korea	100	151	337	333	134	–198	–59.7
United Kingdom	334	997	1,098	1,089	590	–500	–45.9
Saudi Arabia	1,034	1,887	1,850	3,044	1,808	–1,236	–40.6
South Africa	510	327	455	417	160	–257	–61.7
China	278	562	694	946	951	5	0.5
United Arab Em	773	1,089	1,300	2,228	946	–1,282	–57.6
All other	5,180	7,183	11,052	13,534	8,400	–5,134	–37.9
Total	35,312	44,437	52,739	56,898	35,963	–20,936	–36.8
EU-27	3,334	7,594	10,322	12,271	6,170	–6,101	–49.7
OPEC	2,867	4,894	5,414	7,837	4,649	–3,188	–40.7
Latin America	5,545	5,634	6,674	6,649	3,743	–2,906	–43.7
Asia	1,072	1,489	2,128	2,690	2,767	77	2.9
Sub-Saharan Africa	777	721	1,265	2,060	1,386	–674	–32.7
U.S. imports for consumption:							
Canada	48,581	48,623	47,606	37,071	25,108	–11,963	–32.3
Japan	35,947	44,609	44,965	42,407	24,818	–17,589	–41.5
Mexico	18,521	23,548	23,300	22,205	18,628	–3,577	–16.1
Germany	21,824	20,953	22,353	20,586	12,256	–8,330	–40.5
Korea	8,970	9,104	8,792	7,853	6,473	–1,380	–17.6
United Kingdom	5,898	5,031	4,209	4,016	2,274	–1,741	–43.4
Saudi Arabia	0	0	0	[a]	0	[a]	–100.0
South Africa	139	341	453	1,831	1,378	–453	–24.7
China	6	9	21	41	31	–10	–24.8
United Arab Em	0	[a]	0	0	[a]	[a]	[b]
All other	6,423	7,317	7,196	6,532	3,382	–3,150	–48.2
Total	146,308	159,537	158,895	142,541	94,348	–48,193	–33.8
EU-27	33,637	32,883	33,701	30,250	17,373	–12,877	–42.6
OPEC	[a]	[a]	[a]	[a]	[a]	[a]	–82.4
Latin America	18,744	23,716	23,340	22,210	18,632	–3,578	–16.1
Asia	44,924	53,725	53,781	50,304	31,323	–18,981	–37.7
Sub-Saharan Africa	139	341	453	1,831	1,378	–453	–24.7

See footnote(s) at end of table.

TABLE TE.4 Motor vehicles (TE009): U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
Canada	–27,942	–25,687	–22,471	–14,751	–9,302	5,449	36.9
Japan	–35,606	–44,175	–44,502	–41,826	–24,526	17,300	41.4
Mexico	–14,171	–19,557	–18,796	–17,701	–16,373	1,328	7.5
Germany	–20,050	–16,072	–16,500	–12,683	–7,635	5,048	39.8
Korea	–8,870	–8,954	–8,456	–7,520	–6,339	1,182	15.7
United Kingdom	–5,564	–4,034	–3,111	–2,926	–1,685	1,242	42.4
Saudi Arabia	1,034	1,887	1,850	3,044	1,808	–1,236	–40.6
South Africa	371	–15	1	–1,414	–1,218	196	13.8
China	272	553	672	905	920	15	1.7
United Arab Em	773	1,089	1,300	2,228	946	–1,282	–57.6
All other	–1,243	–134	3,856	7,002	5,018	–1,984	–28.3
Total	–110,996	–115,100	–106,155	–85,642	–58,386	27,257	31.8
EU-27	–30,303	–25,289	–23,378	–17,979	–11,203	6,776	37.7
OPEC	2,867	4,894	5,414	7,836	4,649	–3,187	–40.7
Latin America	–13,199	–18,082	–16,666	–15,561	–14,890	672	4.3
Asia	–43,852	–52,236	–51,653	–47,614	–28,556	19,058	40.0
Sub-Saharan Africa	638	380	812	229	8	–222	–96.7

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a] Less than $500,000.
[b] Not meaningful for purposes of comparison.

The second-largest export market for U.S. motor vehicles was Germany, accounting for 13 percent of U.S. exports in 2009, despite a 42 percent drop in the value of U.S. exports. The German market is unique for U.S. exports in that large diesel engine-powered passenger vehicles accounted for a significant share of U.S. vehicle exports; exports of these vehicles fell by $1.4 billion, or 38 percent, in 2009.[22] German manufacturers BMW and Mercedes-Benz manufacture several diesel-powered light vehicles in the United States[23] that are exported to Germany.[24]

The third-largest export market for U.S. motor vehicles in 2009 was Mexico, accounting for 6 percent of U.S. exports. The value of U.S. exports to Mexico decreased by 50 percent in 2009, as the Mexican market experienced a 26 percent drop in light vehicle sales to 752,552 units as a result of the global economic downturn.[25]

U.S. Imports

U.S. imports of motor vehicles fell by $48.2 billion (34 percent) in 2009, with all leading sources posting notable declines because of the severe economic downturn and lower vehicle demand. The largest import declines occurred in light vehicles, as U.S. sales of passenger cars and light trucks fell by 21 percent in 2009 to 10.4 million units,[26] the worst year for U.S. light vehicle sales since 1982.[27] U.S. imports of large gasoline-engine powered passenger vehicles fell by $28.3 billion (43 percent), while those of mid-size gasoline-engine powered passenger vehicles fell by $12.7 billion (23 percent). The decline in these two import categories amounted to 1.9 million light vehicles.

Canada, Japan, and Mexico—the leading three sources of U.S. motor vehicle imports—accounted for 73 percent of U.S. motor vehicle imports in 2009. U.S. imports from Canada, the largest source of motor vehicles, dropped by nearly $12 billion (32 percent), as Canadian light vehicle production fell by 28 percent in 2009 to nearly 1.5 million units in response to lower vehicle demand. U.S. imports from Japan fell by an even greater margin of nearly 42 percent, dropping to $24.8 billion. Japan reported its second consecutive year of declining passenger car production in 2009, down by nearly 32 percent to 7.9 million units, yielding its position as the world's largest automaker to China.[28] Of the leading suppliers, U.S. imports from Mexico declined by the smallest amount by value (16 percent) to $18.6 billion. Due to contracting demand, Mexican light vehicle output dropped by 28 percent to nearly 1.5 million vehicles in 2009.[29]

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[22] German trade data indicate that U.S. exports of large diesel engine-powered passenger cars decreased by 43 percent to 63,802 units in 2009. Global Trade Information System.

[23] BMW Web site, http://www.bmwusfactory.com (accessed April 1, 2010); The Auto Channel, "Mercedes-Benz Plant in Alabama," July 11, 2007.

[24] In 2009, BMW's U.S. production fell nearly 29 percent, from 170,739 units in 2008 to 121,666 units, and Mercedes-Benz's production was down nearly 43 percent, from 152,561 units in 2008 to 87,403 units. Commerce, OTM, *The Road Ahead*, 2010, 15–16.

[25] *Ward's Automotive Reports*, "Ward's Mexico Car Sales by Line and Brand, December 2009" and "Mexico Light-Truck Sales by Line and Brand, December 2009," February 1, 2010, 4–5.

[26] U.S. sales of medium and heavy duty trucks also slumped in 2009, falling by 33 percent to 199,686 units. *Ward's Automotive Reports*, "Ward's U.S. Truck Sales by Weight Class, December 2009," January 18, 2010, 2.

[27] Teahen, "A Down Year Ends on Up Note," January 11, 2010.

[28] *Japan Automotive News*, "Motor Vehicle Production in 2009 by Maker & Vehicle Type" and "Domestic Car Production in 2009 Down 31%," February 2010, 1 and 8.

[29] *Ward's Automotive Reports*, "Ward's North American Vehicle Production Summary," January 18, 2010, 8.

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Textiles, Apparel, and Footwear

Textiles and Apparel

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $10.6 billion (12 percent) to $75.9 billion
U.S. exports: Decreased by $3.2 billion (18 percent) to $14.7 billion
U.S. imports: Decreased by $13.7 billion (13 percent) to $90.6 billion

In 2009, the U.S. trade deficit in textiles and apparel narrowed to $75.9 billion, largely because of a substantial decrease in U.S. imports that was only slightly offset by a smaller decline in U.S. exports (table TX.1). Much of the $13.7 billion decrease in imports reflects continued decreased spending by consumers caused by the downturn in the U.S. economy. Imports of shirts, blouses, and trousers accounted for 53 percent ($36.8 billion) of all apparel imports and 52 percent ($5.0 billion) of the total decline in apparel imports. Fabrics, fibers, and yarns led U.S. exports of textiles and apparel in 2009, together accounting for 53 percent of sector exports and for most of the decrease in these exports (table TX.2).

As in previous years, the United States registered trade deficits with nearly all major trading partners; however, in each case, the trade deficit narrowed in 2009. The trade deficit with China, for example, decreased by $1.2 billion (3 percent) to $34.2 billion, while the trade deficit with Asia as a whole declined by $7.3 billion (10 percent) to $64.3 billion. The United States' trade surplus with Canada, which grew noticeably during 2006–08, declined slightly in 2009 by $70 million (6 percent) to $1.1 billion.

U.S. Exports

U.S. exports of textiles and apparel decreased by $3.2 billion (18 percent) to $14.7 billion in 2009 (table TX.1). Fabrics, fibers, and yarns were the primary U.S. export items, accounting for 53 percent of all sector exports (table TX.2), and were used primarily in making finished apparel products. In 2009, Latin America was the single largest U.S. regional export market, accounting for 44 percent ($6.4 billion) of U.S. sector exports. Mexico and Canada were the largest individual country markets for U.S.-made textiles and apparel in 2009, largely because of their relative proximity, which reduces shipping and transit time, and also because of preferential treatment under the North American Free Trade Agreement (NAFTA). However, U.S. sector exports to Mexico and Canada fell by a combined $1.2 billion in 2009, largely reflecting decreased exports of textile products (down $857 million) to apparel manufacturers in these countries.

TABLE TX.1 Textiles and apparel: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
China	629	731	844	940	846	–94	–10.0
Mexico	4,705	4,551	3,947	3,718	3,109	–609	–16.4
Vietnam	21	33	44	33	37	3	9.8
India	78	101	101	114	114	(a)	0.2
Canada	3,471	3,561	3,531	3,645	3,063	–582	–16.0
Indonesia	79	91	99	133	132	–1	–1.0
Bangladesh	11	12	14	21	20	–1	–3.3
Honduras	1,459	1,416	1,518	1,562	1,073	–489	–31.3
Pakistan	24	27	37	50	55	5	9.9
Thailand	80	85	113	118	88	–30	–25.4
All other	7,307	7,479	7,287	7,471	6,116	–1,355	–18.1
Total	17,864	18,088	17,535	17,805	14,653	–3,152	–17.7
EU-27	1,749	1,899	2,064	2,121	1,666	–456	–21.5
OPEC	232	343	303	400	331	–69	–17.3
Latin America	9,549	9,247	8,371	7,997	6,409	–1,589	–19.9
Asia	2,353	2,522	2,652	2,872	2,517	–355	–12.4
Sub-Saharan Africa	134	141	167	222	199	–23	–10.5
U.S. imports for consumption:							
China	26,937	31,284	36,162	36,368	35,083	–1,285	–3.5
Mexico	8,305	7,497	6,712	5,957	5,177	–780	–13.1
Vietnam	2,807	3,326	4,503	5,392	5,290	–102	–1.9
India	5,194	5,568	5,611	5,583	4,991	–592	–10.6
Canada	3,633	3,395	3,080	2,484	1,972	–513	–20.6
Indonesia	3,230	4,073	4,413	4,460	4,214	–246	–5.5
Bangladesh	2,486	3,025	3,216	3,566	3,557	–9	–0.3
Honduras	2,701	2,535	2,613	2,697	2,133	–564	–20.9
Pakistan	3,042	3,397	3,308	3,225	2,861	–364	–11.3
Thailand	2,609	2,623	2,571	2,532	2,011	–521	–20.6
All other	39,542	37,840	35,489	32,063	23,293	–8,770	–27.4
Total	100,485	104,563	107,678	104,329	90,581	–13,748	–13.2
EU-27	6,095	5,988	6,287	5,791	3,972	–1,819	–31.4
OPEC	465	391	323	238	173	–64	–27.0
Latin America	20,274	18,721	17,237	15,938	13,321	–2,616	–16.4
Asia	63,395	69,796	74,846	74,516	66,826	–7,690	–10.3
Sub-Saharan Africa	1,504	1,339	1,334	1,184	943	–240	–20.3

See footnote(s) at end of table.

TABLE TX.1 Textiles and apparel: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
China	–26,308	–30,553	–35,317	–35,429	–34,237	1,191	3.4
Mexico	–3,600	–2,946	–2,765	–2,239	–2,068	171	7.6
Vietnam	–2,786	–3,293	–4,459	–5,359	–5,254	105	2.0
India	–5,117	–5,467	–5,510	–5,470	–4,877	593	10.8
Canada	–162	166	451	1,161	1,091	–70	–6.0
Indonesia	–3,151	–3,982	–4,314	–4,327	–4,082	245	5.7
Bangladesh	–2,474	–3,013	–3,202	–3,545	–3,537	9	0.2
Honduras	–1,243	–1,118	–1,095	–1,135	–1,060	76	6.7
Pakistan	–3,018	–3,371	–3,271	–3,175	–2,806	369	11.6
Thailand	–2,528	–2,537	–2,458	–2,414	–1,923	491	20.3
All other	–32,235	–30,361	–28,202	–24,592	–17,176	7,415	30.2
Total	–82,621	–86,476	–90,143	–86,523	–75,928	10,596	12.2
EU-27	–4,347	–4,089	–4,223	–3,670	–2,307	1,363	37.1
OPEC	–233	–48	–20	162	157	–5	–3.2
Latin America	–10,724	–9,475	–8,866	–7,940	–6,912	1,028	12.9
Asia	–61,042	–67,273	–72,194	–71,644	–64,309	7,335	10.2
Sub-Saharan Africa	–1,370	–1,198	–1,167	–961	–744	217	22.6

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.

TABLE TX.2 Textiles and apparel: Leading changes in U.S. exports and imports, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. EXPORTS:							
Increases:							
Rubber, plastic, and coated-fabric apparel (TX005Q)	142	165	141	155	173	17	11.1
Men's and boys' suits and sports coats (TX005A)	30	32	28	24	31	8	32.7
Nonwoven apparel (TX005R)	27	25	65	75	77	2	3.3
Body-supporting garments (TX005K)	275	166	57	45	47	2	4.9
Decreases:							
Fibers and yarns, except raw cotton and raw wool (TX001)	3,328	3,780	4,041	4,344	3,496	–849	–19.5
Knit fabrics (TX002B)	1,778	1,611	1,659	1,534	891	–644	–42.0
Broadwoven fabrics (TX002A)	2,478	2,210	1,822	1,630	1,261	–369	–22.7
Coated and other fabrics (TX002D)	1,097	1,119	1,213	1,143	925	–218	–19.0
Other fabrics (TX002F)	1,240	1,392	1,303	1,445	1,248	–198	–13.7
Miscellaneous textile products (TX006)	1,825	2,037	2,174	2,310	2,134	–177	–7.7
All other	5,644	5,551	5,034	5,100	4,372	–728	–14.3
Total	17,864	18,088	17,535	17,805	14,653	–3,152	–17.7
U.S. IMPORTS:							
Increases:							
Rubber, plastic, and coated-fabric apparel (TX005Q)	470	382	387	368	445	77	20.8
Neckwear, handkerchiefs, and scarves (TX005L)	748	656	651	724	758	34	4.6
Blankets (TX004A)	514	606	614	597	616	19	3.2
Decreases:							
Shirts and blouses (TX005E)	23,664	25,073	26,035	24,876	21,962	–2,915	–11.7
Women's and girls' trousers (TX005D)	9,664	9,889	9,872	9,305	8,043	–1,263	–13.6
Women's and girls' suits, skirts, and coats (TX005G)	6,941	6,663	6,346	5,851	4,739	–1,112	–19.0
Men's and boys' trousers (TX005C)	7,776	8,014	7,940	7,626	6,805	–821	–10.8
Robes, nightwear, and underwear (TX005I)	5,418	5,478	5,380	5,444	4,683	–761	–14.0
All other	45,291	47,802	50,451	49,537	42,532	–7,005	–14.1
Total	100,485	104,563	107,678	104,329	90,581	–13,748	–13.2

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

Honduras remained the third-largest U.S. export market for textiles and apparel in 2009. U.S. exports of textiles and apparel to Honduras totaled $1.1 billion and primarily consisted of fibers, yarns, and fabrics (83 percent), predominantly of cotton, shipped to apparel producers in Honduras, who enjoy preferential access to the U.S. market under the Dominican Republic–Central America Free Trade Agreement (DR-CAFTA) for apparel made from U.S. inputs. In 2009, Honduras was the eighth-largest supplier of U.S. sector imports, and 99 percent of such imports were of apparel. The 2009 decline in U.S. sector exports to Honduras of $489 million, which was wholly accounted for by decreased exports of fibers, yarns, and fabrics, reflects diminished U.S. consumption of apparel in 2009, including apparel made in Honduras from U.S. inputs and shipped to the United States under DR-CAFTA. For example, in 2009, $1.9 million of U.S. apparel imports from Honduras entered under DR-CAFTA (representing 91 percent of total U.S. imports of apparel from Honduras), down from $2.4 million in 2008 (89 percent of total U.S. apparel imports from Honduras).

U.S. Imports

For the second consecutive year, the value of U.S. imports of textiles and apparel declined (by $13.7 billion or 13 percent), hitting a 6-year low of $90.6 billion in 2009 (table TX.1).[1] A significant decrease in imports from Asia accounted for over one-half of the total decrease in U.S. imports of textiles and apparel in 2009. U.S. imports from Asia, which accounted for 74 percent ($66.8 billion) of U.S. sector imports, fell by $7.7 billion in 2009, largely because of a $3.2 billion drop in imports from China, Hong Kong, and Macao. U.S. imports from other Asian countries that are among the United States' top 10 suppliers, namely Vietnam, India, Indonesia, Bangladesh, Pakistan, and Thailand, also dropped in 2009 by a combined $1.8 billion.

Mirroring the decline in imports from Asia, U.S. imports from nearly all other sources and regions dropped in 2009. Imports from NAFTA partners Canada and Mexico fell by a combined $1.3 billion (15 percent) in 2009. Imports from the EU, Latin America, and Sub-Saharan Africa declined by 31 percent, 16 percent, and 20 percent, respectively, in 2009. The pervasive decline in imports of textiles and apparel in 2009 reflects the general downturn in the U.S. economy and reduced spending by U.S. consumers. In 2009, for example, consumer expenditures on apparel (which accounted for 77 percent of sector imports) fell by over 3 percent compared with 2008 levels.[2] This coincides with a decline in retail sales of over 3 percent reported by clothing stores in 2009.[3] In addition, the decline in the value of imports is also explained by lower unit values for imports compared with 2008, driven by consumer demand for value-priced garments and reduced spending on luxury brands.[4] For example, the average unit value for imported cotton bottoms in 2009 was $5.81 for men's and boys (category 347) and $4.87 for women's

[1] U.S. imports of textiles and apparel totaled $87.2 billion in 2003, rose to $94.0 billion in 2004, and continued to rise every year thereafter until 2008.

[2] USDOC, BEA, "Table 2.4.5U: Personal Consumption Expenditures by Type of Product," March 29, 2010.

[3] USDOC, Census, "Retail and Food Services Sales by Kind of Business," 2008 and 2009.

[4] Standard & Poor's, Industry Surveys, *Apparel & Footwear: Retailers & Brands*, March 4, 2010, 5–6, 12, 17–18.

and girls (category 348), down from $6.13 and $5.27, respectively, in 2008.[5] Moreover, the import price index, which measures the average price of imports of goods relative to a base year, declined on average for both textile mill products and apparel during 2008–09.[6]

The large decline in U.S. imports in 2009 did not affect the composition of the list of top suppliers to the United States. China remained by far the largest supplier of textiles and apparel to the U.S. market, with 39 percent of sector imports. Imports from China fell considerably in 2009 to $35.1 billion, a decline of $1.3 billion from 2008, representing the first decline in U.S. imports of textiles and apparel from China since China's accession to the World Trade Organization (WTO) in 2001. Although China remains a formidable competitor in the textiles and apparel industry, with its abundant, skilled labor force and ability to produce both widely varied products and complex garments, China's rising production costs and appreciating currency have affected the price-competitiveness of the country's textile and apparel sector.[7] Vietnam displaced Mexico to become the second largest supplier to the United States in 2009, and imports from Vietnam declined at a comparatively modest rate that year (2 percent). The country has become a competitive sourcing alternative to China, owing to its productive, efficient, and skilled workforce and relatively low costs of production.[8]

Footwear[9]

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Change in 2009 from 2008:

U.S. trade deficit: Decreased by $1.7 billion (9 percent) to $17.0 billion
U.S. exports: Decreased by $53 million (8 percent) to $620 million
U.S. imports: Decreased by $1.8 billion (9 percent) to $17.7 billion

In 2009, the U.S. trade deficit in footwear declined by 9 percent as imports, which accounted for 99 percent of the U.S. footwear market, fell sharply for the first time in over five years (table TX.3).[10] The decline mostly came from a $1.0 billion decrease in U.S. imports of footwear from China, which continues to be the largest supplier of footwear to the U.S. market. In contrast, U.S. imports from Vietnam, the second-largest

[5] Because of the numerous differences in units used to measure quantity with respect to garments and textile products (e.g., dozens, square meters equivalent, and so forth), it is difficult to calculate unit values for larger categories of goods. However, cotton bottoms are a major import commodity and may be considered somewhat indicative of trends in the clothing sector. Unit values calculated using data from USDOC, ITA, *Major Shippers Report* (accessed April 8, 2010).

[6] This figure is based on the import price index for NAICS 314 (textile product mills) and NAICS 315 (apparel). USDOL, BLS, Import/Export Price Indexes Database (accessed April 16, 2010).

[7] Standard & Poor's, Industry Surveys, *Apparel & Footwear: Retailers & Brands*, March 4, 2010, 19.

[8] Industry officials, e-mail messages to Commission staff, Washington, DC, March 16 and 26, 2010.

[9] The sector goods in this section are classified under NAICS number 3162 (footwear manufacturing—i.e., establishments primarily engaged in manufacturing footwear, except orthopedic extension footwear).

[10] According to the American Apparel and Footwear Association (AAFA), domestic shoe production now represents only 1 percent of shoe purchases in the United States. Nate Herman (Senior Director of International Trade, AAFA), e-mail message to Commission staff, February 24, 2010.

TABLE TX.3 Footwear: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
	Million dollars						
U.S. exports of domestic merchandise:							
China	41	57	38	35	44	9	24.8
Vietnam	31	34	25	26	25	–1	–3.1
Italy	9	8	8	6	6	(a)	–6.4
Indonesia	12	10	11	8	6	–3	–33.0
Brazil	1	2	3	4	1	–2	–64.1
Mexico	46	47	44	79	63	–16	–20.7
India	8	7	4	6	5	–1	–15.3
Thailand	5	4	3	3	1	–2	–61.1
Canada	65	73	78	86	83	–3	–3.1
Dominican Rep	33	19	23	27	22	–5	–17.5
All other	256	312	342	393	364	–29	–7.4
Total	507	573	578	673	620	–53	–7.8
EU-27	65	60	65	68	53	–15	–21.7
OPEC	21	32	32	45	32	–13	–28.3
Latin America	134	140	146	194	176	–18	–9.3
Asia	196	238	214	238	229	–10	–4.0
Sub-Saharan Africa	17	21	28	32	34	3	8.1
U.S. imports for consumption:							
China	12,654	13,795	14,090	14,444	13,415	–1,029	–7.1
Vietnam	717	952	1,032	1,212	1,323	111	9.1
Italy	1,137	1,110	1,200	1,127	771	–356	–31.6
Indonesia	510	471	383	408	446	38	9.4
Brazil	1,019	896	758	518	382	–135	–26.1
Mexico	247	274	248	255	254	–1	–0.4
India	139	155	164	188	164	–24	–12.7
Thailand	292	293	257	244	156	–87	–35.8
Canada	94	79	76	77	66	–11	–14.5
Dominican Rep	141	129	119	134	121	–13	–9.6
All other	884	884	945	844	567	–277	–32.8
Total	17,834	19,038	19,270	19,451	17,666	–1,785	–9.2
EU-27	1,738	1,700	1,776	1,586	1,090	–496	–31.3
OPEC	2	1	1	1	1	(a)	2.8
Latin America	1,432	1,317	1,148	931	780	–151	–16.2
Asia	14,495	15,852	16,180	16,766	15,658	–1,108	–6.6
Sub-Saharan Africa	3	4	5	2	1	–1	–33.8

See footnote(s) at end of table.

TABLE TX.3 Footwear: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2005–09—*Continued*

Item	2005	2006	2007	2008	2009	Change, 2008 to 2009	
						Absolute	*Percent*
	Million dollars						
U.S. merchandise trade balance:							
China	–12,613	–13,738	–14,052	–14,409	–13,371	1,038	7.2
Vietnam	–685	–917	–1,007	–1,186	–1,298	–111	–9.4
Italy	–1,128	–1,102	–1,192	–1,120	–765	356	31.7
Indonesia	–498	–461	–371	–399	–440	–41	–10.3
Brazil	–1,018	–894	–755	–514	–381	133	25.9
Mexico	–201	–227	–204	–176	–191	–15	–8.6
India	–131	–148	–160	–182	–159	23	12.6
Thailand	–287	–289	–253	–241	–156	86	35.5
Canada	–29	–6	2	9	18	9	95.2
Dominican Rep	–108	–110	–97	–107	–99	8	7.7
All other	–629	–573	–603	–451	–202	248	55.1
Total	–17,327	–18,465	–18,692	–18,778	–17,046	1,732	9.2
EU-27	–1,673	–1,640	–1,711	–1,518	–1,037	481	31.7
OPEC	19	31	31	45	32	–13	–28.8
Latin America	–1,299	–1,176	–1,002	–737	–604	133	18.1
Asia	–14,299	–15,614	–15,966	–16,528	–15,429	1,098	6.6
Sub-Saharan Africa	15	17	23	30	33	3	10.8

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

Note: Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. See appendix B for country group definitions.

[a]Less than $500,000.

supplier of footwear to the United States since 2008, rose by $111 million to $1.3 billion. Since the normalization of trade relations with Vietnam in 2001, and following that country's accession to the WTO in January 2007, the growth of U.S. footwear imports from Vietnam has accelerated.[11]

Domestic consumer spending on footwear fell 3.4 percent in 2009,[12] the first decline in recent years, which can be attributed to the downturn in the U.S. economy and rising unemployment.[13] Industry sources report that the level of household disposable income determines the "quantity, quality, and frequency of footwear purchases."[14] As real household disposable incomes falls, so does discretionary spending on footwear.[15]

Despite the weaker economy and overall decrease in consumer spending on footwear in 2009, sales of children's shoes, certain outdoor footwear (e.g., Uggs boots), and sports leisure footwear remained strong. Parents must continually buy new footwear as their children grow,[16] and sales of outdoor footwear were boosted by consumer purchases of the popular Ugg boots as holiday gifts.[17] The emergence of toning and shaping footwear, which has reportedly become the best-selling segment in athletic footwear, helped the athletic footwear market as a whole decline less in 2009 than it did in 2008.[18]

U.S. Exports

The value of U.S. exports of footwear decreased by $53 million (8 percent) to $620 million in 2009 (table TX.3), a decline which can be attributed to the overall downturn in the global economy.[19] Just over one-half of these exports were of footwear parts, especially removable insoles, rather than entire footwear products. U.S. footwear export statistics also may reflect footwear items imported into the United States, repackaged, and then re-exported to other markets. Industry sources report that U.S. exports of footwear were limited and comprised primarily luxury leather shoes and high-end footwear.[20]

U.S. Imports

China remained the leading supplier by far of footwear to the U.S. market, accounting for just over 76 percent of U.S. footwear imports by value in 2009. China's large labor pool and access to ample energy and water supplies have allowed it to dominate global footwear production in recent years. In 2009, however, U.S. imports of footwear from

[11] Footwear exports from Ho Chi Minh City in Vietnam rose 11 percent in January 2010 compared with January 2009. In the same month, Vietnam opened its first eco-tannery to serve major footwear clients such as Timberland, New Balance, and Hush Puppies. Footwearbiz.com, "Ho Chi Minh Shoe Exports Rise," February 2, 2010; Ngo Tuan, "Vietnam: Country's First Eco-Friendly Tannery Opens," January 28, 2010.

[12] USDOC, BEA, "Table 2.5.4U: Personal Consumption Expenditures," March 29, 2010.

[13] Sammon. "Words from the Wise," January 25, 2010, 26.

[14] IBISWorld, "Footwear Manufacturing in the US: 31621," January 12, 2010, 11.

[15] Ibid.

[16] Beth Boyle (industry analyst, NPD Group, Inc.), telephone interview with Commission staff, April 15, 2010.

[17] Ibid.

[18] NPD Group, Inc., "NPD Reports on 2009 Athletic Footwear & Sports Apparel Market," March 10, 2010; Ayling, "Analysis: Toning Shapes Up Athletic Footwear Sector," February 24, 2010.

[19] Nate Herman (senior director of international trade, American Apparel and Footwear Association), e-mail to Commission staff, April 19, 2010.

[20] Matt Priest (president, Footwear Retailers and Distributors Association), e-mail message to Commission staff, April 5, 2010.

China fell by $1.0 billion (7 percent) to $13.4 billion because of the downturn in the U.S. economy and growing competitive challenges that include rising labor costs relative to other Asian suppliers.[21] One industry source reported that the average hourly wage and social insurance cost for Chinese footwear production is $0.97 cents per hour, versus $0.46 cents per hour in Vietnam.[22] Vietnam's lower labor costs have motivated U.S. footwear companies to increase their imports of footwear from Vietnam.

Despite the overall decrease in U.S. footwear imports, U.S. imports from Vietnam increased by $111 million (9 percent) in 2009. Vietnam has emerged as one of the world's leading footwear producers, ranking third in Asia after China and India.[23] Sport shoes are the leading footwear item exported to the United States from Vietnam, and some U.S. sports footwear companies are increasing their sourcing from Vietnam. NIKE, which has been contracting out footwear production in Vietnam for many years, produced about 100 million pairs of athletic shoes in Vietnam in 2009.[24] In 2009, Puma opened a new product development and sourcing center in Ho Chi Minh City, Vietnam, that is designed to increase the country's speed to market, reduce production costs, and ensure product quality.[25] New Balance, the only remaining domestic producer of athletic footwear, is now a significant importer from Vietnam.[26] Vietnam footwear producers have likely also increased efforts to export more footwear to the United States in response to the European Union's decision to continue imposing antidumping duties on imports of leather shoes from Vietnam.[27]

U.S. imports from Italy, now the third leading supplier (down from the second leading supplier in 2007 and earlier years) of high-end leather shoes to the U.S. market—considered the most important market for Italian fashion[28]—fell sharply by $356 million (32 percent) to $771 million in 2009. Affected by the global economic downturn, industry sources in Italy reported that 143 footwear businesses closed during the first six months of 2009.[29] Nevertheless, to increase their competitiveness, some leading Italian footwear producers are now focusing on producing innovative products, diversifying their target markets, and improving storage, distribution, and transportation networks.[30] Also, in the luxury shoe market, where price is less of a concern, some small U.S. footwear companies that specialize in high-end fashion footwear are shifting their sourcing of footwear to Italy because of problems with quality and fit in China.[31]

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[21] In early 2009, a NIKE factory in southern China with 27,000 employees producing 14 million pairs of shoes annually raised its monthly wages to $210/month, compared with $135, which is the average monthly salary in that area. *World Footwear*, "World Footwear News: China," May–April 2008, 3.

[22] Cooper, written testimony to the USITC, February 4, 2010, Appendix IV.

[23] GTIS, World Trade Atlas Database (accessed April 20, 20009).

[24] Industry and government officials, interview by Commission staff, Ho Chi Minh City, Vietnam, March 10, 2010.

[25] Footwearbiz.com, "Puma Opens New sourcing Center in Vietnam," October 22, 2009.

[26] USITC hearing transcript, March 2, 2010, 240 (testimony of Mitchell Cooper).

[27] Footwearbiz.com, "Vietnamese Footwear Exports in Decline," January 10, 2010. Despite its rapid growth as a footwear exporter, Vietnam's footwear industry faces competitive challenges such as poor infrastructure and transportation, limited availability of raw materials (Vietnamese producers reportedly have to import 70 percent of their materials), labor shortages, particularly of skilled workers, and labor strikes. Industry and Government officials, interview by Commission staff, Ho Chi Minh City, Vietnam, March 10, 2010; Footwearbiz.com, "Staff Shortages Affect Vietnam Shoe Sector," February 10, 2010.

[28] Footwearbiz.com, "Made in Italy,' Event Opens on Madison Avenue," December 16, 2009.

[29] Footwearbiz.com, "Italy: Company Closures Revealed," September 21, 2009.

[30] Footwearbiz.com, "Minister Opens New Geox Facilities," March 3, 2010.

[31] Young, "Classic Move," February 1, 2010.

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APPENDIX A
U.S. TRADE BY INDUSTRY/COMMODITY GROUP

TABLE A.1 Agricultural products: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
AG001	Certain miscellaneous animals and meats:							
	Exports	1,819	2,055	2,158	2,497	2,308	–189	–7.6
	Imports	1,890	1,989	2,133	2,054	1,747	–308	–15.0
	Trade balance	–71	66	25	443	561	119	26.9
AG002	Cattle and beef:							
	Exports	1,041	1,655	2,156	3,085	2,817	–268	–8.7
	Imports	4,410	4,443	4,844	4,524	3,784	–740	–16.4
	Trade balance	–3,369	–2,788	–2,688	–1,439	–967	472	32.8
AG003	Swine and pork:							
	Exports	2,248	2,422	2,710	4,278	3,645	–632	–14.8
	Imports	1,553	1,451	1,490	1,246	1,020	–226	–18.1
	Trade balance	695	971	1,219	3,032	2,625	–407	–13.4
AG004	Sheep and meat of sheep:							
	Exports	17	30	21	35	34	–1	–2.5
	Imports	462	425	456	446	434	–11	–2.6
	Trade balance	–446	–395	–435	–411	–400	11	2.6
AG005	Poultry:							
	Exports	2,795	2,588	3,655	4,607	4,297	–310	–6.7
	Imports	169	194	242	256	263	7	2.8
	Trade balance	2,625	2,395	3,413	4,351	4,034	–317	–7.3
AG006	Fresh or frozen fish:							
	Exports	2,602	2,672	2,706	2,576	2,326	–250	–9.7
	Imports	3,963	4,555	4,922	5,021	4,880	–140	–2.8
	Trade balance	–1,361	–1,884	–2,217	–2,444	–2,554	–110	–4.5
AG007	Canned fish:							
	Exports	223	224	239	268	251	–17	–6.5
	Imports	889	953	950	1,130	1,090	–41	–3.6
	Trade balance	–666	–729	–711	–862	–839	23	2.7
AG008	Cured and other fish:							
	Exports	170	181	178	187	194	7	3.9
	Imports	371	382	394	456	443	–13	–2.9
	Trade balance	–201	–201	–216	–269	–249	20	7.6
AG009	Shellfish:							
	Exports	883	961	949	1,013	1,035	22	2.2
	Imports	6,696	7,288	7,246	7,379	6,587	–792	–10.7
	Trade balance	–5,813	–6,327	–6,297	–6,366	–5,552	814	12.8
AG010	Dairy produce:							
	Exports	1,195	1,387	2,358	3,188	1,755	–1,433	–44.9
	Imports	2,102	2,018	2,212	2,516	1,959	–557	–22.1
	Trade balance	–907	–630	146	672	–204	–876	[a]
AG011	Eggs:							
	Exports	227	235	293	297	347	49	16.6
	Imports	21	31	43	47	30	–17	–36.9
	Trade balance	205	204	250	250	317	67	26.8

See footnote(s) at end of table.

TABLE AG.1 Agricultural products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
AG012	Sugar and other sweeteners:							
	Exports	538	754	1,074	931	829	–102	–10.9
	Imports	1,323	1,868	1,391	1,748	1,919	171	9.8
	Trade balance	–785	–1,114	–317	–817	–1,089	–273	–33.4
AG012A	Sugar:							
	Exports	122	188	230	175	137	–38	–21.6
	Imports	908	1,351	859	1,117	1,246	129	11.5
	Trade balance	–786	–1,164	–629	–943	–1,109	–166	–17.7
AG012B	High fructose corn sweetener:							
	Exports	78	146	220	254	257	3	1.2
	Imports	41	48	57	82	92	10	12.4
	Trade balance	37	99	163	172	165	–7	–4.1
AG013	Animal feeds:							
	Exports	4,535	5,065	6,144	8,467	8,498	31	0.4
	Imports	789	905	1,084	1,375	1,290	–85	–6.2
	Trade balance	3,746	4,160	5,060	7,092	7,208	115	1.6
AG014	Live plants:							
	Exports	170	188	189	198	190	–8	–3.9
	Imports	558	564	588	540	487	–53	–9.9
	Trade balance	–388	–376	–399	–342	–297	46	13.3
AG015	Seeds:							
	Exports	940	893	1,051	1,348	1,190	–158	–11.7
	Imports	525	624	692	786	792	6	0.8
	Trade balance	415	269	358	562	398	–164	–29.2
AG016	Cut flowers:							
	Exports	25	27	37	42	39	–3	–6.7
	Imports	709	768	831	804	768	–36	–4.5
	Trade balance	–684	–741	–794	–762	–728	33	4.3
AG017	Miscellaneous vegetable substances:							
	Exports	554	602	697	786	822	37	4.7
	Imports	1,038	1,193	1,256	1,407	1,280	–127	–9.0
	Trade balance	–484	–592	–559	–622	–458	164	26.4
AG018	Fresh, chilled, or frozen vegetables:							
	Exports	1,621	1,766	1,902	2,070	2,005	–65	–3.1
	Imports	3,871	4,310	4,701	5,003	4,800	–202	–4.0
	Trade balance	–2,250	–2,544	–2,799	–2,933	–2,796	137	4.7
AG019	Prepared or preserved vegetables, mushrooms, and olives:							
	Exports	1,548	1,708	1,943	2,523	2,446	–78	–3.1
	Imports	2,147	2,290	2,550	2,813	2,736	–77	–2.7
	Trade balance	–599	–583	–607	–289	–290	–1	–0.2

See footnote(s) at end of table.

TABLE AG.1 Agricultural products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
AG020	Edible nuts:							
	Exports	2,925	3,092	3,311	3,742	4,024	282	7.5
	Imports	1,121	1,101	1,184	1,351	1,275	–76	–5.6
	Trade balance	1,804	1,990	2,128	2,391	2,749	358	15.0
AG021	Tropical fruit:							
	Exports	71	80	62	77	70	–6	–8.2
	Imports	2,035	2,219	2,530	2,761	3,130	370	13.4
	Trade balance	–1,964	–2,140	–2,468	–2,684	–3,060	–376	–14.0
AG022	Citrus fruit:							
	Exports	664	744	749	874	832	–42	–4.8
	Imports	519	602	723	689	683	–6	–0.9
	Trade balance	145	142	26	185	149	–36	–19.3
AG023	Deciduous fruit:							
	Exports	995	1,065	1,233	1,422	1,396	–26	–1.8
	Imports	324	393	462	448	372	–76	–16.9
	Trade balance	670	672	770	974	1,024	50	5.1
AG024	Other fresh fruit:							
	Exports	1,021	1,052	1,170	1,346	1,326	–20	–1.5
	Imports	1,684	1,826	2,035	2,121	2,302	181	8.5
	Trade balance	–663	–774	–866	–775	–976	–201	–25.9
AG025	Dried fruit other than tropical:							
	Exports	382	418	481	589	533	–55	–9.4
	Imports	150	153	182	191	180	–11	–5.8
	Trade balance	232	266	299	398	353	–44	–11.2
AG026	Frozen fruit:							
	Exports	90	110	132	143	130	–13	–9.2
	Imports	286	356	415	444	348	–96	–21.7
	Trade balance	–196	–246	–283	–300	–218	83	27.6
AG027	Prepared or preserved fruit:							
	Exports	235	288	324	387	365	–22	–5.7
	Imports	858	985	1,116	1,263	1,213	–50	–3.9
	Trade balance	–623	–697	–791	–876	–848	28	3.2
AG028	Coffee and tea:							
	Exports	450	559	657	807	819	12	1.5
	Imports	3,309	3,694	4,173	4,855	4,509	–347	–7.1
	Trade balance	–2,859	–3,135	–3,515	–4,048	–3,690	359	8.9
AG029	Spices:							
	Exports	80	86	94	110	117	6	5.9
	Imports	503	543	677	819	729	–90	–11.0
	Trade balance	–423	–457	–583	–709	–612	97	13.7
AG030	Cereals:							
	Exports	11,096	13,341	20,860	28,625	17,240	–11,385	–39.8
	Imports	657	963	1,425	2,496	1,808	–688	–27.6
	Trade balance	10,439	12,378	19,435	26,129	15,432	–10,697	–40.9

See footnote(s) at end of table.

TABLE AG.1 Agricultural products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
AG031	Milled grains, malts, and starches:							
	Exports	668	858	1,179	840	824	–16	–1.9
	Imports	490	550	721	1,077	957	–120	–11.1
	Trade balance	177	308	458	–237	–132	104	44.1
AG032	Oilseeds:							
	Exports	6,527	7,172	10,346	15,853	16,780	927	5.9
	Imports	335	387	572	1,002	668	–333	–33.3
	Trade balance	6,192	6,786	9,774	14,851	16,112	1,261	8.5
AG033	Animal or vegetable fats and oils:							
	Exports	1,808	2,010	2,981	4,475	3,354	–1,121	–25.1
	Imports	2,294	2,753	3,358	5,261	3,779	–1,482	–28.2
	Trade balance	–486	–743	–377	–786	–425	361	45.9
AG034	Pasta, cereals, and other bakery goods:							
	Exports	1,575	1,771	2,015	2,398	2,489	91	3.8
	Imports	3,016	3,335	3,690	4,011	3,971	–41	–1.0
	Trade balance	–1,442	–1,563	–1,675	–1,614	–1,482	132	8.2
AG035	Sauces, condiments, and soups:							
	Exports	869	947	1,014	1,178	1,172	–6	–0.5
	Imports	790	850	937	1,027	964	–63	–6.2
	Trade balance	80	97	78	150	208	57	38.1
AG036	Infant formulas, malt extracts, and other edible preparations:							
	Exports	3,149	3,422	3,458	4,002	3,909	–93	–2.3
	Imports	1,345	1,528	1,556	1,621	1,619	–2	–0.1
	Trade balance	1,804	1,894	1,902	2,381	2,289	–91	–3.8
AG037	Cocoa, chocolate, and confectionery:							
	Exports	991	1,066	1,206	1,396	1,384	–12	–0.8
	Imports	3,927	3,846	3,882	4,534	4,659	125	2.8
	Trade balance	–2,936	–2,781	–2,676	–3,138	–3,275	–137	–4.4
AG038	Fruit and vegetable juices:							
	Exports	731	862	979	1,061	990	–71	–6.7
	Imports	1,029	1,145	1,738	1,925	1,357	–568	–29.5
	Trade balance	–298	–283	–759	–864	–367	497	57.5
AG039	Nonalcoholic beverages, excluding fruit and vegetable juices:							
	Exports	478	554	643	819	887	68	8.3
	Imports	1,329	1,769	2,012	1,875	1,626	–249	–13.3
	Trade balance	–851	–1,214	–1,369	–1,056	–739	316	30.0
AG040	Malt beverages:							
	Exports	201	209	246	275	306	30	11.0
	Imports	3,081	3,563	3,602	3,648	3,325	–322	–8.8
	Trade balance	–2,879	–3,353	–3,357	–3,372	–3,020	353	10.5

See footnote(s) at end of table.

TABLE AG.1 Agricultural products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
AG041	Wine and certain other fermented beverages:							
	Exports	658	842	910	964	860	–104	–10.8
	Imports	3,797	4,176	4,658	4,655	4,039	–616	–13.2
	Trade balance	–3,139	–3,333	–3,749	–3,691	–3,180	512	13.9
AG042	Distilled spirits:							
	Exports	763	893	1,035	1,102	1,051	–51	–4.6
	Imports	4,106	4,527	5,081	5,061	4,810	–250	–4.9
	Trade balance	–3,343	–3,634	–4,046	–3,959	–3,759	200	5.1
AG043	Unmanufactured tobacco:							
	Exports	983	1,141	1,208	1,238	1,160	–78	–6.3
	Imports	652	751	840	804	900	97	12.0
	Trade balance	332	390	369	435	260	–175	–40.2
AG044	Cigars and certain other manufactured tobacco:							
	Exports	98	107	109	118	76	–42	–35.8
	Imports	346	392	416	465	475	9	2.0
	Trade balance	–248	–285	–307	–347	–399	–52	–14.9
AG045	Cigarettes:							
	Exports	1,200	1,214	1,012	705	414	–291	–41.3
	Imports	194	190	170	165	156	–9	–5.3
	Trade balance	1,006	1,024	843	540	258	–282	–52.2
AG046	Hides, skins, and leather:							
	Exports	2,580	2,755	2,932	2,607	1,812	–795	–30.5
	Imports	896	841	810	688	450	–238	–34.6
	Trade balance	1,684	1,915	2,122	1,919	1,362	–557	–29.0
AG047	Furskins:							
	Exports	195	246	266	300	182	–117	–39.1
	Imports	97	116	124	129	102	–27	–20.8
	Trade balance	98	130	142	170	80	–90	–53.0
AG048	Wool and other animal hair:							
	Exports	34	31	35	24	21	–2	–10.1
	Imports	41	41	35	37	20	–17	–46.4
	Trade balance	–7	–10	(b)	–13	2	15	(a)
AG049	Cotton, not carded or combed:							
	Exports	3,920	4,501	4,578	4,829	3,384	–1,446	–29.9
	Imports	14	13	8	5	(b)	–4	–97.4
	Trade balance	3,906	4,487	4,571	4,825	3,384	–1,441	–29.9

See footnote(s) at end of table.

TABLE AG.1 Agricultural products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009	
							Absolute	*Percent*
		Million dollars						
AG050	Ethyl alcohol for non-beverage purposes:							
	Exports	109	76	357	374	245	–129	–34.4
	Imports	337	1,600	978	1,260	564	–696	–55.3
	Trade balance	–228	–1,524	–621	–886	–318	568	64.1

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

[a]Not meaningful for purposes of comparison.
[b]Less than $500,000.

TABLE A.2 Chemicals and related products: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
CH001	Major primary olefins:							
	Exports	451	611	801	685	439	–246	–36.0
	Imports	7,774	8,062	9,472	12,812	5,931	–6,881	–53.7
	Trade balance	–7,324	–7,451	–8,671	–12,127	–5,493	6,635	54.7
CH002	Other olefins:							
	Exports	420	556	463	615	430	–185	–30.0
	Imports	261	442	448	506	375	–131	–25.9
	Trade balance	159	114	15	110	56	–54	–49.2
CH003	Primary aromatics:							
	Exports	548	375	392	478	531	53	11.2
	Imports	2,802	3,101	3,454	4,004	2,054	–1,950	–48.7
	Trade balance	–2,254	–2,726	–3,062	–3,527	–1,523	2,004	56.8
CH004	Organic commodity chemicals:							
	Exports	4,295	4,360	5,787	4,845	3,633	–1,213	–25.0
	Imports	2,398	2,736	3,141	3,691	2,104	–1,587	–43.0
	Trade balance	1,897	1,625	2,647	1,155	1,529	374	32.4
CH005	Organic specialty chemicals:							
	Exports	6,999	8,089	8,628	8,805	6,956	–1,849	–21.0
	Imports	7,744	7,981	8,422	9,324	7,805	–1,520	–16.3
	Trade balance	–744	108	206	–520	–849	–329	–63.4
CH006	Certain organic chemicals:							
	Exports	11,991	14,263	15,796	16,360	13,339	–3,021	–18.5
	Imports	7,263	7,103	7,441	9,184	6,663	–2,521	–27.4
	Trade balance	4,729	7,159	8,355	7,176	6,675	–500	–7.0
CH007	Miscellaneous inorganic chemicals:							
	Exports	7,003	8,737	10,169	11,674	9,059	–2,616	–22.4
	Imports	6,626	7,310	8,308	9,279	6,388	–2,891	–31.2
	Trade balance	377	1,426	1,861	2,395	2,671	276	11.5
CH008	Inorganic acids:							
	Exports	296	323	318	852	535	–318	–37.3
	Imports	362	415	426	907	496	–411	–45.3
	Trade balance	–66	–91	–108	–55	38	93	(a)
CH009	Chlor-alkali chemicals:							
	Exports	1,269	1,479	1,536	2,044	1,601	–443	–21.7
	Imports	452	460	398	646	453	–193	–29.9
	Trade balance	817	1,020	1,138	1,398	1,149	–249	–17.8
CH010	Fertilizers:							
	Exports	3,005	3,014	3,470	7,171	3,684	–3,487	–48.6
	Imports	7,439	7,525	9,507	16,485	7,373	–9,112	–55.3
	Trade balance	–4,434	–4,512	–6,037	–9,314	–3,689	5,625	60.4
CH011	Paints, inks, and related items, and certain components thereof:							
	Exports	4,509	4,988	5,456	5,914	5,195	–719	–12.2
	Imports	2,598	2,825	2,958	2,748	2,151	–597	–21.7
	Trade balance	1,911	2,164	2,498	3,166	3,044	–122	–3.9

See footnote(s) at end of table.

TABLE A.2 Chemicals and related products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
CH012	Synthetic organic pigments:							
	Exports	400	405	401	452	329	–123	–27.1
	Imports	396	411	452	477	330	–147	–30.8
	Trade balance	5	–6	–51	–26	–1	24	94.8
CH013	Synthetic dyes and azoic couplers:							
	Exports	283	304	325	321	300	–21	–6.4
	Imports	407	389	337	367	260	–107	–29.2
	Trade balance	–125	–85	–13	–47	40	87	(a)
CH014	Synthetic tanning agents:							
	Exports	28	29	24	21	19	–2	–7.7
	Imports	8	7	7	9	6	–3	–29.4
	Trade balance	21	22	17	12	13	1	7.8
CH015	Natural tanning and dyeing materials:							
	Exports	77	67	75	78	67	–10	–13.5
	Imports	74	76	85	109	122	13	11.5
	Trade balance	3	–9	–10	–32	–55	–23	–73.0
CH016	Photographic chemicals and preparations:							
	Exports	460	512	538	693	610	–84	–12.0
	Imports	446	476	424	451	343	–108	–23.9
	Trade balance	14	36	114	243	267	24	9.9
CH017	Pesticide products and formulations:							
	Exports	2,708	3,105	3,537	3,773	3,737	–35	–0.9
	Imports	1,898	1,882	1,899	2,354	2,249	–105	–4.5
	Trade balance	811	1,223	1,638	1,419	1,488	70	4.9
CH018	Adhesives and glues:							
	Exports	807	911	1,087	1,119	997	–122	–10.9
	Imports	333	338	377	358	276	–81	–22.7
	Trade balance	473	573	710	762	721	–41	–5.3
CH019	Medicinal chemicals:							
	Exports	29,296	32,460	37,041	42,146	46,359	4,214	10.0
	Imports	56,104	65,218	71,777	79,943	82,417	2,474	3.1
	Trade balance	–26,808	–32,758	–34,735	–37,797	–36,057	1,740	4.6
CH020	Essential oils and other flavoring materials:							
	Exports	1,420	1,525	1,674	1,813	1,816	3	0.2
	Imports	3,019	3,089	3,062	3,400	2,940	–460	–13.5
	Trade balance	–1,598	–1,564	–1,388	–1,587	–1,124	463	29.2
CH021	Perfumes, cosmetics, and toiletries:							
	Exports	4,418	5,018	5,601	6,271	5,911	–360	–5.7
	Imports	4,099	4,374	4,924	5,221	4,738	–483	–9.2
	Trade balance	319	643	678	1,050	1,173	123	11.7
CH022	Soaps, detergents, and surface-active agents:							
	Exports	3,192	3,608	3,899	4,660	4,409	–251	–5.4
	Imports	1,680	1,835	1,874	2,025	1,737	–288	–14.2
	Trade balance	1,511	1,773	2,025	2,635	2,672	37	1.4

See footnote(s) at end of table.

TABLE A.2 Chemicals and related products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
CH023	Miscellaneous chemicals and specialties:							
	Exports	3,708	4,249	5,259	7,854	5,155	–2,699	–34.4
	Imports	2,907	3,249	3,799	5,315	3,507	–1,808	–34.0
	Trade balance	801	1,000	1,461	2,539	1,648	–891	–35.1
CH024	Explosives, propellant powders, and related items:							
	Exports	476	542	580	602	575	–27	–4.5
	Imports	459	534	563	535	512	–23	–4.4
	Trade balance	16	8	18	67	63	–4	–5.9
CH025	Polyethylene resins in primary forms:							
	Exports	4,448	5,103	6,312	7,578	6,236	–1,342	–17.7
	Imports	3,227	3,712	3,510	3,932	2,454	–1,478	–37.6
	Trade balance	1,221	1,391	2,801	3,646	3,781	135	3.7
CH026	Polypropylene resins in primary forms:							
	Exports	2,202	2,648	3,551	3,563	2,659	–903	–25.4
	Imports	415	395	463	379	162	–218	–57.4
	Trade balance	1,787	2,253	3,088	3,183	2,498	–686	–21.5
CH027	Polyvinyl chloride resins in primary forms:							
	Exports	1,112	1,323	1,628	2,213	2,228	15	0.7
	Imports	593	546	381	362	247	–114	–31.6
	Trade balance	519	777	1,247	1,851	1,981	130	7.0
CH028	Styrene polymers in primary forms:							
	Exports	1,039	1,322	1,413	1,401	1,000	–401	–28.6
	Imports	1,153	1,102	914	938	653	–286	–30.5
	Trade balance	–114	220	499	463	347	–116	–25.0
CH029	Saturated polyester resins:							
	Exports	1,059	1,159	1,295	1,188	963	–225	–19.0
	Imports	1,199	1,329	1,322	1,302	873	–428	–32.9
	Trade balance	–141	–170	–27	–113	90	203	[a]
CH030	Other plastics in primary forms:							
	Exports	10,531	11,746	12,860	13,430	10,412	–3,018	–22.5
	Imports	4,050	4,244	4,362	4,620	3,377	–1,242	–26.9
	Trade balance	6,481	7,502	8,498	8,810	7,034	–1,776	–20.2
CH031	Synthetic rubber:							
	Exports	2,664	3,120	3,536	3,674	2,697	–977	–26.6
	Imports	1,532	1,520	1,510	1,924	1,178	–746	–38.8
	Trade balance	1,132	1,600	2,026	1,750	1,519	–231	–13.2
CH032	Tires and tubes:							
	Exports	2,926	3,164	3,709	4,279	3,799	–479	–11.2
	Imports	7,786	8,743	9,462	9,811	8,229	–1,583	–16.1
	Trade balance	–4,860	–5,579	–5,752	–5,533	–4,429	1,103	19.9

See footnote(s) at end of table.

TABLE A.2 Chemicals and related products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
CH033	Miscellaneous plastic products:							
	Exports	15,826	17,570	19,218	20,189	17,719	–2,469	–12.2
	Imports	19,994	21,738	22,235	22,726	19,328	–3,397	–14.9
	Trade balance	–4,167	–4,168	–3,017	–2,537	–1,609	928	36.6
CH034	Miscellaneous rubber products:							
	Exports	2,743	3,055	2,917	2,912	2,442	–470	–16.2
	Imports	3,884	4,074	4,358	4,342	3,331	–1,011	–23.3
	Trade balance	–1,141	–1,019	–1,441	–1,430	–890	540	37.8
CH035	Gelatin:							
	Exports	88	76	68	69	62	–7	–10.0
	Imports	116	138	143	150	179	29	19.4
	Trade balance	–28	–62	–75	–81	–117	–36	–44.7
CH036	Natural rubber:							
	Exports	34	33	44	44	45	2	4.6
	Imports	1,552	2,029	2,119	2,857	1,274	–1,583	–55.4
	Trade balance	–1,517	–1,996	–2,074	–2,813	–1,228	1,585	56.3

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

[a]Not meaningful for purposes of comparison.

TABLE A.3 Electronic products: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
EL001	Office machines:							
	Exports	751	911	1,295	1,221	845	–377	–30.8
	Imports	1,793	1,877	2,145	1,876	1,487	–389	–20.7
	Trade balance	–1,041	–966	–851	–654	–642	13	1.9
EL002	Telecommunications equipment:							
	Exports	14,183	14,779	16,882	17,151	13,417	–3,734	–21.8
	Imports	49,220	53,318	60,699	64,331	60,299	–4,033	–6.3
	Trade balance	–35,038	–38,539	–43,817	–47,180	–46,881	299	0.6
EL003	Consumer electronics:							
	Exports	3,536	4,231	4,626	4,466	3,965	–501	–11.2
	Imports	48,577	54,831	57,581	55,257	47,186	–8,071	–14.6
	Trade balance	–45,041	–50,600	–52,956	–50,791	–43,221	7,570	14.9
EL003A	Television receivers and video monitors:							
	Exports	857	1,101	1,268	1,186	1,223	36	3.1
	Imports	22,712	28,628	33,267	34,757	29,751	–5,006	–14.4
	Trade balance	–21,854	–27,527	–31,999	–33,571	–28,528	5,043	15.0
EL004	Blank and prerecorded media:							
	Exports	4,618	4,449	4,139	4,365	3,567	–798	–18.3
	Imports	5,747	5,748	5,550	4,873	3,799	–1,074	–22.0
	Trade balance	–1,129	–1,300	–1,411	–508	–232	276	54.4
EL005	Navigational instruments and remote control apparatus:							
	Exports	3,217	3,786	4,437	4,105	2,558	–1,547	–37.7
	Imports	3,241	3,996	5,590	5,794	5,501	–294	–5.1
	Trade balance	–23	–210	–1,153	–1,690	–2,943	–1,253	–74.2
EL006	Radio and television broadcasting equipment:							
	Exports	1,544	1,535	1,204	1,194	989	–205	–17.1
	Imports	3,830	3,527	2,684	3,050	2,279	–771	–25.3
	Trade balance	–2,286	–1,991	–1,479	–1,857	–1,290	566	30.5
EL007	Electric sound and visual signaling apparatus:							
	Exports	1,092	1,205	1,320	1,389	1,243	–146	–10.5
	Imports	2,409	2,647	2,776	2,717	2,455	–262	–9.7
	Trade balance	–1,317	–1,443	–1,456	–1,328	–1,212	117	8.8
EL008	Electrical capacitors and resistors:							
	Exports	1,286	1,825	1,548	1,330	1,172	–159	–11.9
	Imports	2,177	2,721	2,453	2,296	1,586	–710	–30.9
	Trade balance	–891	–896	–905	–966	–414	551	57.1
EL009	Printed circuits:							
	Exports	1,781	1,864	1,531	1,389	1,141	–248	–17.9
	Imports	2,123	2,215	2,228	2,082	1,479	–603	–29.0
	Trade balance	–342	–351	–697	–693	–338	355	51.2
EL010	Circuit apparatus exceeding 1000V:							
	Exports	509	539	597	683	576	–108	–15.7
	Imports	401	442	460	568	465	–103	–18.2
	Trade balance	109	97	137	115	111	–4	–3.8

See footnote(s) at end of table.

TABLE A.3 Electronic products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
EL011	Circuit apparatus not exceeding 1000V:							
	Exports	5,327	6,124	6,517	6,427	5,032	–1,395	–21.7
	Imports	6,818	7,369	7,777	7,763	5,727	–2,036	–26.2
	Trade balance	–1,491	–1,245	–1,261	–1,335	–694	641	48.0
EL012	Circuit apparatus assemblies:							
	Exports	1,447	2,250	2,458	2,560	2,206	–353	–13.8
	Imports	3,941	4,496	5,026	5,327	4,228	–1,099	–20.6
	Trade balance	–2,493	–2,246	–2,568	–2,768	–2,022	746	26.9
EL013	Parts of circuit apparatus:							
	Exports	2,348	2,530	2,630	2,406	1,864	–542	–22.5
	Imports	1,730	1,992	2,145	1,911	1,424	–487	–25.5
	Trade balance	619	538	485	495	440	–56	–11.2
EL014	Electron tubes:							
	Exports	791	465	297	276	262	–14	–5.0
	Imports	759	560	374	340	267	–73	–21.5
	Trade balance	32	–96	–77	–64	–5	59	92.5
EL015	Semiconductors and integrated circuits:							
	Exports	34,195	37,227	35,487	35,809	25,058	–10,751	–30.0
	Imports	25,425	27,022	26,259	25,298	21,190	–4,108	–16.2
	Trade balance	8,770	10,205	9,227	10,511	3,869	–6,642	–63.2
EL016	Miscellaneous electrical equipment:							
	Exports	2,419	2,537	2,341	2,141	1,744	–397	–18.5
	Imports	3,333	3,738	3,653	3,857	3,638	–219	–5.7
	Trade balance	–914	–1,201	–1,311	–1,716	–1,894	–178	–10.4
EL017	Computers, peripherals, and parts:							
	Exports	28,862	29,969	28,051	26,554	19,770	–6,784	–25.5
	Imports	93,950	102,468	106,789	102,338	95,391	–6,947	–6.8
	Trade balance	–65,087	–72,499	–78,738	–75,785	–75,621	163	0.2
EL018	Photographic film and paper:							
	Exports	2,091	2,336	2,353	2,237	2,091	–146	–6.5
	Imports	1,845	1,657	1,541	1,340	1,067	–273	–20.3
	Trade balance	246	679	812	897	1,023	126	14.1
EL019	Optical fibers, optical fiber bundles and cables:							
	Exports	459	568	634	842	906	64	7.6
	Imports	408	554	543	639	481	–157	–24.7
	Trade balance	51	14	92	203	425	222	109.0
EL020	Optical goods, including ophthalmic goods:							
	Exports	4,664	5,041	5,166	4,963	4,447	–515	–10.4
	Imports	5,626	6,294	7,137	7,978	6,632	–1,346	–16.9
	Trade balance	–962	–1,253	–1,971	–3,016	–2,184	831	27.6
EL021	Photographic cameras and equipment:							
	Exports	1,175	1,177	1,423	1,610	1,303	–307	–19.1
	Imports	1,880	1,612	1,614	1,261	841	–419	–33.3
	Trade balance	–704	–435	–191	349	462	113	32.3

See footnote(s) at end of table.

TABLE A.3 Electronic products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009	
							Absolute	*Percent*
		Million dollars						
EL022	Medical goods:							
	Exports	21,114	23,443	25,446	28,415	28,647	232	0.8
	Imports	20,947	22,573	24,878	27,531	25,928	–1,603	–5.8
	Trade balance	166	871	569	884	2,719	1,835	207.4
EL023	Watches and clocks:							
	Exports	255	304	391	416	356	–60	–14.4
	Imports	3,795	3,964	4,168	4,175	3,000	–1,175	–28.1
	Trade balance	–3,539	–3,660	–3,777	–3,758	–2,643	1,115	29.7
EL024	Drawing, drafting, and calculating instruments:							
	Exports	485	619	766	665	543	–122	–18.4
	Imports	335	293	263	256	158	–98	–38.2
	Trade balance	151	326	503	410	385	–24	–5.9
EL025	Measuring, testing, and controlling instruments:							
	Exports	17,399	19,669	20,963	22,195	19,251	–2,944	–13.3
	Imports	15,359	16,573	18,678	18,764	14,912	–3,851	–20.5
	Trade balance	2,040	3,096	2,286	3,431	4,339	907	26.4

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

TABLE A.4 Energy-related products: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
EP001	Electrical energy:							
	Exports	1,039	1,052	991	1,386	575	–811	–58.5
	Imports	2,479	2,518	2,713	3,641	2,071	–1,570	–43.1
	Trade balance	–1,440	–1,466	–1,722	–2,254	–1,495	759	33.7
EP002	Nuclear materials:							
	Exports	1,562	1,822	2,424	2,141	2,235	94	4.4
	Imports	3,175	3,910	5,273	5,435	4,454	–981	–18.1
	Trade balance	–1,613	–2,088	–2,848	–3,294	–2,219	1,075	32.6
EP003	Coal, coke, and related chemical products:							
	Exports	4,318	5,179	5,877	10,255	8,079	–2,176	–21.2
	Imports	6,316	6,930	6,880	9,102	4,123	–4,979	–54.7
	Trade balance	–1,998	–1,751	–1,003	1,154	3,956	2,802	242.9
EP004	Crude petroleum:							
	Exports	627	852	993	2,296	1,620	–676	–29.5
	Imports	137,331	171,243	186,476	274,950	150,809	–124,141	–45.2
	Trade balance	–136,704	–170,391	–185,482	–272,654	–149,189	123,465	45.3
EP005	Petroleum products:							
	Exports	18,302	26,407	31,484	58,765	42,048	–16,717	–28.4
	Imports	77,684	89,448	98,577	126,441	72,581	–53,860	–42.6
	Trade balance	–59,382	–63,042	–67,094	–67,675	–30,533	37,143	54.9
EP006	Natural gas and components:							
	Exports	4,045	3,688	4,905	6,893	5,270	–1,623	–23.5
	Imports	46,211	45,118	44,910	52,757	26,840	–25,917	–49.1
	Trade balance	–42,166	–41,430	–40,005	–45,864	–21,571	24,294	53.0

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

TABLE A.5 Forest products: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
FP001	Logs and rough wood products:							
	Exports	1,741	1,744	2,061	2,116	1,716	–400	–18.9
	Imports	782	832	746	567	398	–169	–29.8
	Trade balance	959	913	1,314	1,549	1,317	–231	–14.9
FP002	Lumber:							
	Exports	2,026	2,275	2,124	1,889	1,593	–296	–15.7
	Imports	9,005	8,335	6,508	4,404	2,639	–1,764	–40.1
	Trade balance	–6,978	–6,060	–4,384	–2,515	–1,046	1,469	58.4
FP003	Moldings, millwork, and joinery:							
	Exports	585	633	664	728	549	–179	–24.6
	Imports	4,433	4,750	3,894	3,040	2,125	–915	–30.1
	Trade balance	–3,848	–4,116	–3,230	–2,312	–1,576	736	31.8
FP004	Wood veneer and wood panels:							
	Exports	1,028	1,128	1,174	1,171	833	–339	–28.9
	Imports	7,218	6,623	5,169	3,941	2,961	–980	–24.9
	Trade balance	–6,190	–5,495	–3,995	–2,770	–2,128	642	23.2
FP005	Wooden containers:							
	Exports	176	210	212	266	253	–12	–4.7
	Imports	698	737	754	722	546	–176	–24.4
	Trade balance	–522	–527	–541	–456	–293	163	35.8
FP006	Tools and tool handles of wood:							
	Exports	37	46	50	73	56	–17	–23.4
	Imports	171	173	182	191	156	–36	–18.6
	Trade balance	–133	–127	–131	–119	–100	19	15.6
FP007	Miscellaneous articles of wood:							
	Exports	218	224	228	251	216	–36	–14.2
	Imports	1,465	1,462	1,402	1,276	981	–296	–23.2
	Trade balance	–1,246	–1,239	–1,174	–1,025	–765	260	25.4
FP008	Cork and rattan:							
	Exports	70	90	62	71	54	–17	–24.4
	Imports	673	678	698	705	561	–144	–20.4
	Trade balance	–602	–587	–636	–634	–507	126	19.9
FP009	Wood pulp and wastepaper:							
	Exports	5,081	5,749	6,916	7,809	6,751	–1,058	–13.5
	Imports	3,074	3,194	3,750	4,023	2,449	–1,573	–39.1
	Trade balance	2,006	2,554	3,165	3,787	4,302	515	13.6
FP010	Paper boxes and bags:							
	Exports	1,492	1,625	1,598	1,616	1,483	–133	–8.2
	Imports	1,492	1,710	1,801	1,793	1,596	–198	–11.0
	Trade balance	1	–85	–203	–177	–113	65	36.4
FP011	Industrial papers and paperboards:							
	Exports	6,287	6,788	7,518	8,281	7,265	–1,016	–12.3
	Imports	4,388	4,713	4,895	5,252	4,621	–631	–12.0
	Trade balance	1,900	2,075	2,623	3,028	2,644	–385	–12.7

See footnote(s) at end of table.

TABLE A.5 Forest products: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009	
							Absolute	*Percent*
		Million dollars						
FP011A	Paperboard:							
	Exports	4,432	4,769	5,356	5,889	5,065	–825	–14.0
	Imports	2,021	2,320	2,337	2,461	2,019	–442	–17.9
	Trade balance	2,411	2,449	3,018	3,428	3,045	–383	–11.2
FP011B	Tissue and tissue products:							
	Exports	1,240	1,363	1,454	1,621	1,589	–32	–2.0
	Imports	1,695	1,724	1,834	2,018	1,946	–72	–3.6
	Trade balance	–455	–361	–379	–398	–357	40	10.1
FP011C	Industrial paper:							
	Exports	615	656	708	771	611	–159	–20.7
	Imports	672	669	724	773	656	–118	–15.2
	Trade balance	–57	–13	–16	–3	–44	–42	–1,591.2
FP012	Newsprint:							
	Exports	383	355	410	605	317	–289	–47.7
	Imports	3,074	3,074	2,384	2,365	1,442	–923	–39.0
	Trade balance	–2,691	–2,719	–1,973	–1,759	–1,125	634	36.1
FP013	Printing and writing papers:							
	Exports	811	902	1,135	1,190	1,105	–84	–7.1
	Imports	5,972	6,149	5,754	5,672	4,285	–1,387	–24.5
	Trade balance	–5,162	–5,247	–4,619	–4,482	–3,180	1,302	29.1
FP014	Certain specialty papers:							
	Exports	1,304	1,360	1,529	1,611	1,389	–222	–13.8
	Imports	859	1,033	1,062	957	835	–122	–12.7
	Trade balance	445	327	467	654	554	–100	–15.3
FP015	Miscellaneous paper products:							
	Exports	1,663	1,811	1,755	1,860	1,749	–112	–6.0
	Imports	2,041	2,113	2,336	2,335	1,964	–371	–15.9
	Trade balance	–378	–302	–581	–475	–216	259	54.5
FP016	Printed matter:							
	Exports	4,906	5,217	5,652	5,825	5,162	–663	–11.4
	Imports	4,660	4,842	5,227	5,048	3,952	–1,096	–21.7
	Trade balance	246	375	425	777	1,210	433	55.7

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

TABLE A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MM001	Clays and related mineral products:							
	Exports	1,127	1,236	1,263	1,280	980	–300	–23.5
	Imports	231	281	282	294	351	57	19.5
	Trade balance	896	955	982	986	628	–358	–36.3
MM002	Fluorspar and miscellaneous mineral substances:							
	Exports	40	37	43	50	47	–4	–7.2
	Imports	192	202	198	393	184	–208	–53.0
	Trade balance	–151	–165	–155	–342	–138	205	59.8
MM003	Iron ores and concentrates:							
	Exports	584	636	718	1,244	356	–888	–71.4
	Imports	532	610	543	917	375	–542	–59.1
	Trade balance	52	25	176	327	–19	–346	(a)
MM004	Copper ores and concentrates:							
	Exports	363	770	1,041	1,731	930	–801	–46.3
	Imports	(b)	(b)	(b)	1	(b)	–1	–82.5
	Trade balance	362	770	1,040	1,730	929	–800	–46.3
MM005	Lead ores, concentrates, and residues:							
	Exports	230	362	619	372	382	10	2.7
	Imports	(b)	(b)	(b)	(b)	(b)	(b)	3,115.8
	Trade balance	230	362	619	372	381	10	2.6
MM005A	Lead ores and concentrates:							
	Exports	224	347	606	370	372	2	0.6
	Imports	0	(b)	(b)	(b)	(b)	(b)	3,007.5
	Trade balance	224	347	606	370	372	2	0.4
MM006	Zinc ores, concentrates, and residues:							
	Exports	490	1,076	1,204	616	674	59	9.5
	Imports	129	229	203	91	76	–14	–15.9
	Trade balance	361	846	1,002	525	598	73	13.9
MM006A	Zinc ores and concentrates:							
	Exports	483	1,068	1,191	610	663	53	8.6
	Imports	117	183	170	73	68	–5	–6.7
	Trade balance	366	885	1,021	537	595	58	10.7
MM007	Certain ores, concentrates, ash, and residues:							
	Exports	1,643	1,687	1,917	2,073	768	–1,305	–62.9
	Imports	1,537	1,364	1,818	2,403	1,696	–708	–29.4
	Trade balance	107	324	100	–331	–928	–597	–180.5
MM007A	Molybdenum ores and concentrates:							
	Exports	1,447	1,457	1,637	1,814	631	–1,184	–65.2
	Imports	746	395	553	512	150	–362	–70.8
	Trade balance	701	1,062	1,084	1,303	481	–822	–63.1
MM008	Precious metal ores and concentrates:							
	Exports	27	49	66	251	204	–48	–19.0
	Imports	20	14	10	18	36	18	98.9
	Trade balance	7	35	56	233	168	–66	–28.2

See footnote(s) at end of table.

TABLE A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MM008A	Gold ores and concentrates:							
	Exports	16	40	49	66	68	2	3.7
	Imports	19	13	8	16	33	17	110.6
	Trade balance	–3	27	41	50	35	–15	–30.2
MM008B	Silver ores and concentrates:							
	Exports	2	4	9	99	134	35	35.3
	Imports	(b)	0	(b)	(b)	(b)	(b)	–86.0
	Trade balance	2	4	9	99	134	35	35.4
MM009	Cement, stone, and related products:							
	Exports	1,853	2,399	2,512	2,554	2,069	–485	–19.0
	Imports	7,144	8,151	7,637	6,499	4,536	–1,963	–30.2
	Trade balance	–5,291	–5,753	–5,125	–3,945	–2,467	1,478	37.5
MM009A	Cement:							
	Exports	68	114	126	106	109	3	3.0
	Imports	1,563	1,842	1,324	789	511	–277	–35.2
	Trade balance	–1,494	–1,728	–1,198	–682	–402	281	41.1
MM010	Industrial ceramics:							
	Exports	702	784	981	998	807	–192	–19.2
	Imports	749	880	919	1,037	712	–326	–31.4
	Trade balance	–47	–96	62	–39	95	134	(a)
MM011	Ceramic bricks and similar articles:							
	Exports	39	43	52	47	39	–8	–17.7
	Imports	67	94	72	68	43	–25	–36.2
	Trade balance	–27	–51	–21	–21	–5	16	77.4
MM012	Ceramic floor and wall tiles:							
	Exports	31	37	42	44	39	–5	–11.3
	Imports	1,800	1,919	1,638	1,378	964	–414	–30.0
	Trade balance	–1,768	–1,881	–1,597	–1,335	–926	409	30.6
MM013	Ceramic household articles:							
	Exports	104	99	118	119	100	–19	–16.1
	Imports	1,687	1,737	1,734	1,538	1,181	–357	–23.2
	Trade balance	–1,583	–1,638	–1,616	–1,418	–1,081	337	23.8
MM014	Flat glass:							
	Exports	1,987	2,204	2,413	2,432	1,785	–647	–26.6
	Imports	2,041	2,143	2,120	1,879	1,474	–406	–21.6
	Trade balance	–53	61	294	552	311	–241	–43.7
MM015	Glass containers:							
	Exports	180	180	237	262	298	36	13.6
	Imports	700	794	902	970	792	–178	–18.3
	Trade balance	–520	–614	–666	–707	–494	214	30.2
MM016	Household glassware:							
	Exports	183	205	220	236	215	–21	–9.1
	Imports	908	895	919	823	632	–191	–23.2
	Trade balance	–725	–689	–698	–586	–417	169	28.9

See footnote(s) at end of table.

TABLE A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MM017	Miscellaneous glass products:							
	Exports	702	866	813	828	686	–142	–17.1
	Imports	806	916	974	990	789	–201	–20.3
	Trade balance	–104	–51	–161	–162	–103	59	36.5
MM018	Fiberglass insulation products:							
	Exports	93	73	98	121	205	83	68.8
	Imports	249	272	133	118	73	–44	–37.7
	Trade balance	–156	–198	–35	4	131	128	3,507.1
MM019	Natural and synthetic gemstones:							
	Exports	2,765	4,087	5,572	6,248	2,447	–3,801	–60.8
	Imports	17,352	18,452	20,239	21,072	13,608	–7,464	–35.4
	Trade balance	–14,587	–14,366	–14,667	–14,823	–11,161	3,663	24.7
MM020	Precious metals and non–numismatic coins:							
	Exports	7,522	13,360	19,289	26,534	20,699	–5,835	–22.0
	Imports	10,029	14,232	16,022	18,750	16,287	–2,463	–13.1
	Trade balance	–2,507	–872	3,267	7,784	4,412	–3,372	–43.3
MM020A	Unrefined and refined gold:							
	Exports	4,636	7,171	11,509	16,276	11,918	–4,358	–26.8
	Imports	4,112	5,029	3,934	5,454	7,928	2,473	45.3
	Trade balance	524	2,142	7,575	10,821	3,990	–6,831	–63.1
MM021	Primary iron products:							
	Exports	12	12	8	19	7	–12	–61.6
	Imports	2,033	2,227	2,236	3,856	1,184	–2,672	–69.3
	Trade balance	–2,021	–2,215	–2,229	–3,837	–1,176	2,660	69.3
MM022	Ferroalloys:							
	Exports	162	146	206	220	128	–93	–42.0
	Imports	1,834	1,954	2,788	4,310	1,062	–3,248	–75.4
	Trade balance	–1,673	–1,807	–2,582	–4,090	–935	3,156	77.2
MM023	Iron and steel waste and scrap:							
	Exports	3,451	4,256	6,910	10,384	7,125	–3,259	–31.4
	Imports	921	1,255	1,051	1,456	817	–638	–43.8
	Trade balance	2,529	3,001	5,859	8,928	6,307	–2,621	–29.4
MM024	Abrasive and ferrous products:							
	Exports	597	621	684	700	528	–172	–24.6
	Imports	984	1,048	1,083	1,084	745	–339	–31.3
	Trade balance	–387	–427	–399	–384	–217	167	43.5
MM024A	Abrasive products:							
	Exports	390	417	436	424	339	–85	–20.0
	Imports	658	712	736	716	536	–180	–25.1
	Trade balance	–268	–295	–300	–292	–197	95	32.6
MM025	Steel mill products:							
	Exports	9,331	10,479	12,535	16,737	10,648	–6,089	–36.4
	Imports	23,534	31,500	29,204	36,870	16,995	–19,875	–53.9
	Trade balance	–14,203	–21,020	–16,670	–20,133	–6,347	13,786	68.5

See footnote(s) at end of table.

TABLE A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MM025A	Ingots, blooms, billets, and slabs of carbon and alloy steels:							
	Exports	171	163	359	633	459	–174	–27.5
	Imports	2,944	3,836	3,050	4,231	891	–3,340	–78.9
	Trade balance	–2,774	–3,673	–2,691	–3,598	–432	3,166	88.0
MM025B	Plates, sheets, and strips of carbon and alloy steels:							
	Exports	4,045	4,137	4,516	6,205	3,940	–2,265	–36.5
	Imports	6,962	10,510	7,210	8,781	4,480	–4,301	–49.0
	Trade balance	–2,917	–6,373	–2,694	–2,577	–540	2,037	79.0
MM025C	Bars, rods, and light shapes of carbon and alloy steels:							
	Exports	837	999	1,162	1,706	989	–717	–42.0
	Imports	3,327	4,043	3,164	3,588	1,472	–2,116	–59.0
	Trade balance	–2,490	–3,044	–2,002	–1,881	–483	1,398	74.3
MM025D	Angles, shapes, and sections of carbon and alloy steels:							
	Exports	467	603	862	1,086	459	–627	–57.7
	Imports	512	769	781	885	394	–490	–55.4
	Trade balance	–45	–166	81	201	65	–137	–67.9
MM025E	Wire of carbon and alloy steels:							
	Exports	226	243	240	293	198	–94	–32.2
	Imports	743	782	721	840	493	–347	–41.3
	Trade balance	–517	–540	–481	–547	–295	253	46.2
MM025F	Ingots, blooms, billets, and slabs of stainless steels:							
	Exports	41	60	98	139	101	–39	–27.7
	Imports	407	411	628	546	204	–341	–62.5
	Trade balance	–366	–351	–530	–406	–104	303	74.4
MM025G	Plates, sheets, and strips of stainless steels:							
	Exports	853	919	1,292	1,360	841	–519	–38.2
	Imports	1,206	1,768	2,380	1,976	670	–1,306	–66.1
	Trade balance	–354	–849	–1,088	–616	171	787	(a)
MM025H	Bars, rods, and light shapes of stainless steels:							
	Exports	165	252	297	323	200	–123	–38.0
	Imports	572	588	793	814	362	–451	–55.5
	Trade balance	–407	–336	–497	–491	–162	329	66.9
MM025I	Angles, shapes, and sections of stainless steels:							
	Exports	12	15	20	19	11	–8	–41.5
	Imports	18	31	37	31	17	–13	–44.1
	Trade balance	–6	–16	–17	–12	–6	6	48.1

See footnote(s) at end of table.

TABLE A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MM025J	Wire of stainless steels:							
	Exports	44	52	62	71	59	–12	–16.8
	Imports	174	209	273	245	126	–118	–48.4
	Trade balance	–130	–157	–211	–173	–67	106	61.4
MM025K	Rails and accessories of carbon and alloy steels:							
	Exports	134	169	222	339	209	–130	–38.4
	Imports	286	374	397	436	313	–123	–28.2
	Trade balance	–152	–205	–175	–97	–104	–7	–7.4
MM025L	Pipes and tubes of carbon and alloy steels:							
	Exports	1,904	2,347	2,607	3,604	2,565	–1,040	–28.8
	Imports	5,259	6,953	8,194	12,933	6,718	–6,215	–48.1
	Trade balance	–3,354	–4,605	–5,587	–9,328	–4,153	5,175	55.5
MM025M	Pipes and tubes of stainless steels:							
	Exports	232	282	367	416	260	–156	–37.5
	Imports	657	821	1,180	1,102	693	–409	–37.1
	Trade balance	–425	–538	–813	–686	–433	252	36.8
MM025N	Tool steels:							
	Exports	200	239	431	544	358	–186	–34.1
	Imports	466	405	397	464	161	–303	–65.3
	Trade balance	–266	–166	34	80	197	118	147.8
MM026	Steel pipe and tube fittings and certain cast products:							
	Exports	1,017	1,277	1,393	1,657	1,291	–366	–22.1
	Imports	1,052	1,307	1,650	1,928	1,246	–682	–35.4
	Trade balance	–35	–30	–257	–272	45	316	[a]
MM027	Fabricated structurals:							
	Exports	278	376	379	590	420	–170	–28.8
	Imports	776	1,176	1,620	2,140	1,366	–774	–36.2
	Trade balance	–498	–800	–1,241	–1,550	–946	604	39.0
MM028	Metal construction components:							
	Exports	773	970	1,087	1,306	1,147	–159	–12.1
	Imports	1,692	2,074	2,613	2,767	1,939	–828	–29.9
	Trade balance	–918	–1,104	–1,526	–1,461	–792	670	45.8
MM029	Metallic containers:							
	Exports	904	1,088	1,291	1,461	1,333	–128	–8.8
	Imports	828	898	1,036	1,165	1,288	123	10.6
	Trade balance	76	190	254	296	45	–251	–84.8
MM030	Wire products of base metal:							
	Exports	966	1,104	1,144	1,282	1,124	–159	–12.4
	Imports	2,473	2,538	2,571	2,811	1,731	–1,080	–38.4
	Trade balance	–1,507	–1,434	–1,427	–1,529	–607	922	60.3

See footnote(s) at end of table.

TABLE A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MM031	Miscellaneous products of base metal:							
	Exports	5,893	6,865	7,411	7,644	5,997	–1,648	–21.6
	Imports	11,619	12,852	13,433	12,915	9,686	–3,229	–25.0
	Trade balance	–5,726	–5,987	–6,021	–5,271	–3,689	1,581	30.0
MM032	Industrial fasteners of base metal:							
	Exports	1,894	2,218	2,358	2,457	1,962	–495	–20.2
	Imports	3,443	3,684	3,755	4,098	2,561	–1,537	–37.5
	Trade balance	–1,548	–1,466	–1,398	–1,641	–599	1,042	63.5
MM033	Cooking and kitchen ware:							
	Exports	204	225	290	277	221	–57	–20.4
	Imports	2,431	2,581	2,621	2,505	2,180	–325	–13.0
	Trade balance	–2,227	–2,355	–2,331	–2,228	–1,960	268	12.0
MM034	Metal and ceramic sanitary ware:							
	Exports	162	180	210	221	193	–28	–12.6
	Imports	1,230	1,371	1,432	1,370	1,030	–341	–24.9
	Trade balance	–1,069	–1,190	–1,222	–1,149	–836	313	27.2
MM035	Construction castings and other cast-iron articles:							
	Exports	39	48	49	68	53	–14	–21.4
	Imports	217	223	241	241	139	–102	–42.3
	Trade balance	–177	–175	–192	–173	–86	88	50.5
MM036	Copper and related articles:							
	Exports	3,405	6,052	6,684	6,691	4,636	–2,055	–30.7
	Imports	7,766	13,803	12,577	11,153	6,125	–5,028	–45.1
	Trade balance	–4,360	–7,751	–5,893	–4,462	–1,488	2,974	66.6
MM036A	Unrefined and refined copper:							
	Exports	157	255	216	246	452	207	84.1
	Imports	3,659	7,093	6,770	6,038	3,403	–2,635	–43.6
	Trade balance	–3,501	–6,838	–6,553	–5,792	–2,951	2,841	49.1
MM036B	Copper alloy plate, sheet, and strip:							
	Exports	275	284	309	333	193	–140	–42.2
	Imports	168	252	242	198	119	–78	–39.7
	Trade balance	107	32	67	135	73	–62	–45.8
MM037	Unwrought aluminum:							
	Exports	2,087	3,508	4,083	4,355	2,673	–1,682	–38.6
	Imports	8,153	10,317	9,462	9,168	5,761	–3,406	–37.2
	Trade balance	–6,067	–6,809	–5,380	–4,813	–3,089	1,724	35.8
MM037A	Primary and secondary aluminum:							
	Exports	716	1,004	1,011	996	620	–376	–37.7
	Imports	7,199	9,114	8,309	7,853	5,021	–2,832	–36.1
	Trade balance	–6,483	–8,110	–7,298	–6,857	–4,401	2,456	35.8

See footnote(s) at end of table.

TABLE A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MM038	Aluminum mill products:							
	Exports	3,757	4,592	4,779	5,232	3,671	–1,561	–29.8
	Imports	4,696	5,768	5,609	5,112	3,330	–1,783	–34.9
	Trade balance	–938	–1,176	–831	120	341	221	184.5
MM038A	Aluminum bars, rods, and profiles:							
	Exports	417	553	568	592	431	–162	–27.3
	Imports	774	1,049	985	825	783	–42	–5.1
	Trade balance	–357	–496	–417	–232	–352	–120	–51.6
MM038B	Aluminum wire:							
	Exports	115	148	179	207	132	–75	–36.1
	Imports	432	571	598	574	321	–253	–44.1
	Trade balance	–316	–423	–419	–366	–189	178	48.5
MM038C	Aluminum plate, sheet, and strip:							
	Exports	2,489	3,025	3,161	3,431	2,397	–1,034	–30.1
	Imports	2,568	3,079	2,919	2,590	1,423	–1,167	–45.1
	Trade balance	–79	–54	241	841	974	133	15.9
MM038D	Aluminum foil:							
	Exports	442	538	547	577	460	–117	–20.3
	Imports	715	822	810	809	591	–218	–26.9
	Trade balance	–273	–284	–263	–232	–131	101	43.6
MM038E	Aluminum tubes, pipes, and fittings:							
	Exports	247	287	287	385	226	–159	–41.2
	Imports	181	216	254	271	190	–82	–30.1
	Trade balance	66	71	34	113	36	–77	–67.9
MM039	Lead and related articles:							
	Exports	110	137	246	340	283	–56	–16.6
	Imports	335	451	734	850	509	–341	–40.1
	Trade balance	–226	–315	–488	–510	–225	285	55.8
MM039A	Refined lead:							
	Exports	35	52	68	101	61	–40	–39.6
	Imports	242	322	391	330	213	–117	–35.4
	Trade balance	–207	–270	–323	–228	–152	77	33.5
MM040	Zinc and related articles:							
	Exports	148	246	315	272	185	–87	–31.9
	Imports	1,139	2,524	2,807	1,765	1,254	–511	–29.0
	Trade balance	–991	–2,278	–2,492	–1,494	–1,069	424	28.4
MM040A	Unwrought zinc:							
	Exports	1	4	6	3	3	(b)	–5.8
	Imports	920	2,181	2,402	1,479	1,076	–403	–27.2
	Trade balance	–918	–2,177	–2,395	–1,476	–1,073	402	27.3
MM041	Certain base metals and chemical elements:							
	Exports	2,882	3,792	4,119	4,453	2,735	–1,718	–38.6
	Imports	4,417	5,924	7,959	7,253	3,822	–3,431	–47.3
	Trade balance	–1,535	–2,131	–3,840	–2,800	–1,087	1,713	61.2

See footnote(s) at end of table.

TABLE A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MM041A	Titanium ingot:							
	Exports	33	41	44	20	20	(b)	1.4
	Imports	39	59	54	37	13	–23	–63.7
	Trade balance	–6	–18	–9	–17	6	24	(a)
MM042	Nonpowered handtools:							
	Exports	2,508	2,880	3,165	3,570	2,734	–836	–23.4
	Imports	4,226	4,770	4,919	4,886	3,628	–1,258	–25.7
	Trade balance	–1,717	–1,889	–1,754	–1,316	–894	422	32.0
MM043	Certain cutlery, sewing implements, and related products:							
	Exports	592	592	597	671	562	–108	–16.1
	Imports	1,243	1,358	1,470	1,491	1,253	–237	–15.9
	Trade balance	–651	–765	–873	–820	–691	129	15.7
MM044	Table flatware and related products:							
	Exports	37	35	37	51	26	–25	–49.5
	Imports	563	572	624	556	444	–112	–20.1
	Trade balance	–526	–536	–587	–505	–418	86	17.1
MM045	Certain builders' hardware:							
	Exports	1,035	1,052	1,063	1,054	942	–112	–10.6
	Imports	3,593	4,155	4,346	4,004	3,119	–886	–22.1
	Trade balance	–2,558	–3,103	–3,284	–2,950	–2,177	773	26.2

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

[a]Not meaningful for purposes of comparison.
[b]Less than $500,000.

TABLE A.7 Miscellaneous manufactures: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MS001	Luggage, handbags, and flat goods:							
	Exports	384	466	434	462	449	–13	–2.9
	Imports	6,151	6,834	7,535	7,833	6,395	–1,438	–18.4
	Trade balance	–5,767	–6,368	–7,101	–7,370	–5,946	1,425	19.3
MS001A	Luggage:							
	Exports	204	268	279	318	286	–33	–10.3
	Imports	3,259	3,758	4,062	4,338	3,602	–737	–17.0
	Trade balance	–3,056	–3,490	–3,782	–4,020	–3,316	704	17.5
MS001B	Handbags:							
	Exports	149	161	116	100	117	16	16.1
	Imports	2,220	2,366	2,676	2,680	2,131	–550	–20.5
	Trade balance	–2,071	–2,204	–2,560	–2,580	–2,014	566	21.9
MS001C	Flat goods:							
	Exports	23	29	29	34	35	1	2.9
	Imports	580	616	712	734	621	–114	–15.5
	Trade balance	–557	–588	–684	–700	–585	115	16.4
MS002	Certain other leather goods:							
	Exports	221	235	156	153	98	–55	–36.0
	Imports	408	464	502	466	391	–75	–16.2
	Trade balance	–186	–229	–346	–313	–293	20	6.4
MS003	Musical instruments and accessories:							
	Exports	516	561	590	660	599	–62	–9.3
	Imports	1,531	1,413	1,383	1,447	1,075	–373	–25.7
	Trade balance	–1,014	–852	–793	–787	–476	311	39.5
MS004	Umbrellas, whips, riding crops, and canes:							
	Exports	10	12	13	16	12	–4	–24.3
	Imports	371	386	420	443	385	–58	–13.1
	Trade balance	–361	–374	–407	–426	–372	54	12.7
MS005	Silverware and related articles of precious metal:							
	Exports	184	167	180	380	246	–134	–35.3
	Imports	85	302	294	849	1,398	550	64.8
	Trade balance	98	–136	–114	–468	–1,152	–684	–146.1
MS006	Precious jewelry and related articles:							
	Exports	2,721	3,694	4,193	4,266	3,931	–335	–7.9
	Imports	8,359	9,553	9,463	7,322	5,755	–1,567	–21.4
	Trade balance	–5,638	–5,858	–5,271	–3,057	–1,824	1,232	40.3
MS007	Costume jewelry and related articles:							
	Exports	126	166	161	187	148	–39	–20.9
	Imports	1,214	1,317	1,410	1,400	1,379	–21	–1.5
	Trade balance	–1,088	–1,151	–1,249	–1,213	–1,231	–18	–1.5
MS008	Bicycles and certain parts:							
	Exports	288	300	361	363	313	–50	–13.8
	Imports	1,434	1,342	1,454	1,732	1,404	–328	–18.9
	Trade balance	–1,146	–1,041	–1,093	–1,370	–1,092	278	20.3

See footnote(s) at end of table.

TABLE A.7 Miscellaneous manufactures: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MS009	Furniture:							
	Exports	3,020	3,354	3,691	4,229	3,392	–836	–19.8
	Imports	24,296	26,078	26,731	25,285	20,057	–5,228	–20.7
	Trade balance	–21,276	–22,724	–23,041	–21,057	–16,665	4,392	20.9
MS010	Writing instruments and related articles:							
	Exports	210	209	203	191	130	–61	–31.8
	Imports	1,225	1,335	1,455	1,296	1,092	–204	–15.7
	Trade balance	–1,015	–1,125	–1,252	–1,105	–962	143	13.0
MS011	Lamps and lighting fittings:							
	Exports	742	825	945	1,073	916	–158	–14.7
	Imports	5,831	6,180	6,211	5,988	4,709	–1,279	–21.4
	Trade balance	–5,089	–5,356	–5,266	–4,914	–3,793	1,121	22.8
MS012	Prefabricated buildings:							
	Exports	447	476	561	821	627	–194	–23.7
	Imports	427	417	408	335	216	–119	–35.5
	Trade balance	21	59	153	486	410	–75	–15.5
MS013	Toys and games:							
	Exports	1,834	2,172	2,948	2,539	2,435	–104	–4.1
	Imports	17,069	17,840	22,778	23,809	21,256	–2,554	–10.7
	Trade balance	–15,235	–15,668	–19,830	–21,271	–18,821	2,450	11.5
MS014	Sporting goods:							
	Exports	1,735	1,813	1,882	1,972	1,550	–422	–21.4
	Imports	4,978	5,600	5,847	5,817	4,688	–1,129	–19.4
	Trade balance	–3,243	–3,787	–3,965	–3,845	–3,138	707	18.4
MS015	Smokers' articles:							
	Exports	96	96	100	97	85	–12	–12.4
	Imports	204	211	225	191	188	–3	–1.4
	Trade balance	–107	–115	–126	–94	–103	–9	–9.9
MS016	Brooms, brushes, and hair grooming articles:							
	Exports	272	283	282	282	266	–16	–5.6
	Imports	1,236	1,275	1,363	1,404	1,292	–111	–7.9
	Trade balance	–964	–992	–1,081	–1,122	–1,026	96	8.5
MS016A	Brooms and brushes:							
	Exports	253	265	263	261	244	–17	–6.6
	Imports	1,049	1,070	1,137	1,180	1,060	–120	–10.2
	Trade balance	–796	–804	–874	–919	–816	103	11.2
MS016B	Hair grooming articles, non-electric (except brushes):							
	Exports	18	18	19	20	22	2	7.8
	Imports	187	205	226	223	232	9	4.0
	Trade balance	–168	–187	–207	–203	–211	–7	–3.7

See footnote(s) at end of table.

TABLE A.7 Miscellaneous manufactures: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009	
							Absolute	*Percent*
		Million dollars						
MS017	Works of art and miscellaneous manufactured goods:							
	Exports	2,423	3,837	5,011	6,064	5,169	–895	–14.8
	Imports	9,943	11,228	13,359	11,849	8,621	–3,229	–27.2
	Trade balance	–7,520	–7,392	–8,347	–5,785	–3,452	2,333	40.3
MS018	Apparel fasteners:							
	Exports	145	154	147	127	109	–19	–14.8
	Imports	80	83	90	89	60	–29	–32.4
	Trade balance	65	71	57	38	48	10	26.5
MS019	Arms, ammunition, and armored vehicles:							
	Exports	3,060	3,616	4,097	3,939	4,292	353	9.0
	Imports	1,718	2,240	2,976	3,280	4,076	796	24.3
	Trade balance	1,342	1,376	1,121	659	216	–442	–67.2
MS019A	Small arms and ammunition:							
	Exports	823	905	1,204	1,116	1,115	–1	–0.1
	Imports	1,071	1,389	1,776	1,884	2,304	420	22.3
	Trade balance	–249	–484	–572	–768	–1,189	–421	–54.8

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

TABLE A.8 Machinery: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MT001	Pumps for liquids:							
	Exports	2,963	3,565	4,174	4,937	4,238	–699	–14.2
	Imports	3,302	3,952	4,452	4,934	3,746	–1,188	–24.1
	Trade balance	–339	–386	–277	3	492	489	16,615.6
MT002	Air-conditioning equipment and parts:							
	Exports	6,340	6,861	7,061	7,830	6,911	–920	–11.7
	Imports	9,531	10,748	11,266	10,859	8,576	–2,284	–21.0
	Trade balance	–3,192	–3,886	–4,205	–3,029	–1,665	1,364	45.0
MT003	Industrial thermal-processing equipment and furnaces:							
	Exports	3,220	3,540	3,731	4,493	3,489	–1,004	–22.4
	Imports	2,350	2,853	3,356	4,094	3,648	–446	–10.9
	Trade balance	870	687	375	399	–160	–559	(a)
MT004	Household appliances, including commercial applications:							
	Exports	5,733	6,515	6,915	7,298	5,576	–1,721	–23.6
	Imports	14,464	16,574	17,904	18,350	16,608	–1,743	–9.5
	Trade balance	–8,731	–10,059	–10,989	–11,053	–11,031	22	0.2
MT004A	Major household appliances and parts:							
	Exports	1,991	2,309	2,409	2,487	1,875	–612	–24.6
	Imports	4,360	5,684	6,383	6,440	5,964	–477	–7.4
	Trade balance	–2,369	–3,375	–3,975	–3,953	–4,089	–135	–3.4
MT005	Centrifuges and filtering and purifying equipment:							
	Exports	3,505	4,060	4,788	5,290	4,582	–708	–13.4
	Imports	3,192	3,871	4,755	5,259	3,886	–1,374	–26.1
	Trade balance	313	189	33	31	696	666	2,178.1
MT006	Wrapping, packaging, and can-sealing machinery:							
	Exports	727	777	787	863	722	–141	–16.4
	Imports	1,811	1,966	2,206	2,282	1,625	–658	–28.8
	Trade balance	–1,084	–1,188	–1,419	–1,419	–903	516	36.4
MT007	Scales and weighing machinery:							
	Exports	148	155	174	192	194	2	0.9
	Imports	577	604	639	594	529	–65	–10.9
	Trade balance	–429	–450	–465	–403	–336	67	16.6
MT008	Mineral processing machinery:							
	Exports	811	1,064	1,220	1,489	1,193	–296	–19.9
	Imports	1,034	1,164	1,277	1,213	656	–557	–45.9
	Trade balance	–223	–100	–57	276	537	261	94.4
MT009	Farm and garden machinery and equipment:							
	Exports	6,518	7,085	8,191	10,454	7,667	–2,787	–26.7
	Imports	6,641	6,356	6,167	6,932	4,977	–1,954	–28.2
	Trade balance	–123	730	2,024	3,522	2,689	–833	–23.7

See footnote(s) at end of table.

TABLE A.8 Machinery: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MT010	Industrial food-processing and related machinery:							
	Exports	710	644	797	947	763	–184	–19.4
	Imports	839	853	949	882	741	–141	–16.0
	Trade balance	–129	–209	–151	66	23	–43	–65.1
MT011	Pulp, paper, and paperboard machinery:							
	Exports	660	712	769	829	616	–213	–25.7
	Imports	948	1,086	1,271	1,200	830	–370	–30.8
	Trade balance	–289	–374	–501	–371	–214	157	42.3
MT012	Printing and related machinery:							
	Exports	1,443	1,526	1,505	1,877	1,414	–464	–24.7
	Imports	6,340	6,554	3,376	2,406	1,373	–1,033	–42.9
	Trade balance	–4,897	–5,029	–1,871	–529	41	569	(a)
MT013	Textile machinery:							
	Exports	991	1,009	1,018	880	642	–238	–27.0
	Imports	1,561	1,264	1,290	1,313	843	–470	–35.8
	Trade balance	–569	–255	–272	–433	–201	232	53.6
MT014	Metal rolling mills:							
	Exports	314	351	394	516	486	–30	–5.9
	Imports	207	352	322	488	523	35	7.2
	Trade balance	107	–1	72	28	–37	–66	(a)
MT015	Metal cutting machine tools:							
	Exports	1,732	2,205	2,026	2,313	1,524	–790	–34.1
	Imports	3,618	4,092	4,009	4,654	2,173	–2,481	–53.3
	Trade balance	–1,886	–1,887	–1,983	–2,341	–650	1,691	72.3
MT016	Machine tool accessories:							
	Exports	305	304	403	435	318	–117	–26.9
	Imports	515	514	588	644	438	–206	–32.0
	Trade balance	–210	–210	–185	–210	–120	90	42.7
MT017	Metal forming machine tools:							
	Exports	851	957	1,015	1,164	927	–237	–20.3
	Imports	1,196	1,335	1,315	1,368	816	–552	–40.3
	Trade balance	–345	–378	–300	–204	111	315	(a)
MT018	Non-metalworking machine tools:							
	Exports	1,110	1,159	1,011	885	582	–303	–34.3
	Imports	1,694	1,776	1,861	1,674	1,287	–387	–23.1
	Trade balance	–584	–617	–850	–789	–705	83	10.6
MT019	Semiconductor manufacturing equipment and robotics:							
	Exports	11,435	14,733	17,476	12,385	8,687	–3,698	–29.9
	Imports	4,515	5,612	8,990	7,966	6,002	–1,963	–24.6
	Trade balance	6,919	9,121	8,485	4,420	2,685	–1,735	–39.3

See footnote(s) at end of table.

TABLE A.8 Machinery: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MT019A	Semiconductor manufacturing equipment:							
	Exports	10,971	14,232	16,974	11,901	8,278	–3,623	–30.4
	Imports	3,857	4,902	8,397	7,370	5,598	–1,772	–24.0
	Trade balance	7,113	9,330	8,578	4,531	2,680	–1,851	–40.9
MT020	Taps, cocks, valves, and similar devices:							
	Exports	4,235	5,010	5,757	6,427	5,929	–498	–7.7
	Imports	7,589	8,942	9,628	9,760	7,542	–2,218	–22.7
	Trade balance	–3,354	–3,932	–3,871	–3,333	–1,613	1,720	51.6
MT021	Mechanical power transmission equipment:							
	Exports	1,398	1,639	1,847	2,023	1,713	–310	–15.3
	Imports	3,252	3,439	3,850	4,320	3,047	–1,273	–29.5
	Trade balance	–1,854	–1,800	–2,003	–2,297	–1,334	963	41.9
MT022	Boilers, turbines, and related machinery:							
	Exports	1,124	1,130	1,235	1,522	1,773	251	16.5
	Imports	1,098	1,001	1,542	1,773	1,899	126	7.1
	Trade balance	26	129	–306	–250	–126	125	49.7
MT023	Electric motors, generators, and related equipment:							
	Exports	5,114	5,997	6,685	8,128	6,743	–1,385	–17.0
	Imports	8,533	10,305	12,358	12,888	10,075	–2,813	–21.8
	Trade balance	–3,420	–4,309	–5,673	–4,760	–3,332	1,428	30.0
MT024	Electrical transformers, static converters, and inductors:							
	Exports	1,895	2,380	2,743	2,835	2,416	–420	–14.8
	Imports	5,973	6,989	8,179	8,891	7,577	–1,314	–14.8
	Trade balance	–4,078	–4,608	–5,436	–6,056	–5,162	894	14.8
MT025	Portable electric handtools:							
	Exports	185	165	153	139	110	–30	–21.3
	Imports	2,424	2,478	2,473	2,349	2,140	–209	–8.9
	Trade balance	–2,239	–2,313	–2,320	–2,210	–2,031	179	8.1
MT026	Nonelectrically powered handtools:							
	Exports	1,264	1,148	1,085	1,105	814	–291	–26.3
	Imports	1,396	1,513	1,433	1,355	1,017	–338	–24.9
	Trade balance	–132	–365	–347	–250	–203	47	18.8
MT027	Electric lamps (bulbs) and portable electric lights:							
	Exports	859	823	812	807	668	–138	–17.2
	Imports	2,202	2,375	2,879	2,745	2,281	–464	–16.9
	Trade balance	–1,342	–1,552	–2,068	–1,938	–1,613	326	16.8
MT028	Welding and soldering equipment:							
	Exports	872	1,165	932	1,087	675	–412	–37.9
	Imports	1,054	1,353	950	951	654	–297	–31.2
	Trade balance	–182	–189	–19	136	22	–115	–84.2

See footnote(s) at end of table.

TABLE A.8 Machinery: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
MT029	Nonautomotive insulated electrical wire and related products:							
	Exports	3,202	4,110	4,586	4,733	3,727	–1,006	–21.3
	Imports	4,693	6,071	6,640	6,463	4,540	–1,923	–29.8
	Trade balance	–1,491	–1,961	–2,054	–1,730	–813	917	53.0
MT030	Miscellaneous machinery:							
	Exports	8,299	9,509	8,982	10,805	8,510	–2,295	–21.2
	Imports	9,343	10,527	9,474	10,284	7,717	–2,567	–25.0
	Trade balance	–1,044	–1,017	–492	521	793	272	52.2
MT031	Molds and molding machinery:							
	Exports	2,074	2,136	1,965	2,076	1,801	–275	–13.2
	Imports	4,035	4,290	3,280	3,205	2,294	–911	–28.4
	Trade balance	–1,960	–2,153	–1,315	–1,130	–494	636	56.3

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

[a]Not meaningful for purposes of comparison.

TABLE A.9 Transportation equipment: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
TE001	Aircraft engines and gas turbines:							
	Exports	20,771	21,631	25,780	28,638	9,457	–19,181	–67.0
	Imports	11,243	12,816	14,898	16,444	14,558	–1,886	–11.5
	Trade balance	9,528	8,815	10,882	12,194	–5,102	–17,295	[a]
TE002	Internal combustion piston engines, other than for aircraft:							
	Exports	14,969	15,930	17,039	16,984	11,556	–5,428	–32.0
	Imports	21,035	20,617	19,930	18,738	11,866	–6,872	–36.7
	Trade balance	–6,065	–4,688	–2,891	–1,754	–310	1,445	82.4
TE003	Forklift trucks and similar industrial vehicles:							
	Exports	1,760	2,172	2,939	3,333	1,576	–1,757	–52.7
	Imports	2,435	2,717	2,581	2,442	1,182	–1,261	–51.6
	Trade balance	–675	–545	358	891	394	–497	–55.7
TE004	Construction and mining equipment:							
	Exports	15,950	19,038	24,425	29,603	19,777	–9,826	–33.2
	Imports	12,039	13,952	12,524	12,291	6,345	–5,946	–48.4
	Trade balance	3,912	5,085	11,901	17,312	13,432	–3,880	–22.4
TE005	Ball and rollers bearings:							
	Exports	1,638	1,841	1,992	2,223	1,701	–522	–23.5
	Imports	2,351	2,429	2,492	2,800	1,927	–873	–31.2
	Trade balance	–712	–589	–500	–577	–226	351	60.8
TE006	Primary cells and batteries and electric storage batteries:							
	Exports	2,272	2,801	2,948	2,716	2,162	–554	–20.4
	Imports	2,841	3,075	3,255	3,628	2,985	–642	–17.7
	Trade balance	–570	–274	–308	–912	–823	88	9.7
TE007	Ignition, starting, lighting, and other electrical equipment:							
	Exports	1,844	1,880	2,040	2,115	1,867	–248	–11.7
	Imports	4,813	5,122	5,546	5,319	4,066	–1,252	–23.5
	Trade balance	–2,969	–3,242	–3,506	–3,204	–2,199	1,005	31.4
TE008	Rail locomotive and rolling stock:							
	Exports	2,124	2,600	2,663	2,935	2,140	–796	–27.1
	Imports	1,516	1,742	1,668	1,803	1,251	–551	–30.6
	Trade balance	607	858	995	1,132	888	–244	–21.6
TE009	Motor vehicles:							
	Exports	35,312	44,437	52,739	56,898	35,963	–20,936	–36.8
	Imports	146,308	159,537	158,895	142,541	94,348	–48,193	–33.8
	Trade balance	–110,996	–115,100	–106,155	–85,642	–58,386	27,257	31.8
TE010	Certain motor-vehicle parts:							
	Exports	31,524	33,346	34,052	30,985	22,713	–8,272	–26.7
	Imports	50,998	53,307	55,619	49,190	35,296	–13,894	–28.2
	Trade balance	–19,474	–19,961	–21,567	–18,205	–12,584	5,621	30.9

See footnote(s) at end of table.

TABLE A.9 Transportation equipment: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
TE011	Powersport vehicles:							
	Exports	2,221	2,535	3,375	4,185	2,571	–1,615	–38.6
	Imports	5,781	5,870	5,208	5,343	2,988	–2,355	–44.1
	Trade balance	–3,560	–3,335	–1,833	–1,157	–417	740	64.0
TE011A	Motorcycles and mopeds:							
	Exports	983	1,252	1,589	1,875	1,357	–518	–27.6
	Imports	4,277	4,449	3,903	3,921	2,341	–1,579	–40.3
	Trade balance	–3,293	–3,197	–2,314	–2,046	–984	1,062	51.9
TE012	Trailers, semi-trailers, and parts:							
	Exports	1,945	2,464	2,781	2,820	1,772	–1,048	–37.2
	Imports	1,595	1,778	1,648	1,387	906	–481	–34.7
	Trade balance	350	686	1,133	1,432	866	–567	–39.6
TE013	Aircraft, spacecraft, and related equipment:							
	Exports	47,981	64,374	73,406	69,516	77,700	8,183	11.8
	Imports	16,475	17,557	21,835	21,539	18,339	–3,200	–14.9
	Trade balance	31,506	46,817	51,571	47,977	59,361	11,383	23.7
TE014	Ships, tugs, pleasure boats, and similar vessels:							
	Exports	1,950	2,601	3,096	3,155	1,946	–1,209	–38.3
	Imports	2,350	2,146	2,084	1,862	1,510	–352	–18.9
	Trade balance	–400	454	1,013	1,293	436	–857	–66.3
TE015	Motors and engines, except internal combustion, aircraft, or electric:							
	Exports	837	1,124	1,198	1,409	1,183	–226	–16.0
	Imports	1,360	1,594	2,195	3,370	2,240	–1,130	–33.5
	Trade balance	–523	–470	–997	–1,962	–1,057	905	46.1

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

[a]Not meaningful for purposes of comparison.

TABLE A.10 Textiles, apparel, and footwear: U.S. trade for industry/commodity groups and subgroups, 2005–09

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
TX001	Fibers and yarns, except raw cotton and raw wool:							
	Exports	3,328	3,780	4,041	4,344	3,496	–849	–19.5
	Imports	3,538	3,582	3,632	3,552	2,638	–914	–25.7
	Trade balance	–211	198	409	792	857	65	8.2
TX002	Fabrics:							
	Exports	7,285	7,015	6,666	6,443	4,917	–1,526	–23.7
	Imports	6,352	6,202	6,343	5,891	4,410	–1,481	–25.1
	Trade balance	934	813	323	552	507	–45	–8.1
TX002A	Broadwoven fabrics:							
	Exports	2,478	2,210	1,822	1,630	1,261	–369	–22.7
	Imports	2,989	2,833	2,870	2,600	1,708	–893	–34.3
	Trade balance	–511	–623	–1,048	–970	–447	523	53.9
TX002B	Knit fabrics:							
	Exports	1,778	1,611	1,659	1,534	891	–644	–42.0
	Imports	1,026	965	876	779	652	–127	–16.3
	Trade balance	752	646	783	755	238	–517	–68.4
TX002C	Specialty fabrics:							
	Exports	545	506	459	442	374	–68	–15.5
	Imports	541	550	553	500	380	–119	–23.9
	Trade balance	5	–44	–94	–58	–7	51	88.4
TX002D	Coated and other fabrics:							
	Exports	1,097	1,119	1,213	1,143	925	–218	–19.0
	Imports	967	1,021	1,078	1,042	864	–177	–17.0
	Trade balance	130	99	134	101	61	–40	–39.8
TX002E	Glass fiber fabrics:							
	Exports	147	178	211	248	219	–29	–11.7
	Imports	119	133	160	194	120	–74	–38.0
	Trade balance	28	44	52	54	99	45	82.0
TX002F	Other fabrics:							
	Exports	1,240	1,392	1,303	1,445	1,248	–198	–13.7
	Imports	710	701	806	776	685	–91	–11.7
	Trade balance	530	691	496	670	563	–107	–16.0
TX003	Carpets and rugs:							
	Exports	881	960	983	1,061	821	–240	–22.6
	Imports	1,993	2,127	2,111	1,902	1,475	–427	–22.4
	Trade balance	–1,112	–1,167	–1,128	–841	–654	187	22.2
TX004	Home furnishings:							
	Exports	417	442	465	456	363	–93	–20.3
	Imports	7,448	8,249	8,724	8,377	7,553	–824	–9.8
	Trade balance	–7,031	–7,808	–8,260	–7,921	–7,190	731	9.2
TX004A	Blankets:							
	Exports	31	30	25	29	23	–7	–22.5
	Imports	514	606	614	597	616	19	3.2
	Trade balance	–483	–576	–589	–567	–593	–26	–4.5

See footnote(s) at end of table.

TABLE A.10 Textiles, apparel, and footwear: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
TX004B	Pillowcases and sheets:							
	Exports	91	83	74	65	46	–19	–29.8
	Imports	1,904	2,204	2,352	2,261	1,938	–323	–14.3
	Trade balance	–1,813	–2,121	–2,278	–2,197	–1,893	304	13.8
TX004C	Table/kitchen linens and towels:							
	Exports	70	73	72	59	44	–15	–24.9
	Imports	1,864	1,951	2,114	2,123	1,852	–271	–12.7
	Trade balance	–1,794	–1,879	–2,042	–2,064	–1,808	256	12.4
TX004D	Curtains:							
	Exports	49	58	71	82	78	–4	–4.4
	Imports	1,017	1,088	1,094	1,029	991	–37	–3.6
	Trade balance	–968	–1,030	–1,023	–947	–913	34	3.6
TX004E	Bedspreads and other furnishing articles:							
	Exports	59	65	73	66	54	–11	–17.2
	Imports	1,284	1,424	1,403	1,236	1,112	–123	–10.0
	Trade balance	–1,225	–1,359	–1,330	–1,170	–1,058	112	9.6
TX004F	Pillows, cushions, and sleeping bags:							
	Exports	108	130	149	155	118	–37	–23.8
	Imports	860	971	1,143	1,129	1,042	–87	–7.7
	Trade balance	–752	–841	–994	–974	–924	50	5.1
TX004G	Tapestries and other wall hangings:							
	Exports	9	4	1	1	1	(a)	–24.7
	Imports	6	5	4	3	2	–1	–42.8
	Trade balance	3	–1	–3	–2	–1	1	53.2
TX005	Apparel:							
	Exports	4,129	3,854	3,206	3,190	2,922	–268	–8.4
	Imports	76,503	79,299	81,366	79,031	69,457	–9,574	–12.1
	Trade balance	–72,374	–75,445	–78,159	–75,841	–66,534	9,306	12.3
TX005A	Men's and boys' suits and sports coats:							
	Exports	30	32	28	24	31	8	32.7
	Imports	1,359	1,336	1,331	1,237	949	–288	–23.3
	Trade balance	–1,329	–1,304	–1,303	–1,213	–917	296	24.4
TX005B	Men's and boys' coats and jackets:							
	Exports	75	71	64	69	61	–8	–12.1
	Imports	2,255	2,441	2,814	2,759	2,299	–460	–16.7
	Trade balance	–2,180	–2,370	–2,750	–2,690	–2,239	452	16.8
TX005C	Men's and boys' trousers:							
	Exports	405	292	231	217	216	–1	–0.3
	Imports	7,776	8,014	7,940	7,626	6,805	–821	–10.8
	Trade balance	–7,371	–7,722	–7,709	–7,409	–6,589	820	11.1
TX005D	Women's and girls' trousers:							
	Exports	239	268	212	247	240	–7	–2.8
	Imports	9,664	9,889	9,872	9,305	8,043	–1,263	–13.6
	Trade balance	–9,425	–9,621	–9,660	–9,058	–7,802	1,256	13.9

See footnote(s) at end of table.

TABLE A.10 Textiles, apparel, and footwear: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
TX005E	Shirts and blouses:							
	Exports	841	802	582	556	525	–32	–5.7
	Imports	23,664	25,073	26,035	24,876	21,962	–2,915	–11.7
	Trade balance	–22,822	–24,272	–25,453	–24,320	–21,437	2,883	11.9
TX005F	Sweaters:							
	Exports	28	35	35	43	27	–16	–37.0
	Imports	2,809	2,658	2,733	2,522	2,014	–508	–20.2
	Trade balance	–2,781	–2,623	–2,698	–2,479	–1,987	492	19.9
TX005G	Women's and girls' suits, skirts, and coats:							
	Exports	155	148	139	163	158	–5	–3.1
	Imports	6,941	6,663	6,346	5,851	4,739	–1,112	–19.0
	Trade balance	–6,786	–6,515	–6,207	–5,688	–4,581	1,107	19.5
TX005H	Women's and girls' dresses:							
	Exports	61	87	121	177	163	–14	–7.7
	Imports	1,465	1,841	2,900	3,176	3,098	–77	–2.4
	Trade balance	–1,404	–1,753	–2,780	–2,999	–2,935	64	2.1
TX005I	Robes, nightwear, and underwear:							
	Exports	479	394	203	109	97	–12	–11.1
	Imports	5,418	5,478	5,380	5,444	4,683	–761	–14.0
	Trade balance	–4,939	–5,084	–5,177	–5,335	–4,586	749	14.0
TX005J	Hosiery:							
	Exports	343	383	349	334	291	–43	–12.8
	Imports	1,366	1,459	1,521	1,565	1,509	–56	–3.6
	Trade balance	–1,023	–1,076	–1,172	–1,231	–1,218	13	1.0
TX005K	Body-supporting garments:							
	Exports	275	166	57	45	47	2	4.9
	Imports	1,854	2,071	2,016	1,994	1,850	–144	–7.2
	Trade balance	–1,579	–1,905	–1,959	–1,949	–1,803	146	7.5
TX005L	Neckwear, handkerchiefs, and scarves:							
	Exports	26	23	19	24	20	–4	–16.4
	Imports	748	656	651	724	758	34	4.6
	Trade balance	–722	–633	–632	–701	–738	–37	–5.3
TX005M	Gloves, including gloves for sports:							
	Exports	101	100	106	127	126	–2	–1.3
	Imports	2,757	2,989	3,160	3,658	3,234	–424	–11.6
	Trade balance	–2,656	–2,889	–3,054	–3,531	–3,108	422	12.0
TX005N	Headwear:							
	Exports	111	114	126	157	128	–29	–18.4
	Imports	1,509	1,621	1,602	1,598	1,357	–241	–15.1
	Trade balance	–1,398	–1,506	–1,476	–1,441	–1,229	212	14.7
TX005O	Leather apparel and accessories:							
	Exports	175	165	220	202	154	–47	–23.5
	Imports	1,512	1,496	1,344	1,091	841	–250	–22.9
	Trade balance	–1,337	–1,331	–1,124	–890	–687	203	22.8

See footnote(s) at end of table.

TABLE A.10 Textiles, apparel, and footwear: U.S. trade for industry/commodity groups and subgroups, 2005–09—*Continued*

Code	Industry/commodity groups and subgroups	2005	2006	2007	2008	2009	Change, 2008 to 2009 Absolute	Change, 2008 to 2009 *Percent*
		Million dollars						
TX005P	Fur apparel and other fur articles:							
	Exports	16	22	29	30	19	–11	–36.4
	Imports	314	274	221	170	136	–34	–20.1
	Trade balance	–298	–253	–192	–140	–117	23	16.6
TX005Q	Rubber, plastic, and coated-fabric apparel:							
	Exports	142	165	141	155	173	17	11.1
	Imports	470	382	387	368	445	77	20.8
	Trade balance	–328	–217	–247	–213	–272	–59	–27.9
TX005R	Nonwoven apparel:							
	Exports	27	25	65	75	77	2	3.3
	Imports	419	479	488	547	500	–47	–8.7
	Trade balance	–392	–454	–423	–473	–423	50	10.6
TX005S	Other wearing apparel:							
	Exports	599	564	481	437	369	–68	–15.6
	Imports	4,204	4,479	4,623	4,518	4,235	–283	–6.3
	Trade balance	–3,604	–3,916	–4,143	–4,082	–3,867	215	5.3
TX006	Miscellaneous textile products:							
	Exports	1,825	2,037	2,174	2,310	2,134	–177	–7.7
	Imports	4,651	5,104	5,502	5,575	5,047	–528	–9.5
	Trade balance	–2,826	–3,067	–3,328	–3,265	–2,914	351	10.8
FW001	Footwear:							
	Exports	507	573	578	673	620	–53	–7.8
	Imports	17,834	19,038	19,270	19,451	17,666	–1,785	–9.2
	Trade balance	–17,327	–18,465	–18,692	–18,778	–17,046	1,732	9.2

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations are based on unrounded data.

[a]Less than $500,000.

APPENDIX B
DEFINITION OF COUNTRY GROUPS

EU-27

Austria
Belgium
Bulgaria
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta (Malta and Gozo)
Netherlands
Poland
Portugal
Romania
Slovak Republic
Slovenia
Spain
Sweden
United Kingdom

OPEC (Organization of the Petroleum Exporting Countries)

Algeria
Angola
Ecuador
Iran
Iraq
Kuwait
Libya
Nigeria
Qatar
Saudi Arabia
United Arab Emirates
Venezuela

LATIN AMERICA

Anguilla
Antigua
Argentina
Aruba
Bahamas, The
Barbados
Belize
Bermuda
Bolivia
British Virgin Islands
Brazil
Cayman Islands
Chile
Colombia
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
Falkland Islands
French Guiana
Grenada
Guadeloupe
Guatemala
Guyana
Haiti
Honduras
Jamaica
Martinque
Mexico
Montserrat
Netherlands Antilles
Nicaragua
Panama
Paraguay
Peru
St. Kitts-Nevis
St. Lucia
St. Pierre and Miquelon
St. Vincent and the Grenadines
Suriname
Trinidad and Tobago
Turks and Caicos Islands
Uruguay
Venezuela

ASIA

Afghanistan
Bangladesh
Bhutan
Brunei
Burma
Cambodia (Kampuchea)
China
Hong Kong
India
Indonesia
Japan
Korea, Republic of
Korea, North
Laos
Macao
Malaysia
Maldive Islands
Mongolia
Nepal
Pakistan
Philippines
Singapore
Sri Lanka
Taiwan
Thailand
Vietnam

SUB-SAHARAN AFRICA

Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Republic
Chad
Comoros
Democratic Republic of the Congo
Republic of the Congo
Côte d'Ivoire
Djibouti
Equatorial Guinea
Eritrea
Ethiopia
Ethiopia (contains Eritrea)
Gabon
The Gambia
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Mauritius
Mozambique
Namibia
Niger
Nigeria
Rwanda
São Tomé and Príncipe
Senegal
Seychelles
Sierra Leone
Somalia
Republic of South Africa
Sudan
Swaziland
Tanzania
Togo
Uganda
Zambia
Zimbabwe