

United States International Trade Commission

STEEL:  
MONITORING DEVELOPMENTS  
IN THE DOMESTIC INDUSTRY  
(INVESTIGATION No. TA-204-9)

STEEL-CONSUMING INDUSTRIES:  
COMPETITIVE CONDITIONS  
WITH RESPECT TO STEEL  
SAFEGUARD MEASURES  
(INVESTIGATION No. 332-452)

VOLUME III: EXECUTIVE SUMMARIES AND INVESTIGATION  
No. 332-452 (REPORT AND APPENDICES)

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

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

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## **Steel:**

**Monitoring Developments in the Domestic Industry  
(Investigation No. TA-204-9)**

## **Steel-Consuming Industries:**

**Competitive Conditions With Respect to Steel  
Safeguard Measures**

**(Investigation No. 332-452)**

**Volume III: Executive Summaries and Investigation  
No. 332-452 (Report and Appendices)**



*Steel: Monitoring Developments in the Domestic Industry  
(Investigation No. TA-204-9)*

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## ERRATA SHEET

Publication No. 3632 *Steel: Monitoring Developments in the Domestic Industry* (Investigation TA-204-9) and *Steel-Consuming Industries: Competitive Conditions With Respect to Steel Safeguard Measures* (Investigation No. 332-452) has been edited since its initial publication. The new release of Publication No. 3632 reflect changes in page numbering and the tables of contents only. There are no changes to the data or subject matter of the publication.





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**EXECUTIVE SUMMARY**  
**INVESTIGATION NO. 332-452**

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# EXECUTIVE SUMMARY

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## Introduction

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Following receipt of a request on March 18, 2003, from the U.S. House of Representatives, Committee on Ways and Means (Committee), the U.S. International Trade Commission (USITC or Commission) instituted investigation No. 332-452, *Steel-Consuming Industries: Competitive Conditions with Respect to Steel Safeguard Measures*, pursuant to section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)).<sup>1</sup> As requested by the Committee, the investigation's analysis was conducted along sectoral lines, in order to assess the impact of the steel safeguard measures on differing segments of the U.S. manufacturing sector and to focus on steel products subject to the President's safeguard measures.<sup>2</sup>

The report addresses the effects of the safeguard measures on steel-consuming industries and on ports and their related services including the following competitive conditions:

- changes in employment, wages, profitability, sales, productivity, and capital investment of steel-consuming industries;
- an examination of the reported effects of the safeguard measures on factors such as prices for steel paid by consuming industries, steel shortages and availability, the ability of steel consumers to obtain required products or quality specifications, lead and delivery times, contract abrogation, sourcing of finished parts from overseas by customers of steel-consuming industries, and the relocation or shift of U.S. downstream production to foreign plants or facilities;
- the impact of international competitive factors, such as relative differences in steel costs to foreign steel-consuming industries not subject to the safeguard measures, and on steel consumers' exports and imports of steel-containing products;
- an examination of shifts in sourcing patterns in the United States, i.e., how much steel was purchased from domestic steel producers by domestic steel-consuming industries before the safeguard action, and how this sourcing has changed following the implementation of the safeguard measures; and

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<sup>1</sup> On Mar. 5, 2003, the Commission instituted an investigation under section 204(a) of the Trade Act of 1974 (Inv. No. TA-204-9) in order to prepare a report to the President and the Congress on results of monitoring developments relating to the domestic steel industry since the President imposed tariffs and tariff-rate quotas on imports of certain steel products (68 FR 12380, Mar. 14, 2003). In its letter, the Committee requests that the Commission provide its report in this section 332 investigation and its monitoring report in the section 204(a) investigation in a single document. In a Mar. 27, 2003 letter to the Commission, the Office of the United States Trade Representative (USTR) referenced the format requested by the Committee and informed the Commission that USTR has no objection to receiving the section 204(a)(2) report and the section 332(g) report in a single document. A copy of the request letter from the Committee and the Commission's *Federal Register* notice of institution of this investigation are contained in appendix A.

<sup>2</sup> The President imposed import relief in the form of tariffs and tariff-rate quotas on imports of certain steel products for a period of 3 years and one day, effective March 20, 2002. A description of the import relief is presented in Chapter 1. Throughout this report, "steel" will refer to steel products subject to the safeguard measures announced by the President.

- a discussion of the likely impact on employment, profitability, capital investment, and international competitiveness of steel-consuming industries of (i) continuation of the safeguard measures for the period September 2003 to March 2005, and (ii) termination of the safeguard measures effective September 20, 2003.

In addition, as requested, an analysis of the economy-wide effects of these safeguard measures (e.g., on costs borne by steel consumers, tariff revenues entering the U.S. Treasury, income to steel producers, and the net effect on the U.S. economy) using a simulation model is provided.

## **Analytical Scope and Approach**

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It is difficult to isolate the effect of the steel safeguard measures on steel-consuming firms from other factors since the safeguard measures have been in place only for 18 months. In addition, the short term nature of these safeguard measures may discourage firms from making changes in terms of capital expenditures or employment in response to the safeguard measures. The impact of the safeguard measures on different steel-consuming industries depends on factors such as the portion of their total production cost represented by the cost of steel and the market power of firms in steel-consuming industries, which may limit their ability to pass on any steel price increase to their customers.

To examine the impact that the steel safeguard measures have had on steel-consuming industries, the Commission utilized information from a variety of sources, including U.S. industry data, current industry literature, questionnaire responses, and other materials developed by the Commission. The Commission received 419 detailed questionnaire responses from steel-consuming firms whose steel purchases accounted for 22 percent of steel sold during the first year of the safeguard measures.<sup>3</sup> Additional information was provided by public written submissions, hearing testimony, and from input provided by industry officials, trade associations, government officials, and other interested parties.

To provide advice on the economy-wide effects of the safeguard remedies, the Commission simulated the imposition of these tariffs using an updated version of its Computable General Equilibrium (CGE) Model of the United States. The model makes use of the most recent, 1997, benchmark table of the U.S. production technology (Bureau of Economic Analysis's input-output

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<sup>3</sup> The Commission mailed out 1,800 purchaser questionnaires and received 644 responses, of which 485 indicated they purchased subject steel products. Of these respondents, 419 steel-consuming firms provided both quantity and value data for their purchases of subject steel products. These purchases totaled \$18.8 billion for the year after the safeguards were implemented in 2002. Purchases by distributors totaling \$4.6 billion were excluded from this total to avoid double counting. This accounts for almost 22 percent of the estimated \$87.2 billion of steel purchased in 2002, \$62.8 billion from the domestic industry and \$14.6 billion of imported of steel. Domestic shipments compiled by USITC staff from official statistics of the U.S. Census Bureau, *Manufacturers' Shipments, Orders, and Inventories*. M3 Series A31AVS, not seasonally adjusted monthly data. Import data was from the U.S. Department of Commerce (USDOC).

At the June 19, 2003, hearing, the Commission announced that it was aware that an "ITC Questionnaire Tip Sheet" (Tip Sheet) had been sent to some companies that may have received Commission questionnaires. Information in the Tip Sheet urged recipients to reply to the questionnaire in a misleading way or to exaggerate estimates in their responses. The Commission investigated this Tip Sheet and found that while the responses of the 34 firms (7 percent of total) that received the Tip Sheet differed to varying degrees from the responses of all steel consuming firms, their responses were generally similar to that of other steel consuming firms in the same industry. Moreover, these 34 questionnaire responses generally support other information collected from hearing testimony, written submissions, and public sources. For further information on the Tip Sheet, see Appendix H.

accounts), using production and trade data for the year before the imposition of the safeguards; the 1997 benchmark data are projected forward to account for current economic conditions. The modeling analysis provides a framework for understanding the effects of the safeguard measures on downstream steel-consuming industries.

## **Principal Findings**

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Many responding firms had difficulty distinguishing between the effects of the safeguard measures and other changes in market conditions. Overall, changes in competitive factors after the safeguard measures were implemented varied in nature across steel-consuming industries and often across firms within industries. Of the steel-consuming industries examined, the motor vehicle parts and steel fabrication industries reported adverse changes in competitive conditions and firm performance after the implementation of the safeguards more frequently than did other industries. These sectors reported expected negative results from continuation of the safeguard measures and positive results from termination of these measures more frequently than other sectors. Industries such as distributors or steel product producers generally reported that they expected no change or positive results from continuation of the safeguards and no change or negative results from termination of the safeguard measures.

### ***Impact on Steel-Consuming Industries and Ports***

#### **Steel Prices**

Publicly available data and hearing testimony indicate that, for most products subject to the safeguards, prices paid by steel-consuming industries initially increased after the safeguards were implemented. However, prices for some of these products then declined after the initial increase. Although varying by industry, about one-half of responding steel-consuming firms faced increases in both contract and spot prices after the implementation of the safeguards. About 43 percent of responding purchasers (162 of 381) reported that they could not pass on these price increases while about 19 percent (71 of 381) of purchasers reported that they were able to pass the price increases on to their customers.

#### **Contract Abrogation**

Some responding steel-consuming firms (134 of 456 or about 29 percent) reported that contracts that they had in place to purchase steel were either modified or abrogated, while most steel-consuming firms (332 of 456 or 71 percent) reported that steel suppliers had not modified or abrogated any contracts with their firms since the implementation of the safeguard measures.

#### **Steel Availability**

A little under one-half of responding steel-consuming firms (229 of 471 or about 49 percent) reported some difficulty in obtaining steel in the quantities or qualities they desired since the implementation of the safeguard measures. The steel fabrication, motor vehicle, motor vehicle parts, steel barrel and canning, and home appliance industries had a higher percentage of firms reporting these difficulties than other industries.

About 32 percent of steel-consuming firms (150 of 472), predominately from the steel fabrication, motor vehicle, motor vehicle parts, furniture,

and steel barrel and canning industries, reported longer lead and delivery times after the safeguards were implemented.

### **Steel Sourcing Patterns**

Almost one-half of steel-consuming firms (219 of 467 or 47 percent) shifted some of their purchases to domestically produced steel from imported steel after the safeguard measures were implemented. Overall, direct purchases of steel products from domestic producers increased from 65 percent to 73 percent of all purchases, while direct purchases from importers fell from 32 to 23 percent of all purchases.

### **Steel-Consuming Sourcing Patterns**

A large number of steel-consuming firms (399 of 450 or 89 percent) reported that they did not shift to sourcing finished parts from overseas and most (399 of 445 or 76 percent) reported that their customers did not shift to sourcing from foreign plants or facilities since implementation of the safeguard measures. With regard to relocation of production facilities, 93 percent of steel-consuming firms (432 of 465) reported that they have not relocated or shifted U.S. production to foreign plants or facilities. Almost two-thirds of responding steel-consuming firms (270 of 430 or 63 percent) reported that they or other steel-consuming firms did not relocate or shift production to foreign plants or facilities after the implementation of the safeguards.

### **Financial Indicators**

Overall sales and profits increased, while capital investment fell, for most steel-consuming industries in 2002/03 (the year following the imposition of the safeguard measures) compared with 2001/02 (the year preceding the safeguard measures).<sup>4</sup>

### **Employment**

Overall employment of steel-consuming industries generally fell or remained flat in 2002/03 compared with both 2000/01 and 2001/02, while productivity and wages increased over the three year period. In many cases, employment fell by a greater amount (and percentage) in the year before the safeguard measures were implemented than in the first year after they were implemented.

### **International Competitiveness**

Public data indicate that prices for steel in the U.S. market fell relative to prices in foreign markets since the imposition of the safeguard measures. However, based on these public data, prices for some steel products in some U.S. markets remained higher than those in foreign markets in May 2003. Questionnaire responses indicate that a majority of firms reported that the price of steel in the U.S. market was higher than steel prices in foreign markets after the imposition of the safeguards.

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<sup>4</sup> Much of the data collected for this report was done so for three constructed years: (1) April 2000-March 2001, (2) April 2001-March 2002, and (3) April 2002-March 2003. Throughout this report, references to these constructed years will be 2000/01, 2001/02, and 2002/03. For example, if data are reported for 2000/01, the actual data period being referred to is April 2000-March 2001.



Imports of steel-containing products declined about 9.0 percent from 2000/01 to 2001/02 but then increased by about 6 percent the year after the safeguards were implemented (2001/02 to 2002/03). Exports of these products declined steadily from 2000/01 to 2002/03, falling about 11 percent from 2000/01 to 2001/02 and then an additional 3 percent the year after the safeguards were implemented (2001/02 to 2002/03). Except for a few industries, such as motor vehicles, metal cutting and forming, pipe, and bar producers, the growth in imports of steel-containing products was greater than the growth in exports in the year after the safeguards.

## **Ports**

Steel imports constitute a significant portion of port trade tonnage in the Philadelphia, PA; Chicago, IL; and Houston-Galveston, TX port districts and also at the Port of New Orleans, LA.

Waterborne imports of steel of the types covered by the safeguard measures declined by 10 percent prior to the implementation of the safeguard measures (2000/01-2001/02) and by 10 percent after implementation (2002/03), for a total decline of 4.0 million short tons. However, imports by land from Canada and Mexico (countries exempt from the safeguard measures) rose by 1.1 million short tons after implementation of the safeguard measures. Overall, imports of all steel products, declined almost 7 percent in the year after the safeguards.

U.S. ports and related-service providers may have received modest benefits from increased imports of steel inputs and rising U.S. exports (exports are a fraction of the volume of U.S. steel imports). In questionnaire responses, U.S. ports and related-service providers reported a decline of approximately 28 percent in revenues from total steel imports during 2000/01-2001/02 and a further decline of 15 percent after implementation of the safeguards. The benefits that the U.S. ports and related-service providers may have received likely would be small in comparison to the decline in revenues from total steel imports, which explains the reported declines in revenues from total steel imports after implementation of the safeguard measures. Hours worked declined by about 10 percent before and after implementation of safeguard measures.

## **Economy-Wide Effects**

The economy-wide analysis, designed to focus on those impacts that arise from the relative price changes resulting from the imposition of the safeguard measures, estimated that the effect of the safeguard measures on the U.S. welfare ranged from a welfare gain of \$65.6 million to a welfare loss of \$110.0 million, with a central estimate of a welfare loss of \$41.6 million. Overall, the simulation results indicate that returns to capital fall by \$294.3 million and returns to labor, based on the net effect on all labor in the U.S. economy, fall by \$386.0 million as a result of the safeguard measures, but tariff revenues increase by \$649.9 million. The offsetting impact results in an estimated annual GDP loss of \$30.4 million.

The model estimates that earnings in industries where returns to capital fell, including steel-consuming industries, would decline by \$601.2

million (0.01 percent), while earnings in other industries where capital income increases (e.g., iron ore mining, ferroalloy and related product manufacturing, coal mining, custom roll forming, energy and services) would experience increased capital returns of \$67.4 million (0.04 percent). The impact of the safeguard measures varies by steel-consuming industry. Industries that are particularly affected include motor vehicle parts and several steel fabrication industries (metal tank manufacturing, railroad rolling stock manufacturing, and power boiler and heat exchanger manufacturing). These industries also reported larger impacts from the safeguard measures in their questionnaire responses and also exhibit market characteristics suggesting that they would be among the most affected steel-consuming industries.

### **Likely Impact of Continuing or Terminating Safeguards**

A majority of steel-consuming firms indicated that neither continuation or termination of the safeguard measures would change employment, international competitiveness, or capital investment. Purchaser responses were split over whether profitability would increase or decrease if the safeguards continued with slightly more firms indicating that profitability would increase with termination of the safeguards than those who indicated that profitability would not change.

These results varied by industry, with firms in the motor vehicle parts and steel fabrication industries more frequently reporting changes in the conditions of competition than other steel-consuming industries in most cases. In particular, both industries indicated that employment, profitability, and international competitiveness would fall if the safeguards were continued but would increase if the safeguards were terminated.

While only a small number of ports and port-related services firms provided information, about 12 of 19 indicated that either continuation or termination of the safeguard measures would not change capital investment and wages. Over one-half of such respondents (7 of 12) expected steel import volumes and revenues to increase with termination and decrease with continuation of the safeguards.

**EXECUTIVE SUMMARY**  
**INVESTIGATION NO. TA-204-9**

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# EXECUTIVE SUMMARY

## BACKGROUND

On March 5, 2002, following affirmative determinations of serious injury or threat of serious injury by the Commission under section 202 of the Trade Act of 1974 (the Act), the President implemented safeguard actions to facilitate efforts by various domestic steel industries and their workers to make a positive adjustment to import competition with respect to certain steel products. The safeguard measures encompass 10 different product categories: certain carbon and alloy flat-rolled steel, tin mill products, hot-rolled bar and light shapes, cold-finished bar, rebar, certain welded pipe and tube, fittings and flanges, stainless steel bar, stainless steel rod, and stainless steel wire.

Presidential Proclamation 7529 implemented relief action in the form of tariffs and tariff-rate quotas, effective March 20, 2002, for a period of 3 years and 1 day. The principal provisions of the proclamation are detailed in the individual product discussions below. The safeguard measures apply to imports of subject steel products from all countries except Canada, Israel, Jordan, and Mexico, which have entered into free trade agreements with the United States, and most developing countries that are members of the World Trade Organization. The President's initial proclamation also excluded numerous specific products from the measures, and the U.S. Trade Representative subsequently announced three additional lists of product exclusions on July 12, 2002, August 30, 2002, and March 31, 2003. The first phased reduction of the relief action (generally, a lowering of tariffs) took effect on March 20, 2003.

The Commission instituted this monitoring investigation under section 204(a)(2) of the Act for the purpose of preparing a mid-point report to the President and the Congress regarding developments with respect to the pertinent domestic steel industries (the 10 industries producing products corresponding to those subject to the safeguard measures) since the imposition of import relief. Pursuant to section 204(a)(1) of the Act, the Commission's report includes information concerning the progress and specific efforts made by workers and firms in these domestic industries to make a positive adjustment to import competition.

The Commission collected data for the period April 2000 through March 2003 for purposes of this investigation. The final 12 months of this period, which correspond to the first year the safeguard measures were in effect, are called "the first relief year" in this Executive Summary. Descriptions below of how industry indicators changed in "the first relief year" compare data collected for the period April 2001 through March 2002, on the one hand, with data collected for the period April 2002 through March 2003, on the other.

The Commission sent questionnaires to approximately 800 firms identified as potential domestic producers of the products subject to the safeguard measures and received responses from 115 domestic producers. It sent questionnaires to approximately 300 importers and received responses from approximately 200. It also received questionnaire responses from nearly 500 U.S. purchasers, and more than 100 foreign producers.

The Commission conducted 4 days of hearings in this investigation in which it received testimony from U.S. steel producers, U.S. steel workers, foreign steel producers, U.S. importers of steel products, U.S. purchasers of steel products, and Congressional and state government witnesses. Numerous parties submitted pre-hearing and post-hearing briefs.

## OVERVIEW OF U.S. AND GLOBAL STEEL DEVELOPMENTS

The United States economy was in recession from March 2001 to November 2001. In the period since imposition of the steel safeguard measures, U.S. demand for most steel products has been weak. In eight of the ten product categories subject to safeguard measures, most U.S. producers and importers reported that U.S. demand for steel has declined since March 2002; responses of market participants in the other two categories were mixed. The market participants that reported demand had declined often referred to the poor overall condition of the U.S. economy, citing in particular weak demand in those industrial sectors that use steel products. While U.S. prices for steel products generally increased for different products, albeit at different rates, many industries reported rising input costs as well.

Despite operating in a general environment of weak demand, U.S. raw steel production increased between calendar years 2001 and 2002, although it remained below 1999 and 2000 levels. U.S. steel production capacity declined in 2002 due to numerous plant closings. Because production increased while capacity declined, the capacity utilization of U.S. steel producers increased to 88.8 percent in 2002 from 79.7 percent in 2001.

The number of U.S. workers employed by manufacturers of basic steel products and in blast furnaces and steel mills declined by 17 percent and 19 percent, respectively, from 1999 through 2002. U.S. productivity, measured in tons of crude steel produced per employee, rose from 1999 to 2002.

World crude steel production also increased from calendar years 2001 to 2002, and was higher during the first quarter of 2003 than during the first quarter of 2002. During 2002, the United States remained a leading producer of raw steel, although its share of world production had fallen to 10.2 percent. By contrast, the U.S. share of world production was 12.4 percent in 1999. The concentration of the steel industry worldwide increased slightly from 1999 to 2002.

There have been considerable changes in the number and composition of U.S. steel producers both before and since imposition of the safeguard measures. Since January 1999, 31 steel companies producing products subject to the safeguard measures have filed for bankruptcy protection. Seven of these companies have sought bankruptcy court protection since imposition of the safeguard measures. Although most of these companies continued to operate while they developed and implemented reorganization plans, several have liquidated.

Since imposition of the safeguard measures, the industries producing steel products have undergone major restructuring and consolidation. The assets of several bankrupt steel producers have been acquired by other firms. For example, International Steel Group (ISG) acquired the steelmaking assets of LTV Steel (LTV), Acme Metals, and Bethlehem Steel. U.S. Steel Corp. (U.S. Steel) acquired the assets of National Steel. Nucor Corp. (Nucor) acquired the assets of Trico Steel and Birmingham Steel. In a significant merger, several producers of long products merged to form Gerdau Ameristeel.

Steel producers and the United Steelworkers of America (USWA), the principal union representing steelworkers in the United States, have negotiated groundbreaking collective bargaining agreements since imposition of the safeguard measures. In September 2002, the USWA adopted a new set of bargaining principles that it has used in subsequent labor negotiations. These principles were designed to reduce fixed costs, improve productivity, and protect retiree welfare. They served as the basis for agreements the USWA made in 2003 with ISG, U.S. Steel, and Wheeling-Pittsburgh Steel and are expected to serve as the basis for future agreements.

Many steel producers that sought bankruptcy protection have terminated or restructured employee pension and benefit programs that they had not fully funded. The USWA-ISG collective bargaining agreement discussed above contains provisions pertaining to some of the pension and benefit costs of the bankrupt producers whose assets ISG acquired. Since March 2002, the Pension Benefit Guaranty Corporation (PBGC), a U.S. government agency, has taken over pension plans of nine U.S. producers of steel subject to the safeguard measures. The estimated unfunded pension liabilities that the PBGC assumed from these producers exceeds \$8 billion. Problems among U.S. steel producers pertaining to unfunded employee benefit liabilities are not, however, limited to bankrupt firms. In 2002, publicly-held steel producers whose reports the Commission examined stated that their total unfunded pension liabilities exceeded \$8 billion and their unfunded liabilities of other post-employment benefits were almost \$12 billion. Both these amounts were significantly higher than in 2001, the latest year these companies' pension benefits were fully funded.

State and local governments have implemented relatively few new programs to benefit steel producers since imposition of the safeguard measures, and the Federal government has implemented no such measures. By contrast, two federal and eight state programs were implemented between 1998 and 2002. The United States has been an active participant in multilateral discussions seeking to address overcapacity and steel subsidies coordinated by the Organisation for Economic Co-Operation and Development. As of July 2003, elements of an agreement for reducing or eliminating subsidies had been roughly defined, although further work remained to conclude the agreement.

## CARBON AND ALLOY FLAT STEEL

The flat steel product categories subject to safeguard measures are certain carbon and alloy flat-rolled steel and tin mill products (tin). Developments in import trends, industry conditions, and pricing are summarized separately for these two product categories. Because several U.S. producers produce steel in both product categories, their adjustment efforts are discussed collectively.

### Certain Carbon and Alloy Flat-Rolled Steel

There are several forms of certain carbon and alloy flat-rolled steel that vary by the nature of their processing. The semifinished form is slab. Further processed forms include plate, hot-rolled steel, cold-rolled steel, and coated steel. The Presidential Proclamation imposed the following safeguard measures on different forms of certain carbon and alloy flat-rolled steel:

- For slab, there is a tariff rate quota (TRQ) of 4.90 million metric tons (5.40 million short tons) in the first year of the measure, 5.35 million metric tons (5.90 million short tons) in the second year, and 5.81 million metric tons (6.40 million short tons) in the third year, with no increase in duties for imports below the within-quota level and an increase in duties of 30 percent *ad valorem* for imports above the within-quota level in the first year of the measure, 24 percent in the second year, and 18 percent in the third year.
- For the remaining forms of certain carbon and alloy flat-rolled steel, there is an increase in duties of 30 percent *ad valorem* in the first year of the measure, reduced to 24 percent in the second year, and to 18 percent in the third year.

In the first relief year, total imports increased, as the increase in imports from sources not covered by the safeguard measure was greater than the decline in imports from covered sources. The quantity of total imports increased from 15,998,677 short tons to 17,166,839 short tons, and their market share increased from 8.4 percent to 8.5 percent. Imports from countries covered by the safeguard measure declined from 11,065,158 short tons to 8,366,746 short tons, and their market share declined from 5.8 percent to 4.1 percent. The quantity of U.S. imports from countries not covered by the safeguard measure increased from 4,933,519 short tons to 8,800,093 short tons, and their market share increased from 2.6 percent to 4.4 percent. Imports from Canada and Mexico accounted for the bulk of the increase.

Semifinished forms of certain carbon and alloy flat-rolled steel are used to make further processed forms of the product. Further processed forms are used in such end-use applications as transportation equipment (such as automobiles, rail cars, and ships and barges), construction, appliances, heavy machinery, and machine parts. During the first relief year, demand for the end-use products in which certain carbon and alloy flat-rolled steel is used either rose very modestly or declined. The value of U.S. manufacturers' shipments of transportation equipment increased by 0.7 percent between the first quarter of 2002 and the first quarter of 2003. During the same period, the value of U.S. nonresidential construction that was put in place declined by 4.8 percent. Most of the responding U.S. producers and importers cited general weakness in the U.S. economy, as well as weaknesses in such sectors as automotive, construction, and capital goods, in reporting that demand for steel has decreased since March 2002.

Although growth in demand was at most modest and total imports increased, output-related indicators for the domestic industry such as production and shipments increased in the first relief year. Production increased by 6.8 percent and the quantity of U.S. shipments increased by 6.0 percent. Capacity utilization increased modestly in the first relief year, as the industry's capacity levels were affected by shutdowns of some mills, and the subsequent reorganization and restarting of certain operations. Employment declined by 10.0 percent in the first relief year. Productivity increased from



830.1 to 934.1 short tons per 1,000 hours in the first relief year. By contrast, for the period from April 2000 to March 2001, productivity was 771.2 short tons per 1,000 hours.

The average unit values (AUVs) that the industry received for commercial sales increased from \$366 to \$413 in the first relief year. Cost of goods sold (COGS) declined on a unit basis, notwithstanding an increase in unit raw materials costs. Because unit revenues increased while unit costs declined, and output increased, the industry's financial performance improved in the first relief year. Its operating margin in the first relief year was 3.1 percent. By contrast, the domestic industry recorded operating losses in the two prior 12-month periods for which the Commission collected data in this investigation.

The Commission collected quarterly pricing data for eight different products in the certain carbon and alloy flat-rolled steel category. Prices for most of these products increased sharply in the second and third quarters of 2002, following imposition of the safeguard measures, and then declined somewhat during the first quarter of 2003. For each of the products, prices for the domestically produced product were higher during the first quarter of 2003 than during the first quarter of 2002. For all but one of the eight domestically produced products, however, the first quarter 2003 price was below that of the second quarter of 2000. The trends in prices for most imports were similar, regardless of whether the imports were from sources covered or not covered by the safeguard measure. Prices increased from the first quarter of 2002 to the first quarter of 2003 for imports from sources covered by the safeguard measure for six of the eight products. During this period, prices for imports from sources not covered by the safeguard measure increased for six of the seven products for which observations were available. During the first relief year, imports from sources covered by the safeguard measure undersold the domestically produced product in 11 of 31 quarterly comparisons. Imports from sources not covered by the safeguard measure undersold the domestically produced product in 21 of 28 quarterly comparisons.

## Tin

The Presidential Proclamation included an increase in duties on tin of 30 percent *ad valorem* in the first year of the measure, reduced to 24 percent in the second year, and to 18 percent in the third year.

In the first relief year, total imports of tin, as well as imports from covered sources, declined sharply, while imports from sources not covered by the safeguard measure increased. The quantity of total imports declined from 581,523 short tons to 326,280 short tons, and their market share fell from 16.8 percent to 9.6 percent. Imports from countries covered by the safeguard measure decreased from 437,045 short tons to 165,059 short tons, and their market share declined from 12.6 percent to 4.9 percent. The quantity of U.S. imports from countries not covered by the safeguard measure increased from 144,479 short tons to 161,221 short tons, and their market share rose from 4.2 percent to 4.7 percent.

Tin is used primarily in the manufacture of welded can containers for food, beverages, aerosols, and paint. During the first relief year, U.S. demand for tin was weak. The quantity of U.S. manufacturers' shipments of steel cans for food declined by 3.8 percent between the first quarter of 2002 and the first quarter of 2003. U.S. tin producers provided mixed responses when asked whether demand for steel products has increased since imposition of the safeguard measure, while most importers stated that demand had declined.

In the first relief year, the domestic industry increased its share of the U.S. market from 83.2 percent to 90.4 percent. Despite declining demand, output-related indicators such as production and shipments increased in the first relief year. These increases, however, were only sufficient to put production and shipments at roughly the same level they were in the period from April 2000 to March 2001. Capacity utilization increased from 78.1 percent to 88.0 percent in the first relief year. The capacity of the U.S. tin industry declined by 2.3 percent. Employment declined by 9.3 percent and

productivity increased by 16.9 percent in the first relief year. There were fewer reporting tin producers in the first relief year than in the preceding 12-month period.

The AUVs that the tin industry received for commercial sales increased from \$589 to \$596 in the first relief year. COGS declined on a unit basis, notwithstanding an increase in unit raw material costs. Despite these improvements, as well as increased output, the industry continued to operate unprofitably. Its operating margin moved from negative 9.7 percent to negative 4.4 percent in the first relief year.

Quarterly prices for the domestically produced tin product for which the Commission collected pricing data rose by 1.8 percent from the first quarter of 2002 to the first quarter of 2003; the first quarter 2003 price differed only slightly from that of the second quarter of 2000. Prices declined for imports of this product from sources covered by the safeguard measure, as well as sources not covered, from the first quarter of 2002 to the first quarter of 2003. During the first relief year, imports from sources covered by the safeguard measure undersold the domestically produced product in two of four quarterly comparisons, and imports from sources not covered by the measure undersold the domestically produced product in all four quarterly comparisons.

### **Adjustment Efforts of the Industries Producing Flat Steel Products**

Pursuant to section 204(a)(1) of the Act, the Commission collected information concerning the progress and specific efforts made by workers and firms to make a positive adjustment to import competition. During the section 201 investigation, the individual producers of certain carbon and alloy flat-rolled steel and tin submitted adjustment plans that included: (1) restoring financial stability; (2) investing in more efficient facilities and equipment; (3) developing new products and markets; and (4) pursuing market-based consolidation and rationalization.

Since the safeguard measures went into effect, there has been extensive restructuring of the domestic industries producing certain carbon and alloy flat-rolled steel and tin. There are fewer domestic producers. Four of the largest U.S. producers of certain carbon and alloy flat-rolled steel and tin – Bethlehem, National, LTV, and U.S. Steel – have been consolidated into two companies, which are now owned by ISG and U.S. Steel. ISG, U.S. Steel, and Nucor have invested a total of \$3 billion to restructure and consolidate the industries by purchasing the assets of other companies. ISG was formed in March 2002 and purchased assets of producers LTV, Acme, and Bethlehem in 2002 and 2003. Nucor expanded by purchasing the assets of idled producer Trico Steel Company in July 2002. U.S. Steel finalized its purchase of National Steel in May 2003.

As part of the restructuring process, the USWA has reached innovative new collective bargaining agreements with several producers, including ISG, U.S. Steel, and Wheeling-Pittsburgh. USWA membership has ratified all three agreements. The agreements are designed to achieve goals such as reducing fixed costs, improving productivity, and protecting retiree welfare. For example, the agreement with ISG: (1) permits the company to cut the workforce by 40 percent, and includes a \$125 million transition assistance program, (2) reduces job classifications from over 30 to five, (3) increases employee job flexibility and training programs, (4) introduces profit sharing, (5) restricts executive compensation, (6) requires company investment to maintain competitiveness, and (7) establishes a benefit trust to provide some health-care relief to retirees. Additionally, Weirton Steel Corp. and the Independent Steelworkers Union entered into a collective bargaining agreement in 2003 that provides for pay cuts and a pension plan freeze.

Additionally, several domestic producers have made or authorized capital investments, which in the aggregate exceed \$500 million, to upgrade existing facilities and invest in new technologies to reduce costs and improve product quality. For example, U.S. Steel has invested \$200 million, half of which is dedicated to steelmaking (i.e., blast furnace and basic oxygen furnace) operations. ISG invested \$53

million to start up and begin modernizing its purchased LTV and Acme facilities; it recently announced investments of \$272 million in its Burns Harbor facility. Nucor, Ispat Inland, and Gallatin have also committed significant funds to capital investments.

The legislative history of Section 204 of the Act directs that adjustment efforts should be evaluated in light of existing economic conditions. Domestic producers of certain carbon and alloy flat-rolled steel and tin described several factors that affected their adjustment efforts. As referenced in the product-specific discussions above, because of the condition of the U.S. economy, demand for these products was weak during the first relief year. Additionally, imports from countries not covered by the safeguard remedies increased. Further, several producers that are significant slab purchasers claimed that the measure on slab adversely affected the rolling capacity of the industry producing certain carbon and alloy flat-rolled steel. Other producers did not agree that the TRQ on slab was hurting the industry's adjustment efforts, noting that the quota has not been fully utilized, domestic sales of slab have increased, and rollers' profitability has increased.

Parties opposed to the safeguard measures acknowledged that the domestic industries producing certain carbon and alloy flat-rolled steel and tin have restructured and consolidated, and that producers and labor had negotiated new collective bargaining agreements. They contended, however, that these changes were not the result of the safeguard measures. They argued that the safeguard measures had harmed steel users, and that a continuation of relief would hamper further rationalization and removal of inefficient capacity.

## CARBON AND ALLOY LONG STEEL

The long steel product categories subject to safeguard measures are hot-rolled bar and light shapes (hot bar), cold-finished bar (cold bar), and rebar. Developments in import trends, industry conditions, and pricing are summarized separately for the three product categories. Because several U.S. producers produce more than one of these product categories, their adjustment efforts are discussed collectively.

### Hot Bar

The Presidential Proclamation included an increase in duties on hot bar of 30 percent *ad valorem* in the first year of the measure, reduced to 24 percent in the second year, and to 18 percent in the third year.

In the first relief year, total imports of hot bar, as well as imports from covered sources, declined, while imports from sources not covered by the safeguard measure increased. The quantity of total imports declined from 1,989,880 short tons to 1,907,404 short tons, and their market share fell from 20.4 percent to 19.0 percent. Imports from countries covered by the safeguard measure decreased from 708,271 short tons to 480,517 short tons, and their market share declined from 7.2 percent to 4.8 percent. The quantity of U.S. imports from countries not covered by the safeguard measure increased from 1,281,609 short tons to 1,426,887 short tons, and their market share rose from 13.1 percent to 14.2 percent.

Major U.S. markets for hot bar are in automotive and construction applications. Hot bars are used in the production of parts of bridges, buildings, ships, agricultural implements, motor vehicles, road building equipment, and machinery. During the first relief year, demand in these segments either rose very modestly or declined. The value of U.S. manufacturers' shipments of transportation equipment increased by 0.7 percent between the first quarter of 2002 and the first quarter of 2003. During the same period, the value of U.S. nonresidential construction put in place declined by 4.8 percent, and the value of U.S. manufacturers' shipments of carbon steel forgings declined by 1.9 percent. Most of the responding U.S. producers and importers cited weakness in demand for vehicle parts, appliances, construction, and machinery in reporting that demand for steel has decreased since March 2002.

In the first relief year, the domestic industry increased its share of the U.S. market from 79.6 percent to 81.0 percent. Despite growth in demand that was at most weak, output-related indicators such as production and shipments increased in that period. They were, however, lower than they were in the period from April 2000 to March 2001. Capacity utilization increased modestly from 71.6 percent to 72.3 percent in the first relief year, but was below the 77.0 percent level of the period from April 2000 to March 2001. Capacity levels were affected by shutdowns of some mills and the subsequent reorganization and restarting of certain operations. Employment declined and productivity increased in the first relief year.

The AUVs that the industry received for commercial sales increased from \$384 to \$391 in the first relief year, but were still below the \$409 AUV for the period from April 2000 to March 2001. COGS increased less on a unit basis than did AUVs. In the first relief year, unit raw materials costs increased sharply, but unit labor and other factory costs declined. Because unit revenues increased at a greater rate than unit costs, and output increased, the industry's financial performance improved in the first relief year. Its operating margin increased from 1.6 percent to 3.0 percent. The latter margin, however, was below the industry's 4.4 percent operating margin in the period from April 2000 to March 2001.

Quarterly prices for the domestically produced hot bar product for which the Commission collected pricing data rose by 8.1 percent from the first quarter of 2002 to the first quarter of 2003, but the first quarter 2003 price was below that of the second quarter of 2000. Prices increased from the first quarter of 2002 to the first quarter of 2003 for imports of this product from sources covered by the safeguard measure as well as sources not covered by the measure. In the first relief year, imports from sources covered by the safeguard measure, and from sources not covered, oversold the domestically produced product in every quarterly comparison.

### **Cold Bar**

The Presidential Proclamation included an increase in duties on cold bar of 30 percent *ad valorem* in the first year of the measure, reduced to 24 percent in the second year, and to 18 percent in the third year.

In the first relief year, total imports of cold bar declined, while imports from covered sources declined sharply, and imports from sources not covered by the safeguard measure increased. The quantity of total imports declined from 266,423 short tons to 209,607 short tons, and their market share decreased from 15.7 percent to 12.2 percent. Imports from countries covered by the safeguard measure fell from 181,738 short tons to 99,304 short tons, and their market share declined from 10.7 percent to 5.8 percent. The quantity of U.S. imports from countries not covered by the safeguard measure increased from 84,685 short tons to 110,302 short tons, and their market share increased from 5.0 percent to 6.4 percent. Imports from Canada were responsible for the bulk of this increase.

Automotive and construction applications provide major U.S. markets for cold bar. Demand for transportation equipment increased by 0.7 percent between the first quarter of 2002 and the first quarter of 2003. By contrast, during this period the value of U.S. nonresidential construction put in place decreased by 4.8 percent. Most of the responding U.S. producers and importers cited weakness in demand, particularly in the construction and capital goods sectors, in reporting that demand for steel has decreased since March 2002.

In the first relief year, the domestic industry increased its share of the U.S. market from 84.3 percent to 87.8 percent. Despite weak to non-existent growth in demand, output-related indicators such as production and shipments increased in the first relief year. They were lower, however, than they were in the period from April 2000 to March 2001. Capacity utilization increased slightly from 54.5 percent to 55.1 percent in the first relief year. The latter level was considerably below the 67.2 percent capacity utilization for the period from April 2000 to March 2001. As with hot bar, capacity levels were affected by shutdowns and restarting of certain operations. Employment declined by 11.0 percent in the first relief year, and productivity increased by 17.4 percent.

The AUVs that the industry received for commercial sales increased only modestly, from \$646 to \$649, in the first relief year. These values were below the \$670 AUV for the period from April 2000 to March 2001. Unit COGS declined in the first relief year, notwithstanding an increase in unit raw materials costs. Because unit revenues increased while unit COGS declined, and output increased, the cold bar industry's financial performance improved in the first relief year. Its operating margins increased from negative 0.4 percent to positive 1.5 percent. The latter figure was still below the modest 2.5 percent operating margin the industry recorded during the period from April 2000 to March 2001.

The Commission collected quarterly pricing data for two cold bar products. Prices for the first product increased by 1.2 percent from the first quarter of 2002 to the first quarter of 2003, and prices for the second product increased by 3.6 percent over the same period. Prices for both products were lower in the first quarter of 2003 than they were in the second quarter of 2000. Prices of imports from sources covered by the safeguard measure increased from the first quarter of 2002 to the first quarter of 2003 for both products; during this period, there were only isolated pricing observations of imports from sources not covered by the safeguard measure. During the first relief year, imports from sources covered by the measure undersold the domestically produced product in five of eight quarterly comparisons.

## Rebar

The Presidential Proclamation included an increase in duties on rebar of 15 percent *ad valorem* in the first year of the measure, reduced to 12 percent in the second year, and to 9 percent in the third year.

In the first relief year, total imports of rebar declined, imports from covered sources declined sharply, and imports from sources not covered by the safeguard measure increased. The quantity of total imports declined from 1,851,865 short tons to 1,034,251 short tons, and their market share fell from 22.5 percent to 13.4 percent. Imports from countries covered by the safeguard measure decreased from 1,367,171 short tons to 304,938 short tons, and their market share declined from 16.6 percent to 4.0 percent. The quantity of U.S. imports from countries not covered by the safeguard measure increased from 484,694 short tons to 729,313 short tons, and their market share rose from 5.9 percent to 9.5 percent. There were particularly large increases in imports from Brazil, the Dominican Republic, and Egypt.

Rebar is used for structural reinforcement within cast concrete structures. Consequently, changes in demand for rebar are derived from and reflect changes in construction activity. The value of nonresidential construction put in place decreased by 4.8 percent between the first quarter of 2002 and the first quarter of 2003. Most responding U.S. producers and importers of rebar cited the weak construction market and reduced government spending on transportation projects in reporting that demand for steel has decreased since the imposition of safeguard measures.

In the first relief year, the domestic industry increased its share of the U.S. market from 77.5 percent to 86.6 percent. Because of its increased market share, the domestic industry showed increases in output-related indicators such as production and shipments in that period notwithstanding the decline in U.S. demand for rebar. U.S. rebar producers' capacity showed little change in the first relief year, increasing by 0.5 percent, and may have been affected by shutdowns. Because production increased while capacity changed only slightly, capacity utilization increased from 79.4 percent to 82.6 percent in the first relief year. Employment declined by 2.7 percent in the first relief year as productivity increased by 5.7 percent.

The AUVs that the industry received for commercial sales declined from \$265 to \$260 in the first relief year. Unit COGS increased on a unit basis from \$237 to \$247. This reflected a sharp increase in unit raw materials costs; by contrast, unit labor and other factory costs declined in the first relief year. Although the industry's total sales revenues increased in the first relief year because of its increase in shipments, the concurrent declines in unit revenues and increases in unit costs adversely affected the industry's operating margins. The operating margin declined from positive 3.8 percent to negative 0.7 percent in the first relief year. Additionally, the number of firms reporting operating losses increased.

Quarterly prices for the domestically produced rebar product for which the Commission collected pricing data increased by 0.2 percent from the first quarter of 2002 to the first quarter of 2003. The price for this product in the first quarter of 2003 was below its level in the second quarter of 2000. Prices of imports of this product from both sources covered by the safeguard measure and those not covered by the safeguard measure increased from the first quarter of 2002 to the first quarter of 2003. During the first relief year, imports from sources covered by the measure undersold the domestically produced product in all 4 quarterly comparisons. Imports from sources not covered by the measure undersold the domestically produced product in three of four quarterly comparisons.

### **Adjustment Efforts of the Industries Producing Long Steel Products**

Pursuant to section 204(a)(1) of the Act, the Commission collected information concerning the progress and specific efforts made by workers and firms to make a positive adjustment to import competition. During the section 201 investigation, the individual producers of hot bar, cold bar, and rebar submitted adjustment plans that included: (1) making capital expenses to enhance efficiency and reduce costs; (2) resuming a more normal scope and pace of operations by increasing productive shifts, rehiring laid off workers, or paying down debt; and (3) installing equipment designed to permit producers to offer new product lines.

Since the safeguard measures have gone into effect, the U.S. hot bar, cold bar, and rebar industries have restructured. Most notably, there have been several mergers and acquisitions among the producers of these products; established producers of long products have spent over \$700 million to acquire the assets of other producers. In particular, Nucor Corp., the largest U.S. producer of steel using the electric arc furnace, or “minimill,” method, has acquired the assets of two separate producers that produce hot bar and rebar, although it has not reactivated all the assets that it has acquired. The North American operations of Gerdau combined with Co-Steel, to form Gerdau AmeriSteel, now the second-largest North American minimill producer. A major producer of hot bar and cold bar, Republic, restructured and emerged from bankruptcy, having reduced its hot bar capacity and closed permanently three cold bar facilities. Republic also entered into a new competitive labor agreement with its steelworkers that includes significant changes to work rules and incentive plans. Several companies have invested substantial sums in new technologies and made capital improvements. For example, Nucor totally revamped its Texas melt shop and improved finishing areas in several of its mills. Republic upgraded its Lorain, Ohio, plant to replace an inefficient facility it shuttered. North Star installed new rolling mill drivers and completed the first phase of a caster upgrade at its St. Paul, Minnesota, facility.

The legislative history of Section 204 of the Act directs that adjustment efforts should be evaluated in light of existing economic conditions. Domestic producers of hot bar, cold bar, and rebar described several factors that hindered their adjustment efforts. First, as referenced in the product-specific discussions above, demand for these products was weak during the first relief year. Second, prices rose only moderately for hot bar and cold bar, and were flat to declining for rebar. Third, raw materials costs rose steadily and adversely affected profitability.

In commenting on the adjustment efforts of the hot bar, cold bar, and rebar industries, parties opposed to the safeguard measures acknowledged that U.S. producers in these industries have achieved strong gains in productivity since imposition of the safeguard measures. They also acknowledged that there has been a significant degree of consolidation in these industries. Some of the parties, however, contended that these industries still have excess capacity, and expressed concern regarding the possible reopening of closed facilities.

## CARBON AND ALLOY TUBULAR STEEL

The tubular steel product categories subject to safeguard measures are welded pipe and tube and fittings and flanges (fittings). Developments in import trends, industry conditions, and pricing are summarized separately for the two product categories. The adjustment efforts of the U.S. welded pipe and tube and fittings industries are discussed collectively.

### Welded Pipe and Tube

The Presidential Proclamation included an increase in duties on welded pipe and tube of 15 percent *ad valorem* in the first year of the measure, reduced to 12 percent in the second year, and to 9 percent in the third year.

In the first relief year, total imports of welded pipe and tube declined, imports from covered sources declined sharply, and imports from sources not covered by the safeguard measure increased. The quantity of total imports declined from 2,988,231 short tons to 2,327,495 short tons, and their market share fell from 42.7 percent to 37.1 percent. Imports from countries covered by the safeguard measure decreased from 1,583,353 short tons to 809,695 short tons, and their market share declined from 22.6 percent to 12.9 percent. The quantity of U.S. imports from countries not covered by the safeguard measure increased from 1,404,878 short tons to 1,517,800 short tons, and their market share rose from 20.1 percent to 24.2 percent. There were substantial increases in imports from India, Turkey, and to a lesser extent, Mexico.

Welded pipe and tube is used in industrial, construction, automotive, and power generation applications, as well as in the oil market. Economic activity in the principal markets for welded pipe and tube generally declined during the first relief year. The value of U.S. construction of utilities, pipelines, and railroads put in place decreased by 5.1 percent from the first quarter of 2002 to the first quarter of 2003, and the value of U.S. nonresidential construction put in place decreased by 4.8 percent during this period. Most of the responding U.S. producers and importers cited poor economic conditions, particularly in the construction market and capital goods sectors, in reporting that demand for steel has decreased since March 2002.

In the first relief year, the domestic welded pipe and tube industry increased its share of the U.S. market from 57.3 percent to 62.9 percent. However, because of declining demand, the industry's output-related indicators were mixed. Production increased modestly in the first relief year, while the quantity of shipments declined modestly. Capacity utilization declined from 54.8 percent to 52.9 percent in the first relief year. Capacity levels were affected by the closure and opening of certain facilities. Employment increased in the first relief year, but productivity declined.

The AUVs that the industry received for commercial sales increased from \$555 to \$599 in the first relief year. The latter value was still below the \$602 AUV for the period from April 2000 to March 2001. Unit COGS increased in the first relief year, due principally to an increase in unit raw material costs. Because unit costs increased by a greater degree than unit revenues, and the industry's sales volumes declined, its financial performance declined as well. The industry's operating margins declined from 5.4 percent to 3.3 percent. By contrast, the industry's operating margin was 5.7 percent during the period from April 2000 to March 2001.



The Commission collected quarterly pricing data for two welded pipe and tube products. Prices for the first product increased by 17.7 percent from the first quarter of 2002 to the first quarter of 2003, and prices for the second product increased by 14.5 percent over the same period. Prices for both products, however, were lower in the first quarter of 2003 than they were in the second quarter of 2000. Prices of both imported products increased from the first quarter of 2002 to the first quarter of 2003 from sources covered by the safeguard measure as well as from sources not covered by the safeguard measure. During the first relief year, imports from sources covered by the safeguard measure and imports from sources not covered by the measure undersold the domestically produced product in every quarterly comparison.

## Fittings

The product category fittings encompasses fittings and flanges. The Presidential Proclamation included an increase in duties on fittings of 13 percent *ad valorem* in the first year of the measure, reduced to 10 percent in the second year, and to 7 percent in the third year.

In the first relief year, the quantity of total imports of fittings, imports from sources subject to the safeguard measure, and imports from sources not subject to the safeguard measure all declined, and the market share of total imports and imports from sources subject to the safeguard measure also declined. The quantity of total imports fell from 171,923 short tons to 131,121 short tons, and their market share decreased from 63.6 percent to 60.1 percent. Imports from countries covered by the safeguard measure declined from 136,164 short tons to 99,573 short tons, and their market share decreased from 50.4 percent to 45.6 percent. The quantity of U.S. imports from countries not covered by the safeguard measure declined from 35,759 short tons to 31,549 short tons, but their market share increased from 13.2 percent to 14.5 percent.

Demand for fittings is driven principally by demand in the utilities and construction sectors. Economic activity in the principal markets for fittings generally declined during the first relief year. The value of U.S. construction of utilities, pipelines, and railroads put in place decreased by 5.1 percent from the first quarter of 2002 to the first quarter of 2003, and the value of U.S. nonresidential construction put in place decreased by 4.8 percent during this period. Responses of U.S. producers and importers were mixed as to demand trends since March 2002, with a small majority of producers stating that demand was stable and a small majority of importers stating that demand had declined.

In the first relief year, the domestic fittings industry increased its share of the U.S. market from 36.4 percent to 39.9 percent. However, because of declining demand, output-related indicators such as production and shipments declined; additionally, both these indicators were considerably below the levels of the period from April 2000 to March 2001. The capacity of the U.S. fittings industry declined by 11.1 percent in the first relief year. Reflecting the decline in capacity, capacity utilization increased from 54.0 percent to 55.9 percent. The latter level, however, was considerably below the 71.9 percent capacity utilization rate for the period from April 2000 to March 2001. Coincident with the decline in capacity, employment also declined in the first relief year, and productivity increased.

The AUVs that the industry received for commercial sales increased in the first relief year. Unit COGS also increased, due principally to an increase in unit raw material costs. The increase in unit revenues was greater than that of unit costs. However, the industry's sales revenues declined because of the demand-related output declines, and the industry's operating margins declined in the first relief year.

Quarterly prices for the domestically produced fittings product for which the Commission collected pricing data increased during 2002, reaching a high for the three-year period for which data were collected, but declined between the fourth quarter of 2002 and the first quarter of 2003. The first quarter 2003 price was 0.1 percent below the first quarter 2002 price. Between the first quarter of 2002 and the first quarter of 2003, prices increased by 1.5 percent for imports from sources covered by the safeguard measure, and increased by 22.3 percent for imports from sources not covered by the measure. During the first relief year, imports from sources covered by the safeguard measure undersold the domestically produced product in all four quarterly price comparisons, and imports from sources not covered undersold the domestically produced product in two of four quarterly comparisons.

### **Adjustment Efforts of the Industries Producing Tubular Steel Products**

Pursuant to section 204(a)(1) of the Act, the Commission collected information concerning the progress and specific efforts made by workers and firms to make a positive adjustment to import competition. During the section 201 investigation, the individual producers of welded pipe and tube and fittings submitted adjustment plans that contemplated additional investments. Sixteen producers of welded pipe and tube indicated that they intended to invest approximately \$159 million over a four-year period to upgrade some facilities, relocate or close others, install new equipment, and invest in employee training and information systems. Four producers of fittings proposed investments over a four-year period of approximately \$14 million to upgrade facilities and invest in worker training and retirement plans.

Since the safeguard measures have gone into effect, several tubular firms have closed one or more production facilities, including welded pipe and tube producers Olympic Steel Tube, Maverick Tube, and Copperweld, as well as fittings producer Trinity Mills. The remaining firms have made significant capital investments to adjust to import competition. These improvements include investments in new equipment that permits improved product quality and expanded product range. In addition, corporate restructuring has changed the structure of the domestic welded pipe and tube industry, as Wheatland Tube acquired Sawhill Tubular from AK Steel, Maverick Tube acquired LTV Tubular, and ISG sold its interests in its Steelton large diameter line pipe mill and in its joint venture, Bethnova Tube. Finally, both Maverick Tube (following its acquisition of LTV Tubular) and Bethnova Tube have reached collective bargaining agreements with members of their labor force containing elements similar to those described in the section entitled “Flat Steel Products.”

The legislative history of Section 204 of the Act directs that adjustment efforts should be evaluated in light of existing economic conditions. Domestic producers of welded pipe and tube and fittings described several factors that hindered their adjustment efforts. These included weak demand, particularly in industries such as construction and oil and gas, increased imports from countries not subject to the safeguard remedy, and adverse supply-side effects resulting from the higher level of relief granted to upstream flat-rolled steel producers as compared to tubular products producers.

In commenting on the adjustment efforts of the welded pipe and tube and fittings industries, parties opposed to the safeguard measures stated that several welded pipe and tube producers do not claim to have made adjustments, and that the investments that other producers have made were not in response to import competition. They also contended that the domestic welded pipe and tube industry’s condition is directly influenced by factors other than the safeguard measure, most notably general U.S. economic conditions, continued excess capacity, and raw material price trends. They contended that the domestic fitting industry’s efforts to make a positive adjustment to import competition have been inadequate and have had little impact on overall industry performance.

## STAINLESS STEEL

The stainless steel product categories subject to safeguard measures are stainless steel bar (stainless bar), stainless steel rod (stainless rod), and stainless steel wire (stainless wire). Developments in import trends, industry conditions, and pricing are summarized separately for the three product categories. Because several U.S. producers produce more than one of these product categories, their adjustment efforts are discussed collectively.

### Stainless Bar

The Presidential Proclamation included an increase in duties on stainless bar of 15 percent *ad valorem* in the first year of the measure, reduced to 12 percent in the second year, and to nine percent in the third year.

In the first relief year, total imports of stainless bar, as well as imports from covered sources, declined, while imports from sources not covered by the safeguard measure increased. The quantity of total imports declined from 108,627 short tons to 99,714 short tons, and their market share declined from 42.7 percent to 41.9 percent. Imports from countries covered by the safeguard measure decreased from 82,798 short tons to 63,739 short tons, and their market share fell from 32.6 percent to 26.8 percent. The quantity of U.S. imports from countries not covered by the safeguard measure rose from 25,829 short tons to 35,975 short tons, and their market share increased from 10.2 percent to 15.1 percent. India was the country not covered by the safeguards measure whose imports increased the most during this period.

Major U.S. markets for stainless bar are in the aerospace, automotive, chemical processing, dairy, food processing, and pharmaceutical equipment industries. During the first relief year, demand in these markets either increased modestly or declined. The value of U.S. manufacturers' shipments of transportation equipment increased by 0.7 percent between the first quarter of 2002 and the first quarter of 2003. During the same period, the value of U.S. manufacturers' shipments of stainless steel forgings declined by 6.1 percent. Most of the responding U.S. producers and importers cited poor economic conditions, including downturns in aerospace, power generation, petrochemical industries, and capital goods, in reporting that demand for steel has decreased since March 2002.

In the first relief year, the domestic stainless bar industry marginally increased its share of the U.S. market from 57.3 percent to 58.1 percent. Consistent with the decline in demand, output-related indicators such as production and shipments declined in the first relief year. The capacity of the U.S. stainless bar industry increased by 1.1 percent in the first relief year. Capacity utilization declined from 62.9 percent to 60.6 percent. By contrast, capacity utilization was 72.7 percent during the period from April 2000 to March 2001. Employment declined in the first relief year, and productivity increased.

The AUVs that the industry received for commercial sales declined in the first relief year. Unit COGS also declined, notwithstanding that unit raw materials costs increased. The unit decline in COGS was not as great as the decline in AUVs. As a result of this cost-price squeeze and declining output, the industry's financial performance deteriorated in the first relief year. Its operating margin declined from negative 3.4 percent to negative 7.9 percent. By contrast, the industry had a positive 3.6 percent operating margin during the period from April 2000 to March 2001. The number of U.S. producers reporting operating losses also increased in the first relief year.

The Commission collected quarterly pricing data for two stainless bar products. Prices for the first product increased by \*\*\* percent from the first quarter of 2002 to the first quarter of 2003, and prices for the second product declined by 4.4 percent during this period. Prices for the first product were \*\*\* percent lower in the first quarter of 2003 than in the second quarter of 2000 and prices for the second product were 1.5 percent higher. For the first product, prices of imports from sources covered by the safeguard measure declined from the first quarter of 2002 to the first quarter of 2003, and there was only one pricing observation of imports from sources not covered by the safeguard measure during this period. For the second product, prices of imports from sources covered by the safeguard measure increased from the first quarter of 2002 to the first quarter of 2003, and prices of imports from sources not covered by the safeguard measure declined. During the first relief year, imports from sources covered by the measure undersold the domestically produced product in six of seven quarterly comparisons and imports from sources not covered by the measure undersold the domestically produced product in all 3 quarterly comparisons.

### **Stainless Rod**

The Presidential Proclamation included an increase in duties on stainless rod of 15 percent *ad valorem* in the first year of the measure, reduced to 12 percent in the second year, and to 9 percent in the third year.

In the first relief year, total imports, as well as imports from covered sources, declined, while imports from sources not covered by the safeguard measure increased. The quantity of total imports fell from 66,691 short tons to 45,610 short tons, and their market share also decreased. Imports from countries covered by the safeguard measure declined from 64,283 short tons to 40,558 short tons, and their market share also decreased. The quantity of U.S. imports from countries not covered by the safeguard measure increased from 2,408 short tons to 5,052 short tons, and their market share also rose. India was the only source not covered by the measure from which imports increased.

Most stainless rod is further processed into stainless wire. Stainless rod is also used in downstream products such as industrial fasteners, springs, medical and dental instruments, automotive parts, and welding electrodes. Demand for products in which stainless rod is used generally declined during the first relief year. The value of U.S. manufacturers' shipments of metalworking machinery declined by 9.5 percent between the first quarter of 2002 and the first quarter of 2003. Most of the responding U.S. producers and importers cited poor economic conditions, including downturns in aerospace, automotive, industrial, and consumer markets, in reporting that demand for steel has decreased since March 2002.

Notwithstanding the decline in demand, output-related indicators such as production and shipments increased in the first relief year, although production and total U.S. shipments were both below the levels of the period April 2000 to March 2001. The capacity of the U.S. stainless rod industry increased in the first relief year. Capacity utilization also increased, but was below the level of the period April 2000 to March 2001. Employment and productivity both increased in the first relief year.

The AUVs that the industry received for commercial sales declined in the first relief year. Unit COGS also declined, notwithstanding that unit raw materials costs increased. The unit decline in COGS was greater than the decline in AUVs. Because unit revenues fell less than unit costs, and output increased, the industry's financial performance improved in the first relief year. Nevertheless, it operated unprofitably; in contrast, the industry had profitable operating performance from April 2000 to March 2001.

Quarterly prices for the domestically produced stainless rod product for which the Commission collected pricing data declined from the first quarter of 2002 to the first quarter of 2003. During this period, prices increased for imports from sources covered by the safeguard measure, but declined for imports from sources not covered. During the first relief year, imports from sources covered by the safeguard measure undersold the domestically produced product in one of four quarterly price comparisons, and imports from sources not covered undersold the domestically produced product in all 4 quarterly comparisons.

### **Stainless Wire**

The Presidential Proclamation included an increase in duties on stainless wire of eight percent *ad valorem* in the first year of the measure, reduced to seven percent in the second year, and to six percent in the third year.

In the first relief year, total imports increased in quantity but declined in market share. The quantity of total imports increased from 31,295 short tons to 33,251 short tons, but their market share declined from 46.9 percent to 46.2 percent. Imports from countries covered by the safeguard measure decreased from 26,759 short tons to 25,014 short tons, and their market share fell from 40.1 percent to 34.8 percent. The quantity of U.S. imports from countries not covered by the safeguard measure increased from 4,535 short tons to 8,236 short tons, and their market share rose from 6.8 percent to 11.4 percent. Imports from India accounted for the bulk of this increase.

Major U.S. markets for stainless wire are in the chemical, petroleum, medical instrument, paper, and food processing industries. Stainless wire is also used in the production of household appliances, nails, and staples. The value of U.S. manufacturers' shipments of metalworking machinery decreased by 9.5 percent between the first quarter of 2002 and the first quarter of 2003. Most of the responding U.S. producers and importers cited poor economic conditions, including weakness in the manufacturing sector, in reporting that demand for stainless wire has decreased since March 2002.

In the first relief year, the domestic stainless wire industry marginally increased its share of the U.S. market from 53.1 percent to 53.8 percent. Output-related indicators such as production and shipments increased in that period, but were below the level of the period from April 2000 to March 2001. The capacity of the U.S. stainless wire industry increased by 3.1 percent in the first relief year. Capacity utilization increased from 46.2 percent to 51.5 percent. By contrast, capacity utilization was 62.5 percent during the period from April 2000 to March 2001. Employment declined by 8.3 percent in the first relief year, and productivity increased by 25.6 percent.

The AUVs the stainless wire industry received for commercial sales declined in the first relief year. Unit COGS also declined, at roughly the same rate as AUVs. Because of the increase in output, the industry's financial performance improved in the first relief year. Nevertheless, it operated unprofitably; by contrast, the industry had profitable operating performance from April 2000 to March 2001.

Quarterly prices for the domestically produced stainless wire product for which the Commission collected pricing data declined by 6.4 percent from the first quarter of 2002 to the first quarter of 2003. During this period, prices increased for imports from sources covered by the safeguard measure, but declined for imports from sources not covered by the measure. During the first relief year, imports from sources covered by the safeguard measure as well as imports from sources not covered by the measure undersold the domestically produced product in every quarterly price comparison.

## **Adjustment Efforts of the Industries Producing Stainless Steel Products**

Pursuant to section 204(a)(1) of the Act, the Commission collected information concerning the progress and specific efforts made by workers and firms to make a positive adjustment to import competition. During the section 201 investigation, the individual producers of stainless bar, stainless rod, and stainless wire submitted adjustment plans that included substantial investments in productive facilities to improve efficiency, product quality, and cost competitiveness. They also indicated that they intended to develop new product lines to increase demand for their products.

Since the safeguard measures have gone into effect, one producer, Slater Steels, has acquired one production facility and rationalized others in an effort to enhance integration of its production process and increase efficiency. Slater additionally entered into a new collective bargaining agreement allowing for increased flexibility in scheduling and performance-based pay initiatives. Several stainless steel producers have made capital investments in their facilities to increase product offerings and reduce lead times.

The legislative history of Section 204 of the Act directs that adjustment efforts should be evaluated in light of existing economic conditions. Domestic producers of stainless bar, stainless rod, and stainless wire described several factors that hindered their adjustment efforts. These included weak demand, increasing raw material costs, and the negative impact of low-priced imports from countries such as India not subject to the safeguard remedies.

In commenting on the adjustment efforts of the stainless bar, stainless rod, and stainless wire industries, parties opposed to the safeguard measures stated that they generally agree that U.S. producers have made positive efforts to adjust to import competition. They contended that the industry nevertheless must do more to close inefficient production facilities.

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# CHAPTER 1

## INTRODUCTION

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### Scope of the Study

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This study investigates the current competitive conditions facing the steel-consuming industries in the United States, with respect to the safeguard measures announced by the President on March 5, 2002, and with respect to foreign steel-consuming competitors not covered by such measures. As requested by the U.S. House of Representatives, Committee on Ways and Means (Committee) on March 18, 2003,<sup>1</sup> the analysis was conducted along sectoral lines, in order to assess the impact on differing segments of the U.S. manufacturing sector; and focused on steel products covered by the President's safeguard measures.<sup>2</sup> The report addresses the effects of the safeguard measures on steel-consuming industries and on ports and their related services including the following competitive conditions:<sup>3</sup>

- changes in employment, wages, profitability, sales, productivity, and capital investment of steel-consuming industries;
- an examination of the reported effects of the safeguard measures on factors such as prices for steel paid by consuming industries, steel shortages and availability, the ability of steel consumers to obtain required products or quality specifications, lead and delivery times, contract abrogation, sourcing of finished parts from overseas by customers of steel-consuming industries, and the relocation or shift of U.S. downstream production to foreign plants or facilities;
- the impact of international competitive factors, such as relative differences in steel costs to foreign steel-consuming industries not covered by the safeguard measures, and on steel consumers' exports and imports of steel-containing products;
- an examination of shifts in sourcing patterns in the United States, i.e., how much steel was purchased from domestic steel producers by domestic steel-consuming industries before the safeguard action, and how this sourcing has changed following the implementation of the safeguard measures; and
- a discussion of the likely impact on employment, profitability, capital investment, and international competitiveness of steel-consuming industries of (i) continuation of the safeguard measures for the period September 2003 to March 2005, and (ii) termination of the safeguard measures effective September 20, 2003.

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<sup>1</sup> A copy of the request letter from the Committee is in appendix A. The Commission's *Federal Register* notice of institution of this investigation is also in appendix A.

<sup>2</sup> Throughout this report, "steel" will refer to steel products covered by the safeguard measures announced by the President on Mar. 6, 2002.

<sup>3</sup> Much of the data collected for this report was done so for 3 constructed years: (1) April 2000-March 2001, (2) April 2001-March 2002, and (3) April 2002-March 2003. Throughout this report, references to these constructed years will be made as 2000/01, 2001/02, and 2002/03. For example, if data in the report are reported for 2000/01, the actual data period being referred to is April 2000-March 2001.

In addition, as requested, the U.S. International Trade Commission (USITC or Commission) provides an analysis of the economy-wide effects of these safeguard measures (e.g., on costs borne by steel consumers, tariff revenues entering the U.S. Treasury, income to steel producers, and the net effect on the U.S. economy) using a simulation model.

Following receipt of the Commission's report,<sup>4</sup> the President, pursuant to section 203 of the Act,<sup>5</sup> imposed import relief in the form of tariffs and tariff-rate quotas on imports of certain steel products for a period of 3 years and 1 day effective March 20, 2002. A compilation of *Federal Register* notice citations concerning the section 203 safeguard measures is presented in appendix A. The steel products covered by these section 203 safeguard measures are listed in table 1-1, along with the short forms for referring to these products in this report. These products are described in more detail in Appendix B. In addition, information on the specific steel products covered by the safeguard measures and corresponding tariff and tariff-rate quota remedies is presented in tabulation following table 1-1.

**Table 1-1**  
**Summary of steel products covered by section 203 safeguard measures**

<b>Product group and product description</b>	<b>Short form for this report</b>
<b>A. Carbon and alloy steel:</b>	
1. Flat-rolled steel	
a. Slab	Slab
b. Plate, including cut-to-length plate and clad plate	Plate
c. Hot-rolled sheet and strip, including plate in coils	Hot-rolled
d. Cold-rolled sheet and strip, other than grain-oriented electrical steel	Cold-rolled
e. Corrosion-resistant and other coated sheet and strip	Corrosion resistant
2. Tin-mill products	Tin mill
<b>B. Carbon and alloy long products:</b>	
7. Hot-rolled bar and light shapes	Hot bar
8. Cold-finished bar	Cold bar
9. Rebar	Rebar
<b>C. Carbon and alloy tubular products and fittings:</b>	
10. Welded tubular products other than oil country tubular goods	Welded pipe
11. Flanges and fittings	Fittings
<b>D. Stainless steel products:</b>	
12. Bar and light shapes	Stainless bar
13. Rod	Stainless rod
14. Wire	Stainless wire

<sup>1</sup> Flat-rolled steel is one product composed of five different forms.

Source: USITC compilation.

<sup>4</sup> See *Steel*, Inv. No. TA-201-73, USITC Pub. 3479, December 2001. For additional information on the Commission's section 201 investigation, report, and remedy recommendations, see also, <http://www.usitc.gov/steel/>.

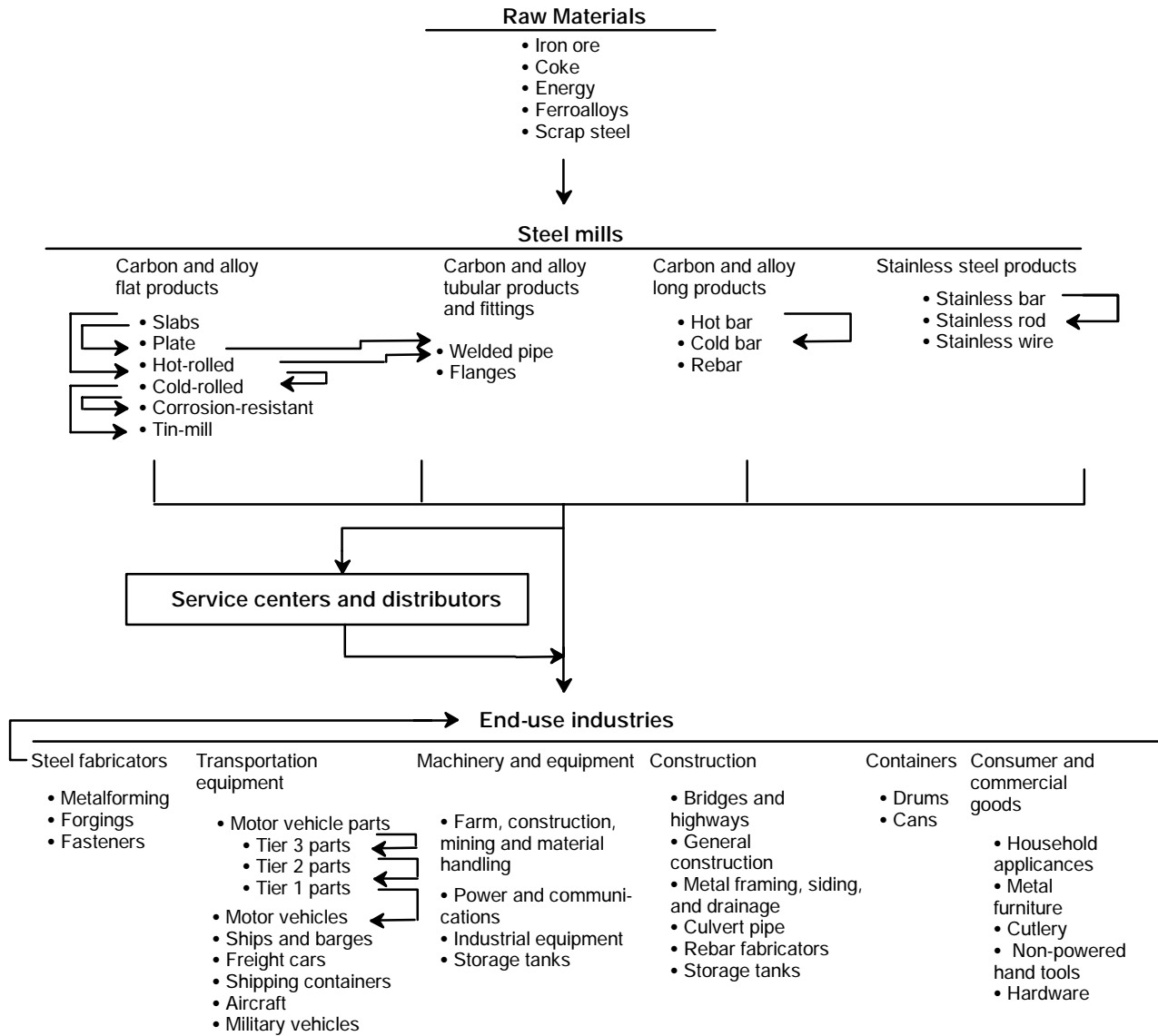
<sup>5</sup> 19 U.S.C. § 2253.

Item	Type of measure	First year of relief	Second year of relief	Third year of relief
		<b>Percent <i>ad valorem</i>, unless otherwise noted</b>		
Certain carbon and alloy flat-rolled steel:				
Slab	Tariff-rate quota (TRQ)	TRQ of 4.90 million metric tons with no increase in duties for imports below the within-quota level and an increase in duties of 30 percent <i>ad valorem</i> for imports above the within-quota level	TRQ of 5.35 million metric tons with no increase in duties for imports below the within-quota level and an increase in duties of 24 percent <i>ad valorem</i> for imports above the within-quota level	TRQ of 5.81 million metric tons with no increase in duties for imports below the within-quota level and an increase in duties of 18 percent <i>ad valorem</i> for imports above the within-quota level
Plate <sup>2</sup>	Increase in duties	30	24	18
Hot-rolled	Increase in duties	30	24	18
Cold-rolled <sup>3</sup>	Increase in duties	30	24	18
Coated	Increase in duties	30	24	18
Tin	Increase in duties	30	24	18
Hot bar	Increase in duties	30	24	18
Cold bar	Increase in duties	30	24	18
Rebar	Increase in duties	15	12	9
Welded products <sup>4</sup>	Increase in duties	15	12	9
Fittings	Increase in duties	13	10	7
Stainless bar	Increase in duties	15	12	9
Stainless rod	Increase in duties	15	12	9
Stainless wire	Increase in duties	8	7	6
<sup>1</sup> The remedy is currently in its second year. See 68 FR 15494, March 31, 2003. <sup>2</sup> Cut-to-length (CTL) and clad plate. <sup>3</sup> Other than grain-oriented electrical steel (GOES). <sup>4</sup> Other than oil country tubular goods (OCTG).				
Source: 67 FR 10553, March 7, 2002.				

Finally, figure 1-1 provides an illustration of the relationship between steel producers and steel-consuming industries. Firms in steel-consuming industries purchase steel both directly from steel mills and from steel service centers and distributors. In addition, some firms in steel-consuming industries also purchase steel containing products.

Figure 1-1

Flow diagram of steel products subject to safeguard measures and links among steel-consuming industries



Source: Compiled by USITC staff from public sources.

## Approach of the Study

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The Commission sought information for both the quantitative and qualitative analysis of the steel safeguard measures on steel-consuming industries from several sources, including U.S. industry data, current industry literature, questionnaire responses, and other materials developed by the Commission. Written public submissions in response to the Federal Register notice and interviews with industry officials, trade associations, government officials, and other interested parties provided additional information. The Commission also held public hearings on June 19 and 20, 2003, at which interested parties testified regarding the effect of the safeguards.<sup>6</sup>

In part because the steel safeguard measures were implemented only recently, it is difficult to isolate the effect of the steel safeguard measures on steel-consuming firms. Further, many adjustments to the safeguard measures that steel-consuming firms could take require time and may not be cost effective given the temporary nature of the measure. Therefore, in the 18 months since implementation, changes may not yet have occurred. Finally, the impact of the safeguard measures will have different effects on different industries; one of the most important distinctions may be between steel-consuming firms that produce products using steel largely covered by the safeguard measures and those that produce products that rely on steel not covered by the measures.

### *Questionnaire Responses*

The Commission sent questionnaires to more than 1,800 purchasers of steel products, and to 128 ports and providers of related services. The questionnaires were sent to purchasers of the covered products in the major consuming industries, which together account for more than 90 percent of steel shipments to manufacturing industries. The mailing list was mainly compiled from publicly available information on firms in 22 manufacturing industries, specified by North American Industry Classification System (NAICS) 4-digit categories, that were the largest consumers of steel products in 1997 (latest year available). Together these firms (specified by NAICS) consumed steel products valued at \$71.3 billion, or about 92 percent<sup>7</sup> of the total \$77.6 billion consumed by all manufacturing industries (table 1-2) during 1997. From lists of the top-75 firms in the largest steel-consuming industries among the corresponding 121 individual 6-digit NAICS categories, staff sent questionnaires to firms of various sizes (in terms of sales/employment). The total number of firms selected from a particular 6-digit NAICS category was based on the relative shares of steel consumed by the industry. This list was supplemented with firms identified by major trade associations and firms voluntarily identified by steel producers and importers in the Section 204 investigation as principal purchasers of steel for which import relief was granted. In addition, the questionnaires were also available on the Commission's website.<sup>8</sup>

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<sup>6</sup> See appendix C for listing of hearing participants.

<sup>7</sup> Based on unrounded data.

<sup>8</sup> The Commission instituted Investigation No. TA-204-9, *Steel: Monitoring Developments in the Domestic Industry* to report results of domestic steel industry developments since the President imposed tariffs and tariff-rate quotas on imports of certain steel products, effective Mar. 20, 2002. Copies of the questionnaire are available at [http://www.usitc.gov/investigation/332\\_452](http://www.usitc.gov/investigation/332_452).

**Table 1-2**  
**Steel consumption by manufacturing industries, 1997**

NAICS code	Industry description	Delivered cost of steel products consumed	Share of delivered cost of steel products consumed by all industries <sup>1</sup>
		-- Million Dollars --	----- Percent -----
3363	Motor vehicle parts manufacturing . . . . .	13836	17.8
3323	Architectural and structural metals manufacturing . . . . .	9427	12.1
3312	Steel product manufacturing from purchased steel . . . . .	7844	10.1
	Agriculture, construction, and mining machinery manufacturing . . . . .	4097	5.3
3321	Forging and stamping . . . . .	4024	5.2
3311	Iron and steel mills and ferroalloy manufacturing . . . . .	3655	4.7
3339	Other general purpose machinery manufacturing . . . . .	3612	4.7
3324	Boiler, tank, and shipping container manufacturing . . . . .	3305	4.3
3329	Other fabricated metal product manufacturing . . . . .	2911	3.8
	Machine shops; turned product; and screw, nut, and bolt manufacturing . . . . .	2663	3.4
3327	Spring and wire product manufacturing . . . . .	2042	2.6
3353	Electrical equipment manufacturing . . . . .	1753	2.3
	Ventilation, heating, air conditioning, and commercial refrigeration equipment manufacturing . . . . .	1706	2.2
3334	Coating, engraving, heat treating, and allied activities . . . . .	1664	2.1
3335	Metalworking machinery manufacturing . . . . .	1326	1.7
3372	Office furniture, including fixtures, manufacturing . . . . .	1320	1.7
3352	Household appliance manufacturing . . . . .	1259	1.6
3332	Industrial machinery manufacturing . . . . .	1122	1.5
	Other electrical equipment and component manufacturing . . . . .	990	1.3
3359	Hardware manufacturing . . . . .	927	1.2
3362	Motor vehicle body and trailer manufacturing . . . . .	918314	1.2
3322	Cutlery and hand tool manufacturing . . . . .	884	1.1
	All other . . . . .	6345	8.2
	<b>Total . . . . .</b>	<b>77629</b>	<b>100</b>

<sup>1</sup> Calculations based on unrounded data.

Source: Compiled from official statistics of the U.S. Department of Commerce, Census Bureau, *Material Summary, 1997 Economic Census, Manufacturing*.

These questionnaires requested detailed information about domestic and international competitive factors regarding purchases of steel products covered by the safeguard measures. Purchasers' questionnaire responses were received from 644 firms (or about one-third of those sent), with 159 of these firms reporting no purchases of steel products covered by the safeguard measures.<sup>9</sup>

Among the 128 port and port-related-service providers surveyed, questionnaire responses were received from 21 firms for about a 16-percent response rate, accounting for about 27 percent of total steel

<sup>9</sup> Of these responses, 419 steel-consuming firms provided both quantity and value data for their purchases of covered steel products. These purchases totaled \$18.8 billion for the year after the safeguards were implemented. Purchases by distributors totaling \$4.6 billion were excluded from this total to avoid double counting. This accounts for 22 percent of the estimated \$87.2 billion of steel purchased in 2002/03, \$62.8 billion from the domestic industry and \$14.6 of imported of steel. Domestic shipments were compiled by the USITC from official statistics of the U.S. Census Bureau, *Manufacturers' Shipments, Orders, and Inventories*. M3 Series A31AVS, not seasonally adjusted monthly data. Import data are official statistics of the USDOC. In addition, 11 steel-consuming firms submitted questionnaire responses which were received too late to be processed and analyzed.

imports covered by the safeguards in 2002/03. Although many of these questionnaires were returned with incomplete data, the Commission was able to assemble usable data for most of the questions posed.<sup>10</sup>

During the course of this investigation, the Commission learned that a document entitled “ITC Questionnaire Tip Sheet” (Tip Sheet) had been distributed to some of the companies that may have received the questionnaire or had been in a position to complete the questionnaire in this investigation. Because the Tip Sheet urged recipients to reply to the questionnaire in a misleading way or to exaggerate estimates in their responses, the Commission decided to investigate thoroughly the impact of this incident on the Commission’s fact-finding process. The scope and results of that investigation are detailed in Appendix H to this report. As detailed therein, the Commission found that the inclusion of the responses from those companies receiving the Tip Sheet did not significantly change the overall results of the study. Accordingly, the Commission has used questionnaire responses from all responding firms, including those that received the Tip Sheet, in the data contained in this report.<sup>11</sup>

### ***Economy-wide Analysis***

To provide advice on the economy-wide effects of the safeguard measures, the Commission simulated the imposition of the safeguard measures using a simulation model that captures the interrelationships between the steel products and the rest of the U.S. economy. The simulation model is an updated version of the USITC's Computable General Equilibrium (CGE) Model of the United States. The database underlying the model incorporates the most recent, 1997, benchmark table of the U.S. production technology from the Bureau of Economic Analysis (BEA) input-output accounts. The database also includes 2002 trade flows and National Income and Product Accounts (NIPA) data based on BEA input-output accounts. The entire database is projected forward to account for current economic conditions. The analytical exercise considers the economic implications of the imposition of section 203 safeguard measures on the modeled economy.

## **Organization of the Report**

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Chapter 2 presents information regarding recent changes in competitive conditions and the impact of the safeguard measures on steel-consuming industries from questionnaire responses, interviews with industry representatives, and publicly available sources.

Chapter 3 presents the market structure of ports and related-service providers with respect to steel they handle, and information regarding recent changes in competitive conditions and the impact of the safeguard measures on these industries from questionnaire responses, interviews with industry representatives, and publicly available sources.

Chapter 4 provides quantitative analysis of the economy-wide effects of the safeguard remedies. Specifically addressed are the costs borne by steel consumers, tariff revenues entering the U.S. Treasury, income to steel producers, and the net effect on the U.S. economy.

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<sup>10</sup> As detailed in chapter 4, incomplete responses by firms were omitted from the analysis in many cases.

<sup>11</sup> The Commission considers the question of whether the conduct by those participating in an investigation could compromise the objectivity of the information received in response to questionnaires to be a serious matter. Accordingly, the Commission will address separately the conduct during the Commission’s investigation of those responsible for the creation and distribution of the Tip Sheet.

Chapter 5 discusses the likely impact on the relevant factors identified for steel-consuming industries and the U.S. ports and related-service providers of continuing safeguard measures from September 2003 through March 2005, or alternatively, terminating safeguard measures effective September 20, 2003. It includes narrative responses from questionnaires and views of interested parties.



# CHAPTER 2

## REPORTED IMPACT OF SAFEGUARD MEASURES ON STEEL-CONSUMING INDUSTRIES

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This chapter presents information on the impact of the safeguard measures on steel-consuming industries and on recent changes in steel-consuming industries' conditions. It focuses mainly on the responses to the Commission questionnaire sent to steel-consuming purchasers but includes data from publicly available sources, hearing testimony, and written submissions.<sup>1</sup> It presents purchasers' views of how the safeguards measures and other factors have influenced steel prices, availability, contract abrogation, and investment trends since the measures were enacted. Overall data on employment, productivity, profitability, and wages for the steel-consuming firms that responded to the questionnaire for 2000/01, 2001/02 and 2002/03 are also presented.<sup>2</sup>

The impact of the safeguard measures depends on how increased duties affect the price and availability of each of the types of steel purchased and on the supply and demand conditions in each of the steel-consuming industries. Depending on these conditions, the effects of the safeguard measures on firms in different steel-consuming industries will vary. For example, while increases in steel prices have a direct effect on the costs of steel consuming firms, the impact of these increases on a firm depends on its ability to pass the price increase on to its customers. As discussed later in this chapter, some steel-consuming firms were able to pass on the increased cost of steel to their customers. However, a majority of firms responding to the Commission's questionnaire reported that they were unable to pass on the increased cost of steel and that their firm absorbed the increased cost.<sup>3</sup> An analysis of factors that might be expected to determine the effect of the safeguard measures on firms in specific steel-consuming industries is presented in appendix D.

Steel-consuming firms were asked to report on a number of ways that the safeguards may, or may not, have affected their firm. In particular, steel-consuming firms were asked about how the safeguard measures affected their firm's purchasing patterns, prices, sales, employment, wages, availability of steel products, lead times and delivery times, changes in contracts, and the ability to obtain required products or quality specifications. In general, as is discussed below, there were numerous incidents of contract abrogation; longer lead and delivery times were experienced; sales were lost to foreign competitors; and purchases were shifted from imported to domestic steel. However, most purchasers reported that their ability to obtain required steel products or quality specifications did not change; that their customers did not shift to sourcing from foreign plants or facilities; or that they or other steel-consuming firms did not relocate or shift production to foreign plants or facilities after the implementation of the safeguards.

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<sup>1</sup> As noted in chapter 1, useable purchaser questionnaire responses were received from 485 steel-consuming firms; these firms accounted for approximately 22 percent of total steel purchased in 2002/03. Not all firms answered all questions so the total number of firms providing information may vary from question to question.

<sup>2</sup> Much of the data collected for this report was done so for 3 constructed years: (1) April 2000-March 2001, (2) April 2001-March 2002, and (3) April 2002-March 2003. Throughout this report, references to these constructed years will be 2000/01, 2001/02, and 2002/03. For example, if data are reported for 2000/01, the actual data period being referred to is April 2000-March 2001.

<sup>3</sup> Steel distributors accounted for the majority of firms that reported that they were able to pass on changes in the cost of steel due to the safeguard measures to their customers.

## Domestic Competitive Factors

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Given their recent imposition, as well as other economic factors impacting the steel consuming market, it is difficult to isolate the effect of the measures on steel-consuming firms. In the 18 months since implementation, firms may not have had time or sufficient financial resources to implement changes and may have only responded modestly because the measures are temporary. Many firms were unable to determine the specific effect of the safeguards on their firm, reporting that it is difficult to isolate the effects of the safeguard measures given the other changes that were also occurring at the time, including the closing and reopening of a number of flat steel producers; the recovery of the economy from the recession; and other factors that may affect specific steel-consuming industries. Finally, the impact of the safeguard measures will have different effects on different industries; one of the most important distinctions may be between steel-consuming firms that produce products using steel largely covered by the safeguard measures and those that produce products that instead rely on steel not covered by the measures.

Macroeconomic trends can strongly affect what happens to steel producing and steel-consuming firms. Economic conditions may vary across sectors; while construction may be facing high demand, auto parts, for instance, may see falling demand. Figures 2-1 and 2-2 show data for the value of shipments for durable goods, employment of production workers, and wages since 1990/91. These indicators of durable goods shipments, employment, and wages followed consistent trends in the years before the period for which the Commission collected data (before the April 2000 to March 2003 period). Figure 2-1 shows that manufacturing shipments followed an increasingly seasonal trend since the 1990/91 period; employment was relatively flat during that time. As seen in Figure 2-2, hours worked were also generally flat over the entire period, while hourly earnings consistently increased. None of these factors appears to change its trend after the imposition of the safeguard measures.

### *Steel Prices*

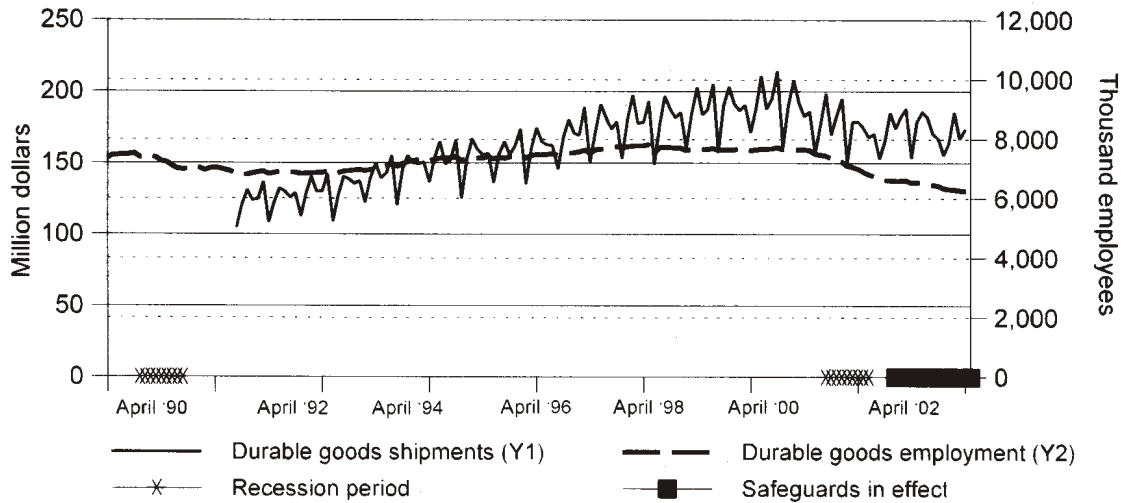
As noted earlier, safeguard measures can have a direct effect on the prices of steel, which can then directly affect steel-consuming industries. The Commission collected both price data from public sources, as well as qualitative information from steel-consuming firms in the Commission's purchasers' questionnaire. Prices (based on the PPI) for most of the steel products generally increased after the imposition of the safeguard measures; however, public data indicate a decline in these prices after that initial increase but remained higher than pre-safeguard prices for several products including hot-rolled, cold-rolled, corrosion, bars, and pipe and tube.

Data from the Bureau of Labor Statistics (BLS) for several steel products subject to the safeguard measures indicate that prices for some of these products increased following the implementation of the safeguard measures in March 2002 (see figures 2-3 through 2-13).<sup>4</sup> These data also

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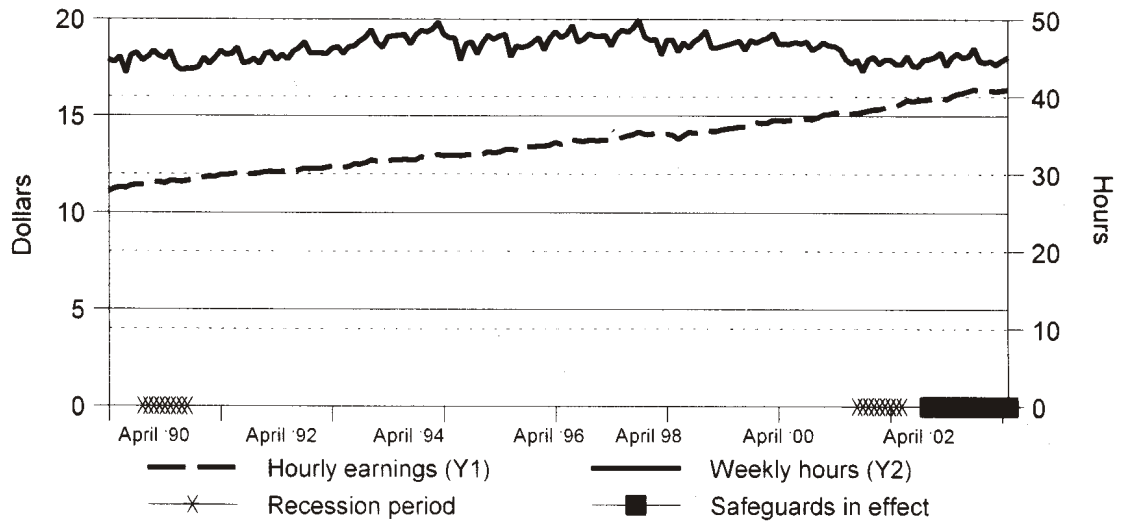
<sup>4</sup> These figures are based on the Producer Price Index (PPI) compiled by BLS. The PPI is a family of indices that measures the average change over time in selling prices received by domestic producers of goods and services. PPIs measure price change from the perspective of the seller and represents the first commercial transaction for many products and some services. PPI data represent a mix of steel sold at spot prices and on a contract-price basis. Steel mills were selling in both markets and those forms for which spot-market prices were available include: hot-rolled carbon sheet, cold-rolled carbon sheet, hot-dipped galvanized sheets and strip, cold-finished carbon bars, stainless steel sheet, and carbon concrete reinforcement bars.

**Figure 2-1**  
**Durable goods manufacturing, value of shipments and employment of production workers, January 1990-June 2003**



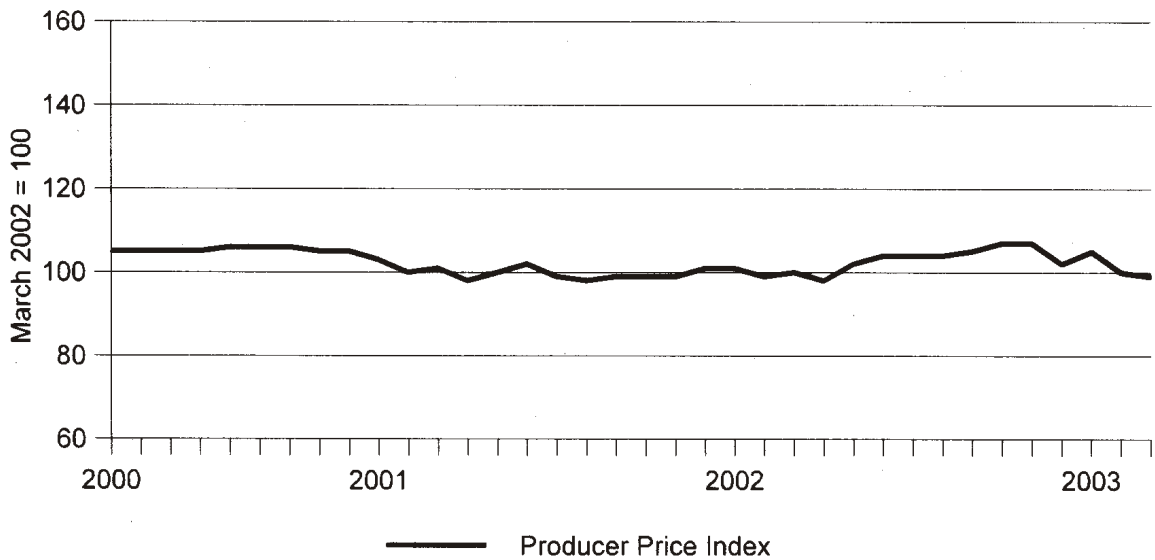
Source: Official statistics of the U.S. Bureau of Labor Statistics, Employment, Hours, and Earnings--National (CE) Series 19, CEU3100000003; U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders--Series M3, UMDMVS; and statistics of the National Bureau of Economic Research, U.S. Business Cycle Expansions and Contractions.

**Figure 2-2**  
**Durable goods manufacturing, average hourly earnings and average weekly hours, including overtime, January 1990-June 2003**



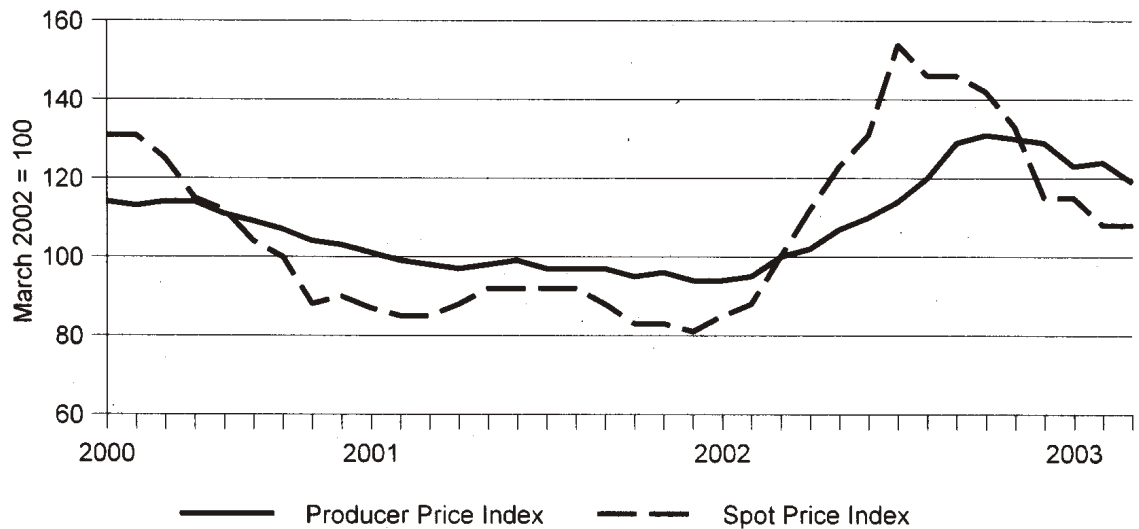
Source: Official statistics of the U.S. Bureau of Labor Statistics, Employment, Hours, and Earnings--National (CE), series 30, CEU3100000005, CEU3100000006; and statistics of the National Bureau of Economic Research, U.S. Business Cycle Expansions and Contractions.

**Figure 2-3**  
**Index of U.S. prices for carbon plates, April 2000-March 2003**



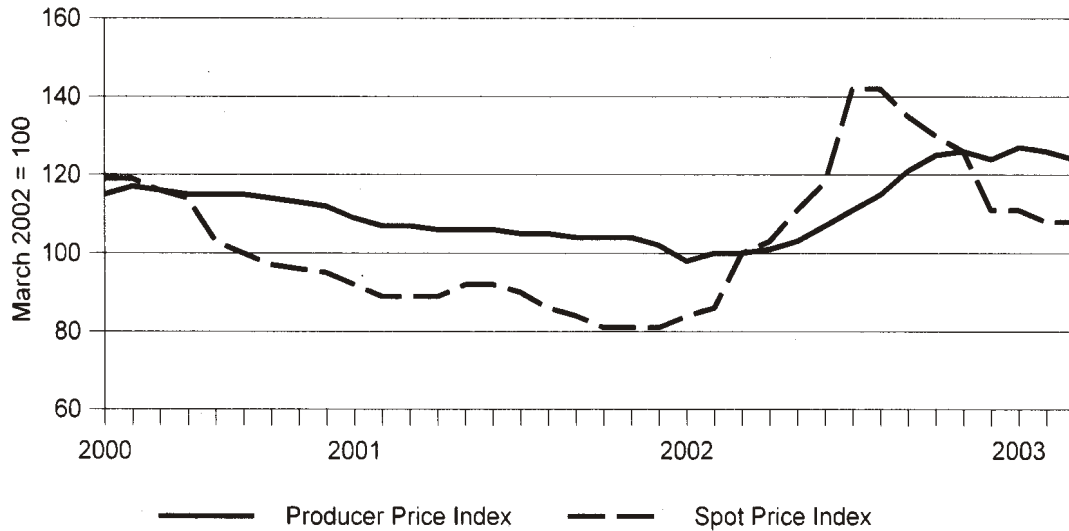
Source: Official statistics of the U.S. Bureau of Labor Statistics, Producer Price Index, Series WPU1070412.

**Figure 2-4**  
**Index of U.S. prices for sheet, hot-rolled, carbon, April 2000-March 2003**



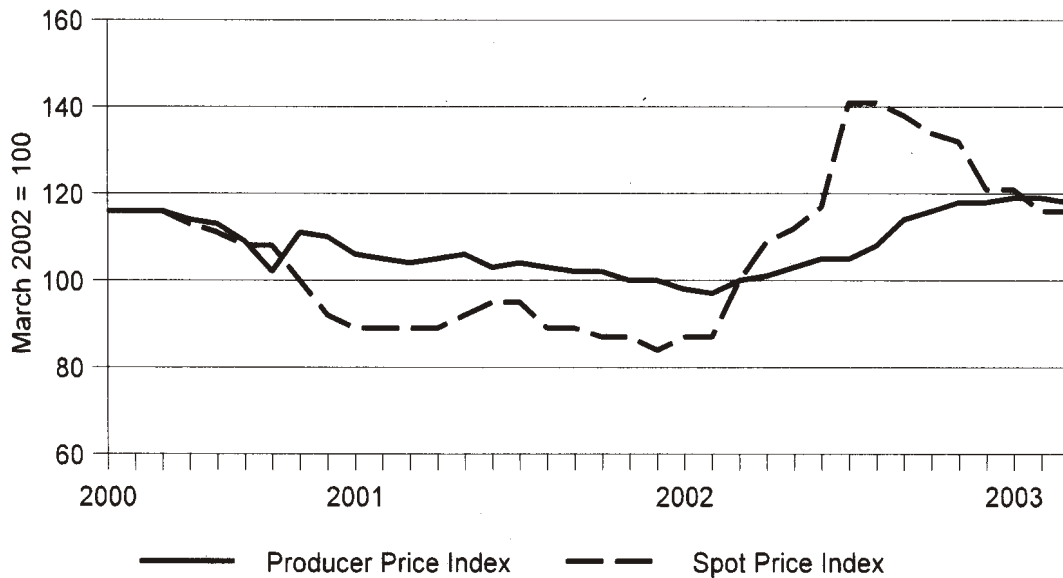
Source: Official statistics of the U.S. Bureau of Labor Statistics, Producer Price Index, Series WPU10170311 and Purchasing Magazine.

**Figure 2-5**  
**Index of U.S. prices for sheets, cold-rolled, carbon, April 2000-March 2003**



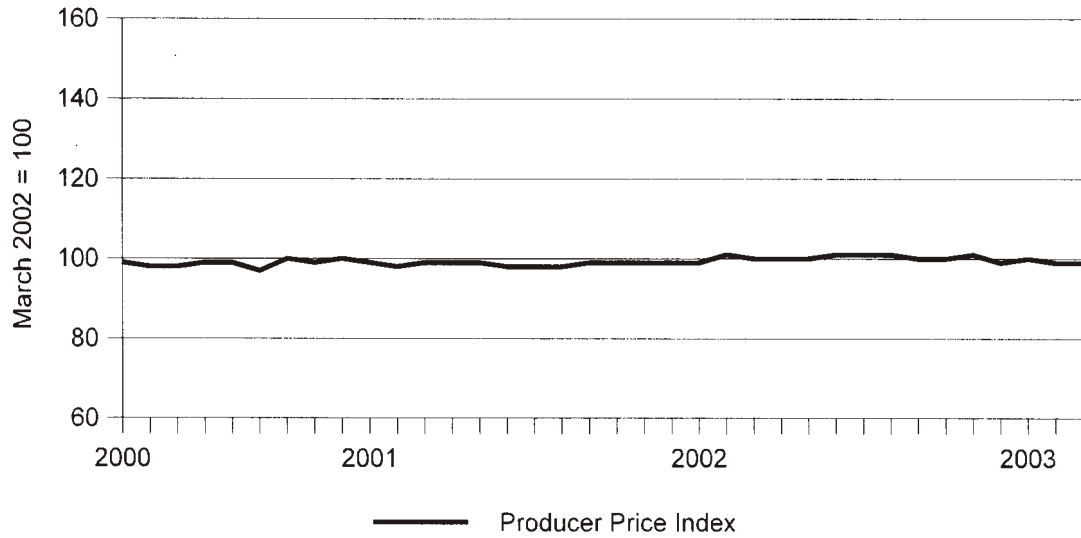
Source: Official statistics of the U.S. Bureau of Labor Statistics, Producer Price Index, Series WPU10170711 and Purchasing Magazine.

**Figure 2-6**  
**Index of U.S. prices for sheets and strip, hot-dipped galvanized, April 2000-March 2003**



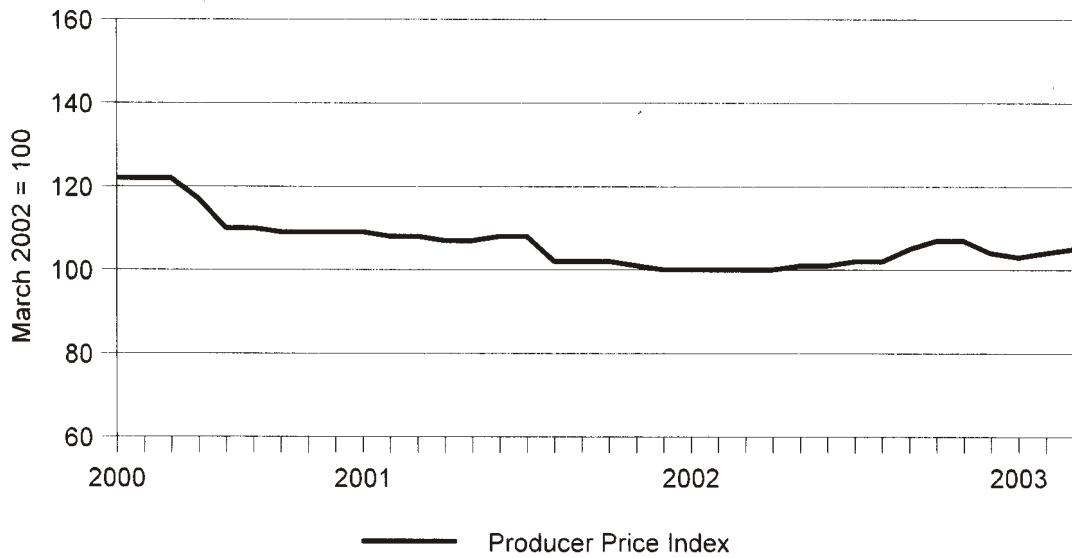
Source: Official statistics of the U.S. Bureau of Labor Statistics, Producer Price Index, Series WPU10170313 and Purchasing Magazine.

**Figure 2-7**  
**Index of U.S. prices for tinplate, April 2000-March 2003**



Source: Official statistics of the U.S. Bureau of Labor Statistics, Producer Price Index, Series WPU10170326.

**Figure 2-8**  
**Index of U.S. prices for bars, light structurals, carbon, April 2000-March 2003**



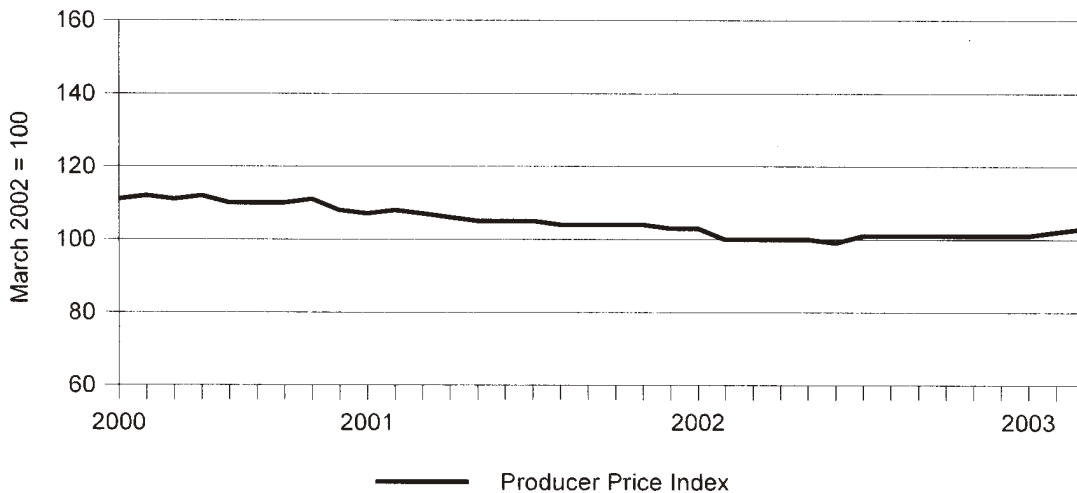
Source: Official statistics of the U.S. Bureau of Labor Statistics, Producer Price Index, Series WPU10170424.







**Figure 2-13**  
**Indexed of U.S. prices for wire, stainless, April 2000-March 2003**



Source: Official statistics of the U.S. Bureau of Labor Statistics. Producer Price Index. Series WPU10170551.

indicate that after the initial increase, prices then tended to decline in late 2002 and early 2003. As shown in the figures, spot market prices were much more volatile during the April 2000-July 2003 period than those reported by the PPI.

At the USITC hearings, most steel-consuming firms who testified reported substantial increases in the price of steel after the imposition of the safeguard measures. The Chairman of Metaldyne Corporation, an automotive parts supplier, testified that “[s]ince the tariffs were implemented, we have experienced up to 10 percent price increases in aggregate, and up to 50 percent price increases of specific items.”<sup>5</sup> The President of a fasteners company testified that “[Our] relationship with our largest steel supplier has been positive and constructive, but the day after the steel 201 tariffs were imposed they broke its [sic] contract and imposed a 40 percent price increase.”<sup>6</sup> An officer of Acuity Lighting testified that “All of them [contract agreements] were broken in terms of the prices. All of the prices went up 20 to 30 percent, all of them.”<sup>7</sup> Some purchasers also noted, however, that prices had eased somewhat after the first quarter of 2003.<sup>8</sup>

<sup>5</sup> Testimony of Timothy D. Leuliette, Chairman, President, and Chief Executive Officer, Metaldyne Corp., transcript of Commission hearing, June 19, 2003, p. 86.

<sup>6</sup> Testimony of Wes Smith, President, E&E Manufacturing Company, transcript of Commission hearing, June 19, 2003, p. 103.

<sup>7</sup> Testimony of Tom Naramoore, Senior Vice President of Global Sourcing, Acuity Lighting, transcript of Commission hearing, June 19, 2003, p. 270.

<sup>8</sup> Testimony of John Stropki, Executive Vice President and Chief Operating Officer, Lincoln Electric Holdings, Inc., transcript of Commission hearing, June 19, 2003, p. 273. “In the early stages of the 201 we saw the 25 to 30 percent increase. Again that was driven by contract terminations by the Steel Supply Centers. Since that period of time we have entered into new contracts they [sic] are lower in than that but still higher than the pre-tariff number. The current range is probably in the 12 to 15 percent increase over the pre-tariff number.” See also testimony of Timothy D. Leuliette, Chairman, President, and Chief Executive Officer, Metaldyne Corp., transcript of Commission hearing, June 19, 2003, p. 182; Larry A. Denton, President and Chief Executive Officer, Dura Automotive Systems, Inc., transcript of Commission hearing, June 19, 2003, p. 183.

Some steel-consuming purchasers testified that they did not experience large increases in price after the imposition of the safeguard measures. Nucor Cold Finish and Nucor Fasteners observed minor price increases for hot and cold bar.<sup>9</sup> These increases followed a 9-year low in the price of cold bar.<sup>10</sup> Most rebar purchasers who testified also reported little change in the price of rebar attributable to safeguard measures and a larger impact due to other factors, principally higher scrap and energy costs.<sup>11</sup> Table 2-1 summarizes the information provided by industry representatives with regard to price increases that occurred since the imposition of the safeguard measures.

In the Commission's questionnaire, steel-consuming firms were asked to report if prices changed for steel products that are covered by the safeguard measures after April 1, 2002; these firms were asked to provide information on price changes for products purchased on both a spot basis and on a contract basis.<sup>12</sup> Overall, slightly more than one-half of the responding firms (51 percent) reported that spot prices for steel covered by the safeguard measures had changed since April 1, 2002 and half reported that spot prices had not changed (table 2-2). On an industry basis, in 7 of the 15 identified industries, most firms reported that spot prices had changed; in the other 8 industries most firms reported that spot prices had not changed. Those industries with a majority of firms reporting changes in spot prices include distributors, producers of hot/cold/coated steel forms, welded pipe, bar finisher/wire producers, fabricators, motor vehicles, and household appliances. The other industries (fasteners, motor vehicle parts, shipping containers/military ships, heavy machinery, construction, steel barrels and cans, and furniture) had more firms reporting that spot prices for steel subject to the safeguard measures had not changed since April 1, 2002.

Steel-consuming firms also were asked in the questionnaire about any changes in contract prices for steel products covered by the safeguard measures since April 1, 2002 (table 2-2). Of the 434 steel-consuming firms that provided responses to this question, 48 percent reported that prices changed for steel products purchased on a contract basis. Steel-consuming industries in which a majority of responding firms reported changes in their contract prices include: fasteners, steel fabricators, motor vehicles, motor vehicle parts, heavy machinery, steel barrels and cans, and household appliances. Industries with the largest number of firms reporting changes in contract prices were the motor vehicle parts industry (56 firms reporting) and the steel fabrication industry (44 firms). Industries with the largest percent of firms reporting changes in contract prices including household appliances (90 percent), motor vehicle parts (74 percent), steel barrels and cans (72 percent), motor vehicles (67 percent), and fabricators (60 percent). Just under one-half of the industries (7 of 15) had more firms reporting unchanged contract prices for steel subject to the safeguard measures. Industries with a significant percent of responding firms reporting no changes in contract prices include distributors (79 percent), producers of hot/cold/coated steel forms (79 percent), bar finishers (74 percent), shipping containers (75 percent), and construction (67 percent).

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<sup>9</sup> Testimony of Terry Cieslinski, Cold-Finish Manager, Nucor Cold Finish, transcript of Commission hearing, June 20, 2003, p. 564; and testimony of Scott Wulff, General Manager, Nucor Fasteners, transcript of Commission hearing, June 20, 2003, p. 566.

<sup>10</sup> Testimony of Terry Cieslinski, Cold-Finish Manager, Nucor Cold Finish, transcript of Commission hearing, June 20, 2003, pp. 563-564.

<sup>11</sup> Testimonies of Jayson Turner, President, Arrowhead Rebar Co., transcript of Commission hearing, June 20, 2003, p. 687, and Tom Yarbrough and Carl Schoenleber, General Managers, SMI Rebar, CMC Steel Group, transcript of Commission hearing, June 20, 2003, pp. 683, 688.

<sup>12</sup> Firms were not asked if they purchased on contract or spot basis. Firms that reported that they did not purchase on contract were recorded as having unchanged contract prices, while those that reported that they did not purchase on spot were recorded as having unchanged spot prices.

**Table 2-1**  
**Price increases after imposition of the safeguard measures as reported at the Commission hearing by U.S. steel-consuming firms**

<b>Firm/group</b>	<b>Industry</b>	<b>Type of subject steel<sup>1</sup></b>	<b>Maximum percent price increase</b>
Arvin Meritor	Automotive parts	cold-rolled, galvanized	<sup>2</sup> 25-40
Delphi	Automotive parts	hot-rolled, cold-rolled, other	<sup>3</sup> 5-48
DURA	Automotive parts	strip steel	<sup>4</sup> 30
Federal Mogul	Automotive parts	unspecified	<sup>5</sup> 25
Metaldyne	Automotive parts	hot-rolled special quality bar	<sup>6</sup> 10
Transpro	Automotive parts	unspecified	<sup>7</sup> 25
GR Spring & Stamping	Fabricator	unspecified	<sup>8</sup> 20-30+
Trans-Matic	Fabricator	low carbon sheet and strip	<sup>9</sup> 32
E&E Manufacturing	Fasteners	unspecified	<sup>10</sup> 40
Nucor Cold Finish and Fasteners	Fasteners	hot and cold bar	( <sup>11</sup> )
Textron Fastening	Fasteners	flat forms	<sup>12</sup> 30
HPBA	Furniture	cold-rolled and other forms	<sup>13</sup> 12-25
KI	Furniture	hot-rolled, cold-rolled	<sup>14</sup> 25-35
Acuity Lighting	Home appliances	unspecified	<sup>15</sup> 20-30
AHAM	Home appliances	hot-rolled, cold-rolled, galvanized	<sup>16</sup> 17-30
Lincoln Electric	Home appliances	hot-rolled, cold-rolled	( <sup>17</sup> )
Caterpillar	Machinery	unspecified	<sup>18</sup> 50
Olson International	Metal stamping	flat-rolled	<sup>19</sup> 30-40
Su-dan Corp.	Metal stamping	unspecified	<sup>20</sup> 30
Advanced Transformer	Power Machinery	unspecified	<sup>21</sup> 12
NRACP	Refrigeration products	galvanized	<sup>22</sup> 34
Dowding Industries	Tool & die	unspecified	( <sup>23</sup> )
Stripmatic	Tube producer	hot-rolled	<sup>24</sup> 7-30

<sup>1</sup> Information on the level of import relief associated with each of the steel products covered by the safeguard measures is presented in chapter 1.

<sup>2</sup> Jeffrey Stoner, Vice President, World Wide Procurement, Arvin Meritor, pp. 109, 210. The current price of cold-rolled is 13 percent higher and galvanized is 28 percent higher than what the price was before April 2002.

<sup>3</sup> Eric Sandford, Deputy Director, Global Purchasing, Delphi Corp., pp. 121-122 and written testimony.

<sup>4</sup> Larry A. Denton, President and Chief Executive Officer, DURA Automotive Systems, pp. 90-92.

<sup>5</sup> Ramzi Y. Hermiz, Vice President, Global Supply Chain Management, Federal-Mogul, Corp., p. 114. Reported that in the spot market, prices were 100 percent higher than contract prices.

<sup>6</sup> Timothy D. Leuliette, Chairman, President, and Chief Executive Officer, Metaldyne Corp., p. 86. For certain products, the price increase was 50 percent.

<sup>7</sup> Layne Gobrogge, Vice President of Marketing, Transpro, p. 118.

<sup>8</sup> Merle Emery, President, GR Spring and Stamping, p. 408.

<sup>9</sup> Patrick A. Thompson, Founder and Chief Executive Officer, Trans-Matic, pp. 417-419.

<sup>10</sup> Wes Smith, President, E&E Manufacturing Co., p. 103.

<sup>11</sup> Terry Cieslinski, Cold-Finish Manager, Nucor Cold Finish, p. 564 and Scott Wulff, General Manager, Nucor Fasteners, p. 566. Reported only that the price increase was minor and based on a 9-year low.

<sup>12</sup> Richard Clayton, President, Textron Fastening systems, p. 99.

<sup>13</sup> Jack Goldman, General Counsel and, Director of Government Affairs, Hearth, Patio & Barbecue Association, pp. 733-734.

<sup>14</sup> Gary N. Van Handel, Director, Supply Chain Management, KI, Inc., p. 739.

<sup>15</sup> Tom Naramore, Senior Vice President of Global Sourcing, Acuity Lighting, p. 239.

<sup>16</sup> Joseph M. McGuire, President, Association of Home Appliance Manufacturers(AHAM), p. 730.

<sup>17</sup> John Stropki, Executive Vice President and Chief Operating Officer, Lincoln Electric Holdings Inc., p. 248. Reported that his company had experienced higher prices for both hot-rolled and cold-rolled sheets.

<sup>18</sup> Dan M. Murphy, Executive Vice President, Global Purchasing Division, Caterpillar Inc., p. 274.

<sup>19</sup> Edward Farrer, Manager, Purchases, Olson International Limited, p. 413.

<sup>20</sup> Teresa Amman, Director, Supply Team Management, Su-dan Corp., p. 425.

<sup>21</sup> Brian Dundon, President, Advanced Transformer, p. 244.

<sup>22</sup> Bryan Kelly, President, National Refrigeration and Air-Conditioning Products, Inc., pp. 723-724. The price of galvanized steel has decreased to a 34 percent price increase from the May 2002 price.

<sup>23</sup> Chris Dowding, President, Dowding Industries, Inc., p. 403. Reported that her company experienced between a \$436,000 and a \$702,000 increase in costs.

<sup>24</sup> William J. Adler, Jr., President and Co-owner, Stripmatic Products, Inc., pp. 422-423.

Source: Testimony submitted to the Commission at its hearings on June 19, 2003 and June 20, 2003.

**Table 2-2**  
**Number of steel-consuming firms reporting changes in prices due to the safeguard measures, by industry**

Steel-consuming sector/industry category	Changes in contract prices		Changes in spot prices		Important factor(s)		
	No	Yes	No	Yes	Safeguard		Not safeguard
					Only	And other	
<b>Steel-product producers/processors/distributors:</b>							
Distributors . . . . .	59	16	36	41	14	38	4
Producers of hot/cold-rolled or coated product . . . . .	15	4	5	15	1	14	1
Welded pipe producers . . . . .	6	7	2	17	1	17	1
Bar and wire finishers . . . . .	14	5	6	13	5	9	1
Fastener producers . . . . .	9	10	11	7	5	5	0
Steel fabricators . . . . .	30	44	27	42	39	24	3
<b>Transportation:</b>							
Motor vehicles . . . . .	4	8	3	7	2	7	0
Motor vehicle parts . . . . .	20	56	31	22	31	25	1
Ships and shipping containers; military . . . . .	6	2	6	2	1	2	0
<b>Machinery and equipment:</b>							
Heavy machinery . . . . .	6	9	8	4	0	10	0
Power, other machinery . . . . .	18	12	22	4	8	8	0
<b>Construction</b> . . . . .	23	11	18	14	7	13	1
<b>Containers:</b>							
Steel barrels and cans . . . . .	3	8	6	4	6	4	0
<b>Consumer and commercial goods:</b>							
Household appliances . . . . .	1	9	3	5	2	7	1
Furniture, hardware, cutlery . . . . .	13	6	11	7	6	3	0
Total . . . . .	227	207	195	204	128	186	13
<i>Percent of responses</i> . . . . .	48	42	49	51	39	57	4

Source: Compiled from data submitted in response to Commission questionnaires.

Steel-consuming firms also were asked, if prices for steel subject to the safeguard measures did change, what factors influenced the prices of these steel products. These firms were asked if (1) the safeguard measures were the *only* important factor influencing prices, (2) the safeguard measures were one of several factors that influenced prices, or (3) the safeguard measures did not affect the price. A significant number of responding steel-consuming firms (39 percent) reported that the safeguard measures were the only important factor in price changes (table 2-2). Fifty-five percent (70 of 128) of firms reporting that the safeguard measures were the only important factors were in the motor vehicle parts and fabrication industries. Fifty-seven percent of steel-consuming firms reported that the safeguard measures were one of several factors that influenced price. Only about 4 percent of responding firms that reported price changes reported that the safeguard measures did not affect prices.

Factors other than the safeguard measures that reportedly caused prices to increase included steel producing plant shut downs (reported by 43 firms) and changes in capacity utilization rates (reported by 18 firms). Legacy costs, capital costs, reduced efficiency, and other overhead costs were reported by a few firms as additional factors that caused prices to increase (table 2-3). In 12 of the 15 industries examined, a majority of steel-consuming firms reported plant shut downs were an important factor. In 5 of the 15 industries, some firms reported capacity utilization rates were important in increasing prices. Firms in the motor vehicle parts, fabricator, construction, and steel distributor industries accounted for the majority of responses. The plants that shut down mainly produced flat product so firms that purchased these products would have been most directly affected by their closing. Thirty-three firms reported that capacity utilization, plant shutdowns, and plant openings were factors that decreased prices. Plant openings were listed most frequently as an important factor in reducing the price of steel. Firms in

**Table 2-3**  
**Number of steel-consuming firms that reported factors other than safeguards that increased or decreased steel price, by industry**

	Increased the cost of steel				Reduced the cost of steel				
	Legacy costs	Capital costs	Capacity utilization rates	Plant shut downs	Other over-head	Reduced efficiency	Capacity utilization rates	Plant shut-downs	Plant openings
<b>Steel-product producers/processors/distributors:</b>									
Distributors .....	0	2	3	7	0	0	0	1	5
Producers of hot/cold-rolled or coated product .....	0	0	1	6	0	0	1	1	3
Welded pipe producers .....	0	0	1	5	0	0	0	0	4
Bar and wire finishers .....	0	1	1	2	0	0	0	0	0
Fastener producers .....	0	0	0	1	0	0	0	0	0
Steel fabricators .....	0	1	2	4	1	1	1	0	1
<b>Transportation:</b>									
Motor vehicles .....	0	0	1	1	0	0	1	0	0
Motor vehicle parts .....	1	0	4	10	0	0	1	0	3
Ships and shipping containers; military .....	0	0	0	0	0	0	0	0	0
<b>Machinery and equipment:</b>									
Heavy machinery .....	0	0	0	1	0	0	1	0	0
Power, other machinery .....	0	0	0	2	0	0	1	0	2
<b>Construction</b> .....	1	1	3	2	0	0	3	0	0
<b>Containers:</b>									
Steel barrels and cans .....	0	0	0	0	0	0	0	0	2
<b>Consumer and commercial goods:</b>									
Household appliances .....	0	0	1	2	0	0	2	0	1
Furniture, hardware, cutlery .....	0	0	1	0	0	0	0	0	0
<b>Total</b> .....	2	5	18	43	1	1	11	2	21

Source: Compiled from data submitted in response to Commission questionnaires.

the distributor, producer of hot/cold/coated steel forms, welded pipe and motor vehicle parts industries provided the majority of responses.

In addition to the information from the questionnaires, at the USITC hearings, SMI Rebar testified that price increases were attributable to increases in scrap and natural-gas costs that could be passed on to customers under the safeguards.<sup>13</sup> Nucor Cold Finish and Nucor Fasteners also testified that much of the price movement in hot bar was due to increased global scrap costs.<sup>14</sup>

Those steel-consuming firms reporting any increase in the price of the steel they purchased also were asked how their firm responded to the price increase. Firms were asked to indicate if they successfully passed on the steel price increases to their customers; whether they absorbed any increased steel costs without changes in operations; whether they absorbed the increased steel costs but made changes in operations such as layoffs, reduced overhead costs, etc.; and whether they shifted production off shore, or outsourced to foreign sources to limit the amount of higher priced steel purchased (table 2-4). Overall, about 19 percent of responding steel-consuming firms (71 of 381) reported that they were successful in passing on any increased cost of steel to their customers, while 43 percent (162 of 381) reported that they were unsuccessful in passing on any increase. Sixteen percent of responding steel-consuming companies (59 of 381) reported that they were able to pass on price increases in some instances but not in others. On a sectoral basis, steel distributors accounted for a significant number (36 of 71) of the firms reporting that they were able to pass on any increased cost or were sometimes able to pass on price increases. In addition, a significant number of fabricators (20 firms) also noted that they were, at least sometimes, able to pass on any increase in the cost of steel. Most of the specified sectors had more firms reporting that they were unsuccessful in passing on the increased cost of steel to their customers. In particular, a majority of responding firms in industries such as fasteners, motor vehicles, motor vehicle parts, power equipment, steel barrels and cans, and furniture reported an inability to pass on steel price increases. Information from the hearing and from written submissions to the Commission concerning the ability to pass on price increases generally supports the information obtained from the questionnaires.<sup>15</sup>

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<sup>13</sup> Testimony of Carl Schoenleber, General Manager, CMC Steel Group, SMI Rebar South Carolina, transcript of Commission hearing, June 20, 2003, p. 688.

<sup>14</sup> Testimony of Terry Cieslinski, Cold-Finish Manager, Nucor Cold Finish, transcript of Commission hearing, June 20, 2003, p. 564; and testimony of Scott Wulff, General Manager, Nucor Fasteners, transcript of Commission hearing, June 20, 2003, p. 566.

<sup>15</sup> For example, Jack H. Goldman, General Counsel and Director of Government Affairs, Hearth, Patio & Barbecue Association (HPBA), written submission to the USITC, for Investigation No. 332-452, June 20, 2003, p. 4; Joseph M. McGuire, President, AHAM, written submission to the USITC, for Investigation No. 332-452, June 20, 2003, p.4; Mitsubishi Motors North America, written submission to the USITC, for Investigation No. 332-452, June 20, 2003, p. 1; AIAM, post-hearing submission to the USITC, for Investigation No. 332-452, June 26, 2003, p. 2; and testimony of Gary Van Handel, Director, Supply Chain Management, Ki, Inc., transcript of Commission hearing, June 20, 2003, p. 739.

**Table 2-4**  
**Number of steel-consuming firms reporting what their firm did or tried to do in response to steel price increases, by industry**

Steel-consuming sector/industry category	Pass on price increase			Absorbed price increase			Shifted production sourcing	
	Success-fully	Unsuccessful-fully	Both <sup>1</sup>	Unchanged operations	Changed operations	Both <sup>1</sup>	Both <sup>1</sup> overseas	Other
<b>Steel-product producers/processors/distributors:</b>								
Distributors .....	36	21	14	15	16	4	4	11
Producers of hot/ cold-rolled or coated product .....	6	5	3	8	4	1	0	2
Welded pipe producers .....	7	8	3	5	3	2	0	2
Bar and wire finishers .....	3	9	1	4	8	0	2	3
Fastener producers .....	1	8	3	6	7	1	1	1
Steel fabricators .....	4	36	20	19	30	9	13	10
<b>Transportation:</b>								
Motor vehicles .....	0	3	0	6	2	0	2	1
Motor vehicle parts .....	3	38	7	27	30	1	8	3
Ships and shipping containers; military .....	1	1	0	0	2	0	0	2
<b>Machinery and equipment:</b>								
Heavy machinery .....	0	2	0	3	8	1	1	1
Power, other machinery .....	0	7	2	11	6	2	3	5
<b>Construction</b> .....	9	10	3	8	4	5	1	3
<b>Containers:</b>								
Steel barrels and cans .....	0	5	3	1	8	0	1	0
<b>Consumer and commercial goods:</b>								
Household appliances .....	1	3	0	1	4	1	3	2
Furniture, hardware, cutlery .....	0	6	0	3	3	2	4	1
Total .....	71	162	59	117	135	29	43	47
<i>Percent of responses<sup>2</sup></i> .....	19	43	15	31	35	8	11	12

<sup>1</sup> Firms that are reported in "Both" are not reported in the other referenced categories.

<sup>2</sup> Firms were able to answer for more than category (e.g., firms could report that they were unsuccessful in passing on the price increase and that they absorbed the price increase without changing operations). Therefore, the percent of responses for each category are based on the total number of firms that provided a response to this question (i.e., 381 firms).

Source: Compiled from data submitted in response to Commission questionnaires.

At the hearing, steel-consuming purchasers testified to increases in the price of steel. Most reported lower profits or price increases to their customers. Two hot-rolled manufacturers reported that they could not negotiate the normal type of cost reduction for increased purchase volumes or relief from their contractual annual sale price decreases required by their customers.<sup>16</sup> A representative from the Hearth, Patio, and Barbeque Association, representing firms in the consumer and commercial goods industries, testified that some of its member companies had seen increased production costs exceeding \$1 million, profit losses of nearly \$1.5 million, and lost contracts to foreign competitors worth \$5 million.<sup>17</sup> Wheatland Tube, a firm in the steel producers, processors, and distributors industry, reported that the differential relief of 30 percent tariffs on flat-rolled forms and 15 percent tariffs on other pipe and tube products imposed a cost-price squeeze, particularly in latter 2002 and early 2003. It predicted that this situation may render the firm unprofitable for the first time since 1984.<sup>18</sup> GR Spring and Stamping, a steel fabricator, stated that the tariffs had placed it in a cost-price squeeze.<sup>19</sup> E&E Manufacturing, a fastener producer, reported that its steel costs increased an average of 34 percent, or \$3.4 million through April 2003.<sup>20</sup> Advanced Transformer Co., a representative of the power machinery sector, testified that it increased its prices to its customers and immediately experienced an 18-percent drop in sales.<sup>21</sup>

### ***Contract Abrogation***

In the steel market, sales are made on both a spot and contract basis. Since the implementation of the steel safeguard measures, some steel-consuming firms have noted that contracts that they had in place were either modified or broken. However, most steel-consuming firms (71 percent) responding to the questionnaire reported that steel suppliers had not modified or abrogated any contracts with their firms since April 1, 2002 (table 2-5). Some industries had a higher percentage of firms reporting that steel suppliers had modified or abrogated contracts: household appliances (56 percent); motor vehicle parts (49 percent); motor vehicles (45 percent); fastener producers (42 percent); furniture, hardware, cutlery (37 percent); steel fabricators (32 percent); and heavy machinery (31 percent).

Steel-consuming firms were also asked to identify any difficulties that they experienced with their suppliers in relation to contract terms (table 2-5). Questionnaire respondents were asked if their suppliers were unable to (1) provide the steel product in a timely manner; (2) meet agreed upon product specifications; (3) meet the agreed upon quantity; (4) meet an increased quantity as specified in the contract; and (5) provide the steel product at the agreed upon price. While firms reported problems in all of the aforementioned areas, the most common response of steel-consuming firms (115) was that suppliers were unable to provide the steel product at the agreed price. The second most cited problem (65 firms) was that steel suppliers were unable to provide the product in a timely manner. A significant number of responding firms (33) also noted that steel suppliers were unable to provide the agreed upon

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<sup>16</sup> Testimony of Chris Dowding, President, Dowding Industries, Inc., transcript of Commission hearing, June 19, 2003, pp. 404-405.

<sup>17</sup> Testimony of Jack Goldman, General Counsel, Director of Government Affairs, HPBA, transcript of Commission hearing, June 20, 2003, pp. 733-734. The HPBA represents manufacturers consuming cold-rolled, plate, hot-rolled, corrosion-resistant, and stainless steel products.

<sup>18</sup> Testimony of Mark Magno, Vice President-Marketing, Wheatland Tube Co., transcript of Commission hearing, June 20, 2003, p. 578.

<sup>19</sup> Testimony of Merle Emery, President, GR Spring & Stamping, Inc., transcript of Commission hearing, June 19, 2003, pp. 407-408.

<sup>20</sup> Testimony of West Smith, President and Owner, E&E Manufacturing Co., Inc., transcript of Commission hearing, June 19, 2003, p. 103.

<sup>21</sup> Testimony of Brian R. Dundon, President, Advanced Transformer Co., transcript of Commission hearing, June 19, 2003, pp. 243-244.



**Table 2-5**

**Number of steel-consuming firms reporting whether and how steel suppliers modified or abrogated contracts after the imposition of the safeguard measures, by industry**

Steel-consuming sector/industry category	Contract modified or abrogated?		Suppliers were unable to provide					Other
	Yes	No	Product in a timely manner	Agreed product specs.	Agreed quantity	Increased quantity <sup>1</sup>	Product at agreed price	
<b>Steel-product producers/processors/distributors</b>								
Distributors . . . . .	13	74	7	2	4	0	9	1
Producers of hot/cold-rolled or coated product . . . . .	4	15	0	0	0	0	3	0
Welded pipe producers . . . . .	4	17	2	3	3	1	3	1
Bar and wire finishers . . . . .	4	16	3	0	1	0	4	0
Fastener producers . . . . .	8	11	3	0	1	1	5	2
Steel fabricators . . . . .	24	51	14	2	6	3	22	2
<b>Transportation:</b>								
Motor vehicles . . . . .	5	6	3	1	4	1	5	0
Motor vehicle parts . . . . .	35	36	18	6	8	2	30	2
Ships and shipping containers; military . . . . .	2	6	1	0	0	0	2	1
<b>Machinery and equipment:</b>								
Heavy machinery . . . . .	5	11	2	0	0	0	5	0
Power, other machinery . . . . .	9	24	2	0	1	0	9	1
<b>Construction</b> . . . . .	6	30	2	0	1	0	6	0
<b>Containers:</b>								
Steel barrels and cans . . . . .	3	9	1	0	0	0	2	1
<b>Consumer and commercial goods:</b>								
Household appliances . . . . .	5	4	3	1	1	0	5	0
Furniture, hardware, cutlery . . . . .	7	12	4	0	3	1	5	0
<b>Total</b> . . . . .	<b>134</b>	<b>322</b>	<b>65</b>	<b>15</b>	<b>33</b>	<b>9</b>	<b>115</b>	<b>11</b>
<i>Percent of responses</i> . . . . .	<i>29</i>	<i>71</i>	<i>(<sup>2</sup>)</i>	<i>(<sup>2</sup>)</i>	<i>(<sup>2</sup>)</i>	<i>(<sup>2</sup>)</i>	<i>(<sup>2</sup>)</i>	<i>(<sup>2</sup>)</i>

<sup>1</sup> An increased quantity as specified in the contract.

<sup>2</sup> Firms were able to answer for more than category (e.g., firms could report suppliers were unable to provide the product in a timely manner and that suppliers were unable to meet the agreed upon price). Therefore, the percent of firms responding is not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

quantity. The largest number of respondents reporting that suppliers did not meet the agreed upon price were in the distributor, fabricator, motor vehicle parts, and power equipment industries. Firms reporting that suppliers were unable to provide the product in a timely manner were most likely to be distributors, fabricators, and motor vehicle parts manufacturers.<sup>22</sup>

<sup>22</sup> A number of written submissions and comments made at the hearing noted that contracts were broken or modified. For example, firms in the motor vehicle parts industry reported that contract abrogation has been a problem since the implementation of the safeguard measures. MEMA written submission to the USITC staff, for Investigation No. 332-452, June 19, 2003, p. 3; Federal-Mogul Corp. written submission to the USITC staff, for Investigation No. 332-452, June 16, 2003, p. 3; testimony of Larry A. Denton, President and Chief Executive Officer, DURA Automotive Systems, Inc., transcript of Commission hearing, June 19, 2003, p. 91-92; testimony of Richard L. Clayton, President, Textron Fastenings Systems, Inc., transcript of Commission hearing, June 19, 2003, p. 100; and testimony of Wes Smith, President, E&E Manufacturing Co., Inc., transcript of Commission hearing, June 19, 2003, p. 103.

In addition, firms in the household appliance industry also reported difficulties. Testimony of Brian Kelly, President, National Refrigeration and Air Conditioning Products, transcript of Commission hearing, June 20, 2003,

Steel-consuming companies also were asked to provide specific information about the contracts that were modified or abrogated since April 1, 2002.<sup>23</sup> The steel products most frequently cited by steel-consuming firms were flat-rolled forms such as hot-rolled, cold-rolled, and coated steel (table 2-6). The most frequently cited problem was that the supplier did not provide the product at the agreed upon price.

**Table 2-6**  
**Number of steel-consuming firms reporting steel suppliers abrogated contracts after the imposition of the safeguard measures, by product**

Steel product	Number of firms	Who abrogated the contract(s)			Supplier did not provide as specified in contract				
		U.S.	Import	Not specified	Product in a timely manner	Agreed product specs.	Agreed quantity	Agreed price	Other
Plate	2	2	0	0	0	0	0	2	0
Hot-rolled	62	51	5	6	11	1	10	47	0
Cold-rolled	64	54	1	9	9	0	6	53	8
Corrosion resistant	27	21	1	4	0	0	4	23	4
Flat <sup>1</sup>	6	6	0	0	0	0	1	5	0
Tin mill	4	2	1	1	0	0	0	4	0
Hot Bar	5	5	1	0	0	0	0	5	0
Cold Bar	4	4	0	0	0	0	0	1	0
Welded pipe	3	3	0	0	0	0	0	3	0
Stainless <sup>2</sup>	4	0	4	0	0	0	0	3	1
Total	181	148	13	20	20	1	21	146	13

<sup>1</sup> Firms reporting contracts involving more than one flat product.

<sup>2</sup> Did not specify which stainless product.

Note.--No firms reported problems with contracts for slab, rebar, or fittings.

Source: Compiled from data submitted in response to Commission questionnaires.

Steel-consuming firms also provided information on any problems that resulted from modified or abrogated contracts. There were about 205 specific problems reported and the majority (143 or 70 percent) of these concerned lower profits experienced by the steel-consuming firm (table 2-7). A number of steel-consuming companies also reported that they experienced lower production (26 instances reported), and lower sales (14 instances reported). Overall, the reported loss in profits due to these problems totaled approximately \$190 million.

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p. 723; William Sutton, President, ARI, written testimony submission to the USITC for Investigation No. 332-452, June 20, 2003, p. 2; and M. Takahashi, President, Sharp Manufacturing Co. of America (SMCA), written submission to the USITC, for Investigation No. 332-452, June 26, 2003, p. 3.

In written submissions and at the hearing, steel producers reported that they did not necessarily agree with the argument that they have modified or abrogated contracts. United States Steel Corp., written submission to the USITC, for Investigation No. 332-452, June 27, 2003, p. 12; testimony of Terry Lisenby, Chief Financial Officer, Nucor Corp., transcript of Commission hearing, June 20, 2003, p. 608 and 619; and testimony of Robert Bussiere, General Manager, Fire Protection Products, Allied Tube and Conduit, transcript of Commission hearing, June 20, 2003, p. 608.

<sup>23</sup> The questionnaire asked responding firms to report information on the product involved, how the contract was modified or abrogated, the problems that resulted from modified or abrogated contracts (e.g., shut downs, layoffs, etc), the source of the steel, and the date that the contract was modified or abrogated. Because of the need to protect the confidentiality of responding firms, much of the specific information cannot be included.

**Table 2-7****Number of steel-consuming firms reporting problems and losses resulting from modified or abrogated contracts after the imposition of the safeguard measures, by product**

<b>Product</b>	<b>Shutdowns</b>	<b>Layoffs</b>	<b>Lower sales</b>	<b>Lower production</b>	<b>Lower profits</b>	<b>Other</b>	<b>Amount lost</b>
Plate .....	0	0	0	0	1	1	\$72,000
Hot-rolled .....	2	5	2	7	51	2	3,720,000
Cold-rolled .....	2	2	7	10	50	6	15,159,000
Corrosion resistant .....	0	1	3	6	21	1	310,300
Flat <sup>1</sup> .....	0	0	0	1	6	0	170,500,000
Tin mill .....	0	0	0	0	4	0	33,371
Hot bar .....	0	0	0	0	4	0	150,000
Cold bar .....	0	0	0	0	3	0	73,000
Welded pipe .....	0	0	1	2	0	0	0
Stainless <sup>2</sup> .....	0	0	1	0	3	0	0
<b>Total .....</b>	<b>4</b>	<b>8</b>	<b>14</b>	<b>26</b>	<b>143</b>	<b>10</b>	<b>190,017,671</b>

<sup>1</sup> Firms reporting contracts involving more than one flat product.

<sup>2</sup> Did not specify which stainless product.

Note.--No firms reported problems with contracts for slab, rebar, or fittings.

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in contracts also were reported in the question asking whether suppliers of domestically produced steel had changed marketing practices since April 1, 2002. A significant number of steel-consuming firms reported that producers had made some changes in contracts (table 2-8). For example, of the 292 firms that reported changes in marketing practices, 112 firms (38 percent) reported that contracts had changed. Most of these firms (92 of 112) reported that the length of period covered by contracts had shortened. Steel-consuming sectors that most frequently reported these changes include motor vehicle parts, fabricators, and distributors. In addition, a number of steel-consuming firms also reported that U.S. steel producers have refused to offer quotes to sell steel; companies in the steel distributors, motor vehicle parts, and fabricator industries accounted for the majority of these responses.

In addition to information submitted in questionnaire responses, steel-consuming purchasers testified at the hearing about changes in contract prices due to the safeguard measures. Several reported instances of contracts being broken and/or renegotiated at higher prices. Caterpillar testified that contracts for purchases of plate (and of hot-rolled and hot bar) were honored through 2002 but that availability was low, so purchasing from service centers was required, at up to a 50-percent increase in prices.<sup>24</sup> Acuity Brands-Lighting Group, a firm in the home appliance industry, testified that all of its price and supply arrangements for cold-rolled steel were broken after the imposition of the safeguard measures. All of their plants purchasing from both the integrated mills and service centers faced price increases of 20 to 30 percent.<sup>25</sup> Textron Fastening Systems, a fastener producer, testified that it had observed broken contracts, with most manufacturers refusing to ship unless their price increases were accepted. In turn, its suppliers (steel distributors) took the same approach.<sup>26</sup> E&E Manufacturing, a fastener producer, reported that its largest steel supplier broke the purchasing contract and raised its prices 40 percent the day after the steel safeguard measures were imposed. GR Spring and Stamping, a steel fabricator, testified that, with the increased cost and decreased supply of steel, service centers have occasionally broken their long-term

<sup>24</sup> Testimony of Dan M. Murphy, Executive Vice President, Global Purchasing Division, Caterpillar Inc., transcript of Commission hearing, June 19, 2003, p. 274.

<sup>25</sup> Testimony of Tom Naramoore, Senior Vice President, Global Sourcing, Acuity Brands Lighting Group, transcript of Commission hearing, June 19, 2003, p. 269.

<sup>26</sup> Testimony of Richard L. Clayton, President, Textron Fastening Systems, Inc., transcript of Commission hearing, June 19, 2003, pp. 99-100.

**Table 2-8  
Number of steel-consuming firms reporting that suppliers of U.S.-produced steel changed their marketing practices since April 1, 2002, by industry**

Steel-consuming sector/industry category	Did marketing practices change?		Reported changes in marketing practices									
	Yes	No	Fewer dis- counts	Longer lead times	Spot sales	More	Contract period	Refusal to quote	Larger mini- mum orders	Less flexible Delivery times	Product specs.	Other
<b>Steel-product producers/processors/distributors:</b>												
Distributors .....	45	39	29	19	9	8	3	11	15	11	22	10
Producers of hot/ cold-rolled or coated product .....	12	11	6	5	0	2	0	3	1	0	4	2
Welded pipe producers .....	11	10	8	10	1	1	0	1	5	4	9	6
Bar and wire finishers .....	10	9	7	5	1	2	0	1	4	5	5	3
Fastener producers .....	10	9	3	8	0	1	0	5	4	1	7	3
Steel fabricators .....	61	19	30	47	8	11	6	22	20	13	35	20
<b>Transportation:</b>												
Motor vehicles .....	9	2	3	7	0	1	4	2	5	3	5	4
Motor vehicle parts .....	59	17	31	44	8	6	2	25	20	19	35	26
Ships and shipping containers; military .....	3	4	1	3	1	0	0	2	1	0	1	1
<b>Machinery and equipment:</b>												
Heavy machinery .....	8	8	2	3	0	1	1	4	0	1	2	3
Power, other machinery .....	15	17	9	8	0	2	0	4	1	1	5	6
<b>Construction</b> .....	24	14	9	10	1	1	1	4	5	2	8	1
<b>Containers:</b>												
Steel barrels and cans .....	8	3	3	4	1	0	0	1	3	2	3	3
<b>Consumer and commercial goods:</b>												
Household appliances .....	8	2	5	7	3	2	3	3	4	1	5	1
Furniture, hardware, cutlery .....	9	9	6	7	0	2	0	4	3	2	5	3
<b>Total</b> .....	292	173	152	187	33	40	20	92	91	65	151	92

Source: Compiled from data submitted in response to Commission questionnaires.

commitments to supply steel, forcing GR Spring and Stamping to buy from the spot market.<sup>27</sup> Federal Mogul testified that 70 percent of its fixed price contracts were cancelled or broken by their major steel supplier in favor of substantially higher pricing.<sup>28</sup>

### ***Steel Shortages and Availability***

The steel safeguards have caused some shifts in purchasing patterns of steel products (i.e., after the implementation of the safeguard measures, purchases of domestic steel increased and purchases of imported steel decreased). The Commission investigated the extent to which availability was reduced due to the safeguard measures. A significant number of responding firms reported some difficulty in obtaining steel in the quantities or qualities they desired.

Steel-consuming firms were asked if, since April 1, 2002, their firm experienced difficulties obtaining steel in the quantities or in the quality specifications necessary to fulfill their needs. Questionnaire respondents were asked to indicate if their firm experienced (1) changes in quantity, (2) changes in quality, (3) changes in both quantity and quality, or (4) no change. Overall, a little less than half of responding steel-consuming firms (229 of 471 or 49 percent) reported some difficulty in obtaining steel in the quantities or qualities desired (table 2-9). Of those responding affirmatively to this question, 24 percent (111 of 471 firms) reported difficulties in obtaining the desired quantity; 4 percent (19 of 471) reported difficulties in obtaining the necessary qualities; and 24 percent (112 of 471) reported difficulties in obtaining both the quantity and the quality of steel required. The remaining 49 percent of responding steel-consuming firms (229 firms) reported that their firm experienced no change in their ability to obtain steel in the quantities or quality desired. On an industry basis, firms in the fabrication, motor vehicles, motor vehicle parts, steel barrel and cans, and household appliance industries had more firms reporting difficulties in obtaining steel than other industries.<sup>29</sup>

Steel-consuming firms that reported difficulties obtaining steel were asked to provide information describing those difficulties. Approximately 75 percent of those steel-consuming firms that reported difficulties obtaining steel (180 of 242) stated that higher steel prices were the principal difficulty (table 2-9). Distributors, bar finishers, fabricators, and motor vehicle, motor vehicle parts, ships and shipping containers, welded pipe, heavy machinery, and household appliances manufacturers all had at least two-thirds of the responding firms in the industry reporting that the higher prices of steel posed the principal difficulty.

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<sup>27</sup> Testimony of Merle Emery, President, GR Spring & Stamping, Inc., transcript of Commission hearing, June 19, 2003, pp. 407-408.

<sup>28</sup> Testimony of Ramzi Hermiz, Vice President, Global Supply Chain Management, Federal Mogul, transcript of Commission hearing, June 19, 2003, p. 114.

<sup>29</sup> More than half of the responding firms in these industries reported having difficulty obtaining steel after the implementation of the safeguard measures.

Table 2-9

**Number of steel-consuming firms reporting difficulties obtaining steel after the imposition of the safeguard measures, by industry**

<b>Steel-consuming sector/industry category</b>	<b>No change</b>	<b>Only in quantity</b>	<b>Only in quality</b>	<b>In both quality and quantity</b>	<b>Higher prices posed the principle difficulty</b>
<b>Steel-product producers/processors/distributors:</b>					
Distributors . . . . .	52	19	3	18	27
Producers of hot/cold-rolled or coated product . . . . .	13	7	0	3	3
Welded pipe producers . . . . .	8	7	2	3	11
Bar and wire finishers . . . . .	10	1	2	3	6
Fastener producers . . . . .	13	2	0	5	3
Steel fabricators . . . . .	31	25	4	30	44
<b>Transportation:</b>					
Motor vehicles . . . . .	3	2	0	6	6
Motor vehicle parts . . . . .	21	19	4	22	47
Ships and shipping containers; military . . . . .	5	3	0	0	2
<b>Machinery and equipment:</b>					
Heavy machinery . . . . .	11	1	1	2	4
Power, other machinery . . . . .	23	9	0	2	6
<b>Construction</b> . . . . .	24	6	0	5	7
<b>Containers:</b>					
Steel barrels and cans . . . . .	4	2	1	4	3
<b>Consumer and commercial goods:</b>					
Household appliances . . . . .	2	1	1	7	6
Furniture, hardware, cutlery . . . . .	9	7	1	2	5
<b>Total</b> . . . . .	<b>229</b>	<b>111</b>	<b>19</b>	<b>112</b>	<b>180</b>
<i>Percent of responses</i> . . . . .	<i>49</i>	<i>24</i>	<i>4</i>	<i>24</i>	<i>175</i>

<sup>1</sup> This percentage is based on the number of firms reporting that higher prices posed the principal difficulty relative to the total number of firms that reported difficulties obtaining steel after the imposition of the safeguard measures.

Source: Compiled from data submitted in response to Commission questionnaires.

Steel-consuming firms reported many other problems associated with their inability to obtain steel (table 2-10). Questionnaire responses (of the 457 responding firms) indicate that difficulties in obtaining steel included longer lead times (176 firms reporting), delayed deliveries (169 firms reporting), shortages (132 firms reporting), being put on allocations<sup>30</sup> by their suppliers (120 firms reporting), broken contracts (92 firms reporting), a refusal on the part of domestic steel suppliers to quote to the steel-consuming firm (51 firms), and other changes in existing contracts (18 firms reporting). In terms of industries, fabricators and motor vehicle parts producers, by far, accounted for most of the reported difficulties. Information from the hearing and from written submissions to the Commission confirms

<sup>30</sup> Steel producers, processors, and distributors generally reported at the hearing that they did not place their customers on allocation and were not put on allocation by their suppliers, although some reported delivery delays during the summer of 2002. Testimony of Bob Heltzel, Jr., President, Kenilworth Steel Co., transcript of Commission hearing, June 20, 2003, p. 616; testimony of Stephen Syzmanski, Manager, Sales, Unites States Steel Corporation, transcript of Commission hearing, June 20, 2003, p. 618; testimony of Terry S. Lisenby, Chief Financial Officer, United States Steel Corporation, transcript of Commission hearing, June 20, 2003, p. 618; testimony of Robert Bussiere, General Manager, Fire Protection Products, Allied Tube and Conduit, transcript of Commission hearing, June 20, 2003, p. 620; testimony of Glenn Baker, Vice President, Searing Industries, transcript of Commission hearing, June 20, 2003, p. 620; testimony of Terry Cieslinski, Cold Finish Manager, Nucor Cold Finish, transcript of Commission hearing, June 20, 2003, p. 620; testimony of Scott Wulff, General Manager, Nucor Fasteners, transcript of Commission hearing, June 20, 2003, p. 621; and testimony of Donnell Efferson, Senior Vice President, Commercial, Stupp Corporation, transcript of Commission hearing, June 20, 2003, p. 621.

some industries' difficulties in obtaining steel products; for example, firms in industries such as motor vehicle parts, motor vehicles, household appliances, and furniture, hardware, and cutlery reported difficulties in obtaining steel.<sup>31</sup> On the other hand, firms in other industries, such as construction, and steel producers, reported no difficulties in steel availability.<sup>32</sup>

**Table 2-10**  
**Number of steel-consuming firms reporting difficulties obtaining steel after the imposition of the safeguard measures, by industry**

<b>Steel-consuming sector/industry category</b>	<b>Allocation</b>	<b>Delayed delivery</b>	<b>Longer lead times</b>	<b>Shortage</b>	<b>Broken contract</b>	<b>Other changes in existing contracts</b>	<b>Refusal to quote</b>
<b>Steel-product producers/processors/distributors:</b>							
Distributors .....	18	16	18	9	7	3	9
Producers of hot/cold-rolled or coated product .....	8	6	7	4	6	0	0
Welded pipe producers .....	12	11	12	7	4	0	2
Bar and wire finishers .....	2	2	3	1	1	0	1
Fastener producers .....	6	6	6	6	2	0	1
Steel fabricators .....	22	35	42	32	23	4	13
<b>Transportation:</b>							
Motor vehicles .....	3	7	8	7	6	2	5
Motor vehicle parts .....	21	43	43	34	24	7	11
Ships and shipping containers; military .....	1	3	2	1	1	0	1
<b>Machinery and equipment:</b>							
Heavy machinery .....	2	4	2	2	2	1	0
Power, other machinery .....	5	6	6	4	5	0	1
<b>Construction</b> .....	8	10	9	7	3	0	3
<b>Containers:</b>							
Steel barrels and cans .....	6	8	5	6	1	0	2
<b>Consumer and commercial goods:</b>							
Household appliances .....	3	5	6	6	4	0	1
Furniture, hardware, cutlery ...	3	7	7	6	3	1	1
<b>Total</b> .....	<b>120</b>	<b>169</b>	<b>176</b>	<b>132</b>	<b>92</b>	<b>18</b>	<b>51</b>

Source: Compiled from data submitted in response to Commission questionnaires.

<sup>31</sup> For motor vehicle parts and motor vehicles, MEMA, written submission to the USITC for Investigation No. 332-452, June 27, 2003, p. 2; and Honda of America Manufacturing, Inc., written submission to the USITC for Investigation No. 332-452, July 2, 2003. Also, testimonies of Jeffrey Stoner, Vice President of Worldwide Procurement, ArvinMeritor, Inc., transcript of Commission hearing, June 19, 2003, p. 110; Larry Denton, Chairman, DURA Automotive Systems, Inc., transcript of Commission hearing, June 19, 2003, p. 90; and Ramzi Hermiz, Vice President of Global Supply Chain Management, Federal-Mogul Corp., transcript of Commission hearing, June 19, 2003, p. 115. For household appliances, testimony of Terry L. Bowman, Vice President, Supply Chain Management York Int'l Corp., written submission to the USITC for Investigation No. 332-452, June 20, 2003, p. 1, and transcript of Commission hearing, June 20, 2003, p. 769.

<sup>32</sup> For construction sector, Eastern Industries Corp., written submission to the USITC for Investigation No. 332-452, June 20, 2003, p.1; testimony of Scott Wulff, General Manager, Nucor Corp., transcript of Commission hearing, June 20, 2003, p. 566-567; testimony of Carl Schoenleber, CMC Steel Group, SMI Rebar-South Carolina, transcript of Commission hearing, June 20, 2003, p. 688; and testimony of Robert Hoover, Vice President, Kvaerner Songer, Inc., transcript of Commission hearing, June 20, 2003, pp. 704-705. For steel suppliers, United States Steel Corp., written submission to the USITC for Investigation No. 332-452, June 27, 2003; United Steelworkers of America, written submission to the USITC for Investigation 332-452, June 4, 2003.

Steel-consuming firms that reported difficulties due to their inability to obtain the desired quantity or quality of steel were asked to report the effects of these difficulties on their firm.<sup>33</sup> Overall, as can be seen in table 2-11, the largest number of firms reported reduced profits (158 firms reporting), reduced production (69 firms reporting), failure to meet customer delivery schedule (69 firms reporting), and reduced sales (69 firms reporting). Fabricators and motor vehicle parts producers accounted for most of the steel-consuming firms that reported difficulties.

### ***Ability to Source Required Products or Quality Specifications***

Questionnaire respondents were asked if, since April 1, 2002, certain sizes/grades/types of steel have been available from only a single source that were previously available from multiple sources. Most of the responding firms responded negatively. Those firms responding affirmatively were asked to provide specific information. Overall, only 55 steel-consuming firms provided such information. Of these, 29 (53 percent) reported that, prior to the imposition of the safeguard measures, certain grades/types/sizes of steel were available from import sources, but not domestic sources (table 2-12). Most of these responses related to plate, hot-rolled, and cold-rolled steel. Seventeen firms (31 percent) reported that, before April 1, 2002, certain products were available only from domestic suppliers, but not import sources. After April 1, 2002, a larger number of firms (42 of 55) reported that these certain grades/sizes/types of steel were available from only domestic steel suppliers (not import sources). Of these 42 responding firms, 25 reported domestic-only suppliers of certain grades of hot-rolled and cold-rolled steel. On an industry basis, firms reporting that certain sizes/grades/types of steel have been available from only a single source that were previously available from multiple sources were predominantly in the distributor, welded pipe, fabricator, motor vehicle parts, and heavy machinery industries.

In addition to information obtained from responses to the Commission questionnaire, a few firms in the household appliance industry reported problems in sourcing the quality of product needed since the safeguard measures were implemented.<sup>34</sup> On the other hand, a representative from the furniture, hardware, and cutlery industry group reported that his firm had no problems in sourcing required quality steel since the safeguard measures were implemented.<sup>35</sup>

### ***Lead Times and Delivery Times***

Some steel-consuming firms, particularly steel fabricators and motor vehicles parts manufacturers, also reported increased lead and delivery times. To assess the impact of the safeguard measures on the lead times and delivery times for steel products, the Commission asked steel-consuming firms if the average lead time between placement of orders for steel and delivery of the steel had changed

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<sup>33</sup> Firms were asked to report if the difficulty in obtaining steel resulted in shutdowns, curtailed production, worker layoffs, reduced profits, failure to meet customer delivery schedule (monetary penalties), lost customers, changes in the products produced by the steel-consuming firm to reduce the amount of steel used, changes in investments, changes in location of production, and/or reduced sales.

<sup>34</sup> Joseph M. McGuire, President, AHAM, written testimony submission to the USITC for Investigation No. 332-452, June 20, 2003, p. 4; and M. Takahashi, President, SMCA, written submission to the USITC for Investigation No. 332-452, June 20, 2003 p. 1.

<sup>35</sup> Testimony of Gary Van Handel, Director, Supply Chain Management, Ki, Inc., transcript of Commission hearing, June 20, 2003, p. 771.



Table 2-11

**Reported actions by steel-consuming firms resulting from difficulties obtaining steel, since April 1, 2002, by industry**

Steel-consuming sector/industry category	Short term only <sup>1</sup>	Shut-down	Lower production	Lay-offs	Lower profit	Failure to deliver <sup>2</sup> customer product <sup>3</sup>	Lost customer	Change in investment location <sup>4</sup>	Change in sales	Other
<b>Steel-product producers/processors/distributors:</b>										
Distributors .....	8	0	5	3	18	9	17	1	19	3
Producers of hot/cold-rolled or coated product .....	6	0	3	0	3	1	1	0	2	2
Welded pipe producers .....	5	1	2	0	8	4	6	0	4	0
Bar and wire finishers .....	1	2	4	2	6	3	4	1	3	1
Fastener producers .....	1	1	3	1	4	4	2	0	3	0
Steel fabricators .....	11	3	14	13	37	15	11	1	15	8
<b>Transportation:</b>										
Motor vehicles .....	0	2	2	0	6	0	0	0	0	2
Motor vehicle parts .....	24	5	17	8	44	19	4	1	11	6
Ships and shipping containers; military .....	2	0	1	1	2	1	2	0	1	0
<b>Machinery and equipment:</b>										
Heavy machinery .....	0	0	2	0	3	1	2	0	1	0
Power, other machinery .....	4	0	4	0	5	4	3	1	2	2
<b>Construction:</b>										
Construction .....	3	0	2	0	6	4	2	1	2	0
<b>Containers:</b>										
Steel barrels and cans .....	0	1	1	0	3	3	1	0	1	5
<b>Consumer and commercial goods:</b>										
Household appliances .....	1	0	3	1	6	0	0	0	1	5
Furniture, hardware, cutlery ..	2	1	6	1	7	1	3	0	4	1
<b>Total .....</b>	<b>68</b>	<b>16</b>	<b>69</b>	<b>30</b>	<b>158</b>	<b>69</b>	<b>58</b>	<b>11</b>	<b>69</b>	<b>35</b>

<sup>1</sup> Problem was short term and diminished.

<sup>2</sup> Failure to meet customer delivery schedule.

<sup>3</sup> Changes in the products produced to reduce steel use.

<sup>4</sup> Changes in location of production.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-12**

**Number of steel-consuming firms reporting certain grades available from single source before and after the imposition of the safeguard measures, by product**

Product	Number reporting product	Sources before						Sources after		
		U.S. and imported	U.S. only	Import only	None	Unclear	U.S.	Import	None	
Plate . . . . .	7	0	0	6	1	0	3	1	3	
Hot-rolled . . . . .	15	2	4	8	0	1	13	1	1	
Cold-rolled . . . . .	13	2	2	8	0	1	12	0	1	
Corrosion resistant . . . . .	10	1	5	4	0	0	6	3	1	
Tin mill . . . . .	1	1	0	0	0	0	0	1	0	
Hot bar . . . . .	6	0	5	1	0	0	5	1	0	
Cold bar . . . . .	3	0	1	2	0	0	3	0	0	
Total . . . . .	55	6	17	29	1	2	42	7	6	

Note.--No firms reported for slab, rebar, welded pipe, fittings, stainless bar, stainless rod, or stainless wire.

Source: Compiled from data submitted in response to Commission questionnaires.

since April 1, 2002. The majority of responding steel-consuming firms (289 of 472 or about 61 percent) reported that lead times had not changed during that time period (table 2-13). Of those firms that reported changes in lead times, more reported that lead times increased rather than decreased; about 32 percent (150 of 472) of all steel-consuming firms that responded to this question stated that lead times had increased while 7 percent (33 of 472) reported that lead times had decreased.<sup>36</sup> Five industries had a significant number of firms (relative to the total number of reporting firms in the industry) that reported increases in lead times for delivery of steel. These include fabricators, motor vehicles, motor vehicle parts, furniture, and steel barrels and cans. Further evidence that there has been some lengthening of lead times can be found in steel-consuming firms' responses to the question of whether or not suppliers of domestically produced steel changed their marketing practices since April 1, 2002 (table 2-9). A significant portion of responding firms (about 40 percent) reported longer lead times by suppliers of domestic steel. Industries that reported longer lead times for domestically produced steel include fabricators, motor vehicle parts, distributors, welded pipe, and construction.

Steel-consuming companies were also requested to provide average lead times for delivery of certain steel products before the imposition of the safeguard measures and at the time of the questionnaire. On a product basis, many steel products have had significant increases in the lead time for delivery (table 2-14). For most of the steel products examined, average lead times, prior to the implementation of the safeguard measures ranged from about 30 days to 60 days. Based on questionnaire responses, lead times for delivery of many flat steel forms, such as hot-rolled, cold-rolled, coated sheet and strip, and tin mill forms, increased between 29 and 59 percent. This percentage increase translated into increased lead times of 40 to 76 days for most products. Other products with longer lead times include hot bar (21.8 percent), cold bar (22.5 percent), welded pipe (44.2 percent), stainless bar (33.3 percent), and stainless wire (100 percent). Only three products were reported to have reduced lead times: plate (0.7 percent), rebar (43.5 percent), and stainless rod (10.0 percent).

Information from written submissions to the Commission and from hearing testimony support the data from questionnaire responses. For example, firms in the transportation sector (motor vehicle parts

<sup>36</sup> A number of firms noted that lead times had increased at the beginning of the period and then fallen. These have been included with those reporting that lead times increased. This question asked for only one type of change in lead times (increase or decrease); however, lead times could have fluctuated over the period.

**Table 2-13**

**Number of steel-consuming firms reporting changes in lead times since April 1, 2002, by industry**

<b>Steel-consuming sector/industry category</b>	<b>Increased</b>	<b>Decreased</b>	<b>Unchanged</b>
<b>Steel-product producers/processors/distributors:</b>			
Distributors	14	12	62
Producers of hot/cold-rolled or coated product	3	4	15
Welded pipe producers	7	1	13
Bar and wire finishers	5	2	13
Fastener producers	3	0	17
Steel fabricators	35	5	39
<b>Transportation:</b>			
Motor vehicles	7	0	4
Motor vehicle parts	38	3	36
Ships and shipping containers; military	2	0	6
<b>Machinery and equipment:</b>			
Heavy machinery	4	0	12
Power, other machinery	8	2	22
<b>Construction</b>	7	3	27
<b>Containers:</b>			
Steel barrels and cans	5	1	6
<b>Consumer and commercial goods:</b>			
Household appliances	4	0	5
Furniture, hardware, cutlery	8	0	12
Total	150	33	289
<i>Percent of responses</i>	32	7	61

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-14**

**Changes in lead time before and after the imposition of safeguard measures, by product**

<b>Product</b>	<b>Average lead time before</b>	<b>Current average lead time</b>	<b>Change in lead time</b>
	<i>-----Days-----</i>	<i>-----Days-----</i>	<i>---Percent---</i>
Slab	-	-	-
Plate	42	42	-0.7
Hot-rolled	37	52	+40.0
Cold-rolled	42	54	+29.2
Corrosion resistant	50	70	+41.5
Tin Mill	48	76	+58.8
Hot Bar	55	67	+21.8
Cold Bar	62	76	+22.5
Rebar	47	26	-43.5
Welded pipe	48	70	+44.2
Fittings	-	-	-
Stainless bar	17	22	+33.3
Stainless rod	75	68	-10.0
Stainless wire	30	60	+100.0

Note.--Less than three firms reported for rebar, stainless bar, and stainless wire. None reported for slab or fittings.

Source: Compiled from data submitted in response to Commission questionnaires.

and motor vehicles) and household appliance industries reported difficulties with lead times and delivery after the safeguard measures were introduced.<sup>37</sup> Other industries reported that lead times were longer

<sup>37</sup> Testimony of Scott Meyer, Chairman, MEMA, transcript of Commission hearing, June 19, 2003, p. 82; testimony of Wes Smith, President, E&E Manufacturing Co., Inc., transcript of Commission hearing, June 19, 2003, p. 103; testimony of Layne Gobrogge, Vice President of Marketing, Transpro Inc., transcript of Commission hearing, June 19, 2003, p. 118; and testimony of Richard Clayton, President, Textron Fastening Systems GFS, transcript of Commission hearing, June 19, 2003, p. 100.

immediately after the implementation of the safeguard measures, but lead times have since returned to a more normal period.<sup>38 39</sup>

### *Sourcing of Steel-Containing Products from Overseas*

Steel safeguard measures also could affect steel-consuming industries to the extent that these measures have caused their customers to shift from domestic sourcing of steel-containing products to imports. In general, available information indicates that this shift occurred in only a small number of cases after the implementation of the safeguard measures. Commission questionnaires asked steel-consuming firms whether or not they have shifted to sourcing finished parts or assemblies from overseas as a result of the safeguard measures. Of the 450 responding firms, the majority (399 firms or 89 percent) reported that they did not shift to sourcing finished parts from overseas as a result of the safeguard measures (table 2-15). The 51 steel-consuming firms that reported shifted sourcing were distributed across the specified industries. While 12 fabricators and 11 motor vehicle parts producers reported that they did shift, these firms accounted for about 16 percent of responding firms in each industry.

Commission questionnaires also asked steel-consuming firms to provide information on whether or not their customers have shifted purchases from steel-consuming firms to buying finished parts or assemblies overseas as a result of the safeguard measures. Of the 445 responding firms, the majority (339 firms or 76 percent) reported that their customers did not shift to sourcing finished parts from overseas as a result of the safeguard measures (table 2-15). Industries that had a significant number of firms reporting that their customers had shifted include welded pipe producers (43 percent), bar and wire finishers (42 percent), steel fabricators (37 percent), household appliances (33 percent), and motor vehicle parts (31 percent).

In addition to information from questionnaire respondents, several firms provided comments at the hearing or in written submissions concerning foreign sourcing of steel-consuming products. For example, firms in the furniture and household appliance industries reported the need to outsource steel assemblies and complete products from other countries, as well as the closing of part of a production facility, and the loss of jobs.<sup>40</sup>

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<sup>38</sup> Jack H. Goldman, General Counsel and Director of Government Affairs, HPBA, post-hearing brief to the USITC for Investigation No. 332-452, July 7, 2003, p. 2; and testimony of Gary Van Handel, Director, Supply Chain Management, Ki Inc., transcript of Commission hearing, June 20, 2003, p. 747.

<sup>39</sup> Steel producers, distributors, and processors similarly reported that lead times have fallen to a more normal level after a period of long lead times during the summer of 2002. Testimony of Kevin M. Dempsey, Esquire, Dewey Ballantine, on behalf of National Steel Corporation and United States Steel Corporation, transcript of Commission hearing, June 20, 2003, p. 35; testimony of Alan H. Price, Esquire, Wiley, Rein, and Fielding, on behalf of Nucor Corporation, Long Products Producers Coalition and the Coalition of Steel Consumers, transcript of Commission hearing, June 20, 2003, p. 587; testimony of Robert Bussiere, General Manager, Fire Protection Products, Allied Tube and Conduit, transcript of Commission hearing, June 20, 2003, p. 620; and testimony of Mark Magno, Vice President-Marketing, Wheatland Tube Co., transcript of Commission hearing, June 20, 2003, p. 632.

<sup>40</sup> Testimony of Terry Bowman, Vice President, Supply Chain Management, York Int'l., transcript of Commission hearing, June 20, 2003, p. 719, 721-722, and 760; M. Takahashi, President, SMCA, written submission to the USITC for Investigation No. 332-452, June 26, 2003 p. 3-4; and testimony of Gary Van Handel, Director, Supply Chain Management, Ki, Inc., transcript of Commission hearing, June 20, 2003, p. 739.

Table 2-15

Number of steel-consuming firms reporting a shift to foreign sources after the imposition of the safeguard measures, by industry

Steel-consuming sector/industry category	Steel-consuming firm shifted to sourcing finished parts or assemblies from overseas		Customer shifted to sourcing finished parts or assemblies from overseas		Steel-consuming firm responding shifted production overseas		Other firms shifted production overseas	
	No	Yes	No	Yes	No	Yes	No	Yes
<b>Steel-product producers/processors/distributors:</b>								
Distributors	79	2	61	21	83	2	59	20
Producers of hot/cold-rolled or coated product	21	1	21	1	21	0	17	2
Welded pipe producers	21	0	12	9	21	0	11	8
Bar and wire finishers	18	1	11	8	19	1	7	9
Fastener producers	19	0	13	4	20	0	11	5
Steel fabricators	65	12	47	28	71	10	35	42
<b>Transportation:</b>								
Motor vehicles	9	2	12	0	12	0	8	2
Motor vehicle parts	59	11	48	22	64	8	33	35
Ships and shipping containers; military	5	3	7	1	8	0	6	2
<b>Machinery and equipment:</b>								
Heavy machinery	15	1	15	1	14	1	13	3
Power, other machinery	27	4	28	1	29	3	21	8
<b>Construction</b>	32	2	35	1	36	0	27	7
<b>Containers:</b>								
Steel barrels and cans	10	2	10	2	11	1	9	3
<b>Consumer and commercial goods:</b>								
Household appliances	4	4	6	3	6	3	2	7
Furniture, hardware, cutlery	15	6	13	4	17	4	11	7
Total	399	51	339	106	432	33	270	160
<i>Percent of responses</i>	89	11	76	24	93	7	63	37

Source: Compiled from data submitted in response to Commission questionnaires.

### *Offshore Relocation of U.S. Steel-Consuming Firms*

Steel-consuming firms were asked if the safeguard measures have caused U.S. steel-consuming facilities to be relocated outside of the United States. In general, available data indicates that relatively few firms have made this substantial change. Overall, 93 percent of responding steel-consuming firms (432 of 465) reported that they have not relocated or shifted U.S. production to foreign plants or facilities as a result of the steel safeguard measures (table 2-15).

Questionnaire respondents also were asked to report, to the best of their knowledge, if other firms had relocated U.S. downstream production to foreign plants or facilities as a result of the safeguard measures (table 2-15). The majority of the 430 responding steel-consuming firms (270 or 63 percent) reported that there has been no such relocation or shift. Industries that had a significant number of firms reporting that other firms had relocated or shifted production include bar and wire finishers (56 percent); fabricators (55 percent); motor vehicle parts (51 percent); welded pipe producers (42 percent); and furniture, hardware, cutlery (39 percent).

Firms also testified to the Commission about shifting production or purchases. A few firms in the transportation sector reported that they shifted production overseas or have shifted to purchasing steel

from safeguard-exempt countries.<sup>41</sup> Metaldyne reported that it has moved some of its operations to Korea, where it was able to turn less expensive steel into automotive components, and that it shifted 40 percent of its domestic steel purchases to safeguard-exempt countries such as Turkey and Brazil.<sup>42</sup> Similarly, Federal-Mogul reported that it is pursuing alternative sources to fill its steel needs and is currently qualifying steel producers in Turkey.<sup>43</sup> Advance Transformer, an electronics manufacturer, testified that it closed a plant in Monroe, Wisconsin in the fall of 2002, and transferred its remaining requirements offshore.<sup>44</sup>

### *Steel Consumption*

Steel safeguard measures could shift purchasing patterns of steel-consuming firms. Therefore, the questionnaire requested that steel-consuming firms provide information on the quantity and value of their purchases of each steel product covered by the safeguard measures. Data were requested for 2000/01, 2001/02 and 2002/03 and steel-consuming firms were asked to provide data separately for domestic steel, imported steel, and purchases from service centers in which the sources were commingled.<sup>45</sup> In all, 415 steel-consuming firms provided data on the value of their purchases.<sup>46</sup>

Data provided by purchasers responding to the Commission questionnaires indicate some shift in purchases by steel-consuming industries after the implementation of the safeguard measures (table 2-16). Comparing data for the 2001/02 period (prior to the safeguards) to the 2002/03 period (after the safeguards) shows that purchases of domestic steel products (as a percent of total purchases) increased from 65.2 percent to 73.4 percent. Purchases of imported steel declined from 32.5 percent in the 2001/02 period to 23.2 percent in the 2002/03 period.<sup>47</sup>

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<sup>41</sup> Testimony of Layne Gobrogge, Vice President of Marketing, Transpro Inc., transcript of Commission hearing, June 19, 2003, p. 120. However, some firms reported that they were unable to move production overseas. Testimony of Wes Smith, President, E&E Manufacturing Co., Inc., transcript of Commission hearing, June 19, 2003, p. 105; and Douglas E. Kryzwicki, Chief Financial Officer, A. J. Rose Manufacturing Co., transcript of Commission hearing, June 19, 2003, p. 192.

<sup>42</sup> Testimony of Timothy Leuliette, Chairman, President and Chief Executive Officer, Metaldyne, transcript of Commission hearing, June 19, 2003, p. 88-89.

<sup>43</sup> Testimony of Ramzi Hermiz, Vice President of Global Supply Chain Management, Federal-Mogul Corp., transcript of Commission hearing, June 19, 2003, p. 115.

<sup>44</sup> Testimony of Brian R. Dugan, President, Advance Transformer Company, transcript of Commission hearing, June 19, 2003, pp. 277-278.

<sup>45</sup> In addition, steel-consuming firms were asked to provide 2003 data on purchases of imports from countries exempt from the safeguard measures.

<sup>46</sup> Some firms did not provide data separately for each steel product purchased.

<sup>47</sup> The share of purchases of steel accounted for by domestic steel in 2002/03 (73.4 percent) was also higher than it was in 2000/01 (71.3 percent).

**Table 2-16****Shares of quantity of purchases, by source, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Source	2000/01	2001/02	2002/03
	-----Percent-----		
Domestic .....	71.3	65.2	73.4
Imports .....	26.3	32.5	23.2
<i>Subject to safeguard measures</i>	-	-	13.9
<i>Exempt</i>	-	-	9.3
Commingled <sup>2</sup> .....	2.5	2.3	3.4
Total .....	100.0	100.0	100.0

<sup>1</sup> April 1–March 30.<sup>2</sup> Commingled denotes purchases from distributors in which steel from different sources was commingled.

Source: Compiled from data submitted in response to Commission questionnaires.

In examining any shifts in purchasing patterns on a sectoral basis, the Commission asked steel-consuming firms to report whether or not they had changed purchases of domestic, subject imported, or exempt steel products (table 2-17). As seen in the table, almost one-half of responding firms reported no change in purchases of subject steel imports since April 1, 2002.<sup>48</sup> Thirty-nine percent of the responding firms reported a decline in purchases of subject steel imports with most of these reporting that purchases decreased by more than 20 percent. Forty-seven percent of responding firms reported an increase in domestic purchases while 28 percent reported a decrease in domestic purchases. Most firms (67 percent) reported no change in purchases of exempt imports; 27 percent reported an increase in these purchases.

Based on questionnaire responses, purchases from all sources declined after the safeguard measures were imposed, to below their 2000/01 levels (table 2-18). The largest reported decline was for cold-rolled steel; purchases of cold-rolled steel declined by 35 percent in the year after the safeguard measures were implemented (2002/03) compared to the year before the safeguards (2001/02). Slab and flange purchases also showed significant declines after the safeguard measures were implemented. Purchases of stainless products have declined since April 2000, but most of the decrease occurred before the safeguard measures were implemented. Cold-finished bar purchases also declined significantly with a slightly higher rate of decline after the safeguard measures were implemented. Purchases of six products increased after the safeguard measures, especially purchases of hot-rolled, which increased by 14.8 percent, and welded pipe, which increased by 16.4 percent.

Most of the industries individually reported increased purchases in the period after the safeguard measures were implemented compared with the period before they were implemented (table 2-19). In particular, purchases by producers of hot/cold-rolled or coated forms; bar and wire finishers; and motor vehicle producers increased by 10 percent or more in the year after the safeguard measures. However, total reported purchases declined due to decreases in several higher volume industries including distributors (5.7 percent) and welded pipe producers (1.8 percent).

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<sup>48</sup> While questionnaire data is available for 2003 purchases from countries exempt from the safeguard measures, questionnaire data is not available for purchases from these countries before the safeguard measures were implemented. Therefore, the extent to which firms may have shifted to sources that are exempt from the safeguard measures cannot be determined from overall purchase data.

Table 2-17

Number of steel-consuming firms reporting changes in purchases of domestic, subject import, and exempt imported steel since April 1, 2002, by industry

Industry/source	Decreased (Percent)				Total	No change	Increased (Percent)				Total	
	>20	11-20	6-10	1-5			1-5	6-10	11-20	>20		
<b>Distributors:</b>												
Domestic .....	7	6	3	4	20	22	8	8	13	18	47	
Subject import .....	37	2	7	4	50	29	1	2	2	4	9	
Exempt import .....	11	2	2	0	15	33	6	5	2	15	28	
<b>Producers of hot/cold-rolled or coated product:</b>												
Domestic .....	4	0	0	2	6	7	1	2	1	6	10	
Subject import .....	6	0	2	1	9	7	1	1	0	3	5	
Exempt import .....	1	0	0	0	1	7	0	0	1	6	7	
<b>Welded pipe producers:</b>												
Domestic .....	2	1	2	2	7	5	2	1	0	4	7	
Subject import .....	7	1	0	1	9	7	0	0	0	0	0	
Exempt import .....	0	0	0	0	0	9	1	0	1	5	7	
<b>Bar and wire finishers:</b>												
Domestic .....	1	0	2	0	3	5	2	3	1	6	12	
Subject import .....	4	1	2	0	7	3	2	1	1	4	8	
Exempt import .....	0	0	0	0	0	7	0	2	1	7	10	
<b>Fastener producers:</b>												
Domestic .....	2	3	1	0	6	4	1	3	4	1	9	
Subject import .....	2	2	1	1	6	7	0	1	1	2	4	
Exempt import .....	1	0	0	0	1	11	1	0	1	0	2	
<b>Steel fabricators:</b>												
Domestic .....	9	5	4	9	27	15	6	5	11	15	37	
Subject import .....	14	3	1	1	19	32	2	1	0	2	5	
Exempt import .....	2	0	1	1	4	40	2	2	1	10	15	
<b>Motor vehicles:</b>												
Domestic .....	1	2	1	1	5	3	2	3	2	2	9	
Subject import .....	1	0	0	1	2	7	0	1	0	2	3	
Exempt import .....	1	0	0	0	1	8	0	0	1	1	2	
<b>Motor vehicle parts:</b>												
Domestic .....	3	3	8	2	16	22	10	6	8	11	35	
Subject import .....	7	1	1	2	11	33	4	2	2	3	11	
Exempt import .....	0	0	1	0	1	39	3	0	0	3	6	
<b>Ships and shipping containers; military:</b>												
Domestic .....	0	0	2	1	3	2	0	1	0	0	1	
Subject import .....	0	0	1	0	1	4	0	1	0	0	1	
Exempt import .....	0	0	0	0	0	5	1	0	0	0	1	
<b>Heavy machinery:</b>												
Domestic .....	2	2	2	1	7	3	1	1	1	2	5	
Subject import .....	2	2	1	2	7	7	0	0	0	0	0	
Exempt import .....	1	0	0	1	2	8	1	0	0	0	1	
<b>Power, other Machinery:</b>												
Domestic .....	6	3	1	1	11	11	1	2	3	3	9	
Subject import .....	5	0	1	0	6	14	2	0	0	0	2	
Exempt import .....	1	0	1	0	2	16	3	0	2	1	6	
<b>Construction:</b>												
Domestic .....	1	5	0	3	9	10	3	6	7	2	18	
Subject import .....	7	2	1	0	10	17	0	0	1	1	2	
Exempt import .....	2	0	0	0	2	19	1	2	0	3	6	
<b>Containers:</b>												
Domestic .....	0	0	1	0	1	2	3	1	0	5	9	
Subject import .....	7	0	0	1	8	1	0	0	0	1	1	
Exempt import .....	2	0	0	0	2	4	1	0	0	2	3	

Table continued.



**Table 2-17-Continued**

**Number of steel-consuming firms reporting changes in purchases of domestic, subject import, and excluded imported steel since April 1, 2002, by industry**

Type of producer/source	Decreased (Percent)					No	Increased (Percent)				
	>20	11-20	6-10	1-5	Total change		1-5	6-10	11-20	>20	Total
<b>Household appliances:</b>											
Domestic .....	0	4	0	2	6	1	0	1	1	0	2
Subject import .....	0	0	0	0	0	6	0	0	0	0	0
Exempt import .....	0	0	0	0	0	6	0	0	0	0	0
<b>Furniture, hardware, cutlery:</b>											
Domestic .....	1	3	2	0	6	3	1	1	4	3	9
Subject import .....	2	1	1	0	4	10	1	0	0	0	1
Exempt import .....	2	1	0	0	3	13	0	0	0	0	0
<b>TOTAL:</b>											
Domestic .....	39	37	29	28	133	115	41	44	56	78	219
Subject import .....	101	15	19	14	149	184	13	10	7	22	52
Exempt import .....	24	3	5	2	34	225	20	11	10	53	94

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-18**

**Total quantity of purchases, by product, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Product	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Short tons-----			-----Percent-----		
Slab .....	5,060,208	5,229,410	4,473,108	(11.6)	3.3	(14.5)
Plate .....	1,183,148	1,081,024	1,167,778	(1.3)	(8.6)	8.0
Hot-rolled .....	10,781,192	8,939,559	10,259,123	(4.8)	(17.1)	14.8
Cold-rolled .....	10,308,699	14,840,618	9,701,706	(5.9)	44.0	(34.6)
Corrosion resistant .....	10,971,314	10,766,548	11,690,207	6.6	(1.9)	8.6
Tin Mill .....	1,429,138	1,388,358	1,345,430	(5.9)	(2.9)	(3.1)
Hot Bar .....	2,743,503	2,411,136	2,615,887	(4.7)	(12.1)	8.5
Cold Bar .....	644,424	467,067	380,690	(40.9)	(27.5)	(18.5)
Rebar .....	1,203,683	1,348,624	1,367,997	13.7	12.0	1.4
Welded pipe .....	933,220	906,554	1,054,914	13.0	(2.9)	16.4
Fittings .....	63,081	71,194	59,448	(5.8)	12.9	(16.5)
Stainless bar .....	39,353	27,208	26,900	(31.6)	(30.9)	(1.1)
Stainless rod .....	297,818	183,803	161,048	(45.9)	(38.3)	(12.4)
Stainless wire .....	364,052	177,494	161,700	(55.6)	(51.2)	(8.9)
Various <sup>2</sup> .....	5,329,342	5,732,758	5,916,087	11.0	7.6	3.2
<b>Total .....</b>	<b>51,352,173</b>	<b>53,571,353</b>	<b>50,382,022</b>	<b>(1.9)</b>	<b>4.3</b>	<b>(6.0)</b>

<sup>1</sup> April 1–March 30.

<sup>2</sup> Various denotes all reported purchases in which firms did not separate data by product purchased.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-19**  
**Total quantity of purchases, by industry, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Industry	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Short tons-----			-----Percent-----		
<b>Steel-product producers/processors/distributors:</b>						
Distributors . . . . .	11,500,273	10,706,834	10,099,266	(12.2)	(6.9)	(5.7)
Producers of hot/cold-rolled or coated product . . . . .	9,142,212	8,581,347	9,657,615	5.6	(6.1)	12.5
Welded pipe producers . . . . .	4,507,789	4,805,102	4,720,680	4.7	6.6	(1.8)
Bar and wire finishers . . . . .	816,879	651,157	734,919	(10.0)	(20.3)	12.9
Fastener producers . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Steel fabricators . . . . .	1,301,684	1,186,717	1,229,679	(5.5)	(8.8)	3.6
<b>Transportation:</b>						
Motor vehicles . . . . .	11,631,448	10,938,000	12,088,559	3.9	(6.0)	10.5
Motor vehicle parts . . . . .	2,399,900	2,476,939	2,617,026	9.0	3.2	5.7
Ships and shipping containers; military . . . . .	190,387	190,084	190,376	0.0	(0.2)	0.2
<b>Machinery and equipment:</b>						
Heavy machinery . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Power, other machinery . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Construction</b> . . . . .	2,117,247	2,058,408	2,245,519	6.1	(2.8)	9.1
<b>Containers:</b>						
Steel barrels and cans . . . . .	1,676,364	1,679,076	1,707,934	1.9	0.2	1.7
<b>Consumer and commercial goods:</b>						
Household appliances . . . . .	1,199,579	1,587,914	1,614,216	34.6	32.4	1.7
Furniture, hardware, cutlery . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Total</b> . . . . .	51,352,173	53,571,354	50,382,022	-1.9	4.3	-6.0

<sup>1</sup> April 1–March 30.

<sup>2</sup> Data suppressed due to confidentiality.

Source: Compiled from data submitted in response to Commission questionnaires.

While overall steel-consuming purchases shifted toward domestic sources after the safeguard measures, 8 of 15 individual industries showed reduced shares of domestic purchases in the year after the safeguard measures (table 2-20).<sup>49</sup> Although most industries purchased predominantly domestic steel, several industries continued to purchase a significant amount (i.e., at least 40 percent of their total purchases) of imported product in the year after the safeguard.<sup>50</sup> The bar and wire finishers and power and other machinery industries reported an increased share of imports since the safeguard measures; on the other hand, producers of hot/cold-rolled or coated product and fastener producers reported an increased share of domestic purchases since the safeguard measures. In addition, heavy machinery producers shifted purchases from domestic product to commingled product; however, it is not clear if this indicates a large shift away from domestic product or just a change in the source of the product purchased.

<sup>49</sup> These industries include bar and wire finishers, steel fabricators, motor vehicles, motor vehicle parts, ships/shipping containers/military, heavy machinery, construction, and household appliances.

<sup>50</sup> A few industries, in particular heavy machinery, and ships, shipping containers, and military, reported large amounts of purchases from distributors in which sources were commingled.

Table 2-20

Shares of total purchases from domestic sources, imports, and service centers in which sources were commingled<sup>1</sup>, by industry, 2000/01<sup>2</sup>, 2001/02<sup>2</sup>, 2002/03<sup>2</sup>

Industry	Source	2000/01	2001/02	2002/03 <sup>3</sup>
-----Percent-----				
<b>Steel-product producers/processors/distributors:</b>				
Distributors	Commingled .....	0.4	0.7	1.2
	Import .....	30.2	27.9	(8.3) 22.5
	Domestic .....	69.3	71.5	76.3
Producers of hot/cold-rolled or coated product	Commingled .....	0.2	0.3	0.3
	Import .....	59.3	60.3	(12.7) 55.8
	Domestic .....	40.4	39.4	43.9
Welded pipe producers	Commingled .....	0.2	0.5	0.9
	Import .....	8.6	9.1	(2.2) 8.7
	Domestic .....	91.2	90.4	90.4
Bar and wire finishers	Commingled .....	0.7	0.8	0.7
	Import .....	36.4	38.0	(11.0) 41.9
	Domestic .....	62.8	61.2	57.4
Fastener producers	Commingled .....	2.0	2.9	5.4
	Import .....	55.0	55.4	(22.1) 45.4
	Domestic .....	43.0	41.7	49.2
Steel fabricators	Commingled .....	16.1	16.0	15.5
	Import .....	12.5	11.6	(7.0) 13.6
	Domestic .....	71.4	72.4	70.9
<b>Transportation:</b>				
Motor vehicles	Commingled .....	2.0	1.3	2.3
	Import .....	2.5	6.6	(4.2) 6.7
	Domestic .....	95.5	92.0	91.0
Motor vehicle parts	Commingled .....	13.0	12.3	12.6
	Import .....	5.1	4.6	(2.1) 4.7
	Domestic .....	81.9	83.2	82.7
Ships and shipping containers; military	Commingled .....	40.5	38.2	37.3
	Import .....	5.0	3.6	(7.8) 8.6
	Domestic .....	54.5	58.2	54.2
<b>Machinery and equipment:</b>				
Heavy machinery	Commingled .....	8.0	8.2	46.7
	Import .....	14.7	8.4	(1.9) 13.8
	Domestic .....	77.3	83.4	39.5
Power, other machinery	Commingled .....	1.2	0.4	1.7
	Import .....	84.8	95.6	(73.0) 74.2
	Domestic .....	14.0	4.0	24.1
<b>Construction</b>	Commingled .....	4.3	3.5	4.8
	Import .....	3.0	2.6	(0.6) 3.9
	Domestic .....	92.7	93.9	91.3
<b>Containers:</b>				
Steel barrels and cans	Commingled .....	2.0	2.0	1.7
	Import .....	13.4	16.4	(6.4) 12.8
	Domestic .....	84.6	81.6	85.5
<b>Consumer and commercial goods:</b>				
Household appliances	Commingled .....	6.5	9.0	10.2
	Import .....	0.0	0.0	(0.0) 0.0
	Domestic .....	93.5	91.0	89.8
Furniture, hardware, cutlery	Commingled .....	8.5	11.2	13.8
	Import .....	7.4	10.2	(0.0) 7.4
	Domestic .....	84.1	78.6	78.7

<sup>1</sup> Commingled denotes purchases from service centers in which steel from different sources was commingled.

<sup>2</sup> April 1–March 30.

<sup>3</sup> Number in parenthesis is the share of total purchases accounted for by imports from countries exempt from the safeguard measures.

Source: Compiled from data submitted in response to Commission questionnaires.

## ***Sales, Profitability, and Capital Investment***

Data provided by steel-consuming firms<sup>51</sup> indicate that net sales and operating income generally improved in the period after the safeguard measures when compared with the previous period, while capital expenditures declined compared with the previous period but continuing a period-long trend (table 2-21).<sup>52 53</sup> Commercial net sales reported by steel-consuming firms increased by 6.2 percent from \$29.0 billion in 2001/02 to \$30.8 billion in 2002/03; this level of commercial net sales in 2002/03 was slightly higher than the \$30.7 billion in 2000/01. On an industry basis, net sales increased for the majority of steel-consuming industries in the year following the implementation of the safeguard measures after declining in all industries in the previous year; industries that did not have increases in net sales in 2002/03 (compared with the previous year, 2001/02) include heavy machinery, construction, and steel barrels and containers.

The steel product producers/processors/distributors sector experienced larger overall percentage declines in commercial net sales than most other steel-consuming sectors, from 2000/01 to 2001/02, as well as a larger overall percentage increase from 2001/02 to 2002/03 (table 2-21). Sales by producers of hot/cold-rolled or coated product showed the greatest improvement, increasing by 32.1 percent in the year after implementation of the safeguard measures. Most other steel-consuming sectors experienced more moderate increases. Several sectors, including machinery and equipment, construction, steel barrels and containers, and steel distributors, showed declines in sales from 2001/02 to 2002/03.

Operating income, as reported by steel-consuming firms, increased from \$1.9 billion (6.5 percent of net sales) in 2001/02 to \$2.1 billion (6.8 percent of net sales) in 2002/03 (table 2-21). The level of operating income in 2002/03, however, was below the level in 2000/01 (\$2.2 billion, or 7.1 percent of net sales). Almost all steel-consuming industries reported increases in operating income after the implementation of the safeguard measures (2002/03) as compared to the previous year (2001/02); however, for some industries, the level of operating income in 2002/03 was still lower than in 2000/01.

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<sup>51</sup> Usable financial data were received from 171 firms, with 135 firms providing data on capital expenditures. Companies that provided partial data that were not used either provided data on a calendar year basis (6 firms), did not provide data for all three periods (11 firms), did not provide the detail of cost of goods sold (COGS) (6 firms), did not provide the detail of raw materials (26 firms), did not provide selling and general administrative costs (SG&A) (4 firms), and/or provided unrealistic SG&A (1 firm). The data and comments regarding changes due to the safeguard in this section of the report were tabulated only for those companies that were included in the financial tables.

<sup>52</sup> Financial data and capital expenditures were provided by steel-consuming firms using the input forms of slabs; CTL/clad plate; hot-rolled sheet, strip, and coils; cold-rolled sheet and strip, other than GOES; corrosion-resistant and other coated sheet and strip; tin mill products; hot-rolled bar and light shapes; cold-finished bar; rebar; welded tubular product other than OCTG; flanges and fittings; stainless steel bar and light shapes; stainless steel rod; and stainless steel wire.

<sup>53</sup> Detailed financial data by industry are presented in Appendix E. Data for the following industries: motor vehicles; ships, shipping containers, and military; household appliances; and furniture, hardware, and cutlery are confidential and are not shown in the tables. In addition, steel-consuming firms' reported changes in financial operations and capital expenditures resulting from the safeguard measures are confidential for all industries and are not shown in the individual industry tables.

**Table 2-21**  
**Summary of commercial net sales, operating income or (loss), and capital expenditures, by industry,**  
**2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Industry category	No. of firms	Change					
		2000/01	2001/02	2002/03	2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Value (\$1,000)-----			-----Percent-----		
<b>Commercial net sales</b>							
<b>Steel-product producers/processors/distributors:</b>							
Distributors . . . . .	19	1,546,253	1,222,919	1,190,623	-23.0	-20.9	-2.6
Producers of hot/cold-rolled or coated product . . . . .	12	2,376,111	1,828,433	2,415,841	1.7	-23.0	32.1
Welded pipe producers . . . . .	16	2,817,352	2,436,415	2,635,155	-6.5	-13.5	8.2
Bar and wire finishers . . . . .	14	326,637	264,310	272,005	-16.7	-19.1	2.9
Fastener producers . . . . .	9	354,809	321,683	347,052	-2.2	-9.3	7.9
Steel fabricators . . . . .	36	1,156,659	1,034,088	1,047,553	-9.4	-10.6	1.0
<b>Transportation:</b>							
Motor vehicles . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Motor vehicle parts . . . . .	19	2,246,215	2,140,179	2,232,372	-0.6	-4.7	4.3
Ships and shipping containers; military . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Machinery and equipment:</b>							
Heavy machinery . . . . .	4	1,088,166	739,984	731,088	-32.8	-32.0	-1.2
Power, other machinery . . . . .	8	2,382,194	2,220,557	2,368,243	-0.6	-6.8	6.7
<b>Construction . . . . .</b>	<b>17</b>	<b>1,466,920</b>	<b>1,144,501</b>	<b>1,053,705</b>	<b>-28.2</b>	<b>-22.0</b>	<b>-7.9</b>
<b>Containers:</b>							
Steel barrels and cans . . . . .	5	2,164,203	2,116,712	2,030,893	-6.2	-2.2	-4.1
<b>Consumer and commercial goods:</b>							
Household appliances . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Furniture, hardware, cutlery . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Total . . . . .</b>	<b>171</b>	<b>30,661,329</b>	<b>28,994,071</b>	<b>30,788,248</b>	<b>0.4</b>	<b>-5.4</b>	<b>6.2</b>

Table continued.

**Table 2-21—Continued.**  
**Summary of commercial net sales, operating income or (loss), and capital expenditures, by industry,**  
**2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Industry category	No. of firms	Change					
		2000/01	2001/02	2002/03	2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Value (\$1,000)-----			-----Percent-----		
<b>Operating income or (loss)</b>							
<b>Steel-product producers/processors/distributors:</b>							
Distributors . . . . .	19	35,311	23,585	15,101	-57.2	-33.2	-36.0
Producers of hot/cold-rolled or coated product . . . . .	12	53,150	(47,795)	75,613	42.3	-189.9	258.2
Welded pipe producers . . . . .	16	158,998	20,267	33,393	-79.0	-87.3	64.8
Bar and wire finishers . . . . .	14	12,705	(7,757)	438	-96.6	-161.1	105.6
Fastener producers . . . . .	9	30,976	27,456	29,265	-5.5	-11.4	6.6
Steel fabricators . . . . .	36	76,573	51,763	52,124	-31.9	-32.4	0.7
<b>Transportation:</b>							
Motor vehicles . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Motor vehicle parts . . . . .	19	145,953	139,376	173,532	18.9	-4.5	24.5
Ships and shipping containers; military . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Machinery and equipment:</b>							
Heavy machinery . . . . .	4	55,547	1,701	11,139	-79.9	-96.9	554.9
Power, other machinery . . . . .	8	160,144	128,262	176,425	10.2	-19.9	37.6
<b>Construction</b> . . . . .	17	167,915	10,581	40,977	-75.6	-93.7	287.3
<b>Containers:</b>							
Steel barrels and cans . . . . .	5	135,578	125,757	132,944	-1.9	-7.2	5.7
<b>Consumer and commercial goods:</b>							
Household appliances . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Furniture, hardware, cutlery . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Total</b> . . . . .	171	2,189,241	1,880,399	2,088,860	-4.6	-14.1	11.1

Table continued.

**Table 2-21—Continued.**  
**Summary of commercial net sales, operating income or (loss), and capital expenditures, by industry,**  
**2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Industry category	No. of firms	Change					
		2000/01	2001/02	2002/03	2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Value (\$1,000)-----			-----Percent-----		
<b>Capital expenditures</b>							
<b>Steel-product producers/processors/distributors:</b>							
Distributors	15	20,241	17,287	7,650	-62.2	-14.6	-55.7
Producers of hot/cold-rolled or coated product	12	44,507	132,191	34,731	-22.0	197.0	-73.7
Welded pipe producers	13	98,496	62,007	76,860	-22.0	-37.0	24.0
Bar and wire finishers	9	12,630	23,768	10,400	-17.7	88.2	-56.2
Fastener producers	7	4,417	2,314	10,902	146.8	-47.6	371.2
Steel fabricators	28	35,122	37,810	17,889	-49.1	7.7	-52.7
<b>Transportation:</b>							
Motor vehicles	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Motor vehicle parts	16	137,921	100,895	80,595	-41.6	-26.8	-20.1
Ships and shipping containers; military	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Machinery and equipment:</b>							
Heavy machinery	4	15,947	9,591	5,628	-64.7	-39.9	-41.3
Power, other machinery	6	110,086	63,310	61,715	-43.9	-42.5	-2.5
<b>Construction</b>	13	28,684	16,990	18,092	-36.9	-40.8	6.5
<b>Containers:</b>							
Steel barrels and cans	3	36,818	24,581	54,751	48.7	-33.2	122.7
<b>Consumer and commercial goods:</b>							
Household appliances	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Furniture, hardware, cutlery	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Total</b>	135	794,656	738,845	706,081	-11.1	-7.0	-4.4

<sup>1</sup> April 1–March 30.

<sup>2</sup> Data suppressed due to confidentiality.

Source: Compiled from data submitted in response to Commission questionnaires.

Operating income reported by firms in the steel product producers/processor/distributor sector displayed larger declines from 2000/01 to 2001/02 than other steel-consuming industries (table 2-21). Almost all industry groups experienced substantial percentage increases in operating income from 2001/02 (the period before the safeguard measures) to 2002/03 (the period after the safeguard measures). The only exception is the steel distributors industry which had a decline in operating income from 2001/02 to 2002/03.

Examination of full financial data for all responding steel-consuming firms indicates some changes in costs over the periods (tables 2-22, 2-23 and 2-24).<sup>54</sup> For example, in the 2002/03 period,

<sup>54</sup> Tables 2-22 through 2-24 show complete financial data and capital expenditures for responding steel-consuming firms. Data in these tables are presented for all reporting steel-consuming firms combined and also separately for steel product producers/processors/distributors and for all other sectors (transportation, machinery and equipment, construction, containers, and consumer and commercial goods) combined.

**Table 2-22**

**Results of operations of steel-consuming firms using the input products of steel covered by the safeguard measures, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Item	2000/01	2001/02	2002/03	Change			Changes <sup>2</sup> Increase Value (\$1,000)
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03	
	-----Value (\$1,000)-----			-----Percent-----			
Commercial net sales . . .	30,661,329	28,994,071	30,788,248	0.4	-5.4	6.2	3,152
Cost of goods sold:							
Raw materials:							
Subject input products:							
From U.S. producers	6,553,184	5,906,828	6,215,463	-5.2	-9.9	5.2	76,575
From imports . . . . .	1,678,650	1,136,634	1,427,402	-15.0	-32.3	25.6	(8,823)
Other raw materials . . .	4,311,186	4,184,136	4,170,773	-3.3	-2.9	-0.3	1,683
Total raw materials . .	12,543,019	11,227,598	11,813,639	-5.8	-10.5	5.2	37,047
Direct labor . . . . .	2,236,904	2,214,451	2,324,165	3.9	-1.0	5.0	(2,542)
Other factory costs . . . . .	10,282,303	10,318,133	11,188,287	8.8	0.3	8.4	(5,880)
Total cost of goods sold	25,062,227	23,760,183	25,326,091	1.1	-5.2	6.6	16,199
Gross profit or (loss) . . . . .	5,599,102	5,233,888	5,462,157	-2.4	-6.5	4.4	23,303
SG&A expenses . . . . .	3,409,862	3,353,490	3,373,297	-1.1	-1.7	0.6	(1,077)
Operating income or (loss)	2,189,241	1,880,399	2,088,860	-4.6	-14.1	11.1	20,824
Capital expenditures . . . . .	794,656	738,845	706,081	-11.1	-7.0	-4.4	258
	<b>----Ratio to net sales (percent)----</b>						
Cost of goods sold:							
Raw materials:							
Subject input products:							
From U.S. producers	21.4	20.4	20.2	-1.2	-1.0	-0.2	
From imports . . . . .	5.5	3.9	4.6	-0.8	-1.6	0.7	
Other raw materials . . .	14.1	14.4	13.5	-0.5	0.4	-0.9	
Total raw materials . .	40.9	38.7	38.4	-2.5	-2.2	-0.4	
Direct labor . . . . .	7.3	7.6	7.5	0.3	0.3	-0.1	
Other factory costs . . . . .	33.5	35.6	36.3	2.8	2.1	0.8	
Total cost of goods sold	81.7	81.9	82.3	0.5	0.2	0.3	
Gross profit or (loss) . . . . .	18.3	18.1	17.7	-0.5	-0.2	-0.3	
SG&A expenses . . . . .	11.1	11.6	11.0	-0.2	0.4	-0.6	
Operating income or (loss)	7.1	6.5	6.8	-0.4	-0.7	0.3	
	<b>----Number of firms reporting----</b>						
Operating losses . . . . .	25	39	40				
Data for operations . . . . .	171	171	171				
Data for capital expenditures . . . . .	135	135	133				

<sup>1</sup> April 1–March 30.

<sup>2</sup> These are the changes for each line reported by firms due to safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.



Table 2-23

**Results of operations of U.S. steel-consuming sectors (steel-product producers/processors/distributors),  
2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Item	2000/01	2001/02	2002/03	Change			Changes <sup>2</sup> Increase (Decrease) Value (\$1,000)
				2000/01 to 2002/03	2000/01 to 2000/02	2001/02 to 2002/03	
	-----Value (\$1,000)-----			-----Percent-----			
Commercial net sales . . .	8,577,821	7,107,847	7,908,230	(7.8)	(17.1)	11.3	12,166
Cost of goods sold:							
Raw materials:							
Subject input products:							
From U.S. producers	3,633,740	3,121,493	3,410,413	(6.1)	(14.1)	9.3	24,366
From imports . . . . .	1,290,200	743,606	1,106,158	(14.3)	(42.4)	48.8	1,330
Other raw materials . .	233,813	234,828	214,504	(8.3)	0.4	(8.7)	(608)
Total raw materials . .	5,157,752	4,099,927	4,731,075	(8.3)	(20.5)	15.4	20,145
Direct labor . . . . .	721,450	692,912	729,255	1.1	(4.0)	5.2	(2,491)
Other factory costs . . . .	1,615,041	1,565,019	1,573,413	(2.6)	(3.1)	0.5	(5,549)
Total cost of goods sold	7,494,244	6,357,859	7,033,743	(6.1)	(15.2)	10.6	4,351
Gross profit or (loss) . . . .	1,083,577	749,988	874,487	(19.3)	(30.8)	16.6	4,966
SG&A expenses . . . . .	715,864	682,469	668,553	(6.6)	(4.7)	(2.0)	251
Operating income or (loss)	367,714	67,520	205,934	(44.0)	(81.6)	205.0	3,765
Capital expenditures . . . . .	215,413	275,378	158,432	(26.5)	27.8	(42.5)	742
	----Ratio to net sales (percent)----						
Cost of goods sold:							
Raw materials:							
Subject input products:							
From U.S. producers	42.4	43.9	43.1	0.8	1.6	-0.8	
From imports . . . . .	15.0	10.5	14.0	-1.1	-4.6	3.5	
Other raw materials . .	2.7	3.3	2.7	0.0	0.6	-0.6	
Total raw materials . .	60.1	57.7	59.8	-0.3	-2.4	2.1	
Direct labor . . . . .	8.4	9.7	9.2	0.8	1.3	-0.5	
Other factory costs . . . .	18.8	22.0	19.9	1.1	3.2	-2.1	
Total cost of goods sold	87.4	89.4	88.9	1.6	2.1	-0.5	
Gross profit or (loss) . . . .	12.6	10.6	11.1	-1.6	-2.1	0.5	
SG&A expenses . . . . .	8.3	9.6	8.5	0.1	1.3	-1.1	
Operating income or (loss)	4.3	1.0	2.6	-1.7	-3.3	1.7	
	----Number of firms reporting----						
Operating losses . . . . .	18	27	28				
Data for operations . . . . .	106	106	106				
Data for capital expenditures . . . . .	83	84	81				

<sup>1</sup> April 1–March 30.<sup>2</sup> These are the changes for each line reported by firms due to safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-24**  
**Results of operations of U.S. steel-consuming sectors (transportation, machinery and equipment, construction, containers, and consumer and commercial goods), 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Item	2000/01	2001/02	2002/03	Change			Change <sup>2</sup> Increase (Decrease) Value (\$1,000)
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03	
	-----Value (\$1,000)-----			-----Percent-----			
Commercial net sales . . .	22,083,508	21,886,224	22,880,018	3.6	(0.9)	4.5	(9,014)
Cost of goods sold:							
Raw materials:							
Subject input products:							
From U.S. producers	2,919,444	2,785,335	2,805,050	(3.9)	(4.6)	0.7	52,209
From imports . . . . .	388,450	393,028	321,245	(17.3)	1.2	(18.3)	(10,154)
Other raw materials . . .	4,077,373	3,949,308	3,956,269	(3.0)	(3.1)	0.2	2,291
Total raw materials . .	7,385,267	7,127,671	7,082,564	(4.1)	(3.5)	(0.6)	16,902
Direct labor . . . . .	1,515,454	1,521,539	1,594,910	5.2	0.4	4.8	(51)
Other factory costs . . . . .	8,667,262	8,753,114	9,614,874	10.9	1.0	9.8	(331)
Total cost of goods sold	17,567,983	17,402,324	18,292,348	4.1	(0.9)	5.1	11,848
Gross profit or (loss) . . . . .	4,515,525	4,483,900	4,587,670	1.6	(0.7)	2.3	18,337
SG&A expenses . . . . .	2,693,998	2,671,021	2,704,744	0.4	(0.9)	1.3	(1,328)
Operating income or (loss)	1,821,527	1,812,879	1,882,926	3.4	(0.5)	3.9	17,059
Capital expenditures . . . . .	579,243	463,467	547,649	(5.5)	(20.0)	18.2	(484)
	----Ratio to net sales (percent)----						
Cost of goods sold:							
Raw materials:							
Subject input products:							
From U.S. producers	13.2	12.7	12.3	-1.0	-0.5	-0.5	
From imports . . . . .	1.8	1.8	1.4	-0.4	0.0	-0.4	
Other raw materials . . .	18.5	18.0	17.3	-1.2	-0.4	-0.8	
Total raw materials . .	33.4	32.6	31.0	-2.5	-0.9	-1.6	
Direct labor . . . . .	6.9	7.0	7.0	0.1	0.1	0.0	
Other factory costs . . . . .	39.2	40.0	42.0	2.8	0.7	2.0	
Total cost of goods sold	79.6	79.5	79.9	0.4	0.0	0.4	
Gross profit or (loss) . . . . .	20.4	20.5	20.1	-0.4	0.0	-0.4	
SG&A expenses . . . . .	12.2	12.2	11.8	-0.4	0.0	-0.4	
Operating income or (loss)	8.2	8.3	8.2	0.0	0.0	-0.1	
	----Number of firms reporting----						
Operating losses . . . . .	7	12	12				
Data for operations . . . . .	65	65	65				
Data for capital expenditures . . . . .	52	51	52				

<sup>1</sup> April 1–March 30.

<sup>2</sup> These are the changes for each line reported by firms due to safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

purchases of subject domestically produced steel inputs increased to \$6.2 billion (20.2 percent of net sales) from \$5.9 billion (20.4 percent of net sales) in the 2001/02 period. The level of input costs in 2002/03, however, was still below the level in 2000/01 which was \$6.6 billion (21.4 percent of net sales) (table 2-8). Similar trends are apparent for purchases of subject imported steel inputs. In 2002/03, purchases of subject imported steel inputs increased to \$1.4 billion (4.6 percent of net sales) from \$1.1 billion (3.9 percent of net sales); despite the increase in 2002/03, the level of these costs in that year was still lower than they were in 2001/02 (\$1.7 billion).

Data submitted by steel-consuming firms on capital expenditures indicate declines over the period (table 2-22). In 2002/03, capital expenditures were 4.4 percent lower than in the 2001/02 period (\$706.1 million in 2002/03 compared to \$738.8 million in 2001/02) and 11.1 percent lower than the \$794.7 million in the 2000/01 period. Capital expenditures fell for 8 of 12 steel-consuming industries in the year after the safeguard measures were implemented. Comparing capital expenditures for the steel product sectors with all other steel-consuming sectors reveals that capital expenditures declined less for the steel product sectors than for the other steel-consuming sectors from the 2000/01 to the 2001/02 period (tables 2-23 and 2-24). Three of the six sectors reported increased capital expenditures.<sup>55</sup> Two of these three categories (producers of hot-rolled/cold-rolled/coated product and bar finishers) showed greatly increased capital expenditures from 2000/01 to 2001/02; capital expenditures for these 2 sectors then declined from 2001/02 to 2002/03 to levels below those in 2000/01. Percentage changes between 2001/02 and 2002/03 reveal that capital expenditures declined for four of the six categories in both the steel product sectors and other steel-consuming sectors. The largest percentage declines in capital expenditures typically occurred in the steel product producer/processor/distributor sectors. Categories that experienced the largest increase in capital expenditures after the safeguard measures were implemented were fastener producers (steel products sector) followed by steel barrels and cans (container sector).

Steel-consuming firms were asked to report what portion of any changes in net sales, operating income, or capital expenditures were due to the safeguard measures; however, many firms did not respond to the question (tables 2-25, 2-26, and 2-27). Of those firms that did provide information, most were unable to quantify any changes or stated that there were no changes. Twenty-one of 171 firms reported an aggregate increase of \$3.2 million in commercial net sales and 22 firms reported an aggregate rise of \$20.8 million in operating income due to the safeguard measures. Thirty-six out of 171 firms reported an aggregate increase of \$76.6 million in spending on subject raw material from U.S. producers while 20 firms reported an aggregate decrease of \$8.8 million in spending on subject raw material from imports due to the safeguard measures.

Publicly available data on corporate profits for selected industries indicates that profits declined by 92 percent among major steel-consuming industry groups from 2000/01 to 2001/02, falling from \$50.7 billion to \$4.1 billion (table 2-28). These profits then increased by approximately 475 percent from \$4.1 billion in 2001/02 to \$23.3 billion in 2002/03. Despite the large increase in the last period, corporate profits were still lower in 2002/03 as compared with 2000/01.

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<sup>55</sup> See Appendix E for financial data on a sectoral basis.

**Table 2-25**

**Number of steel-consuming firms reporting changes due to safeguard measures, by type of response**

Response	Net Sales	Operating Income	Capital Expenditures	Subject input	Subject input
				products from U.S. producers	products from imports
-----Number of firms reporting-----					
<b>Decrease:</b>					
Quantified .....	12	16	5	7	9
Did not quantify .....	3	3	1	1	2
<b>Increase:</b>					
Quantified .....	8	7	2	30	11
Did not quantify .....	3	1	1	12	4
No change .....	29	29	31	23	16
Did not know change ...	6	4	6	4	4
Other response .....	<sup>1</sup> 15	<sup>2</sup> 14	<sup>3</sup> 12	<sup>5</sup> 16	<sup>7</sup> 10
No response .....	95	97	<sup>4</sup> 113	<sup>6</sup> 78	<sup>8</sup> 115
<b>Total .....</b>	<b>171</b>	<b>171</b>	<b>171</b>	<b>171</b>	<b>171</b>

<sup>1</sup> The respondents reported the following information: Four indicated they could not quantify the data, seven indicated not available, one indicated undetermined, one indicated very poor business conditions, one indicated a minimal effect, and one indicated that there were fewer new jobs and they were less competitive globally.

<sup>2</sup> The respondents reported the following information: Seven firms indicated not available, one indicated undetermined, one indicated a minimal effect, four indicated that they could not quantify the data, and one indicated that it would have been worse without remedy.

<sup>3</sup> The respondents reported the following information: Seven indicated not available, four indicated they could not quantify the data and one indicated undetermined.

<sup>4</sup> A total of 27 firms had reported no capital expenditures.

<sup>5</sup> The respondents reported the following information: Seven firms indicated not available, four indicated that they could not quantify the data, one indicated increased cost per ton, one indicated base material cost increase by thirty percent, one indicated an increase of 31 percent, one indicated undetermined, and one indicated a minimal effect.

<sup>6</sup> Three firms had reported no U.S. products.

<sup>7</sup> The respondents reported the following information: Four indicated that they could not quantify the data, four indicated not available, one indicated increased volume, and one indicated undetermined.

<sup>8</sup> A total of 70 firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-26**  
**Number of steel-product producers/processors/distributors reporting changes due to safeguard measures,**  
**by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease:</b>					
Quantified .....	7	11	2	4	6
Did not quantify .....	2	1	0	0	0
<b>Increase:</b>					
Quantified .....	6	4	2	16	7
Did not quantify .....	1	0	0	9	3
No change .....	14	16	17	12	12
Did not know change ...	4	4	4	3	4
Other response .....	<sup>1</sup> 12	<sup>2</sup> 10	<sup>3</sup> 10	<sup>5</sup> 12	<sup>7</sup> 9
No response .....	60	60	<sup>4</sup> 71	<sup>6</sup> 50	<sup>8</sup> 65
<b>Total .....</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>

<sup>1</sup> The respondents reported the following information: Three indicated they could not quantify the data, six indicated not available, one indicated undetermined, one indicated very poor business conditions, and one indicated that there were fewer new jobs and less competitive globally ones.

<sup>2</sup> The respondents reported the following information: Six firms indicated not available, one indicated undetermined, and three indicated that they could not quantify the data.

<sup>3</sup> The respondents reported the following information: Six indicated not available, three indicated they could not quantify the data, and one indicated undetermined.

<sup>4</sup> A total of 16 firms had reported no capital expenditures.

<sup>5</sup> The respondents reported the following information: Six indicated not available, three indicated that they could not quantify the data, one indicated increased cost per ton, one indicated an increase of 31 percent, and one indicated undetermined.

<sup>6</sup> Two firms had reported no U.S. products.

<sup>7</sup> The respondents reported the following information: Three indicated that they could not quantify the data, four indicated not available, one indicated increased volume, and one indicated undetermined.

<sup>8</sup> A total of 33 firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-27**

**Number of firms in selected U.S. steel-consuming sectors (transportation, machinery and equipment, construction, containers, and consumer and commercial goods) reporting changes due to safeguard remedies, by type of response**

Response	Net Sales	Operating Income	Capital Expenditures	Subject input	Subject input
				products from U.S. producers	products from imports
-----Number of firms reporting-----					
<b>Decrease:</b>					
Quantified . . . . .	5	5	3	3	3
Did not quantify . . . . .	1	2	1	1	2
<b>Increase:</b>					
Quantified . . . . .	2	3	0	14	4
Did not quantify . . . . .	2	1	1	3	1
No change . . . . .	15	13	14	11	4
Did not know change . . . . .	2	0	2	1	0
Other response . . . . .	<sup>1</sup> 3	<sup>2</sup> 4	<sup>3</sup> 2	<sup>5</sup> 4	<sup>7</sup> 1
No response . . . . .	35	37	<sup>4</sup> 2	<sup>6</sup> 28	<sup>8</sup> 50
<b>Total . . . . .</b>	<b>65</b>	<b>65</b>	<b>65</b>	<b>65</b>	<b>65</b>

<sup>1</sup> The respondents reported the following information: One indicated it could not quantify the data, one indicated the data were not available, and one indicated that there was a minimal effect.

<sup>2</sup> The respondents reported the following information: One firms indicated the data were not available, one indicated that it would have been worse without remedy, one indicated that there was a minimal effect, and one indicated that it could not quantify the data.

<sup>3</sup> The respondents reported the following information: One indicated the data were not available, and one indicated it could not quantify the data.

<sup>4</sup> A total of 11 firms had reported no capital expenditures.

<sup>5</sup> The respondents reported the following information: One indicated the data were not available, one indicated that it could not quantify the data, one indicated base material cost increased by thirty percent, and one indicated that there was a minimal effect.

<sup>6</sup> One firm had reported no U.S. products.

<sup>7</sup> The respondents reported the following information: One indicated that it could not quantify the data.

<sup>8</sup> A total of 37 firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-28**

**Corporate profits by primary steel-consuming industry group, seasonally adjusted annual rates, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>**

Industry <sup>2</sup>	Reported data (April to March)		
	2000/01	2001/02	2002/03
-----Billion dollars-----			
Primary metal industries . . . . .	-0.4	-0.6	1.7
Fabricated metal products . . . . .	13.2	7.8	6.0
Industrial machinery and equipment . . . . .	13.7	-4.2	-1.4
Electronic and other electric equipment . . . . .	4.9	-5.1	4.5
Motor vehicles and equipment . . . . .	-4.4	-10.4	-3.8
Other durable goods . . . . .	23.5	16.6	16.4
<b>Total . . . . .</b>	<b>50.7</b>	<b>4.1</b>	<b>23.3</b>

<sup>1</sup> April 1–March 30.

<sup>2</sup> Data are based on the 1987 Standard Industrial Classifications (SIC) codes.

Source: Official statistics of the U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product*, "Table 6.16C: Corporate Profits by Industry Group."

Public data for revenues, operating costs, and income (loss) from operations for the major steel-consuming industry groups between 2001/02 and 2002/03 are presented in table 2-29. Revenues remained essentially unchanged during this time frame, with industry groups that experienced increased revenues offsetting those groups that experienced decreased revenues. Revenues increased for steel products producers/processors/distributors, transportation equipment, and miscellaneous manufactures while revenues decreased for machinery and equipment and consumer and commercial goods. Operating income increased during this time period for all major industry groups, with transportation equipment and machinery and equipment showing the largest increases.

In addition to data from questionnaires and public sources, witnesses from various industry categories (transportation, machinery and equipment, metal forming, and consumer and commercial goods) reported that sales and profitability have been negatively affected by the imposition of steel safeguard tariffs.<sup>56</sup> Some witnesses from the transportation, machinery and equipment, and metal forming industries also testified the steel safeguards reduced capital investment.<sup>57</sup>

### ***Employment, Wages, and Productivity***

Reported employment (as measured by hours worked and number of workers)<sup>58</sup> in steel-consuming industries was relatively flat or declined slightly in the year after the safeguard measures were implemented (2002/03) as compared to the year prior to the safeguards (2001/02) continuing a period-long trend (table 2-30).<sup>59</sup> Both wages (per hour and per worker) and productivity increased over all three years.

While hours worked and total wages paid to workers increased in the year after the safeguard measures were implemented (2002/03), they were still below the levels in the year before the safeguard measures (2000/01). The number of PRWs decreased overall (from 2000/01 to 2002/03), with a greater decline in the year before the safeguard measures were implemented (2000/01 to 2001/02) than in the year after the safeguard measures were implemented (2001/02 to 2002/03).

Only a relatively small number of all questionnaire respondents provided information regarding what portion of changes in employment and/or wages was due to the safeguard measures (table 2-31).<sup>60</sup>

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<sup>56</sup> Testimony of Richard Clayton, President of Textron Fastening Systems, transcript of Commission hearing, June 19, 2003, p. 113; testimony of Doug Krzywicki, Chief Financial Officer of A.J. Rose Manufacturing Co., transcript of Commission hearing, June 19, 2003, p. 138; testimony of Pat Thompson, Chief Executive Officer of Trans-Matic, transcript of Commission hearing, June 19, 2003, p. 444; testimony of Teresa Amman, Director of the Supply Management Team for Su-dan Corp., transcript of Commission hearing, June 19, 2003, p. 451; and testimony of Woody Sutton, President of the Air Conditioning and Refrigeration Institute, transcript of Commission hearing, June 20, 2003, p. 726.

<sup>57</sup> Testimony of Doug Krzywicki, Chief Financial Officer, A.J. Rose Manufacturing Co., transcript of Commission hearing, June 19, 2003, p. 137; testimony of Ken Cather of Imports Int'l, transcript of Commission hearing, June 19, 2003, p. 357; and testimony of Teresa Amman, Director of the Supply Management Team for Sudan Corp., transcript of Commission hearing, June 19, 2003, p. 451.

<sup>58</sup> Workers are defined as production and related workers (PRWs).

<sup>59</sup> Almost half of questionnaire respondents provided useable data regarding employment and wages. Only data for those firms that reported data for the 3 requested years were used.

<sup>60</sup> With regard to number of PRWs, 134 of 222 firms did not answer or reported that they did not know. For hours worked, 128 of 221 firms did not answer or reported that they did not know. With regard to wages paid to PRWs, 138 of 223 did not answer or reported that they did not know.

Table 2-29

Steel-consuming industries: Net sales and operating income, 2001/02<sup>1</sup> and 2002/03<sup>1</sup>

NAICS codes	Industry group	2001/02	2002/03	Change
				2001/02 to 2002/03
		-----Million dollars-----		Percent
<b>Steel-products producers, processors, and distributors:</b>				
3311				
3312	Iron, steel, and ferroalloys:			
	Net sales, receipts, and operating revenues . . . . .	56,639	57,900	2.2
	Depreciation, depletion, and amortization . . . . .	3,123	2,951	-5.5
	COGS, SG&A, and all other operating costs and expenses . . . . .	54,475	55,020	1.0
	Income (or loss) from operations . . . . .	-959	-71	-92.6
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	-1.7	-0.1	( <sup>2</sup> )
332	<b>Fabricated metal products:</b> <sup>3</sup>			
	Net sales, receipts, and operating revenues . . . . .	197,384	203,293	3.0
	Depreciation, depletion, and amortization . . . . .	7,229	7,102	-1.8
	COGS, SG&A, and all other operating costs and expenses . . . . .	178,022	182,906	2.7
	Income (or loss) from operations . . . . .	12,133	13,285	9.5
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	6.1	6.5	( <sup>2</sup> )
<b>Transportation equipment:</b>				
3361				
3362				
3363	<b>Motor vehicles and parts:</b>			
	Net sales, receipts, and operating revenues . . . . .	521,914	554,082	6.2
	Depreciation, depletion, and amortization . . . . .	16,621	17,429	4.9
	COGS, SG&A, and all other operating costs and expenses . . . . .	512,535	532,929	4.0
	Income (or loss) from operations . . . . .	-7,242	3,724	-151.4
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	-1.4	0.7	( <sup>2</sup> )
3364	<b>Aerospace products and parts:</b>			
	Net sales, receipts, and operating revenues . . . . .	169,486	158,920	-6.2
	Depreciation, depletion, and amortization . . . . .	3,795	3,591	-5.4
	COGS, SG&A, and all other operating costs and expenses . . . . .	153,287	143,555	-6.3
	Income (or loss) from operations . . . . .	12,404	11,774	-5.1
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	7.3	7.4	-2.0
<b>Machinery and equipment:</b>				
<b>Machinery:</b>				
333	Net sales, receipts, and operating revenues . . . . .	258,655	252,409	-2.4
	Depreciation, depletion, and amortization . . . . .	10,418	10,079	-3.3
	COGS, SG&A, and all other operating costs and expenses . . . . .	237,318	229,004	-3.5
	Income (or loss) from operations . . . . .	10,919	13,326	22.0
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	4.2	5.3	( <sup>2</sup> )
3341	<b>Computer and peripheral equipment:</b>			
	Net sales, receipts, and operating revenues . . . . .	149,025	138,408	-7.1
	Depreciation, depletion, and amortization . . . . .	6,753	6,257	-7.3
	COGS, SG&A, and all other operating costs and expenses . . . . .	143,792	131,277	-8.7
	Income (or loss) from operations . . . . .	-1,520	874	-157.5
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	-1.0	0.6	( <sup>2</sup> )
3342	<b>Communications equipment:</b>			
	Net sales, receipts, and operating revenues . . . . .	105,838	85,741	-19.0
	Depreciation, depletion, and amortization . . . . .	6,393	5,227	-18.2
	COGS, SG&A, and all other operating costs and expenses . . . . .	123,961	84,135	-32.1
	Income (or loss) from operations . . . . .	-24,516	-3,621	-85.2
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	-23.2	-4.2	( <sup>2</sup> )

Table continued.



**Table 2-29—Continued**  
**Steel-consuming industries: Net sales and operating income, 2001/02<sup>1</sup> and 2002/03<sup>1</sup>**

NAICS codes	Industry group	2001/02	2002/03	Change
				2001/02 to 2002/03
		-----Million dollars-----		Percent
3343				
3344				
3345				
3346	<b>All other electronic equipment:</b>			
	Net sales, receipts, and operating revenues . . . . .	216,817	217,730	0.4
	Depreciation, depletion, and amortization . . . . .	15,405	15,229	-1.1
	COGS, SG&A, and all other operating costs and expenses . . . . .	209,225	202,621	-3.2
	Income (or loss) from operations . . . . .	-7,813	-120	-98.5
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	-3.6	-0.1	( <sup>2</sup> )
335	<b>Electrical equipment, appliances, and components:</b>			
	Net sales, receipts, and operating revenues . . . . .	176,827	181,748	2.8
	Depreciation, depletion, and amortization . . . . .	5,566	5,539	-0.5
	COGS, SG&A, and all other operating costs and expenses . . . . .	154,176	156,829	1.7
	Income (or loss) from operations . . . . .	17,085	19,380	13.4
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	9.7	10.7	( <sup>2</sup> )
	<b>Consumer and commercial goods:</b>			
337	<b>Furniture and related products:</b>			
	Net sales, receipts, and operating revenues . . . . .	57,197	55,115	-3.6
	Depreciation, depletion, and amortization . . . . .	1,479	1,500	1.4
	COGS, SG&A, and all other operating costs and expenses . . . . .	52,523	50,126	-4.6
	Income (or loss) from operations . . . . .	3,195	3,489	9.2
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	5.6	6.3	( <sup>2</sup> )
	<b>Other:</b>			
339	<b>Miscellaneous manufactures:</b>			
	Net sales, receipts, and operating revenues . . . . .	96,532	107,777	11.6
	Depreciation, depletion, and amortization . . . . .	3,553	3,800	7.0
	COGS, SG&A, and all other operating costs and expenses . . . . .	84,588	92,915	9.8
	Income (or loss) from operations . . . . .	8,391	11,062	31.8
	Income (or loss) from operations to net sales ( <i>percent</i> ) . . . . .	8.7	10.3	( <sup>2</sup> )

<sup>1</sup> April 1–March 31.

<sup>2</sup> Not applicable.

<sup>3</sup> Includes both ferrous and nonferrous metals.

Source: Official statistics of the U.S. Census Bureau, *Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations*, Series QFR, "Income Statements for Corporations in NAICS Manufacturing Industry Groups."

**Table 2-30**  
**Employment, wages, and productivity, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>**

Item	2000/01	2001/02	2002/03	Change			Changes due to safeguard <sup>2</sup>
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03	
				-----Percent-----			
Hours worked (1,000 hours) . . . . .	202,410	179,552	180,121	-11.0	-11.3	0.3	(348)
Number of PRWs <sup>3</sup> . . . . .	96,923	90,943	88,180	-9.0	-6.2	-3.0	(228)
Wages paid to PRWs <sup>3</sup> (1,000 dollars) . . . . .	3,738,458	3,545,375	3,669,732	-1.8	-5.2	3.5	(13,219)
Productivity (value added <sup>4</sup> per hour) . . . . .	80.60	86.50	90.80	7.4	4.9	12.7	( <sup>5</sup> )
Productivity (value added <sup>4</sup> per worker) . . . . .	164,370	166,398	181,205	1.2	8.9	10.2	( <sup>5</sup> )
Wages (per hour) . . . . .	18.47	19.75	20.37	10.3	6.9	3.2	( <sup>5</sup> )
Wages (per worker) . . . . .	38,570	38,980	41,620	7.9	1.1	6.8	( <sup>5</sup> )

<sup>1</sup> April 1–March 30.

<sup>2</sup> Steel-consuming firms were asked to report any increase or (decrease) in average number of PRWs, hours worked by PRWs, and wages paid to PRWs due to the safeguard measures. Numbers in this column represent totals reported by all responding steel-consuming firms.

<sup>3</sup> Production and related workers.

<sup>4</sup> Productivity based on reported *net sales and employment*. Data was only used that was reported by firms that provided both financial and employment data.

<sup>5</sup> Not reported.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table 2-31**  
**Number of firms responding to question regarding changes resulting from steel safeguards, by type of response<sup>1</sup>**

Response	Average number of PRWs <sup>2</sup>	Hours worked by PRWs <sup>2</sup>	Wages paid to PRWs <sup>2</sup>
<b>Decrease</b>			
Quantified . . . . .	10	12	8
Did not quantify . . . . .	7	10	3
Subtotal . . . . .	17	22	11
<b>Increase</b>			
Quantified . . . . .	9	10	8
Did not quantify . . . . .	3	2	5
Subtotal . . . . .	12	12	13
No change . . . . .	59	59	61
No answer/don't know . . . . .	134	128	138
<b>Total</b> . . . . .	<b>222</b>	<b>221</b>	<b>223</b>

<sup>1</sup> This table only includes responses of firms that filled out some or all of the data concerning trade related information.

<sup>2</sup> Production and related workers.

Source: Compiled from data submitted in response to Commission questionnaires.

Approximately two-thirds of firms providing information reported no changes in the number of PRWs (59 of 88), hours worked by workers (59 of 93 firms), and wages paid to workers (61 of 85). Twenty-two firms indicated that the safeguard measures caused a decline in hours worked and 11 indicated a decline in wages. Based on the limited responses, steel-consuming firms reported that about 8.3 percent of the decline in the number of workers was related to the imposition of the safeguard measures. The overall trends showed an increase in hours worked and wages in the year after the safeguard measures were implemented.

Information on cost of production, employment, and wage data was also gathered on an industry basis and is presented for nine industries; data for the remaining 6 industries cannot be shown due to the small number of firms responding. Value-added per hour of labor, a measure of productivity, increased in seven of the nine industries in the year following the imposition of the safeguard measures (table 2-32). Most industries showed increased wages after the safeguards were implemented. Exceptions are bar and wire finishers, which showed a decline in wages, and construction, which showed an increase in wages per hour but a decrease in wages per worker. Trends for employment were mixed, with most industries showing an increase in hours worked but a decline in the number of workers. The heavy machinery and construction industries showed significant declines in both hours worked and number of workers with the declines in the heavy machinery sector occurring both before and after the safeguard measures, while the decline in the construction sector occurred after the safeguard.

Publicly available data show a more pronounced trend of falling employment than the questionnaire data suggest (table 2-33). The public data on employment indicate declines in most industries between 2000/01 and 2001/02, and between 2001/02 and 2002/03. The sectors with the largest declines included metal working machinery and electrical equipment, both with over 21 percent reductions in employment over the 3-year period. For the 3-year period, only one sector, construction, did not show employment declining by 10 percent or more; employment in the construction sector fell by about 6 percent. The data do not indicate that overall employment declined more rapidly after the safeguards were implemented than previously, as percentage declines from 2000/01 to 2001/02 were larger than percentage declines from 2001/02 to 2002/03.<sup>61</sup>

Data available from public sources indicates that the wage rate increased in most industries between 2000/01 and 2002/03 (table 2-34); declines were evidenced in construction machinery, and motors and generators. Between 2001/2 and 2002/3, wages also fell in the construction machinery; electrical motors and generators, electric relay and industrial control, and construction plate work industries.

In addition to data from questionnaires and public sources, witnesses from various industry categories (transportation, machinery and equipment, metal forming, and consumer and commercial goods) reported that the imposition of steel safeguard measures has negatively affected employment.<sup>62</sup> Some witnesses from the metal forming and consumer and commercial goods industries also testified that the imposition of steel safeguard measures has reduced productivity.<sup>63</sup>

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<sup>61</sup> As shown in table 2-32, of the industries included in the questionnaire data, only 4 had larger employment declines as a percentage, following the safeguard measures than earlier.

<sup>62</sup> Testimony of Richard Clayton, President of Textron Fastening Systems, transcript of Commission hearing, June 19, 2003, p. 113; testimony of Doug Krzywicki, Chief Financial Officer, A.J. Rose Manufacturing Co., transcript of Commission hearing, June 19, 2003, p. 137; testimony of Ken Cather of Imports International, transcript of Commission hearing, June 19, 2003, p. 356; testimony of Roland Martel, President of the North American Automotive Components Businesses of Illinois Tool Works, transcript of Commission hearing, June 19, 2003, p. 423; and testimony of Woody Sutton, President of the Air Conditioning and Refrigeration Institute, transcript of Commission hearing, June 20, 2003, p. 726.

<sup>63</sup> Testimony of Roland Martel, President of the North American Automotive Components Businesses of Illinois Tool Works, transcript of Commission hearing, June 19, 2003, p. 423; and testimony of Woody Sutton, President of the Air Conditioning and Refrigeration Institute, transcript of Commission hearing, June 20, 2003, p. 726.

**Table 2-32**  
**Employment, wages, and productivity, by industry, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>**

Steel consuming sector/industry category	Item	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
					-----Percent-----		
<b>Distributors</b>	Hours worked (1,000 hours) .....	1,423	1,242	1,316	-7.5	-12.7	6.0
	Number of PRWs .....	665	594	576	-13.4	-10.7	-3.0
	Wages paid to PRWs (1,000 dollars) .....	17,324	15,726	17,034	-1.7	-9.2	8.3
	Productivity (value added <sup>2</sup> per hour) .....	383.7	387.4	394.0	2.7	0.9	1.7
	Productivity (value added <sup>2</sup> per worker) .....	838,673	860,816	852,395	1.6	2.6	-1.0
	Wages (per hour) .....	12.17	12.66	12.94	6.3	4.0	2.2
	Wages (per worker) .....	26,050	26,470	29,570	13.5	1.6	11.7
<b>Producers of hot/cold-rolled or coated product</b>	Hours worked (1,000 hours) .....	125,383	113,718	115,508	-7.9	-9.3	1.6
	Number of PRWs .....	59,436	58,165	56,481	-5.0	-2.1	-2.9
	Wages paid to PRWs (1,000 dollars) .....	2,376,711	2,363,181	2,482,365	4.4	-0.6	5.0
	Productivity (value added <sup>2</sup> per hour) .....	8.0	7.4	9.7	21.4	-7.1	30.7
	Productivity (value added <sup>2</sup> per worker) .....	16,075	13,833	19,055	18.5	-13.9	37.8
	Wages (per hour) .....	18.96	20.78	21.49	13.3	9.6	3.4
	Wages (per worker) .....	39,990	40,630	43,950	9.9	1.6	8.2
<b>Welded pipe producers</b>	Hours worked (1,000 hours) .....	6,922	7,208	7,094	2.5	4.1	-1.6
	Number of PRWs .....	3,156	3,126	3,375	6.9	-1.0	8.0
	Wages paid to PRWs (1,000 dollars) .....	126,240	130,273	147,737	17.0	3.2	13.4
	Productivity (value added <sup>2</sup> per hour) .....	111.8	103.9	104.6	-6.5	-7.1	0.6
	Productivity (value added <sup>2</sup> per worker) .....	245,270	239,610	219,813	-10.4	-2.3	-8.3
	Wages (per hour) .....	18.24	18.07	20.83	14.2	-0.9	15.3
	Wages (per worker) .....	40,000	41,670	43,770	9.4	4.2	5.0
<b>Bar and wire finishers</b>	Hours worked (1,000 hours) .....	1,556	1,247	1,318	-15.3	-19.9	5.7
	Number of PRWs .....	713	643	610	-14.4	-9.8	-5.1
	Wages paid to PRWs (1,000 dollars) .....	22,715	32,451	20,081	-11.6	42.9	-38.1
	Productivity (value added <sup>2</sup> per hour) .....	275.4	236.8	265.5	-3.6	-14.0	12.1
	Productivity (value added <sup>2</sup> per worker) .....	554,165	464,251	534,894	-3.5	-16.2	15.2
	Wages (per hour) .....	14.59	26.03	15.24	4.5	78.4	-41.5
	Wages (per worker) .....	31,860	50,470	32,920	3.3	58.4	-34.8

Table continued.

**Table 2-32—Continued**  
**Employment, wages, and productivity, by industry, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>**

Steel consuming sector/industry category	Item	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
					-----Percent-----		
<b>Fastener producers</b>	Hours worked (1,000 hours) .....	1,228	1,138	1,175	-4.3	-7.3	3.3
	Number of PRWs .....	627	570	550	-12.3	-9.1	-3.5
	Wages paid to PRWs (1,000 dollars) .....	24,521	22,980	24,946	1.7	-6.3	8.6
	Productivity (value added <sup>2</sup> per hour) .....	267.9	262.2	255.9	-4.5	-2.1	-2.4
	Productivity (value added <sup>2</sup> per worker) .....	525,353	532,366	567,781	8.1	1.3	6.7
	Wages (per hour) .....	19.97	20.19	21.23	6.3	1.1	5.2
	Wages (per worker) .....	39,110	40,320	45,360	16.0	3.1	12.5
<b>Steel fabricators</b>	Hours worked (1,000 hours) .....	2,174	2,005	2,035	-6.4	-7.8	1.5
	Number of PRWs .....	1,461	1,283	1,306	-10.6	-12.2	1.8
	Wages paid to PRWs (1,000 dollars) .....	30,298	27,593	29,062	-4.1	-8.9	5.3
	Productivity (value added <sup>2</sup> per hour) .....	320.1	302.6	301.3	-5.9	-5.5	-0.4
	Productivity (value added <sup>2</sup> per worker) .....	454,395	454,253	451,526	-0.6	0.0	-0.6
	Wages (per hour) .....	13.94	13.76	14.28	2.5	-1.3	3.8
	Wages (per worker) .....	20,740	21,510	22,250	7.3	3.7	3.4
<b>Motor vehicle parts</b>	Hours worked (1,000 hours) .....	4,994	4,878	4,914	-1.6	-2.3	0.7
	Number of PRWs .....	2,430	2,354	2,343	-3.6	-3.1	-0.5
	Wages paid to PRWs (1,000 dollars) .....	86,724	77,269	83,239	-4.0	-10.9	7.7
	Productivity (value added <sup>2</sup> per hour) .....	263.3	270.2	290.7	10.4	2.6	7.6
	Productivity (value added <sup>2</sup> per worker) .....	575,935	567,493	608,117	5.6	-1.5	7.2
	Wages (per hour) .....	17.27	15.84	16.94	-2.5	-8.3	6.9
	Wages (per worker) .....	35,690	32,820	35,530	-0.4	-8.0	8.3
<b>Heavy machinery</b>	Hours worked (1,000 hours) .....	3,072	2,254	1,802	-41.3	-26.6	-20.1
	Number of PRWs .....	1,772	1,345	1,027	-42.0	-24.1	-23.6
	Wages paid to PRWs (1,000 dollars) .....	49,164	39,395	34,250	-30.3	-19.9	-13.1
	Productivity (value added <sup>2</sup> per hour) .....	291.7	187.5	282.7	-3.1	-35.7	50.7
	Productivity (value added <sup>2</sup> per worker) .....	495,042	297,016	492,574	-0.5	-40.0	65.8
	Wages (per hour) .....	16.00	17.48	19.01	18.8	9.3	8.8
	Wages (per worker) .....	27,740	29,290	33,350	20.2	5.6	13.9

Table continued.

**Table 2-32--Continued**  
**Employment, wages, and productivity, by industry, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>**

Steel consuming sector/industry category	Item	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
					-----Percent-----		
<b>Construction</b>	Hours worked (1,000 hours) .....	731	732	629	-14.0	0.1	-14.1
	Number of PRWs .....	331	335	310	-6.3	1.2	-7.5
	Wages paid to PRWs (1,000 dollars) .....	13,122	12,586	10,988	-16.3	-4.1	-12.7
	Productivity (value added <sup>2</sup> per hour) .....	693.20	583.58	593.18	-14.4	-15.8	1.6
	Productivity (value added <sup>2</sup> per worker) .....	1,530,909	1,275,158	1,203,590	-21.4	-16.7	-5.6
	Wages (per hour) .....	17.95	17.19	17.47	-2.7	-4.2	1.6
	Wages (per worker) .....	39,640	37,570	35,450	-10.6	-5.2	-5.6

<sup>1</sup> April 1--March 30.

<sup>2</sup> Net sales receipts and operating revenues less total raw material costs.

Notes.--PRWs are production and related workers. Productivity based on reported *net sales and employment*. Data were only included for firms that provided both financial and employment data.

Source: Compiled from data submitted in response to Commission questionnaires.

Table 2-33

Steel-consuming industries: Production workers, not seasonally adjusted, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

NAICS codes	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----1,000s-----			-----Percent-----		
<b>Steel-products producers, processors, and distributors:</b>							
<b>Iron and steel products:</b>							
3311	Iron and steel mills and ferroalloys . . .	104	91	83	-20.5	-13.0	-8.6
33121	Iron and steel pipe and tube from purchased steel . . . . .	24	22	20	-15.5	-8.3	-7.8
33122	Rolling and drawing of purchased steel . . . . .	33	30	28	-15.5	-10.9	-5.1
	Total . . . . .	161	142	131	-18.7	-11.9	-7.8
<b>Fabricated metal products:</b>							
332111	Iron and steel forging . . . . .	22	20	19	-12.1	-7.0	-5.5
332116	Metal stamping . . . . .	56	47	45	-19.8	-15.0	-5.7
3326	Spring and wire products . . . . .	65	58	55	-15.3	-10.1	-5.7
332721	Precision turned products . . . . .	42	37	34	-19.0	-13.3	-6.5
332722	Bolts, nuts, screws, rivets, and washers . . . . .	40	36	34	-16.3	-11.3	-5.6
3328	Metal coating, engraving, and heat treating . . . . .	142	126	115	-19.2	-11.4	-8.8
	Total . . . . .	367	324	302	-17.8	-11.7	-7.0
	Sector total . . . . .	528	466	433	-18.1	-11.7	-7.2
<b>Transportation:</b>							
<b>Motor vehicles:</b>							
3361	Automobiles and light trucks . . . . .	206	200	197	-4.2	-3.0	-1.3
33612	Heavy duty trucks . . . . .	42	31	25	-40.3	-26.6	-18.7
	Total . . . . .	248	231	222	-10.3	-7.0	-3.6
3362	<b>Motor vehicle bodies and trailers:</b>						
336211	Motor vehicle bodies . . . . .	63	56	53	-16.0	-10.3	-6.3
336212	Truck trailers . . . . .	30	22	22	-28.0	-25.8	-2.9
336213	Motor homes <sup>2</sup> . . . . .	17	14	15	-9.3	-18.0	10.6
336214	Travel trailers and campers . . . . .	30	30	33	6.8	-2.7	9.7
	Total . . . . .	140	122	122	-12.8	-12.9	0.1
3363	<b>Motor vehicle parts:</b>						
33631	Gasoline engines and parts . . . . .	81	75	72	-11.0	-6.8	-4.4
33632	Electric equipment . . . . .	102	94	86	-16.1	-8.6	-8.2
33633	Steering and suspension parts . . . . .	45	41	39	-14.0	-8.9	-5.6
33634	Brake systems <sup>2</sup> . . . . .	40	37	34	-14.7	-8.2	-7.1
33635	Power train components . . . . .	88	80	76	-13.7	-9.0	-5.1
33636	Seating and interior trim . . . . .	55	51	50	-8.8	-8.0	-0.9
33637	Metal stampings . . . . .	98	90	87	-11.0	-8.3	-2.9
33639	Other parts . . . . .	158	147	141	-10.7	-7.5	-3.5
	Total . . . . .	667	613	585	-12.3	-8.1	-4.6
3364	Aerospace products and parts . . . . .	247	239	214	-13.3	-3.0	-10.6
3366	Ships and boat building . . . . .	121	116	116	-4.2	-4.2	0.0
	Sector total . . . . .	1,423	1,321	1,259	-11.5	-7.2	-4.7
<b>Machinery and equipment:</b>							
3331	<b>Agricultural, construction, and mining machinery:</b>						
33311	Agricultural machinery . . . . .	61	58	54	-11.1	-6.0	-5.4
33312	Construction machinery . . . . .	53	44	41	-22.1	-15.9	-7.4
33313	Mining and oil and gas field machinery <sup>2</sup> . . . . .	39	41	37	-3.9	5.6	-9.0
	Total . . . . .	152	143	133	-13.1	-6.5	-7.0
3332	Industrial machinery . . . . .	96	81	70	-27.0	-15.8	-13.3
3333	Commercial and service industry machinery . . . . .	85	81	77	-9.7	-5.1	-4.9

Table continued.

Table 2-33—Continued

Steel-consuming industries: Production workers, not seasonally adjusted, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

NAICS codes	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
				-----1,000s-----	-----Percent-----		
3334	Heating, ventilating, and air conditioning, and commercial refrigeration equipment .....	143	126	115	-19.5	-12.2	-8.3
3335	<b>Metalworking machinery:</b>						
333511	Industrial molds .....	40	36	33	-18.1	-10.7	-8.3
333512	Metal cutting and forming machine tools .....	34	29	27	-22.9	-14.7	-9.7
333514	Special tools, dies, jigs, and fixtures ..	77	69	61	-20.4	-10.1	-11.5
333515							
333516	Miscellaneous metalworking machinery .....	38	32	27	-27.8	-16.0	-14.1
333518	Total .....	190	167	149	-21.8	-12.2	-11.0
3336	<b>Turbine and power transmission equipment:</b>						
333611	Turbine and turbine generator sets ...	13	14	13	0.1	4.7	-4.4
333612							
333613	Power transmission and miscellaneous engines .....	65	57	52	-19.4	-11.8	-8.6
333618	Total .....	78	71	65	-16.1	-9.0	-7.8
3339	<b>Other general purpose machinery:</b>						
33391	Pumps and compressors .....	34	32	30	-12.5	-5.5	-7.4
33392	Material handling equipment .....	64	56	50	-22.0	-12.0	-11.4
33399	All other general purpose machinery ..	112	99	91	-19.3	-11.6	-8.7
	Total .....	210	187	170	-19.0	-10.7	-9.3
334	<b>Computer and electronic products:</b>						
3341	Computer and peripheral equipment ...	114	100	96	-15.9	-12.7	-3.6
3342	Communications equipment .....	114	96	83	-27.4	-15.3	-14.3
3343	Audio and video equipment .....	30	25	23	-22.9	-17.1	-7.1
3345	Electronic instruments .....	219	207	192	-12.4	-5.3	-7.5
	Total .....	477	428	394	-17.5	-10.2	-8.1
3351	Electric lighting equipment .....	62	55	50	-18.5	-11.1	-8.3
3353	<b>Electrical equipment:</b>						
335311	Power, distribution, and specialty transformers <sup>2</sup> .....	25	22	18	-26.7	-13.9	-14.9
335312	Motors and generators .....	54	47	43	-20.5	-13.2	-8.4
335313	Switchgear and switchboard apparatus .....	32	29	26	-19.5	-10.5	-10.1
335314	Relay and industrial controls .....	33	29	26	-21.7	-10.0	-13.0
	Total .....	144	127	113	-21.6	-12.0	-11.0
3359	Batteries and other electrical equipment and components .....	138	121	103	-25.5	-12.4	-14.9
3391	Medical equipment and supplies .....	207	205	203	-2.0	-1.0	-1.0
	Sector total .....	1,983	1,791	1,641	-17.2	-9.7	-8.3
<b>Construction:</b>							
<b>Nonresidential construction:</b>							
23621	Industrial buildings .....	167	158	148	-10.9	-5.4	-5.9
23622	Commercial buildings .....	426	424	400	-6.3	-0.6	-5.7
23711	Water and sewer systems .....	146	148	144	-1.5	1.1	-2.6
23712	Oil and gas pipelines .....	64	68	65	1.8	6.4	-4.3
23713	Power and communication systems ...	122	118	100	-17.5	-3.3	-14.7
2373	Highways, streets, and bridges .....	273	286	277	1.3	4.6	-3.1
2379	Other heavy construction .....	95	99	94	-0.6	4.3	-4.6
	Total .....	1,293	1,300	1,228	-5.0	0.5	-5.5

Table continued.



Table 2-33—Continued

Steel-consuming industries: Production workers, not seasonally adjusted, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

NAICS codes	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
				-----1,000s-----	-----Percent-----		
<b>Construction products:</b>							
332311	Prefabricated metal buildings and components .....	22	20	20	-9.7	-7.5	-2.4
332312	Fabricated structural metal products ..	72	71	67	-7.5	-1.2	-6.4
332313	Plate work .....	41	39	37	-8.7	-4.6	-4.3
33232	Ornamental and architectural metal products .....	183	172	162	-11.6	-6.1	-5.9
	Total .....	318	303	286	-10.2	-4.9	-5.6
	Sector total .....	1,611	1,602	1,514	-6.0	-0.5	-5.5
<b>Consumer and commercial goods:</b>							
3352	Household appliances .....	87	85	81	-6.8	-1.6	-5.2
<b>Furniture, cases, partitions, shelving, and lockers:</b>							
337124							
337125							
337127	Miscellaneous household and						
337129	institutional furniture .....	45	42	39	-13.6	-6.8	-7.2
337214	Office furniture and fixtures, except wood <sup>3</sup> .....	30	25	20	-33.2	-17.5	-19.1
	Showcases, partitions, shelving, and lockers .....	68	61	54	-20.1	-10.3	-10.9
337215	Total .....	143	120	113	-20.8	-10.7	-11.3
3322	Cutlery and hand tools .....	61	52	48	-21.9	-15.3	-7.8
3325	Hardware .....	38	34	31	-17.7	-11.1	-7.5
33995	Signs .....	48	46	46	-3.9	-4.0	0.1
	Sector total .....	377	345	319	-15.3	-8.5	-7.4
<b>Other:</b>							
3324	Boilers, tanks, and containers .....	82	78	73	-11.5	-4.9	-7.0
	Total, all sectors .....	6,004	5,603	5,240	-12.7	-6.7	-6.5

<sup>1</sup> April 1–March 31.<sup>2</sup> Calculated from difference of sum of reported data from reported total.<sup>3</sup> Calculated as difference between sum of wood office furniture and custom wood work and millwork (337211 and 337212) and showcases, partitions, shelving, and lockers (337215) from office furniture and fixtures (3372).Source: Official statistics of the U.S. Bureau of Labor, *Employment, Hours, and Earnings*, National (CE), Series 18 and 19.

Table 2-34

Steel-consuming industries: Average hourly earnings (not excluding overtime), not seasonally adjusted, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

NAICS codes	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Dollars-----			-----Percent-----		
<b>Steel-products producers, processors, and distributors:</b>							
<b>Iron and steel products:</b>							
3311	Iron and steel mills and ferroalloys . . . .	21.12	21.57	22.58	6.9	2.1	4.7
33121	Iron and steel pipe and tube from purchased steel . . . . .	14.05	14.63	15.25	8.5	4.1	4.2
33122	Rolling and drawing of purchased steel . . . . .	15.78	16.44	16.95	7.4	4.2	3.1
	Total . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Fabricated metal products:</b>							
332111	Iron and steel forging . . . . .	15.38	15.94	16.62	8.1	3.7	4.3
332116	Metal stamping . . . . .	13.96	14.28	14.57	4.4	2.3	2.0
3326	Spring and wire products . . . . .	13.19	13.49	13.56	2.7	2.3	0.5
332721	Precision turned products . . . . .	14.00	14.65	14.85	6.1	4.6	1.4
332722	Bolts, nuts, screws, rivets, and washers . . . . .	14.14	14.71	15.62	10.4	4.0	6.2
3328	Metal coating, engraving, and heat treating . . . . .	12.10	12.62	12.95	7.0	4.3	2.6
	Total . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
	Sector total . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Transportation:</b>							
<b>Motor vehicles:</b>							
3361	Automobiles and light trucks . . . . .	25.36	26.64	28.07	10.7	5.0	5.4
33612	Heavy duty trucks . . . . .	22.06	22.71	23.42	6.1	2.9	3.1
	Total . . . . .	24.81	26.13	27.57	11.1	5.3	5.5
<b>Motor vehicle bodies and trailers:</b>							
336211	Motor vehicle bodies . . . . .	17.03	17.16	18.35	7.7	0.7	6.9
336212	Truck trailers . . . . .	12.87	12.89	13.21	2.6	0.2	2.4
336213	Motor homes . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
336214	Travel trailers and campers . . . . .	12.59	12.89	13.41	6.5	2.3	4.0
	Total . . . . .	15.04	15.18	15.65	4.0	0.9	3.1
<b>Motor vehicle parts:</b>							
33631	Gasoline engines and parts . . . . .	19.05	20.08	21.81	14.5	5.4	8.6
33632	Electric equipment . . . . .	14.83	15.62	17.09	15.3	5.3	9.4
33633	Steering and suspension parts . . . . .	22.37	22.97	24.84	11.1	2.7	8.2
33634	Brake systems . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
33635	Power train components . . . . .	22.64	23.42	25.49	12.6	3.4	8.8
33636	Seating and interior trim . . . . .	13.66	14.01	15.14	10.8	2.6	8.0
33637	Metal stampings . . . . .	19.83	20.91	22.30	12.5	5.4	6.6
33639	Other parts . . . . .	14.68	15.27	16.45	12.0	4.0	7.8
	Total . . . . .	17.91	18.58	20.11	12.3	3.8	8.2
3364	Aerospace products and parts . . . . .	20.72	21.53	22.16	6.9	3.9	3.0
3366	Ships and boat building . . . . .	14.99	15.56	15.67	4.5	3.8	0.7
	Sector total . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Machinery and equipment:</b>							
<b>Agricultural, construction, and mining machinery:</b>							
3331	Agricultural machinery . . . . .	13.48	13.99	14.05	4.2	3.7	0.5
33312	Construction machinery . . . . .	14.95	15.19	14.86	-0.6	1.6	-2.2
33313	Mining and oil and gas field machinery . . . . .	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
	Total . . . . .	14.27	14.49	14.43	1.1	1.5	-0.4
3332	Industrial machinery . . . . .	15.89	16.01	16.52	4.0	0.8	3.2
3333	Commercial and service industry machinery . . . . .	16.56	16.93	17.72	7.0	2.2	4.7

Table continued.

Table 2-34—Continued

Steel-consuming industries: Average hourly earnings (not excluding overtime), not seasonally adjusted, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

NAICS codes	Description	2000/01	2001/02	2002/03	Change					
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03			
				-----Dollars-----			-----Percent-----			
3334	Heating, ventilating, and air conditioning, and commercial refrigeration equipment .....	13.18	13.50	13.81	4.8	2.5	2.3			
3335	<b>Metalworking machinery:</b>									
333511	Industrial molds .....	17.25	17.50	17.71	2.7	1.5	1.2			
333512	Metal cutting and forming machine									
333513	tools .....	16.90	17.02	17.22	1.9	0.7	1.2			
333514	Special tools, dies, jigs, and fixtures ...	16.59	17.27	17.69	6.6	4.1	2.4			
333515										
333516	Miscellaneous metalworking									
333518	machinery .....	16.40	16.22	17.07	4.1	-1.1	5.2			
	Total .....	16.75	17.07	17.49	4.5	1.9	2.5			
3336	<b>Turbine and power transmission equipment:</b>									
333611	Turbine and turbine generator sets ....	21.15	21.85	22.47	6.3	3.3	2.8			
333612										
333613	Power transmission and									
333618	miscellaneous engines .....	16.14	16.35	16.82	4.2	1.3	2.9			
	Total .....	16.95	17.43	17.95	5.9	2.9	3.0			
3339	<b>Other general purpose machinery:</b>									
33391	Pumps and compressors .....	15.91	16.08	16.87	6.0	1.1	4.9			
33392	Material handling equipment .....	13.85	14.06	14.52	4.9	1.5	3.3			
33399	All other general purpose machinery ...	14.86	15.42	15.91	7.1	3.8	3.2			
	Total .....	14.72	15.14	15.68	6.5	2.9	3.6			
334	<b>Computer and electronic products:</b>									
3341	Computer and peripheral equipment ...	18.38	19.41	19.58	6.5	5.6	0.9			
3342	Communications equipment .....	14.45	15.27	15.97	10.5	5.7	4.6			
3343	Audio and video equipment .....	11.63	11.99	14.35	23.5	3.1	19.7			
3345	Electronic instruments .....	15.94	16.39	16.76	5.2	2.8	2.3			
	Total .....	14.81	15.71	16.31	10.1	6.1	3.8			
3351	Electric lighting equipment .....	11.95	12.67	13.50	13.0	6.0	6.6			
3353	<b>Electrical equipment:</b>									
335311	Power, distribution, and specialty									
	transformers .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )			
335312	Motors and generators .....	12.29	12.87	12.69	3.2	4.6	-1.4			
335313	Switchgear and switchboard									
	apparatus .....	14.90	15.49	15.90	6.8	4.0	2.7			
335314	Relay and industrial controls .....	15.18	16.04	15.31	0.8	5.7	-4.6			
	Total .....	13.50	14.23	14.16	4.9	5.4	-0.5			
3359	Batteries and other electrical equipment									
	and components .....	13.77	14.24	14.48	5.1	3.4	1.7			
3391	Medical equipment and supplies .....	12.81	13.28	13.75	7.4	3.7	3.6			
	Sector total .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )			
<b>Construction:</b>										
<b>Nonresidential construction:</b>										
23621	Industrial buildings .....	18.17	18.32	19.00	4.6	0.8	3.7			
23622	Commercial buildings .....	18.36	18.67	19.47	6.0	1.7	4.3			
23711	Water and sewer systems .....	16.59	16.88	17.56	5.9	1.8	4.0			
23712	Oil and gas pipelines .....	15.56	15.94	16.71	7.4	2.5	4.8			
23713	Power and communication systems ....	16.52	16.94	17.82	7.8	2.5	5.2			
2373	Highways, streets, and bridges .....	18.22	18.55	19.13	5.0	1.8	3.1			
2379	Other heavy construction .....	16.25	17.14	18.54	14.1	5.5	8.2			
	Total .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )			

Table continued.

Table 2-34—Continued

Steel-consuming industries: Average hourly earnings (not excluding overtime), not seasonally adjusted, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

NAICS codes	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Dollars-----			-----Percent-----		
<b>Construction products:</b>							
332311	Prefabricated metal buildings and components .....	13.14	13.37	13.42	2.1	1.8	0.4
332312	Fabricated structural metal products ...	13.60	14.05	14.60	7.3	3.3	3.9
332313	Plate work .....	14.59	14.82	14.74	1.0	1.5	-0.5
33232	Ornamental and architectural metal products .....	13.26	13.70	14.21	7.1	3.3	3.7
	Total .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
	Sector total .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Consumer and commercial goods:</b>							
3352	Household appliances .....	13.54	13.55	13.59	0.4	0.1	0.3
<b>Furniture, cases, partitions, shelving, and lockers:</b>							
337124							
337125							
337127	Miscellaneous household and						
337129	institutional furniture .....	11.12	11.60	12.04	8.3	4.3	3.8
337214	Office furniture, except wood .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
337215	Showcases, partitions, shelving, and lockers .....	11.81	12.17	12.75	8.0	3.0	4.8
	Total .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
3322	Cutlery and hand tools .....	13.41	14.02	14.83	10.6	4.5	5.8
3325	Hardware .....	12.97	13.50	13.66	5.3	4.0	1.2
33995	Signs .....	12.42	13.36	13.89	11.8	7.6	3.9
	Sector total .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Other:</b>							
3324	Boilers, tanks, and containers .....	15.10	15.71	16.48	9.2	4.1	4.9
	Total, all sectors .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )

<sup>1</sup> April 1–March 31.<sup>2</sup> Not available.

Source: Official statistics of the U.S. Census Bureau, Employment, Hours, and Earnings, National (CE), Series 29 and 30.

Another way in which the effect of these changes can be assessed is through the use of economic modeling. Using monthly industry data between January 2000 and December 2002, Francois and Baughman (2003) estimate that increases in the price of hot-rolled and cold-rolled steel between January 2002 and December 2002, caused employment to decrease by about 1.0 percent or about 50,000 workers for a narrow definition of steel-consuming sectors and by about 1.4 percent or 197,000 workers for a broader definition of steel-consuming industries.<sup>64</sup> On a percentage change basis, the decline in

<sup>64</sup> The authors use a *simple* average of the price of cold rolled and hot rolled steel from producer price indices. Their narrow definition of the steel-consuming industries includes the following Standard Industrial Classification (SIC) categories: metal fabrication (SIC 34), industrial machinery and equipment (SIC 35), and transportation equipment (SIC 37). In addition to the industries in their narrow definition, their broad definition includes electric distribution equipment (SIC 361), electrical industrial apparatus (SIC 362), household appliances (SIC 363); electric lighting and wiring equipment (SIC 364), chemical and related products (SIC 28), tires (SIC 301), petroleum refining (SIC 291), and nonresidential construction (SIC 15-17 minus SIC 152). Joseph Francois and Laura M. Baughman, "The Unintended Consequences of U.S. Steel Import Tariffs: A Quantification of the Impact During 2002." Paper prepared for the CITAC Foundation, Feb. 4, 2003, found at internet address <http://www.tradepartnership.com/pdf/jobstudy2002.pdf>, retrieved Apr. 24, 2003.

employment in their broader definition of steel-consuming industries is about half of the 3.0 percent decline in number of workers from questionnaire responses in table 2-30 for 2003 and about one fifth of the 6.5 percent decline in the overall number of workers in steel-consuming industries as reported by BLS in table 2-33 for 2003.<sup>65</sup>

Francois and Baughman also estimate that the decrease in employment represents almost \$4 billion in lost wages from February to November 2002.<sup>66</sup> As seen in table 2-30, overall wages for steel-consuming industries increased by 3.5 percent in 2003 following the long term trend of increasing wages.

It is important to note that although Francois and Baughman estimate the impact of the change in the price of steel, they did not specify what part of this impact was due specifically to the steel safeguard measures. The model results reported above are estimates based on specific assumptions which simplify the analysis. The reported point estimates mask considerable variations in the range of plausible estimates implied by the statistical analysis.<sup>67</sup> In a separate paper, Morici (2003) points out that employment for industries in Francois and Baughman's broad definition of steel-consuming industries actually *increased* by almost 53,000 between March 2002 and December 2002 and that during the same period in 2001, employment fell by about 281,000.<sup>68</sup>

## **International Competitive Factors**

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### ***Differences in U.S. and Foreign Steel Prices***

Many steel-consuming firms have claimed that the safeguard measures and subsequent increases in the price of steel have made them less competitive with foreign competitors. In general, available information indicates that U.S. prices were higher than prices in foreign markets both before and after the implementation of the safeguard measures. Overall, more firms reported that U.S. prices were higher than the foreign prices after the implementation of the safeguards than before.

To obtain information on differences between U.S. and foreign steel prices, questionnaire respondents were asked to report how the price of steel purchased by their firm compared with the price of steel purchased by steel-consuming firms located in other countries. Firms were asked to comment on this for two periods, from April 1, 2000 to March 31, 2002 and from April 1, 2002 to March 31, 2003.

Of the 292 responding steel-consuming firms, 58 percent (169 firms) reported that prices for steel in the United States were higher than in other countries between April 1, 2000, to March 31, 2002. Approximately 35 percent of responding firms (102 of 292) reported that prices of steel in the United States were the same as those in other countries in that time period; the remaining 7 percent of responding firms stated that U.S. prices were lower (table 2-35). Eleven of the 15 specified industries had

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<sup>65</sup> Note that trends for the questionnaire and BLS data are for a slightly different period, April 2002-April 2003, compared to the January 2002 to December 2002 period used by Francois and Baughman.

<sup>66</sup> This estimate assumes that the unemployed workers located similarly-paid employment within 4 weeks.

<sup>67</sup> See Appendix F for more detailed discussion of their model's assumptions and limitations.

<sup>68</sup> Peter Morici, "An Assessment of Steel Import Relief Under Section 201 After One Year," Mar. 2003, p. 29, found at <http://www.steel.org/images/pdfs/MoriciPaper2003.pdf>, retrieved Apr. 1.

Table 2-35

Number of steel-consuming firms reporting differences between steel prices within the U.S. compared to prices outside the U.S. between April 1, 2000 and March 31, 2002, by industry<sup>1</sup>

Steel-consuming sector/industry category	U.S. prices were higher	U.S. and foreign prices were the same	U.S. prices were lower	Percent U.S. prices					
				were higher			were lower		
				>20	11-20	1-10	1-10	11-20	>20
<b>Steel-product producers/processors/distributors:</b>									
Distributors	28	19	6	2	14	12	2	4	0
Producers of hot/cold-rolled or coated product	17	8	3	0	15	2	1	2	0
Welded pipe producers	11	3	0	1	2	8	0	0	0
Bar and wire finishers	13	2	0	1	6	5	0	0	0
Fastener producers	6	6	0	2	1	3	0	0	0
Steel fabricators	34	19	1	3	16	13	0	1	0
<b>Transportation:</b>									
Motor vehicles	5	3	1	1	1	3	1	0	0
Motor vehicle parts	31	17	2	3	10	16	1	1	0
Ships and shipping containers; military	2	2	1	0	0	1	0	1	0
<b>Machinery and equipment:</b>									
Heavy machinery	5	2	2	0	4	2	1	0	1
Power, other machinery	9	8	1	2	2	4	1	0	0
Construction	8	5	1	1	1	6	0	1	0
<b>Containers:</b>									
Steel barrels and cans	6	2	0	1	1	3	0	0	0
<b>Consumer and commercial goods:</b>									
Household appliances	2	1	2	0	0	2	2	0	0
Furniture, hardware, cutlery	4	5	1	0	1	3	1	0	0
Total	181	102	21	17	74	83	10	10	1

<sup>1</sup> Firms were asked in separate questions to indicate (1) whether prices were higher, lower, or the same and (2) by what percentage did prices differ. Since some firms only responded to one of the questions, the number of firms reporting that U.S. prices were higher or lower may not equal the number that reported that prices were a certain percentage higher or lower.

Source: Compiled from data submitted in response to Commission questionnaires.

at least 50 percent of responding firms reporting that U.S. prices were higher than prices in other countries between April 1, 2000 and March 31, 2002.<sup>69</sup>

Steel-consuming firms that reported differences between U.S. and foreign steel prices from April 1, 2000 to March 31, 2002 were asked to quantify the differences.<sup>70</sup> Overall, of those steel-consuming firms reporting that U.S. prices were higher than those in foreign markets, 49 percent reported that U.S. prices were 1 to 10 percent higher and 44 percent reported that U.S. prices were 11 to 20 percent higher than foreign market prices (table 2-35). Seventeen steel-consuming firms (about 10 percent) reported that U.S. steel prices were higher by 21 percent or more than prices in foreign markets; of these, 35 percent (6) were in the fabricator and motor vehicle parts industries. Steel-consuming firms in the distributor, fastener, and power and other equipment industries also reported U.S. prices were higher by more than 20 percent than the foreign market prices. Of those reporting that U.S. prices were higher by 11 to 20 percent relative to prices in foreign markets, firms in the distributor, producer of hot/cold/coated steel forms, and

<sup>69</sup> These include distributors, producers of hot/cold/coated steel forms, welded pipe producers, bar finishers, fastener producers, fabricators, motor vehicles, motor vehicle parts, heavy machinery, construction, and steel barrels and cans.

<sup>70</sup> Questionnaire respondents were asked to indicate whether U.S. prices were 1 to 10 percent higher, 11-20 percent higher, 21 percent or more higher, 1 to 10 percent lower, 11-20 percent lower, or 21 percent or more lower.

motor vehicle parts industries were the most frequent responders, collectively accounting for 75 percent of the total number of firms reporting this price differential. Of those firms reporting that U.S. prices were between 1 and 10 percent higher than steel prices in foreign markets, firms in the motor vehicle parts, fabricators, and distributors markets accounted for the majority of responses.<sup>71</sup>

Steel-consuming firms also were asked to provide information on differences between steel prices in the U.S. and foreign markets since April 1, 2002. Overall, most of the responding steel-consuming firms (189 of 281) reported that since April 1, 2002, U.S. prices for steel were higher than prices in foreign markets (table 2-36). The percentage of steel-consuming firms reporting that U.S. prices were higher than prices in foreign markets after the safeguard measures were put in place was higher (67 percent) than the number of firms reporting the same fact before the safeguard measures (58 percent). About 14 percent of responding steel-consuming firms (38 firms) reported that U.S. prices were lower than in other countries after April 1, 2002, while 19 percent (54 firms) reported that prices in the U.S. market were the same as those in foreign markets. On an industry basis, those industries that accounted for most of the responses that U.S. prices were higher than prices in foreign markets were in the fabricator (37 firms reporting), motor vehicle parts (41 firms reporting), and the distributor (29 firms reporting) markets. In all but one of the 15 industries examined, more than half of the responding firms reported that U.S. prices for steel were higher than prices in foreign markets since April 1, 2002.<sup>72</sup> Of those firms reporting that prices for steel in the U.S. market were the same as those in foreign markets, a significant number were distributors (12 firms), fabricators (8 firms), and power and other equipment producers (8 firms).

Steel-consuming firms that reported the U.S. prices were higher than foreign prices since the safeguard measures were implemented were fairly evenly split with regard to the level of price differentials (table 2-36). Of the 178 responding firms, 33 percent reported that U.S. prices were 1 to 10 percent higher than foreign prices; 37 percent reported that U.S. prices were 11 to 20 percent higher; and 30 percent reported that U.S. prices were more than 20 percent higher.<sup>73</sup> Firms in the fabrication and motor vehicle parts industries accounted for most (62 percent) of those firms reporting that U.S. prices were more than 20 percent higher than prices in foreign countries. Of the 66 responding firms reporting that U.S. prices were 11 to 20 percent higher than prices in foreign countries after the safeguard measures were enacted, firms that accounted for a significant number of those responses included fabricators (14 firms); motor vehicle parts (14 firms); distributors (9); bar and wire finishers (6 firms); and power, other machinery producers (5). For those reporting that U.S. prices were 1-10 percent higher than prices in foreign markets, firms in the distributor and motor vehicle parts industries accounted for a large number of the total responses.

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<sup>71</sup> Fewer firms (21) reported that U.S. prices were lower than prices in foreign markets during April 1, 2000 to March 31, 2002; 48 percent of these reported that U.S. prices were 1 to 10 percent lower; 48 percent reported that U.S. prices were 11-20 percent lower; and about 5 percent reported that U.S. prices were 21 percent or more lower.

<sup>72</sup> In comparison, 11 of 15 industries had more than 50 percent of responding firms reporting the U.S. prices for steel were higher than prices of steel in foreign markets prior to the imposition of the safeguard measures.

<sup>73</sup> Compared with the information on price differentials before the safeguard measures were implemented, more firms reported that U.S. prices were more than 20 percent higher than foreign prices after the safeguard measures were put in place.

Table 2-36

Number of steel-consuming firms reporting differences between steel prices within the U.S. compared to prices outside the U.S. since April 1, 2002, by industry<sup>1</sup>

Steel-consuming sector/industry category	U.S. prices were higher	U.S. and foreign prices were the same	U.S. prices were lower	Percent U.S. prices were higher			Percent U.S. prices were lower		
				>20	11-20	1-10	1-10	11-20	>20
<b>Steel-product producers/processors/distributors:</b>									
Distributors	29	12	8	2	9	17	5	2	0
Producers of hot/cold-rolled or coated product	5	4	4	0	3	3	2	1	0
Welded pipe producers	10	0	5	5	3	2	1	0	2
Bar and wire finishers	11	3	1	0	6	4	1	0	0
Fastener producers	7	4	1	3	3	1	0	0	0
Steel fabricators	37	8	8	17	14	4	6	2	0
<b>Transportation:</b>									
Motor vehicles	7	1	0	1	1	4	0	0	0
Motor vehicle parts	41	3	3	16	14	9	2	1	0
Ships and shipping containers; military	4	1	0	0	1	2	0	0	0
<b>Machinery and equipment:</b>									
Heavy machinery	6	1	1	1	2	3	1	0	0
Power, other machinery	10	8	2	2	5	2	1	1	0
Construction	6	6	2	1	1	4	2	0	0
<b>Containers:</b>									
Steel barrels and cans	5	0	2	1	2	1	1	1	0
<b>Consumer and commercial goods:</b>									
Household appliances	5	0	0	1	1	2	0	1	0
Furniture, hardware, cutlery	6	3	1	3	1	1	1	0	0
Total	189	54	38	53	66	59	23	9	2

<sup>1</sup> Firms were asked in separate questions to indicate (1) whether prices were higher, lower, or the same and (2) by what percentage did prices differ. Since some firms only responded to one of the questions, the number of firms reporting that U.S. prices were higher or lower may not equal the number that reported that prices were a certain percentage higher or lower.

Source: Compiled from data submitted in response to Commission questionnaires.

Most of the 34 steel-consuming firms (68 percent) reporting that U.S. steel prices were lower than prices in foreign markets since April 1, 2002, stated that U.S. prices were 1 to 10 percent lower (table 2-36). Twenty-six percent of these responding firms reported that U.S. prices were 11 to 20 percent lower while only 6 percent reported that U.S. prices were more than 20 percent lower than prices in foreign markets after April 1, 2002.

Questionnaire respondents also were asked to indicate how prices of similar grades/types/sizes of steel from different country sources have changed since April 1, 2002.<sup>74</sup> Respondents indicated that prices for U.S. produced steel and steel from foreign sources all increased since April 1, 2002 (table 2-37) with average price increases ranging from 5.5 percent to 22.2 percent.

<sup>74</sup> Questionnaire respondents were asked to identify the country source, to note whether the price increased, decreased, or stayed the same, and to estimate the rate of change. The percentage numbers noted in the text represent simple averages of the responses.



**Table 2-37****Change in U.S. prices (simple average) of purchased steel products since April 1, 2002, by country of origin**

<b>Country</b>	<b>Percentage price change</b>
United States	+12.8
Brazil	+21.9
Canada	+14.9
China	+12.8
France	+14.3
Germany	+12.9
India	+8.2
Italy	+8.9
Japan	+14.9
Korea	+18.0
Mexico	+13.6
Netherlands	+20.5
Russia	+18.3
Spain	+11.3
Sweden	+5.5
Taiwan	+12.8
Turkey	+22.2
UK	+7.5

Source: Compiled from data submitted in response to Commission questionnaires.

Figures 2-14 to 2-16 compare steel prices in various U.S. and foreign markets for several types of steel subject to safeguard measures. Although prices for these types of steel were generally greater in U.S. markets than in foreign markets in March 2002 and October 2002, the latest available data for May 2003 indicate that prices in the U.S. market may be higher, lower, or about the same as those in foreign markets depending on the markets being compared.<sup>75</sup>

Prices in the west coast market for cold-rolled and hot-dipped galvanized sheet were the highest of any market in May 2003, while the price for hot-rolled sheet in the west coast market was slightly lower than prices in all foreign markets except for Asia. Also, with the exception of the Asian markets, prices for three of these products in the midwest and gulf coast markets were lower than prices in other markets. However, prices in all foreign markets rose relative to all three of the U.S. markets for all three products between March 2002 and May 2003 and between October 2002 and May 2003.

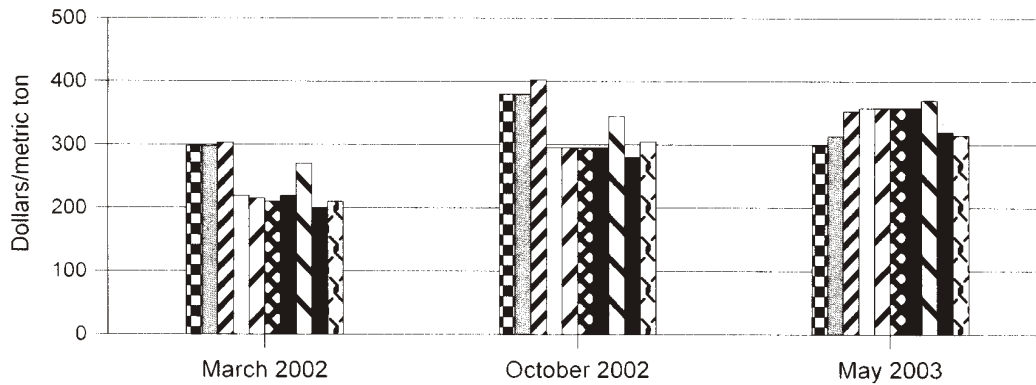
### ***Changes in Imports and Exports of Steel Containing Products***

In order to report on the impact of differences in steel costs on trade in steel-containing products, questionnaire respondents were asked if they had lost sales to foreign competitors because of increased costs of steel. Eighty-two steel-consuming firms (including 30 fabricators, 11 motor vehicle parts producers, 10 distributors, 9 welded pipe producers, 6 bar finishers, and 5 fastener producers) reported that they had lost sales to foreign competitors (table 2-38).

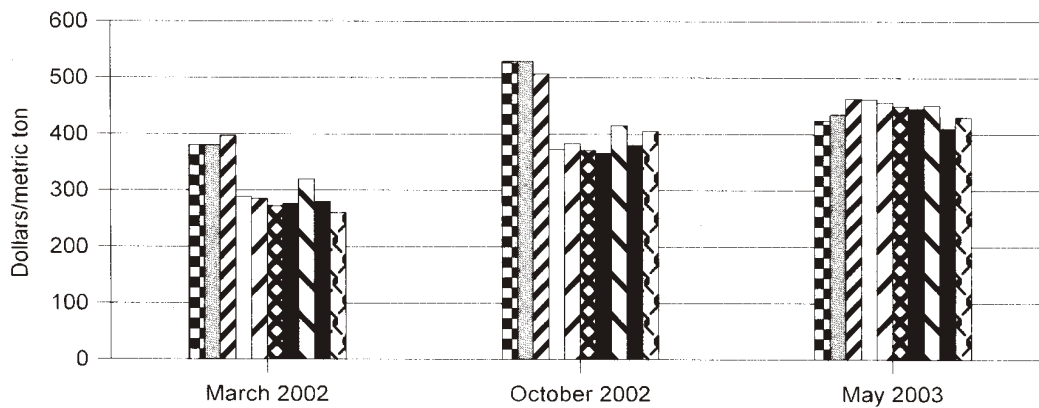
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<sup>75</sup> As these price comparisons are converted to U.S. dollars, some of the observed price increases in foreign markets between March 2002 and May 2002 may be the result of the depreciation of the U.S. dollar during this period. The U.S. dollar depreciated by about 18 percent against the Euro, about 8 percent against the British pound, and about 6 percent against the Japanese yen between March 2002 and May 2003. CRU Group, Steel Sheet Products, *CRU Monitor* (various months).

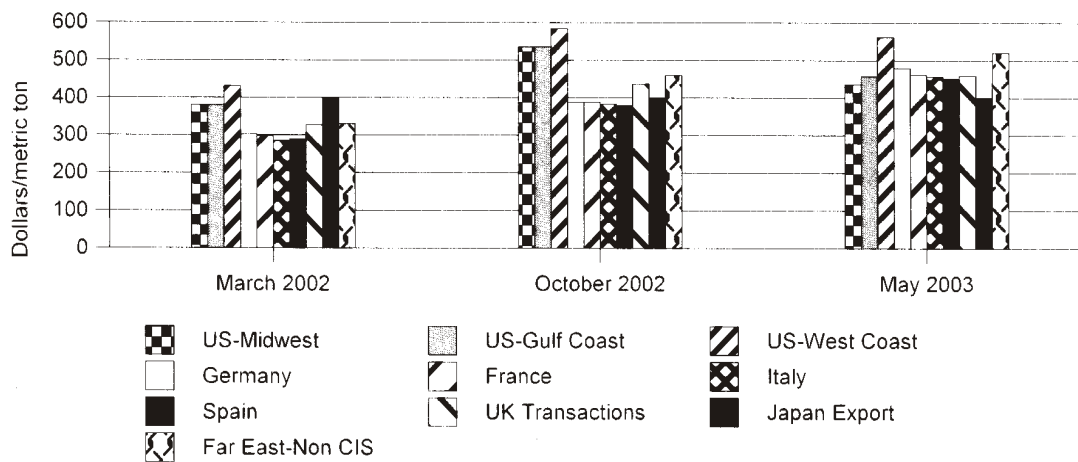
**Figure 2-14**  
**Prices of hot-rolled coiled sheet**



**Figure 2-15**  
**Prices of cold-rolled coiled sheet**



**Figure 2-16**  
**Prices of hot-dipped galvanized coiled sheet**



Source: CRU Group, Steel Sheet Products, *CRU Monitor* (various months).

Table 2-38

## Lost sales after the imposition of the safeguard measures reported by steel-consuming firms, by industry

Steel-consuming sector/industry category	Number of firms reporting lost sales	Dollar value of lost sales	Share of lost sales/net sales <sup>1</sup> --Percent--	Dollar value of steel in end product	Amount of steel --Short tons--
<b>Steel-product producers/processors/distributors:</b>					
Distributors	10	13,832,500	0.5	4,875,002	19,350
Producers of hot/cold-rolled or coated product	2	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Welded pipe producers	9	60,033,000	1.4	27,455,000	60,911
Bar and wire finishers	6	14,050,000	4.1	10,508,000	6,671
Fastener producers	5	4,125,000	0.3	1,385,500	8,510
Steel fabricators	30	91,296,016	2.7	41,273,393	75,116
<b>Transportation</b>					
Motor vehicles	-	-	-	-	-
Motor vehicle parts	11	68,506,000	2.8	29,204,260	58,173
Ships and shipping containers; military	1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Machinery and equipment:</b>					
Heavy machinery	1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Power, other machinery	1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Construction</b>	1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Containers:</b>					
Steel barrels and cans	1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Consumer and commercial goods:</b>					
Household appliances	1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Furniture, hardware, cutlery	1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Total</b>	<b>82</b>	<b>339,951,516</b>	<b>0.6</b>	<b>225,553,155</b>	<b>1,106,018</b>

<sup>1</sup> Data in this column is based only on firms that reported financial data.

<sup>2</sup> Data suppressed due to confidentiality.

Source: Compiled from data submitted in response to Commission questionnaires.

Steel-consuming firms also were asked to provide specific information on their reported lost sales, including the value of the lost sale, the value of the steel in the end product, and the quantity of steel in the end product (table 2-38). For all reporting industries, reported lost sales totaled approximately \$340 million. Industries with the largest dollar amount of reported lost sales include fabricators (\$91.3 million), motor vehicle parts (\$68.5 million), welded pipe (\$60 million), household appliances (\$35.8 million), and distributors (\$13.8 million).

Imports of steel-containing products declined about 9.0 percent from 2000/01 to 2001/02 but they increased by about 6 percent the year after the safeguards were implemented (2001/02 to 2002/03) (table 2-39). Exports of these products declined steadily from 2000/01 to 2002/03, falling about 11 percent from 2000/01 to 2001/02 and then an additional 3 percent the year after the safeguards were implemented (2001/02 to 2002/03) (table 2-40). Except for a few industries, such as motor vehicles, metal cutting and forming, pipe, and bar producers, the growth in imports of steel-containing products was greater than the growth in exports in the year after the safeguards.

Table 2-39

**Steel consumers: U.S. imports for consumption, customs value, constructed years, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>**

Industry Group <sup>2</sup>	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Million dollars-----			-----Percent-----		
<b>Steel products producers, processors, and distributors:</b>							
MM025B	Plates, sheets, and strips of carbon and alloy steels	4,745	3,462	3,939	(17.0)	(27.0)	13.8
MM025L	Pipes and tubes of carbon and alloy steels	2,233	2,422	2,083	(6.7)	8.5	(14.0)
( <sup>3</sup> )	Bars, cold-worked, of carbon or alloy steels	71	62	46	(35.1)	(12.7)	(24.6)
MM025J	Wire of stainless steels	111	94	91	(17.7)	(15.3)	(3.6)
( <sup>3</sup> )	Industrial fasteners	2,258	1882	2,163	(4.2)	(16.7)	14.9
( <sup>3</sup> )	Steel forgings and stampings	151	181	219	44.9	19.9	21.4
	Total	9,599	8,104	8,542	(10.7)	(15.6)	5.4
<b>Transportation equipment:</b>							
ET009	Motor vehicles	128401	127067	133,702	4.1	(1.0)	5.2
ET010	Certain motor-vehicle parts	24446	24358	28,810	17.9	(0.4)	18.3
MM067	Seats for motor vehicles and aircraft	3138	3355	4,123	31.4	6.9	22.9
MM069	Pumps for motor vehicles	854	798	947	10.9	(6.6)	18.8
ET002	Internal combustion piston engines, other than for aircraft	15,095	13,484	15,450	2.3	(10.7)	14.6
ET013	Aircraft, spacecraft, and related equipment	19597	21139	16,355	(16.5)	7.9	(22.6)
ET014	Ships, tugs, pleasure boats, and similar vessels	1,287	1,321	1,480	15.0	2.6	12.0
ET008	Rail locomotives and rolling stock	1811	1114	1,068	(41.0)	(38.5)	(4.1)
ET011	Motorcycles, mopeds, and parts	2691	2886	2,990	11.1	7.2	3.6
ET012	Miscellaneous vehicles and transportation-related equipment	2,968	2,386	2,907	(2.1)	(19.6)	21.8
	Total	200,287	197,907	207,832	3.8	(1.2)	5.0
<b>Machinery and equipment:</b>							
<b>Agricultural, construction, mining, and materials handling equipment:</b>							
MM078	Farm and garden machinery and equipment	3,753	3,541	4,053	8.0	(5.6)	14.5
ET004	Construction and mining equipment	5,621	5,060	5,421	(3.5)	(10.0)	7.2
ET003	Forklift trucks and similar industrial vehicles	1,696	1,260	1,305	(23.1)	(25.7)	3.6
	Total	11,070	9,861	10,780	(2.6)	(10.9)	9.3
<b>Industrial machinery and equipment:</b>							
MM070	Pumps for liquids	1811	1772	1,951	7.7	(2.2)	10.1
MM071	Air-conditioning equipment and parts	6,450	5,952	7,004	8.6	(7.7)	17.7
MM072	Industrial thermal-processing equipment and furnaces	1,730	1,584	1,718	(0.7)	(8.4)	8.4
MM074	Centrifuges, filtering and purifying equipment	2,134	2,245	2,452	14.9	5.2	9.2
MM075	Wrapping, packaging, and can-sealing machinery	1,251	1,295	1,329	6.2	3.5	2.6
MM076	Scales and weighing machinery	299	272	306	2.4	(9.0)	12.3
MM077	Mineral processing machinery	679	576	567	(16.5)	(15.2)	(1.7)
MM079	Industrial food-processing and related machinery	533	540	583	9.5	1.3	8.0
MM080	Pulp, paper, and paperboard machinery	1,217	897	758	(37.7)	(26.3)	(15.5)
MM081	Printing and related machinery	2,106	1,759	2,618	24.3	(16.5)	48.8
MM082	Textile machinery	1805	1278	1,350	(25.2)	(29.2)	5.7
MM087	Semiconductor manufacturing equipment and robotics	5,656	3,900	3,839	(32.1)	(31.0)	(1.6)

Table continued.

Table 2-39—Continued

Steel consumers: U.S. imports for consumption, customs value, constructed years, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

Industry Group <sup>2</sup>	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Million dollars-----			-----Percent-----		
MM088	Taps, cocks, valves, and similar devices . . . . .	5,085	4,724	5,366	5.5	(7.1)	13.6
MM093	Portable electric handtools . . . . .	1,183	1,182	1,518	28.4	(0.1)	28.5
MM094	Nonelectrically powered handtools and parts . . . . .	926	883	974	5.2	(4.6)	10.3
MM096	Welding and soldering equipment . . . . .	836	725	817	(2.3)	(13.3)	12.8
MM098	Miscellaneous machinery . . . . .	7,326	6,109	5,932	(19.0)	(16.6)	(2.9)
	Total . . . . .	41,026	35,693	39,081	(4.7)	(13.0)	9.5
<b>Metalworking and non-metalworking machinery and tools:</b>							
MM083	Metal rolling mills . . . . .	241	168	188	(22.1)	(30.3)	11.8
MM084	Metal cutting machine tools and machine tool accessories . . . . .	4,232	2,973	2,613	(38.3)	(29.8)	(12.1)
MM085	Metal forming machine tools . . . . .	1,539	1,147	858	(44.2)	(25.5)	(25.2)
MM086	Non-metalworking machine tools . . . . .	1,543	1,183	1,282	(16.9)	(23.3)	8.4
MM099	Molds and molding machinery . . . . .	3,500	2,675	3,148	(10.0)	(23.6)	17.7
	Total . . . . .	11,055	8,147	8,090	(26.8)	(26.3)	(0.7)
<b>Turbines, generators, motors, and power-transmission equipment:</b>							
	Boilers, turbines, and related machinery . . . . .	950	1,394	1,275	34.2	46.7	(8.5)
MM091	Electric motors, generators, and related equipment . . . . .	6,808	7,569	7,047	3.5	11.2	(6.9)
ET015	Motors, engines, except internal combustion, aircraft, or electric . . . . .	780	756	722	(7.4)	(3.1)	(4.4)
MM089	Mechanical power transmission equipment . . . . .	2,131	1,901	2,104	(1.3)	(10.8)	10.7
	Total . . . . .	10,669	11,619	11,148	4.5	8.9	(4.1)
<b>Computers and certain other electronic products:</b>							
ET035	Computers, peripherals, and parts . . . . .	90,285	72,367	75,507	(16.4)	(19.8)	4.3
ET016	Office machines . . . . .	1,951	1,666	1,484	(23.9)	(14.6)	(10.9)
ET017	Telephone and telegraph apparatus . . . . .	32,906	25,697	28,742	(12.7)	(21.9)	11.8
ET018	Consumer electronics, except televisions . . . . .	21,607	19,507	21,288	(1.5)	(9.7)	9.1
ET021	Navigational instruments and remote control apparatus . . . . .	1,771	1,762	1,939	9.5	(0.5)	10.0
ET022	Television receivers and video monitors . . . . .	7,954	8,877	10,565	32.8	11.6	19.0
ET023	Radio and television broadcasting equipment . . . . .	7,334	5,474	4,903	(33.2)	(25.4)	(10.4)
ET024	Electric sound and visual signaling apparatus . . . . .	2,344	1,849	1,801	(23.2)	(21.1)	(2.6)
ET039	Photographic cameras and equipment . . . . .	4,931	3,300	2,964	(39.9)	(33.1)	(10.2)
ET040	Medical goods . . . . .	9,502	11,370	13,872	46.0	19.7	22.0
ET042	Drawing, drafting, and calculating instruments . . . . .	239	181	205	(14.2)	(24.3)	13.0
ET043	Measuring, texting, and controlling instruments . . . . .	12,153	11,332	11,910	2.0	(6.8)	5.1
	Total . . . . .	192,978	163,382	175,181	(9.2)	(15.3)	7.2
<b>Electrical equipment:</b>							
MM092	Electrical transformers, static converters, and indicators . . . . .	6,308	4,707	4,744	(24.8)	(25.4)	0.8
ET007	Ignition, starting, lighting, and other electrical equipment . . . . .	3,058	3,070	3,624	18.5	0.4	18.0
ET006	Primary cells and batteries and electric storage batteries . . . . .	2,601	2,283	2,188	(15.9)	(12.2)	(4.1)

Table continued.

Table 2-39—Continued

Steel consumers: U.S. imports for consumption, customs value, constructed years, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

Industry Group <sup>2</sup>	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Million dollars-----			-----Percent-----		
ET027	Circuit apparatus exceeding 1,000 volts .....	408	350	311	(23.9)	(14.2)	(11.3)
ET028	Circuit apparatus not exceeding 1,000 volts .....	6,841	4,841	5,022	(26.6)	(29.2)	3.7
ET029	Circuit apparatus assemblies .....	2,644	2,495	2,635	(0.3)	(5.6)	5.6
ET030	Parts of circuit assemblies .....	1,234	1,051	1,105	(10.5)	(14.8)	5.1
	Total .....	23,094	18,797	19,629	(15.0)	(18.6)	4.4
	Sector total .....	289,892	247,500	263,909	(9.0)	(14.6)	6.6
<b>Containers:</b>							
MM029	Metallic containers .....	541	613	630	16.5	13.3	2.8
<b>Consumer and commercial goods:</b>							
MM073A	Major household appliances and parts ..	1,618	2,159	2,507	55.0	33.4	16.1
( <sup>3</sup> )	Metal furniture .....	2,326	2,126	2,437	4.8	(8.6)	14.7
MM045	Certain builders' hardware .....	2,014	1,950	2,256	12.0	(3.2)	15.7
MM043	Certain cutlery, sewing implements, and related products .....	901	849	953	5.8	(5.8)	12.2
MM044	Table flatware and related products .....	513	434	495	(3.5)	(15.4)	13.9
( <sup>3</sup> )	Cookware, steel not stainless .....	433	422	518	19.7	(2.5)	22.8
MM042	Non-powered handtools .....	3,147	2,914	3,466	10.1	(7.4)	18.9
	Total .....	10,951	10,854	12,631	15.3	(0.9)	16.4
Total, all sectors .....		511,240	464,977	493,543	(3.5)	(9.0)	6.1

<sup>1</sup> April 1–March 31.

<sup>2</sup> For trade-monitoring purposes, the USITC assigns U.S. Harmonized Tariff Schedule (HTS) import headings/subheadings, and the corresponding Schedule B export categories, to industry/commodity groups and subgroups.

<sup>3</sup> Compiled from individual HTS subheadings.

Source: Official statistics of the U.S. Department of Commerce.

Table 2-40

Steel consumers: U.S. domestic exports, FAS value, constructed years, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

Industry Group <sup>2</sup>	Description	2000/01	2001/02	2002/03	Change		
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Million dollars-----			-----Percent-----		
<b>Steel products producers, processors, and distributors:</b>							
MM025B	Plates, sheets, and strips of carbon and alloy steels	2,027	1,854	1,963	(3.2)	(8.5)	5.8
MM025L	Pipes and tubes of carbon and alloy steels	958	1,018	977	1.9	6.3	(4.0)
( <sup>3</sup> )	Bars, cold-worked, of carbon or alloy steels	62	48	52	(17.1)	(22.6)	8.9
MM025J	Wire of stainless steels	65	69	63	(3.9)	6.2	(9.2)
( <sup>3</sup> )	Industrial fasteners, steel	1,510	1,315	1,381	(8.5)	(12.9)	5.1
( <sup>3</sup> )	Steel forgings and stampings	326	280	264	(19.1)	(14.1)	(5.5)
	Total	4,950	4,583	4,700	(5.1)	(7.4)	2.5
<b>Transportation equipment:</b>							
ET009	Motor vehicles	21,811	23,577	27,102	24.3	8.1	15.0
ET010	Certain motor-vehicle parts	28,259	26,118	26,608	(5.8)	(7.6)	1.9
MM067	Seats for motor vehicles and aircraft	1,790	1,879	1,462	(18.3)	5.0	(22.2)
MM069	Pumps for motor vehicles	680	631	698	2.7	(7.2)	10.7
ET002	Internal combustion piston engines, other than for aircraft	13,349	12,385	13,250	(0.7)	(7.2)	7.0
ET013	Aircraft, spacecraft, and related equipment	41,454	41,576	40,665	(1.9)	0.3	(2.2)
ET014	Ships, tugs, pleasure boats, and similar vessels	1,037	1,940	1,165	12.4	87.1	(39.9)
ET008	Rail locomotives and rolling stock	1,375	1,242	1,116	(18.9)	(9.7)	(10.1)
ET011	Motorcycles, mopeds, and parts	607	741	810	33.6	22.1	9.4
ET012	Miscellaneous vehicles and transportation-related equipment	2,861	2,651	2,830	(1.1)	(7.3)	6.7
	Total	113,223	112,739	115,706	2.2	(0.4)	2.6
<b>Machinery and equipment:</b>							
<b>Agricultural, construction, mining, and materials handling equipment:</b>							
MM078	Farm and garden machinery and equipment	4,873	4,564	4,818	(1.1)	(6.3)	5.6
ET004	Construction and mining equipment	9,622	9,668	9,512	(1.1)	0.5	(1.6)
ET003	Forklift trucks and similar industrial vehicles	1,339	1,291	1,048	(21.7)	(3.6)	(18.8)
	Total	15,834	15,524	15,378	(2.9)	(2.0)	(0.9)
<b>Industrial machinery and equipment:</b>							
MM070	Pumps for liquids	2,550	2,488	2,406	(5.6)	(2.4)	(3.3)
MM071	Air-conditioning equipment and parts	6,000	5,442	5,357	(10.7)	(9.3)	(1.6)
MM072	Industrial thermal-processing equipment and furnaces	2,746	2,297	2,034	(25.9)	(16.4)	(11.4)
MM074	Centrifuges, filtering and purifying equipment	3,240	2,913	3,088	(4.7)	(10.1)	6.0
MM075	Wrapping, packaging, and can-sealing machinery	790	659	641	(18.8)	(16.6)	(2.7)
MM076	Scales and weighing machinery	188	150	164	(12.4)	(20.2)	9.5
MM077	Mineral processing machinery	618	538	487	(21.1)	(12.9)	(9.5)
MM079	Industrial food-processing and related machinery	620	571	600	(3.1)	(7.9)	5.0
MM080	Pulp, paper, and paperboard machinery	728	657	581	(20.3)	(9.8)	(11.6)
MM081	Printing and related machinery	1,547	1,157	1,165	(24.7)	(25.2)	0.7
MM082	Textile machinery	971	866	869	(10.5)	(10.8)	0.4
MM087	Semiconductor manufacturing equipment and robotics	15,067	6,440	7,860	(47.8)	(57.3)	22.0
MM088	Taps, cocks, valves, and similar devices	3,353	3,255	3,221	(3.9)	(2.9)	(1.0)

Table continued.

Table 2-40—Continued

Steel consumers: U.S. domestic exports, FAS value, constructed years, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

Industry Group <sup>2</sup>	Description				Change		
		2000/01	2001/02	2002/03	2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
		-----Million dollars-----			-----Percent-----		
MM093	Portable electric handtools . . . . .	359	265	211	(41.1)	(26.2)	(20.4)
MM094	Nonelectrically powered handtools and parts . . . . .	577	518	570	(1.3)	(10.2)	10.0
MM096	Welding and soldering equipment . . . . .	971	659	620	(36.2)	(32.1)	(5.9)
MM098	Miscellaneous machinery . . . . .	8,064	7,142	6,237	(22.7)	(11.4)	(12.7)
	Total . . . . .	48,388	36,018	36,112	(25.4)	(25.6)	0.3
<b>Metalworking and non-metalworking machinery and tools:</b>							
MM083	Metal rolling machines . . . . .	171	186	186	9.1	8.8	0.1
MM084	Metal cutting machine tools and machine tool accessories . . . . .	2,336	1,639	1,663	(28.8)	(29.8)	1.4
MM085	Metal forming machine tools . . . . .	873	691	666	(23.7)	(20.8)	(3.6)
MM086	Non-metalworking machine tools . . . . .	1,106	686	773	(30.1)	(38.0)	12.6
MM099	Molds and molding machinery . . . . .	2,068	1,664	1,598	(22.7)	(19.5)	(4.0)
	Total . . . . .	6,554	4,867	4,886	(25.5)	(25.7)	0.4
<b>Turbines, generators, motors, and power-transmission equipment:</b>							
MM090	Boilers, turbines, and related machinery . . . . .	1,116	1,113	921	(17.4)	(0.3)	(17.2)
MM091	Electric motors, generators, and related equipment . . . . .	3,858	4,614	3,815	(1.1)	19.6	(17.3)
ET015	Motors, engines, except internal combustion, aircraft, or electric . . . . .	482	494	498	3.5	2.5	1.0
MM089	Mechanical power transmission equipment . . . . .	994	922	976	(1.8)	(7.2)	5.9
	Total . . . . .	6,450	7,143	6,211	(3.7)	10.7	(13.0)
<b>Computers and certain other electronic products:</b>							
ET035	Computers, peripherals, and parts . . . . .	46,108	34,382	28,985	(37.1)	(25.4)	(15.7)
ET016	Office machines . . . . .	1,096	984	799	(27.1)	(10.2)	(18.8)
ET017	Telephone and telegraph apparatus . . . . .	20,026	15,522	12,046	(39.8)	(22.5)	(22.4)
ET018	Consumer electronics, except televisions . . . . .	2,995	2,710	2,553	(14.8)	(9.5)	(5.8)
ET021	Navigational instruments and remote control apparatus . . . . .	2,770	3,025	2,922	5.5	9.2	(3.4)
ET022	Television receivers and video monitors . . . . .	1,189	1,266	1,119	(5.8)	6.5	(11.6)
ET023	Radio and television broadcasting equipment . . . . .	2,617	2,064	1,280	(51.1)	(21.1)	(38.0)
ET024	Electric sound and visual signaling apparatus . . . . .	877	956	1,025	16.9	9.0	7.2
ET039	Photographic cameras and equipment . . . . .	1,816	1,592	1,059	(41.7)	(12.3)	(33.5)
ET040	Medical goods . . . . .	13,845	15,042	15,297	10.5	8.6	1.7
ET042	Drawing, drafting, and calculating instruments . . . . .	391	382	376	(3.9)	(2.3)	(1.6)
ET043	Measuring, texting, and controlling instruments . . . . .	16,903	14,977	14,338	(15.2)	(11.4)	(4.3)
	Total . . . . .	110,633	92,903	81,800	(26.1)	(16.0)	(12.0)
<b>Electrical equipment:</b>							
MM092	Electrical transformers, static converters, and indicators . . . . .	2,931	2,103	1,774	(39.5)	(28.3)	(15.6)
ET007	Ignition, starting, lighting, and other electrical equipment . . . . .	1,919	1,815	1,894	(1.3)	(5.4)	4.3
ET006	Primary cells and batteries and electric storage batteries . . . . .	2,699	2,079	1,827	(32.3)	(23.0)	(12.1)
ET027	Circuit apparatus exceeding 1,000 volts . . . . .	686	590	540	(21.2)	(14.0)	(8.4)

Table continued.



Table 2-40—Continued

Steel consumers: U.S. domestic exports, FAS value, constructed years, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, and 2002/03<sup>1</sup>

Industry Group <sup>2</sup>	Description	2000/01	2001/02	2002/03	Change				
					2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03		
				-----Million dollars-----			-----Percent-----		
ET028	Circuit apparatus not exceeding 1,000 volts .....	6,247	4,626	4,458	(28.6)	(25.9)	(3.6)		
ET029	Circuit apparatus assemblies .....	1,361	1,090	1,142	(16.1)	(19.9)	4.7		
ET030	Parts of circuit assemblies .....	1,874	1,451	1,649	(12.0)	(22.6)	13.7		
	Total .....	17,718	13,753	13,284	(25.0)	(22.4)	(3.4)		
	Sector total .....	205,577	170,207	157,672	(23.3)	(17.2)	(7.4)		
<b>Containers:</b>									
MM029	Metallic containers .....	703	651	656	(6.6)	(7.4)	0.9		
<b>Consumer and commercial goods:</b>									
MM073A	Major household appliances and parts ..	1,738	1,682	1,573	(9.5)	(3.2)	(6.5)		
( <sup>3</sup> )	Metal furniture .....	875	619	534	(39.0)	(29.3)	(13.7)		
MM045	Certain builders' hardware .....	1,090	926	908	(16.6)	(15.0)	(1.9)		
MM043	Certain cutlery, sewing implements, and related products .....	564	528	562	(0.4)	(6.4)	6.4		
MM044	Table flatware and related products ....	26	28	28	7.9	7.7	(1.0)		
( <sup>3</sup> )	Cookware, steel not stainless .....	35	30	29	(17.9)	(14.3)	(5.6)		
MM042	Non-powered handtools .....	2,332	2,011	2,034	(12.8)	(13.8)	1.1		
	Total .....	6,660	5,825	5,668	(14.9)	(12.5)	(2.7)		
Total, all sectors .....		331,112	294,005	284,402	(14.1)	(11.2)	(3.3)		

<sup>1</sup> April 1–March 31.

<sup>2</sup> For trade-monitoring purposes, the USITC assigns U.S. Harmonized Tariff Schedule (HTS) import headings/subheadings, and the corresponding Schedule B export categories, to industry/commodity groups and subgroups.

<sup>3</sup> Compiled from individual HTS subheadings.

Source: Official statistics of the U.S. Department of Commerce.



# CHAPTER 3

## PORTS AND RELATED-SERVICE PROVIDERS: RECENT CHANGES IN COMPETITIVE CONDITIONS AND THE EFFECTS OF SAFEGUARD REMEDIES

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### Introduction<sup>1</sup>

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U.S. port authorities and related-service providers generate significant revenues and employment income from steel imports.<sup>2</sup> The extent to which ports and related-service providers were adversely affected by the steel safeguard measures corresponds with their reliance on steel imports. In the aggregate, adverse effects related to the safeguard measures may have been somewhat offset by increased imports of raw materials (steel inputs) to produce steel, and, to a very small extent, through increases in U.S. exports of steel.

To assess the effects of the safeguard measures, the Commission sent questionnaires to 128 port authorities and related-service providers, primarily stevedoring<sup>3</sup> and terminal operators. This survey sample consisted of the top 50 ports,<sup>4</sup> ranked by tonnage, at which imports of steel of the types subject to safeguard measures were unloaded in 2002/03.<sup>5</sup> These ports accounted for 85 percent of such steel imports. The sample also included the leading stevedoring firms, marine terminal operators, and barge lines in the top 10 ports, as well as a small number of related-service providers, such as trucking and other maritime services. The Commission received usable responses from 21 port authorities and related-service providers,<sup>6</sup> resulting in a response rate of 16 percent. Responding port authorities accounted for approximately 27 percent of total steel imports subject to safeguard measures in 2003. The lack of

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<sup>1</sup> The request letter asked the Commission to assess the effects of the steel safeguard measures on industries that rely on imports of steel, such as ports.

<sup>2</sup> U.S. ports authorities having steel imports had revenues from marine activities of approximately \$1.7 billion in 2000 and 2001, the most recent periods for which data were available (U.S. Department of Transportation, Maritime Administration, Office of Ports and Domestic Shipping, *Public Port Finance Survey for FY 2001*, April 2003).

One industry source estimated that in calendar year 2000, U.S. ports generated \$1.6 billion in direct and indirect revenues for ports and related service providers' revenues and more than 27,000 full-time equivalent jobs related to the handling of steel imports (Martin Associates, *The Economic Impact of Imported Iron and Steel Mill Products on the Nation's Marine Transportation System*, Exhibit 2, Dekieffer & Horgan, "Comments by the Free Trade in Steel Coalition on Section 203 Remedies (Steel) to the Trade Policy Staff Committee," Jan. 4, 2002, found at <http://www.ustr.gov/sectors/industry/steel/201/president-comments.htm>, retrieved June 4, 2003).

<sup>3</sup> Stevedoring firms hire and manage the labor that loads or unloads a ship.

<sup>4</sup> This analysis excludes inland river ports that may have benefitted from the transshipment of steel through the United States via inland waterways, as well as activity generated by U.S. exports of steel as a result of the steel safeguard measures.

<sup>5</sup> Throughout this chapter, 2000/01 refers to Apr. 1, 2000 through Mar. 31, 2001; 2001/02 refers to Apr. 1, 2001 through Mar. 31, 2002; and 2002/03 refers to Apr. 1, 2002 through Mar. 31, 2003.

<sup>6</sup> Eight entities provided negative responses, indicating that they did not handle, load, or unload steel of the type subject to safeguard measures.

publicly available data precludes the Commission from ascertaining the degree to which responses to the Commission questionnaire from stevedoring and terminal operators handling steel and/or deriving revenues from subject steel imports represents these segments of the U.S. maritime industry. However, responses to the Commission questionnaire appear to be consistent with the broad base of information compiled during this investigation. For example, as noted earlier in this report, at the Commission's public hearing, several maritime and transportation interests testified regarding the effects of the safeguard measures, and the Commission received a number of written statements during the investigation. Further, the Commission conducted a number of telephone interviews with maritime interests. Other than trade statistics by port district, the most current publically available data on port activities are generally for calendar year 2001.

#### Summary of findings

- *Steel imports*—Constitute a significant portion of port trade tonnage in the Philadelphia, PA; Chicago, IL; Houston-Galveston, TX port districts; and also at the Port of New Orleans, LA.
- *Imports*— Waterborne imports of steel of the types covered by the safeguard measures declined by 10 percent prior to the implementation of the safeguard measures (2000/01-2001/02) and by 10 percent after implementation (2002/03), for a total decline of 4.0 million short tons. However, imports by land from Canada and Mexico, countries not covered by the measures, rose by 1.1 million short tons after implementation of the safeguard measures. Overall, imports of all steel products, declined almost 7 percent in the year after the safeguards.
- *Other factors*—Other events at steel mills (fire, furnace relining, natural gas line construction), falling demand for steel imports from a weakened economy, and antidumping orders account for some shifts in imports during 2000/01-2002/03.
- *Imports of steel inputs and U.S. steel exports*—U.S. ports and related-service providers likely received modest benefits from increased imports of steel inputs and rising U.S. exports (exports are a fraction of the volume of U.S. steel imports).
- *Revenues and hours* —U.S. ports and related-service providers realized a decline of approximately 28 percent in revenues from total steel imports during 2000/01-2001/02 and a further decline of 15 percent after implementation of the safeguards. Hours worked declined by about 10 percent before and after implementation of safeguard measures.

This chapter first describes the reliance of ports on steel trade and the structure of this segment of the maritime industry. The chapter then examines the principal factors determining revenues and hours-worked (a reportedly better measure of industry health than employment), as well as the trends in imports and exports of steel and steel inputs. Concluding the chapter is a discussion of the effects of the safeguard measures based on responses to the Commission's questionnaire and publicly available information and data. Data for this chapter are principally in short tons because, unlike steel consuming industries that are concerned with the price of steel, ports and related-service providers base their revenues, and indirectly the amount of hours worked, on the tonnage of steel handled.

## Ports and the Steel Trade

In calendar year 2001, steel accounted for about 4 percent of the total tonnage of U.S. imports and exports, excluding liquids in tankers, flowing through U.S. port districts with steel trade (table 3-1). However for some port districts, steel trade and trade of the types of steel covered by the safeguard measures, represents a sizeable portion of total port district volume. The Philadelphia district had the greatest share of total trade accounted for by types of steel covered by the safeguards, with total steel trade accounting for 27 percent and steel trade of the types of steel covered by safeguard measures accounting for 24 percent. Other port districts with significant shares of total trade accounted for by subject steel include Chicago, Houston-Galveston, and San Francisco. The share for the port district of

New Orleans is low because of the large number of ports in that district that handle commodities other than steel. The Commission estimates that subject steel shipped through the Port of New Orleans amounted to 4 percent of total trade, owing to the Port's large export volume, and all types of steel accounting for approximately 6 percent of total trade. The Port of New Orleans reported that it derives over 40 percent of its revenues from trade in steel.<sup>7</sup>

**Table 3-1**  
**U.S. ports districts of unloading:<sup>1</sup> Steel trade,<sup>2</sup> by type, as a share of total trade,<sup>2</sup> calendar year 2001**

Port	Total steel as share of total	Steel of types covered by the
	trade, excluding tanker trade <sup>3</sup>	safeguard measures as a share
	<i>Percent</i>	
Philadelphia, PA . . . . .	27.2	24.3
Los Angeles, CA . . . . .	5.9	4.6
Houston-Galveston, TX . . . . .	9.8	5.3
New Orleans, LA <sup>3</sup> . . . . .	2.6	1.6
Chicago, IL . . . . .	20.5	18.0
San Francisco, CA . . . . .	6.3	5.8
Columbia-Snake, OR . . . . .	4.7	4.0
Tampa Total FL . . . . .	4.5	3.2
Cleveland, OH . . . . .	2.1	1.7
Detroit, MI . . . . .	3.2	2.9
All others . . . . .	2.1	1.3
<b>Total</b> . . . . .	<b>4.3</b>	<b>3.1</b>

<sup>1</sup> Excludes the district of Portland, ME, which did not have imports or exports of steel.

<sup>2</sup> Imports for consumption plus exports of domestic merchandise. Exports exclude data on certain fertilizers due to confidentiality concerns.

<sup>3</sup> Percentages are based upon data for total port district trade for container, dry bulk, and break bulk and roll-on/roll-off, but exclude tanker trade. Liquid tanker trade is likely to occur at terminals that are either located offshore or are not under the jurisdiction of port authorities.

<sup>4</sup> The percentages for the Port of New Orleans is likely substantially higher because the most of the steel trade occurs at that port, however, the New Orleans port district includes many ports that handle products other than steel.

Source: Data from U.S. Department of Transportation, Maritime Administration, and U.S. Census Bureau

## Industry Structure

A diverse set of industry participants import and transport steel to the ultimate customer, including governmental bodies, maritime service firms, longshoremen hired on an as needed basis, and transportation firms and individual truckers. Figure 3-1 lists the participants involved in steel imports and shows the flow of revenue or income to these service-providers.

<sup>7</sup> Testimony of David P. Schulingkamp, Chairman of the Board of Commissioners of the Port of New Orleans, before the Subcommittee on Trade, Ways and Means Committee, U.S. House of Representatives, transcript of the Hearing on the Impact of the Section 201 Safeguard Action on Certain Steel Products, Mar. 26, 2003, p. 55.

**Figure 3-1**  
**U.S. port and related-service providers: U.S. industry participants and their role**

Type of firm	Type of port <sup>1</sup>			
	Administered by Port Authority			Privately-owned
	<i>Landlord</i>	<i>Operating</i>	<i>Limited operating</i>	
<b>Port Authority</b>	Builds wharves, rents or leases facilities to terminal and warehouse operators	Builds wharves; operates facilities and provides services for loading/unloading cargo	Combines landlord and operating functions, leasing some properties, operating others	
<b>Private terminal owner</b>				Build wharves, invests in cargo handling equipment, and operates facilities. Alternatively, leases the facilities.
<b>Terminal operator<sup>2</sup></b>	Leases terminal, obtains customers, invests in cargo handling equipment, and may hire longshoremen to load/unload the cargo		Possible leasing of terminal, obtains customers, invests in cargo handling equipment, and may hire longshoremen to load/unload the cargo	Possible leasing of terminal, obtains customers, invests in cargo handling equipment, and may hire longshoremen to load/unload the cargo
<b>Stevedoring firm</b>	Hires longshoremen and provides management of cargo loading/unloading		Possible hiring of longshoremen and provides management of cargo loading/unloading	Possible hiring of longshoremen and provides management of cargo loading/unloading
<b>Other maritime services<sup>3</sup></b>	Chandlers (provide ship supplies) Bunkering		Towing Marine surveying	Piloting Medical services
<b>Connecting transportation services</b>	Barge lines <sup>4</sup> Railroads	Independent truckers and trucking firms		

<sup>1</sup> According to information from the American Association of Port Authorities, 34 public port authorities operate as landlord ports; 32 as operating ports; and 11 as limited-operating ports. The number of private port terminals handling steel is not readily available.

<sup>2</sup> The major firms are P&O Ports North America, Inc.; Cooper/T. Smith Stevedoring Co.; Ceres Terminals; SSA Marine; and Pasha Stevedoring & Terminals, L.P.

<sup>3</sup> Chandlers provide vessels with ship supplies, such as food, clothing, and spare parts; towing firms provide tug boat services to guide the vessel to and from the port; pilots assist in navigating the vessels through channels and harbors to and from the marine terminals; bunkering firms provide vessels with fuel; marine surveyors inspect the vessels and the cargo; and medical services tend to the medical needs of vessel crew members.

<sup>4</sup> The major domestic lines handling steel are American Commercial Barge Lines, Ingram Barge Company, and TECO Barge Line.

Source: Based upon interviews by USITC staff with industry sources and submissions to the USITC for Investigation No. 332-452.

In the United States, ports handling steel imports are administered principally by port authorities. A few small ports are administered by private marine terminal operators or steel companies. Port authorities may be local governmental bodies, such as municipalities or counties, or state agencies. For example, the Port of Los Angeles is a department of the City of Los Angeles, and several states, such as Alabama, Georgia, North Carolina, and South Carolina, have state port authorities. Marine terminal operators are firms that manage and/or own marine terminals at ports, and they may also provide stevedoring services. In the United States, a few large marine terminal firms handle most steel imports, but there are numerous smaller firms.<sup>8</sup> There are a number of related-service providers involved in the transportation of imported steel on waterborne vessels, including Chandler, towing, piloting, bunkering, marine surveying, and medical services. Trucking firms, barge lines, and railroads convey steel from the docks to the ultimate customers. Barges operate on the inland waterways, primarily along the Mississippi River.

Employees involved in handling steel imports may work for either state, county, or municipal entities, as well as for private-sector firms. In addition, many workers loading and unloading steel are members of unions such as the International Longshore and Warehouse Union (ILWU), which represents longshoremen on the West Coast, or the International Longshoremen's Association (ILA), which represents workers in the Great Lakes region and on the Gulf and East Coasts.<sup>9</sup> Other major unions representing longshoremen are the United Steelworkers of America and the Teamsters Union. Navigation pilots at ports may also be represented under organized labor arrangements.

Because precise employment estimates for persons engaged in handling steel imports of the types covered by safeguard measures are unknown, an approximate level of employment may be deduced. Based upon statistics from the U.S. Bureau of Labor Statistics, average annual employment for support activities for water transportation (NAICS industry group 4883)<sup>10</sup> totaled 95,000 persons, ranging from 90,200 to 100,900 persons on a monthly basis, during 2000/01-2002/03. Average annual employment for solely marine cargo handling (NAICS industry 48832) was about 40,400 persons during the same 3-year period, ranging from 37,700 to 39,400 persons on a monthly basis. While employment did not change

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<sup>8</sup> P&O Ports North America, Inc. is owned by the P&O Group, headquartered in London, and operates in numerous ports throughout the United States. Cooper T. Smith is present at 38 U.S. ports, as well as ports in Canada, Mexico, and South America. SSA Marine operates on the West, Gulf, and East Coasts, as well as internationally, and encompasses the former Stevedoring Services of America based in Seattle, WA. Ceres Terminals, which has annual revenues of \$150 million and operations in nine U.S. ports, as well as in Canada and Amsterdam, was purchased in Oct. 2002 by NYK Line of Japan, one of the world's leading vessel operators. *See* NYK Line, press release, "NYK to Purchase Ceres Terminals," Sept. 12, 2002, found at <http://www.nykline.co.jp/english/what/2002/0912/index.htm>, retrieved May 7, 2003; and "Big News in 2002 for NYK Group," found at <http://www.nykline.co.jp/english/2002/1217/index.htm>, retrieved May 7, 2003.

<sup>9</sup> Maritime service providers on the West Coast and Texas have specific organizations to negotiate agreements with unions. The Pacific Maritime Association (PMA) is an association that negotiates and administers maritime labor agreements with the International Longshore and Warehouse Union. The Pacific Maritime Association's membership consists of U.S. flag and foreign flag steamship operators, and stevedore and terminal operator companies that operate in California, Oregon, and Washington ports. The West Gulf Maritime Association is a Texas nonprofit corporation that negotiates and administers maritime labor agreements with the International Longshoremen's Association in all Texas ports and the Port of Lake Charles, Louisiana. The West Gulf Maritime Association membership consists of steamship owners, operators, agents, stevedoring and/or terminal operators.

<sup>10</sup> Data pertain to employees designated under North American Industrial Classification System (NAICS) industry group 4883, Support Activities for Water Transportation. This industry group includes NAICS industries 488310, Port and Harbor Operations; 48832, Marine Cargo Handling; 48833, Navigational Services to Shipping; and 48839, Other Support Activities for Water Transportation. Other relevant employment data are classified under NAICS national industries 483113, Coastal and Great Lakes Freight Transportation and 483211, Inland Water Freight Transportation.

much annually, average hourly wages for production workers in marine cargo handling rose by 16 percent during 2000/01-2002/03, from \$18.37 to \$21.30 per hour.

According to an estimate by Martin Associates<sup>11</sup> made prior to implementation of safeguard measures on steel, the 36.4 million short tons of iron and steel imported in calendar year 2000 generated 38,800 direct, induced, and indirect jobs that resulted in \$1.7 billion of direct, induced, and indirect wages and salaries.<sup>12</sup> Martin Associates estimated that 1,100 jobs are created for every 1 million short tons of steel imported. Direct employment was estimated at 27,148 persons and direct personal income at \$466 million. Based upon the data provided above, employment estimates for persons directly handling imported steel of the types covered by the safeguard measures is likely to range from 17,000 to 19,000 persons in 2002/03, based upon the share of steel imports covered by the safeguards to total steel imports and responses to the Commission's questionnaire regarding employment.

Information from the Port of Houston Authority illustrates employment levels and income at a large steel handling port. For its port facilities alone, the Authority estimates (also based on the Martin Associates study) that 0.43 jobs are created for each 1,000 short tons of steel handled at its public facilities, and \$31 in business revenue is generated per short ton of handled steel.<sup>13</sup> Such parameters would result in 1,776 jobs and \$128 million in business revenue created for the 4,130,456 short tons of steel handled in 2000. Personal income for employees directly handling steel at the Port of Houston was estimated at \$46.5 million in calendar year 2000.<sup>14</sup>

Although the most recent publicly available data on port revenues and capital expenditures are for calendar year 2001, such information provides a perspective regarding port operations. According to statistics published by the U.S. Maritime Administration, profitability at U.S. public ports varied widely in calendar year 2001, with a number of ports in the Northeast United States incurring losses; however, the report did not provide reasons for the profitability trends.<sup>15</sup> Ports face additional costs related to homeland security following the terrorist attacks of September 11, 2001. According to an estimate by the U.S. Coast Guard, if ports are to comply with the Maritime Transportation Security Act,<sup>16</sup> \$4.4 billion will be required over the next 10 years to cover the costs associated with acquiring new equipment and hiring new personnel.<sup>17</sup>

U.S. ports make a variety of capital investments for either maintenance or new construction each year. According to U.S. Maritime Administration data, U.S. public port capital expenditures declined from \$1.5 billion in calendar year 1997 to \$1.0 billion in calendar year 2000, before rising to \$1.7 billion

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<sup>11</sup> Martin Associates, *The Economic Impact of Imported Iron and Steel Mill Products on the Nation's Marine Transportation System*, Exhibit 2, Dekieffer & Horgan, Comments by the Free Trade in Steel Coalition on Section 203 Remedies (Steel) to the Trade Policy Staff Committee, Jan. 4, 2002, found at <http://www.ustr.gov/sectors/industry/steel/201/president-comments.htm>, retrieved June 4, 2003.

<sup>12</sup> Direct employment include those jobs directly related to handling steel. Induced employment are those jobs that are created as a result of income spending by those persons directly handling steel. Indirect employment is generated by the expenditures of firms directly handling steel on goods and services. *Ibid.*, pp. 4-5.

<sup>13</sup> Testimony of Wade Battles, Managing Director, Port of Houston Authority, transcript of Commission hearing, June 19, 2003, p. 323.

<sup>14</sup> PPS Consult, written submission to the USITC, for Investigation No. 332-452, July 17, 2003, p. 3.

<sup>15</sup> U.S. Department of Transportation, Maritime Administration, Office of Ports and Domestic Shipping, *Public Port Finance Survey for FY 2001*, April 2003.

<sup>16</sup> The Port and Maritime Security Act (S. 1214) was passed by Congress in November 2002.

<sup>17</sup> AAPA, position paper, Seaport Security, found at [http://www.aapa-ports.org/govrelations/aapa\\_security\\_position.pdf](http://www.aapa-ports.org/govrelations/aapa_security_position.pdf), retrieved June 6, 2003.



in calendar year 2001.<sup>18</sup> In that year, the top 10 ports in terms of volume of imported steel accounted for almost 80 percent of total capital expenditures. For example, the Port of Los Angeles had capital expenditures of \$550.7 million in calendar year 2001, and the Port of Houston Authority had capital expenditures of \$45.2 million.<sup>19</sup> U.S. public ports rely significantly on port revenues and revenue bonds to finance capital expenditures. In calendar year 2001, port revenues accounted for 51 percent of overall financing; revenue bonds for almost 29 percent; general obligation bonds for 9 percent; grants for 7 percent; loans for 4 percent; and other methods for 11 percent.<sup>20</sup>

## Determinants of Revenues and Hours Worked

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The principal determinants affecting ports and related-providers' levels of revenue, income, and hours-worked related to steel trade are steel tonnage, the length of time a vessel is at dock or cargo is on the wharf, and the type of steel that is being unloaded or loaded (table 3-2). Landlord ports account for much of the volume of imported steel, with the exception of the Port of Houston, which is a limited operating port. These ports<sup>21</sup> derive their income principally from dockage and wharfage fees and the leasing of property to terminal operators and warehousing firms. Terminal operators that lease facilities charge customers the port's tariff for dockage and wharfage and, in turn, remit a percentage of revenues to the landlord port. Within a customs port district, private terminal operators may own facilities at which ships discharge imported steel and charge their own fees. For example, in the Philadelphia port district, one of the largest points of unloading for steel imports is Novolog USA, Inc., a private terminal north of the Port of Philadelphia, that handles only steel.<sup>22</sup>

Dockage fees are charged either on the net registered tons of cargo carried by the vessel or the length of the vessel. For example, a fully loaded ship carrying 18,000 metric tons of semi-finished or finished steel and docked for 3 to 4 days for unloading would generate approximately \$5,000 in daily dockage fees for a total of \$15,000 to \$20,000 for the duration.<sup>23</sup> An alternative to docking is mid-stream anchorage; the fees for mid-stream anchorage are negligible compared to docking. At Gulf Coast ports, approximately 60 percent of imported steel is discharged through midstream operations<sup>24</sup> for transport by barge through the inland waterway system to ports in the Midwest. Regardless of whether the vessel is docked or at anchorage, a stevedoring firm would likely be employed to load or unload the cargo. According to industry officials, wharfage fees for such a ship at dock, charged on a metric ton basis, could generate between \$25,000 to \$30,000.<sup>25</sup> Generally, wharfage fees are based upon the type of commodity. For example, the Port of Houston Authority maintains a wharfage charge of \$1.65 per short ton for all steel products except steel slabs, for which the charge is \$1.16 per short ton.

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<sup>18</sup> Approximately 79 percent of the capital expenditures in 2001 were for cargo facilities; 13 percent for expenditures on terminals; and 8 percent for dredging. Of total port capital expenditures in 2001, 56 percent was for new construction; 29 percent for modernization or rehabilitation; and 14 percent for other miscellaneous construction. U.S. Department of Transportation, Maritime Administration, Office of Ports and Domestic Shipping, *United States Port Development Expenditure Report*, Mar. 2003, p. 4.

<sup>19</sup> *Ibid.*, p. 16.

<sup>20</sup> *Ibid.*, p. 18.

<sup>21</sup> Port authorities at landlord and limited-operating ports may also oversee the operation of airports and other transportation terminals, as well as bridges and other infrastructure that generate revenues.

<sup>22</sup> Official of the Port of Philadelphia, telephone interview with USITC staff, June 20, 2003.

<sup>23</sup> Free Trade in Steel Coalition, written submission to the USITC, for Investigation No. 332-452, June 27, 2003, pp. 1-2.

<sup>24</sup> DeKieffer & Horgan, on behalf of the Free Trade in Steel Coalition, written submission to the USITC, for Investigation No. TA-201-73, Nov. 13, 2001, p. 5.

<sup>25</sup> *Ibid.*, p. 2.

**Table 3-2**

**U.S. port and related-service providers: Sources of and determinants affecting revenue and income**

**Steel imports**

**participants/revenue or income**

<b>source</b>	<b>Determinants</b>
<b>Ports</b>	
Lease port property to terminal operators and warehousing firms	Volume of cargo handled by the terminal operator; high cargo volume results in higher lease revenue, lower cargo volume results in lower lease revenue
Dockage fees	Net tonnage of cargo carried by ship or vessel length; length of time vessel remains at dock
Wharfage fees	Commodity type and tonnage crossing the wharf, and length of time cargo remains on wharf
<b>Terminal operators</b>	
Dockage fees	Net tonnage of cargo carried by ship or vessel length; length of time vessel remains at dock
Wharfage fees	Commodity type and tonnage crossing the wharf; length of time cargo remains on wharf
Equipment usage fees	Length of time equipment used to load/unload cargo
<b>Stevedoring firms and longshoremen</b>	
Management fees	Size of project and hours worked
Hours worked	1. Tonnage: large cargos result in more hours until the next job 2. Type of steel: higher value added steel shipped as breakbulk <sup>1</sup> cargo requires careful handling and therefore requires more hours to load or unload

<sup>1</sup> Breakbulk cargo is noncontainerized cargo that is stored in bales or other discretely packaged units.

Source: Compiled by the Commission from various maritime industry sources.

Steel is principally imported as breakbulk cargo, that is, noncontainerized general cargo that is stored in bales or other discretely packaged units. For example, approximately 88 to 91 percent of hot-rolled, cold-rolled, and corrosion-resistant, plate, and rebar was shipped as breakbulk cargo into U.S. ports from 2001/02 through 2002/03, while the remainder was shipped in containers.<sup>26</sup> Containers are used either to protect the product from corrosion or for faster handling.<sup>27</sup> Between 85 to 97 percent of stainless steel bar and light shapes, rod, and wire, as well as flanges and fittings was shipped in containers during this period. Approximately 27 to 32 percent of slab was shipped in containers from 2000/01 through 2002/03. Steel shipped as breakbulk cargo requires special handling and is thus labor intensive to load onto and unload from vessels.<sup>28</sup>

Industry participants contend that for the maritime industry, man-hours worked and resultant wages and fringe benefits lost or gained are more relevant to assessing the effects of the steel safeguards than a measure such as employment in the manufacturing industry.<sup>29</sup> The cost in terms of wages and

<sup>26</sup> Based upon analysis of the Customs Net Import File.

<sup>27</sup> Containers generally come in standard units. A 20-foot equivalent unit is 20 feet by 8 feet by 6 inches high, and has a maximum payload of 23.9 short tons; a 40-foot equivalent unit is 40 feet by 8 feet by 6 inches, and has a maximum payload of 29.4 short tons.

<sup>28</sup> Industry representative, telephone interview with USITC staff, May 6, 2003.

<sup>29</sup> Testimony of Dennis Rochford, Coordinator, Free Trade in Steel Coalition; Walter A. Niemand, President, West Gulf Maritime Association; and Michael Dickens, District Representative, South Atlantic and Gulf

(continued...)

fringe benefits to discharge a ship of steel imports ranges between \$30,000 and \$76,000.<sup>30</sup> Steel is typically unloaded from a vessel by a team of workers, known as a “gang.”<sup>31</sup> At the Port of Houston, a steel unloading gang would likely work a 12-hour shift, and take 1.5 to 7 days to unload a ship’s steel cargo.<sup>32</sup>

Hours worked depend on the type of steel to be discharged. Higher value-added steel products made to exacting tolerances and finishes require more careful handling to avoid damage during discharge from the vessel and placement on the next mode of transportation. The number of tons of steel that can be moved per hour from a vessel with a 14-person gang is much lower for higher value-added steel than for lower value-added steel, such as slab. For example, 250 to 400 short tons of slab can be unloaded in an hour by a 14-person gang, whereas the gang would only be able to unload 125 short tons of cold-rolled, corrosion-resistant, tin-mill, or rebar in the same amount of time. Thus, a shift in the composition of steel imports at a port to slab or steel types that typically are shipped in containers would result in fewer hours for steel gangs.

The number of hours worked is particularly important to unionized workers, because these workers need a set number of hours to qualify for fringe benefits, including paid holidays, vacation time, pensions, and health care.<sup>33</sup> Most of the unionized longshoremen are casual workers, not employed full time but hired at union halls on an as-needed basis.<sup>34</sup>

## **Trade Trends and Ports**

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### *Steel Imports and Ports*

Although waterborne transport has been the principal mode of transport during 2000/01-2002/03, a shift to imports over land began prior to the implementation of the safeguard measures, and accelerated after implementation. Waterborne shipments accounted for 74 to 80 percent of all imports of steel during 2000/01-2002/03 (based on tonnage), while land transport accounted for 20 to 26 percent and air transport for 0.1 percent of such imports. Waterborne imports as a share of total imports of steel of the types subject to safeguard measures declined in 2002/03, the first year in which the safeguard measures were in effect, falling from 79 percent to 73 percent of imports (table 3-3). The decline in waterborne imports is likely attributable to both a decline in U.S. demand for steel in 2001/02, and in part, corresponds to likely

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<sup>29</sup> (...continued)

Coast District, International Longshoremen’s Association, transcript of Commission hearing, June 19, 2003, pp. 378-380.

<sup>30</sup> Testimony of Dennis Rochford, Coordinator, Free Trade In Steel Coalition, transcript of Commission hearing, June 19, 2003, p. 325.

<sup>31</sup> A gang typically has 12 to 14 persons, including a supervisor, persons for checking the load, a group of four men to work in the hold of the ship, and possibly a forklift truck operator. The gang works in conjunction with the crane operators assigned to unload the ship. *See* testimony of Walter A. Nieman, President, West Gulf Maritime Association, before the USITC, hearing transcript, June 19, 2003, p. 318, and PPS Consult, on behalf of the Texas Free Trade Coalition, written submission, for Investigation No. 332-452, June 27, 2003, Exhibit 1.

<sup>32</sup> Testimony of Walter A. Nieman, President, West Gulf Maritime Association, transcript of Commission hearing, June 19, 2003, pp. 319-320.

<sup>33</sup> Testimony of Walter A. Nieman, President, West Gulf Maritime Association, transcript of Commission hearing, June 19, 2003, p. 320.

<sup>34</sup> Testimony of Dennis Rochford, Coordinator, Free Trade In Steel Coalition, transcript of Commission hearing, June 19, 2003, p. 315.

effects of preliminary antidumping duties assessed on imports of hot-rolled steel from certain countries.<sup>35</sup> During 2000/01-2002/03, there was an overall decline in waterborne imports of 4 million short tons, but an increase of 937,140 tons over land. Non-waterborne imports rose by 1.1 million short tons between 2001/02 and 2002/03, with virtually all the increase being steel imported from Canada and Mexico, which are exempt from safeguard measures. Most of the increase of such imports was of hot-rolled, cold-rolled, and corrosion-resistant steel. Between 2001/02 and 2002/03, the largest declines in waterborne import tonnage of subject steel were from Japan, the EU, Russia, Korea, Taiwan, Brazil, China, Ukraine, and Malaysia. The largest increases were for imports from countries exempt from the safeguard measures, such as Mexico, India, Egypt, Romania, Thailand, and Canada.

**Table 3-3**  
**Share of U.S. imports of steel of the types subject to safeguards transported by waterborne vessels vs. other modes of transport, 2000/01,<sup>1</sup> 2001/02,<sup>1</sup> and 2002/03<sup>1</sup>**

Mode	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	<i>Short tons</i>			<i>Percent</i>		
Waterborne . . . . .	21,134,680	18,968,467	17,071,583	-19.2	-10.3	-10.0
Other . . . . .	5,273,081	5,086,908	6,210,221	17.8	-3.5	22.1
Total . . . . .	26,407,761	24,055,374	23,281,804	-11.8	-8.9	-3.2
	<i>Percent</i>			<i>Percent</i>		
Waterborne . . . . .	80.0	78.9	73.3	-8.4	-1.4	-7.1
Other . . . . .	20.0	21.1	26.7	33.5	5.5	26.5
Total . . . . .	100.0	100.0	100.0	0.0	0.0	0.0

<sup>1</sup> April 1-March 31.

Source: U.S. Census Bureau.

Together, U.S. ports had a 19-percent decline in imports of steel of the types subject to safeguard measures and an 18-percent decline in total steel import tonnage during 2000/01-2002/03 (table 3-4). Comparing 2001/02 with 2002/03, the first year after the implementation of the safeguard measures, steel imports of the types covered by the safeguard measures fell by 10 percent, and total steel import tonnage for all U.S. ports declined by almost 7 percent. During 2000/01-2002/03, imports of safeguard steel in tons was only partially offset by steel imports from exempt countries.

The top five leading port districts<sup>36</sup> for imports of steel subject to safeguard measures were Philadelphia, Los Angeles, Houston-Galveston, New Orleans, and Chicago during 2000/01-2002/03 (table 3-4). These port districts together accounted for 66 to 68 percent of total imports of steel subject to

<sup>35</sup> U.S. imports of hot-rolled steel from Argentina, China, India, Indonesia, Kazakhstan, Taiwan, and the Ukraine virtually dropped out of the U.S. market in 2001/02 and 2002/03 probably as a result of preliminary antidumping duties assessed in May and June 2001. Imports from Romania, South Africa, and Thailand dropped almost out of the market in 2001/02, but rebounded significantly in 2002/03. Imports from the Netherlands dropped by only 20 percent between 2000/01 and 2001/02, and remained constant in 2002/03. See preliminary antidumping duty margins assessed, 66 F.R. 22146-22204, May 3, 2001; 66 F.R. 30411, June 6, 2001; final antidumping duty orders 66 F.R. 48424, Sept. 19, 2001; 66 F.R. 58435, Nov. 21, 2001; 66 F.R. 59559-59566, Nov. 29, 2001; and 66 F.R. 60192-60194, Dec. 3, 2001. See also statistics on hot-rolled steel and strip in regards to USITC Investigation No. TA-204-9, on the USITC Dataweb, found at [http://dataweb.usitc.gov/scripts/steel\\_204/steel.asp](http://dataweb.usitc.gov/scripts/steel_204/steel.asp), retrieved Aug. 19, 2003.

<sup>36</sup> The U.S. Census Bureau provides data to the public by U.S. Customs Service port district, with each district consisting of a number of ports of entry, some of which may be seaports. Census aggregates data on the operations of individual ports or marine terminals so as not to expose confidential business data.

safeguard measures.<sup>37</sup> The Houston-Galveston port district exhibited the largest decline in quantity (598,504 short tons or 24 percent), of subject steel from subject and exempt sources between 2001/02 and 2002/03. The Philadelphia district had a decline of almost 13 percent (or 458,350 short tons), and the Los Angeles district had a decline of 10 percent (332,958 short tons) between 2001/02 and 2002/03.<sup>38</sup>

**Table 3-4**  
**U.S. imports of steel, by vessel: Port district of unloading, by status, 2000/01,<sup>1</sup> 2001/02,<sup>1</sup> and 2002/03,<sup>1</sup> ranked by subject imports in 2001/02<sup>1</sup>**

Port district of unloading/status	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	<i>Short tons</i>			<i>Percent</i>		
Philadelphia, PA:						
Subject <sup>2</sup> .....	3,206,006	3,291,373	2,400,997	-25.1	2.7	-27.1
Exempt <sup>3</sup> .....	418,767	287,007	719,034	71.7	-31.5	150.5
Subtotal .....	3,624,772	3,578,381	3,120,031	-13.9	-1.3	-12.8
Nonsubject <sup>4</sup> .....	429,955	324,957	282,507	-34.3	-24.4	-13.1
Total .....	4,054,727	3,903,338	3,402,538	-16.1	-3.7	-12.8
Los Angeles, CA:						
Subject <sup>2</sup> .....	2,352,644	2,872,853	2,068,354	-12.1	22.1	-28.0
Exempt <sup>3</sup> .....	801,197	480,413	951,954	18.8	-40.0	98.2
Subtotal .....	3,153,842	3,353,266	3,020,305	-4.2	6.3	-9.9
Nonsubject <sup>4</sup> .....	852,811	762,278	760,720	-10.8	-10.6	-0.2
Total .....	4,006,653	4,115,544	3,781,028	-5.6	2.7	-8.1
Houston-Galveston, TX:						
Subject <sup>2</sup> .....	2,123,150	1,819,570	707,704	-66.7	-14.3	-61.1
Exempt <sup>3</sup> .....	828,766	665,935	1,179,297	42.3	-19.6	77.1
Subtotal .....	2,951,916	2,485,505	1,887,001	-36.1	-15.8	-24.1
Nonsubject <sup>4</sup> .....	1,943,948	1,781,410	1,447,853	-25.5	-8.4	-18.7
Total .....	4,895,863	4,266,915	3,334,854	-31.9	-12.8	-21.8
New Orleans, LA:						
Subject <sup>2</sup> .....	2,049,492	1,552,357	1,013,194	-50.6	-24.3	-34.7
Exempt <sup>3</sup> .....	1,420,649	738,739	1,685,778	18.7	-48.0	128.2
Subtotal .....	3,470,140	2,291,096	2,698,972	-22.2	-34.0	17.8
Nonsubject <sup>4</sup> .....	1,488,112	1,379,341	1,550,780	4.2	-7.3	12.4
Total .....	4,958,252	3,670,437	4,249,752	-14.3	-26.0	15.8
Chicago, IL:						
Subject <sup>2</sup> .....	814,808	884,716	647,688	-20.5	8.6	-26.8
Exempt <sup>3</sup> .....	100,487	21,462	204,903	103.9	-78.6	854.7
Subtotal .....	915,295	906,178	852,591	-6.9	-1.0	-5.9
Nonsubject <sup>4</sup> .....	242,404	129,860	253,021	4.4	-46.4	94.8
Total .....	1,157,699	1,036,038	1,105,612	-4.5	-10.5	6.7

<sup>37</sup> Within various regions (e.g., along the Gulf Coast, within the Great Lakes, in the Mid-Atlantic) there is competition among ports for steel imports. Such competition is based upon facilities, wharfage and dockage fees, and land transportation costs to the ultimate customer.

<sup>38</sup> The 10-day long labor strike in Los Angeles in Sept. 2002 did not adversely effect imports of steel. Shipments of steel destined for Los Angeles were not diverted to other ports. Steel that arrived at the port in Sept. during the strike was subsequently unloaded in Oct. Testimony of Tim Tess, Vice President Administration, Pasha Stevedoring and Terminals, transcript of Commission hearing, June 19, 2003, pp. 343-344.

Table 3-4

U.S. imports of steel, by vessel: Port district of unloading, by status, 2000/01,<sup>1</sup> 2001/02,<sup>1</sup> and 2002/03,<sup>1</sup> ranked by subject imports in 2001/02<sup>1</sup>

Port district of unloading/status	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	<i>Short tons</i>			<i>Percent</i>		
San Francisco, CA:						
Subject <sup>2</sup> .....	1,182,878	829,245	930,514	-21.3	-29.9	12.2
Exempt <sup>3</sup> .....	128,408	18,954	99,296	-22.7	-85.2	423.9
Subtotal .....	1,311,284	848,199	1,029,810	-21.5	-35.3	21.4
Nonsubject <sup>4</sup> .....	110,808	57,669	44,266	-60.1	-48.0	-23.2
Total .....	1,422,092	905,868	1,074,075	-24.5	-36.3	18.6
Columbia-Snake, OR:						
Subject <sup>2</sup> .....	667,510	695,822	505,717	-24.2	4.2	-27.3
Exempt <sup>3</sup> .....	243,667	641,861	514,677	111.2	163.4	-19.8
Subtotal .....	911,177	1,337,683	1,020,394	12.0	46.8	-23.7
Nonsubject <sup>4</sup> .....	255,610	172,285	181,646	-28.9	-32.6	5.4
Total .....	1,166,787	1,509,967	1,202,040	3.0	29.4	-20.4
Tampa, FL:						
Subject <sup>2</sup> .....	251,806	486,906	109,727	-56.4	93.4	-77.5
Exempt <sup>3</sup> .....	87,291	101,889	140,458	60.9	16.7	37.9
Subtotal .....	339,097	588,765	250,186	-26.2	73.6	-57.5
Nonsubject <sup>4</sup> .....	251,807	191,916	220,182	-12.6	-23.8	14.7
Total .....	590,903	780,711	470,368	-20.4	32.1	-39.8
Cleveland, OH:						
Subject <sup>2</sup> .....	618,613	389,818	401,869	-35.0	-37.0	3.1
Exempt <sup>3</sup> .....	22,362	669	32,099	43.5	-97.0	4,698.1
Subtotal .....	640,975	390,487	433,968	-32.3	-39.1	11.1
Nonsubject <sup>4</sup> .....	207,353	95,058	151,199	-27.1	-54.2	59.1
Total .....	848,328	485,545	585,167	-31.0	-42.8	20.5
Detroit, MI:						
Subject <sup>2</sup> .....	643,765	364,694	477,446	-25.8	-43.3	30.9
Exempt <sup>3</sup> .....	93,458	23,178	183,999	96.9	-75.2	693.9
Subtotal .....	737,223	387,871	561,445	-23.8	-47.4	44.8
Nonsubject <sup>4</sup> .....	36,531	29,828	42,675	16.8	-18.3	43.1
Total .....	773,754	417,700	704,120	-9.0	-46.0	68.6
All others:						
Subject <sup>2</sup> .....	2,088,829	2,056,014	966,978	-53.7	-1.6	-53.0
Exempt <sup>3</sup> .....	990,130	744,992	1,129,900	14.1	-24.8	51.7
Subtotal .....	3,078,959	2,801,005	2,096,878	-31.9	-9.0	-25.1
Nonsubject <sup>4</sup> .....	2,089,885	1,650,816	1,795,983	-14.1	-21.0	8.8
Total .....	5,168,844	4,451,821	3,892,861	-24.7	-13.9	-12.6
Total:						
Subject <sup>2</sup> .....	15,999,498	15,243,369	10,230,188	-36.1	-4.7	-32.9
Exempt <sup>3</sup> .....	5,135,182	3,725,098	6,841,395	33.2	-27.5	83.7
Subtotal .....	21,134,680	18,968,467	17,071,583	-19.2	-10.3	-10.0
Nonsubject <sup>4</sup> .....	7,909,224	6,575,417	6,730,833	-14.9	-16.9	2.4
Total .....	29,043,904	25,543,884	23,802,416	-18.0	-12.1	-6.8

<sup>1</sup> April 1-March 31.

<sup>2</sup> Steel of the types covered by the safeguard measures from subject countries.

<sup>3</sup> Steel of the types covered by the safeguard measures from exempt countries.

<sup>4</sup> Steel of the types not covered by the safeguard measures.

Source: U.S. Bureau of the Census.

The Tampa district had a decline of almost 58 percent (338,609 short tons); and the Columbia-Snake River district had a decline of almost 24 percent (317,289 short tons), between 2001/02 and 2002/03. In contrast, the New Orleans district had an increase of almost 18 percent (407,876 short tons) during this period. In the New Orleans district, between 2001/02 and 2002/03, there were significant declines in steel import tonnage of plate, cold-rolled, tin mill, and rebar, but these were more than offset by substantial increases in import tonnage of slab, hot-rolled, and corrosion-resistant steel.

The significant changes in imports at port districts discussed above are also reflected in the large changes that occurred in imports of the types of steel covered by the safeguard measures during 2000/01-2002/03 (table 3-5). Between 2001/02 and 2002/03, increases in waterborne imports occurred for slab, hot-rolled, corrosion-resistant, and stainless wire. The increase in slab imports, an input into hot-rolled steel, is in part attributable to production increases in 2002/03 by U.S. steel producers that roll slab into various products, and also to at least one U.S. slab producer relining its furnace.<sup>39</sup> Imports of all other products declined with large drops evident in cold-rolled, tin-mill, and rebar likely related to the safeguard measures.<sup>40</sup> Some of the large swings in steel imports shown in tables 3-4 and 3-5 were due to events unrelated to safeguard measures, such as a fire at a steel mill in the San Francisco district<sup>41</sup> corresponding to the large decline in hot-rolled and large increase in cold-rolled imports in 2001/02, both of which again reversed in 2002/03. The installation of a natural gas pipeline between Alabama and the Florida Gulf Coast<sup>42</sup> corresponds with the increase in imports of pipe in 2001/02, and with the system's completion in early 2002. Stainless bar saw little change, likely attributable to flat demand for this product. Stainless steel rod imports fell, reflecting a shift to imports of stainless steel wire.<sup>43</sup>

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<sup>39</sup> Ispat Inland, Inc. received a 250,000 short ton slab safeguard exclusion because the company was relining its furnace. Ispat International, N.V., *Annual Report 2002*, found at <http://www.ispat.com>, retrieved Aug. 19, 2003, p. 88.

<sup>40</sup> With regard to tin-mill, *see* testimony of Richard O. Cunningham, esq., on behalf of the Corus Group, PLC, before the USITC, in Investigation No. TA-204-9, July 22, 2003, p. 349.

<sup>41</sup> A substantial portion of the changes in imports of hot-rolled and cold-rolled steel occurred in the San Francisco port district. It is likely that these changes were related to the fire that shut down the cold-rolling mill at USS-Posco in Pittsburg, CA, from May 31, 2001 until Jan. 7, 2002. During this time, USS-Posco imported cold-rolled, rather than hot-rolled steel, to produce cold-rolled, galvanized, and tin-mill steel. U.S. imports of hot-rolled steel unloaded in the San Francisco port district fell from 970,084 short tons in 2000/01 to 172,266 short tons in 2001/02, and then rose to 921,466 short tons in 2002/03. For the same periods, imports of cold-rolled steel rose from 169,330 short tons to 398,172 short tons, and then fell to 1,823 short tons. *See* USS-Posco, "Cold Rolling Mill Fire," press release 27; "USS-Posco Industries Returns to Production," press release 25; and "Cold Mill Up and Running," press release 24, found at <http://www.uss-posco.com/PressReleases>, retrieved July 14, 2003. Posco received an exclusion to the safeguard measures of 750,000 short tons of hot-rolled coil steel. SteelNews.net, "U.S. Firms Cry Foul at Procedure for Giving Steel-Tariff Exemptions," Mar. 20, 2002, found at <http://www.steelnews.net/members/2002/mar/20/03202002-1.shtml>, retrieved July 17, 2003.

<sup>42</sup> U.S. waterborne imports of welded tubular products other than oil country tubular goods rose in 2002 from 2001 because of shipments used to construct the Gulfstream Natural Gas System, a natural gas pipeline system running from southern Alabama to Tampa Bay, FL. Construction began in mid-2001 and finished in May 2002. Imports of welded tube into the Tampa, FL port district rose from 88,124 short tons in 2000/01 to 324,964 short tons in 2001/02, before falling to 70,962 short tons in 2002/03. Imports of welded tube into the Mobile, AL port district rose from 14,681 short tons in 2001 to 274,211 short tons in 2001/02, before declining to 185,290 short tons in 2002/03. *See* Gulfstream Natural Gas System, press releases "Gulfstream Natural Gas System Signs Purchase Agreement with Florida Pipe Supplier," Nov. 30, 2002; "Initial Gulfstream Natural Gas System Pipe Shipment Arrives in Alabama," Apr. 18, 2001; and "Gulfstream Natural Gas System Signs Cornerstone Agreements with Port Manatee for Significant Florida Base," July 20, 2000; found at <http://www.gulfstreamgas.com>, retrieved July 18, 2003.

<sup>43</sup> With regard to stainless steel bar, *see* testimony of Dan Anderson, Vice President of Sales and Marketing, Slater Steels Corp., before the USITC, in Investigation No. TA-204-9, hearing transcript, July 10, 2003, pp. 34-35.

(continued...)

**Table 3-5**

**Steel covered by the safeguard measures: U.S. imports for consumption, all sources, by waterborne transports, by product type, 2000/01,<sup>1</sup> 2001/02,<sup>1</sup> and 2002/03<sup>1</sup>**

Product	2000/01	2001/02	2002/03	Change			2001/02 to 2002/03
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03	
	–Short tons–			–Percent–			–Short tons–
Slab . . . . .	6,262,636	6,458,386	6,901,083	10.2	3.1	6.9	442,697
Plate . . . . .	741,923	713,782	414,236	-44.2	-3.8	-42.0	-299,547
Hot-rolled . . . . .	5,446,797	2,436,113	3,791,121	-30.4	-55.3	55.6	1,355,007
Cold-rolled . . . . .	2,426,469	2,596,417	1,031,252	-57.5	7.0	-60.3	-1,565,164
Corrosion resistant . .	1,462,173	1,436,537	1,570,132	7.4	-1.8	9.3	133,595
Tin mill . . . . .	413,657	482,803	188,011	-54.5	16.7	-61.1	-294,791
Hot bar . . . . .	1,054,261	862,762	719,235	-31.8	-18.2	-16.6	-143,527
Cold bar . . . . .	157,687	149,124	71,482	-54.7	-5.4	-52.1	-77,642
Rebar . . . . .	1,508,552	1,775,250	918,614	-39.1	17.7	-48.3	-856,636
Welded pipe . . . . .	1,339,106	1,750,411	1,219,027	-9.0	30.7	-30.4	-531,384
Flanges . . . . .	106,804	133,259	98,365	-7.9	24.8	-26.2	-34,894
Stainless bar . . . . .	113,084	85,473	81,362	-28.1	-24.4	-4.8	-4,112
Stainless rod . . . . .	75,507	62,727	39,690	-47.4	-16.9	-36.7	-23,037
Stainless wire . . . . .	26,025	25,423	27,974	7.5	-2.3	10.0	2,551
<b>Total . . . . .</b>	<b>21,134,680</b>	<b>18,968,467</b>	<b>17,071,583</b>	<b>-19.2</b>	<b>-10.2</b>	<b>-10.0</b>	<b>-1,896,884</b>

<sup>1</sup> April 1-March 31.

Source: U.S. Census Bureau.

### ***Imports of Raw Materials to Produce Steel***

Following the imposition of the safeguard measures, U.S. steel producers increased their production of steel, due in part as some U.S. capacity was restarted, and thus increased their consumption of raw materials and other inputs to produce steel.<sup>44</sup> As a result, increased imports of raw materials to produce steel may have offset some of the adverse effects on ports attributed to the decline in U.S. imports of steel subject to safeguards.<sup>45</sup> However, while data indicate that certain raw materials used in the production of steel increased subsequent to the safeguard measures, it is difficult to determine the amount that is specifically attributable to the safeguard measures.

Steel production inputs, classified as bulk materials by the maritime industry, require fewer labor hours to discharge from vessels. Further, if such commodities are discharged directly into barges either at mid-stream or at the dock, or directly into railroad cars, wharfage charges are minimized. In addition, in some instances, imports of steel inputs are unloaded at terminals operated by U.S. steel producers at

<sup>43</sup> (...continued)

With regard to stainless steel rod and wire, *see* testimony of Ed J. Blot, President, Ed Blot & Associates, on behalf of Carpenter Technology Corp., Crucible Specialty Metals, Dunkirk Specialty Steel, Electroalloy, and Slater Steels Corp., before the USITC, in Investigation No. TA-204-9, hearing transcript, July 10, 2003, p. 88.

<sup>44</sup> At the hearings, one producer of ferrous scrap noted that since the implementation of the steel safeguard measures there has been a significant improvement in its business and the volume of scrap shipped to the steel industry has increased (*See* testimony of Steve Wulff, Vice President of Marketing and Communications, on behalf of David J. Joseph Co., transcript of Commission hearing, June 19, 2003, p. 780. *See also*, U.S. Steel, slide “The Industry Is Leaner and More Productive,” in exhibit for hearing before the USITC, in Investigation No. TA-204-9, July 22, 2003.

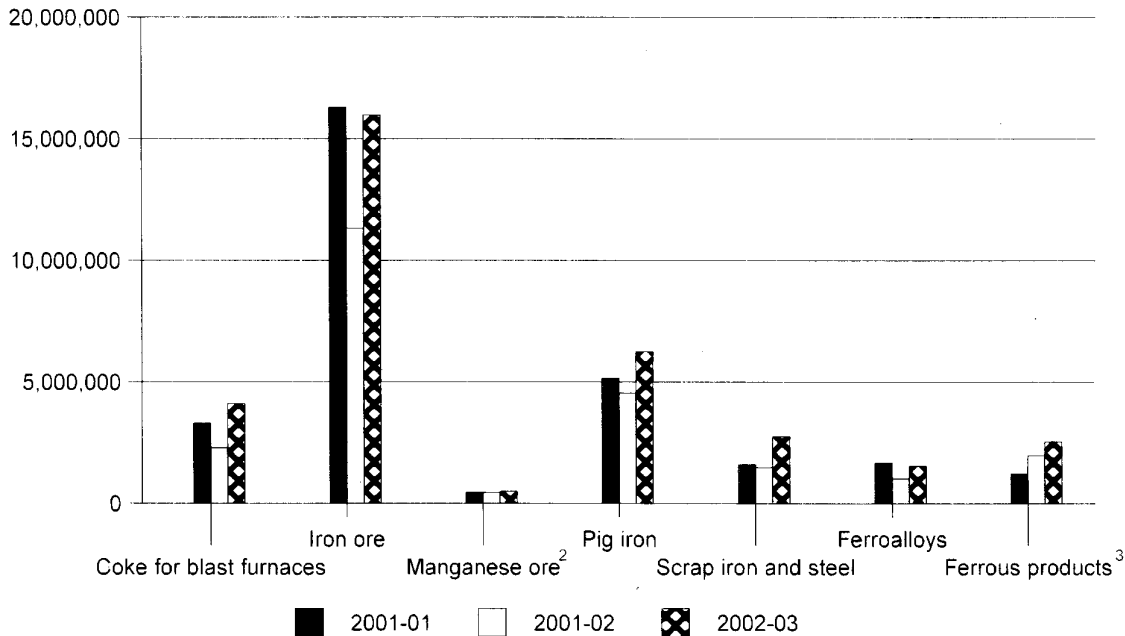
<sup>45</sup> Wiley Rein & Fielding, LLP, on behalf of the Long Product Producers Coalition and the Coalition of Steel Consumers, written submission to the USITC, for Investigation No. 332-452, June 4, 2003, pp. 60-63.



which workers are employees of the steel producer and no revenues are directly generated as a result of this activity.

After falling by 22 percent between 2000/01 and 2001/02, U.S. imports of steel production inputs by waterborne vessel rose by 46 percent between 2001/02 and 2002/03 (figure 3-2). U.S. imports of coke

**Figure 3-2**  
**Steel production inputs: U.S. imports for consumption, waterborne, by input type, 2000-01<sup>1</sup>, 2001-02<sup>1</sup>, 2002-03<sup>1</sup>**



<sup>1</sup>April 1-March 31.

<sup>2</sup>According to the U.S. Geological Survey, approximately 85 to 90 percent of U.S. consumption of manganese is for steel or iron production.

<sup>3</sup>Includes Direct Reduced Iron and Hot-Briquetted Iron.

Source: U.S. Census Bureau.

(consumed by integrated steel producers) by vessel rose by 78 percent between 2001/02 and 2002/03. The increase in coke imports was likely the result of rising demand from U.S. steel producers as they increased production in 2002/03 and declining coke production capacity in the United States. U.S. coke producers have eliminated approximately 15 percent of their U.S. coke production capacity since late 2001. U.S. steel producers have increasingly purchased lower-priced Chinese-produced coke rather than available U.S.-produced coke.<sup>46</sup> Imports of ferrous products (direct reduced iron and hot briquetted iron) doubled during 2000/01-2002/03 largely because of demand for virgin inputs by mini-mills needed for the production of high-quality flat-rolled forms as production rose and steel exports to the Far East

<sup>46</sup> According to the *American Metal Market*, part of the reduction in U.S. coke production capacity was reportedly attributable to a negative injury determination made in August 2001 in an antidumping duty investigation on foundry coke. Philip Burgert, AMM.com, "Mills face coke quandary as Chinese prices soar," found at <http://www.amm.com/subscribe/2003/may/week2/051tp06.htm>, retrieved July 12, 2003. See also U.S. International Trade Commission, *Blast Furnace Coke from China and Japan* (Investigation No. 731-TA-951-952 (Final)), USITC Publication 3444, August 2001.

increased.<sup>47</sup> The increase in scrap imports was in part also attributable to rising demand from U.S. mini-mill producers.

During 2000/01-2002/03, the leading U.S. port districts for U.S. imports by vessel of raw materials for steel production were New Orleans; Baltimore; Charleston; and Mobile (table 3-6). However, the Los Angeles port district, the second ranked district for steel imports, had negligible imports of steel inputs because of a limited number of steel production facilities (e.g., minimills and integrated producers) in that region. Imports of steel inputs rose at a number of port districts during this period. The New Orleans district was the leader in all steel input imports, except for iron ore and iron and steel scrap. The Baltimore district was the leading district for imports of iron ore, followed by New Orleans. Iron ore imports at Baltimore principally were destined for the former Bethlehem Steel's integrated steel facilities at nearby Sparrows Point, now owned by International Steel Group, Inc. (ISG). The second-largest increase in iron ore imports between 2001/02 and 2002/03, almost 1.3 million short tons, occurred at the former Bethlehem Steel's ore pier at Sparrow's Point, a private wharf, with minimal benefit to the Maryland Port Authority or stevedoring firms. Charleston was the leading port district for imports of scrap iron and steel, followed by Seattle and New Orleans. Imports into the Charleston district are likely destined for Nucor Corp.'s steel production facilities in Berkeley, SC, approximately 20 miles from the Port of Charleston.<sup>48</sup>

**Table 3-6**  
**Steel production inputs: U.S. imports for consumption, waterborne, by port district, 2000/01,<sup>1</sup> 2001/02,<sup>1</sup> and 2002/03<sup>1</sup>**

Port district of unloading	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	<i>Short tons</i>			<i>Percent</i>		
New Orleans, LA . . . . .	11,300,249	9,313,371	14,550,624	28.8	-17.6	56.2
Baltimore, MD . . . . .	6,304,788	5,385,486	7,397,066	17.3	-14.6	37.4
Charleston, SC . . . . .	1,519,773	2,451,576	4,098,403	169.7	61.3	67.2
Mobile, AL . . . . .	3,735,373	1,535,871	2,805,344	-24.9	-58.9	82.7
Cleveland, OH . . . . .	1,109,791	744,332	1,849,655	66.7	-32.9	148.5
Chicago, IL . . . . .	2,514,810	1,410,261	1,231,492	-51.0	-43.9	-12.7
Seattle, WA . . . . .	336,382	305,582	491,825	46.2	-9.2	60.9
Detroit, MI . . . . .	1,789,711	968,297	377,877	-78.9	-45.9	-61.0
Milwaukee, WI . . . . .	206,614	187,878	216,601	4.8	-9.1	15.3
Houston-Galveston, TX . . . . .	109,737	106,842	133,449	21.6	-2.6	24.9
All other . . . . .	787,896	682,107	517,971	-34.3	-13.4	-24.1
Total . . . . .	29,715,123	23,091,602	33,670,307	13.3	-22.3	45.8

<sup>1</sup> April 1-March 31.

Source: U.S. Census Bureau.

Also, imports into the Charleston district probably rose because Georgetown Steel, LLC, a large producer of carbon wire rod (not subject to steel safeguard measures), restarted its direct iron reduction facilities in October 2001, which had been idled for the previous 9 months. In the Cleveland, OH district, imports declined by almost 33 percent between 2000/01 and 2001/02 before rebounding by 146 percent in

<sup>47</sup> U.S. mini-mill steel production, which is based on remelting scrap and adding in virgin ferrous products, as a share of total U.S. steel production has been rising in recent years; such producers currently account for approximately half of U.S. steel production. Thomas A. Danjczek, President, Steel Manufacturers' Association, telephone interview with USITC staff, Aug. 18, 2003.

<sup>48</sup> Ron Menchaca, The Post and Courier Charleston.Net, "Security issues at docks hitting Nucor hard in pocketbook," Mar. 18, 2003, found at [http://charleston.net/stories/031803/ter\\_18nucor.shtml](http://charleston.net/stories/031803/ter_18nucor.shtml), retrieved July 11, 2003.

2002/03. This was likely due to the closure of certain LTV Corporation production facilities in Cleveland in April 2001, idling of other facilities in November 2001, and the restart of certain of these facilities by a new owner, ISG, from May through July 2002.

During 2000/01-2002/03, there were significant declines in imports of raw materials to produce steel in the Mobile, Chicago, and Detroit port districts. These declines are likely the result of consolidation or temporary closure of U.S. steel-making facilities in a specific region, particularly 2001/02. For example, the decline in imports through Mobile between 2000/01 and 2001/02 were likely related to the temporary shutdown of Trico Steel Co. in Decatur, AL, from March 2001 to October 2002. The subsequent increase in raw material imports for steel production through Mobile between 2001/02 and 2002/03 were likely related to the restarting of production at Trico Steel Co., as well as the ramp up in production at an IPSCO plate mill in Mobile, AL that started production in November 2001.

Iron ore shipments from ports in northern Michigan and Minnesota on the Great Lakes by U.S. flag carriers rose by almost 9 percent between 2001/02 and 2002/03.<sup>49</sup> During this period, shipments rose significantly from the ports of Duluth, MN; Silver Bay, MN; Superior, WI; Two Harbors, MN; and Presque Isle Harbor at Marquette, MN. There was a significant decline in iron ore shipments from Escanaba, MI and a cessation of shipments from Taconite Harbor, MN.<sup>50</sup> Most of the shipments of iron ore went to piers at steel mills along the Great Lakes. Included in such shipments were a small percentage of U.S. exports to Canada, totaling almost 3 percent in calendar year 2002.<sup>51</sup>

Thus, as indicated by the data presented, there were increases of U.S. imports of inputs for use in the production of steel (e.g., pig iron, coke, scrap iron and steel) at certain ports in the year after the implementation of the safeguard measures. At these ports, these increases may have offset some of the effect of the decline in imports of steel products covered by the safeguard measures.

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<sup>49</sup> Although data on U.S. barge traffic carrying iron ore on certain inland waterways are available (*see* U.S. Army Corp of Engineers, *Key Lock Report*), the Commission did not analyze these shipments due to the complexity of such an analysis. Statistics on iron ore shipments carried by U.S. flag carriers from Lake Carriers' Association, found at <http://www.lcaships.com>, retrieved July 11, 2003.

<sup>50</sup> Iron ore shipments from Escanaba, MI, declined because the iron-ore mining at the Empire Mine, near Escanaba, was shut down from mid-November 2001 to early April 2002. At that time, the Empire Mine was jointly owned by Cleveland-Cliffs, Inc.; Ispat Inland, Inc.; and LTV Steel Mining Co., a subsidiary of LTV Corp., a major U.S. steel producer in bankruptcy during 2001. In November, LTV Steel Mining Co. did not meet its joint ownership obligations as a result of the shut down of the operations of its parent company, LTV Corp., and as a result, the Empire Mine was shut down. *See* Cleveland Cliffs, Inc., *Form 10-Q* for quarter ending Mar. 31, 2002, found at <http://www.sec.gov>, retrieved Aug. 6, 2002. Iron-ore shipments from Taconite Harbor, MN, ceased in September 2001 as a result of LTV Corp.'s subsidiary LTV Steel Mining Co. closing its iron-ore mine at Hoyt Lakes, MN. LTV Corp. was in bankruptcy during 2001. *See* Great Lakes/Seaway Log Archive, "LTV to close Hoyt Lakes taconite plant, cease ore shipments from Taconite Harbor," found at <http://www.harborhouse.com/Log/logarchive/28/12.html>, retrieved Aug. 4, 2003.

<sup>51</sup> U.S. iron ore mines do not export, other than to Canada. U.S. flag carriers in the Great Lakes are not capable of oceangoing transport. Official of the Lake Carriers' Association, telephone interview with USITC staff, Aug. 19, 2003.

## *Exports of Steel*

U.S. exports of steel<sup>52</sup> by vessel rose by 21 percent, from 939,304 short tons in 2000/01 to 1.1 million short tons in 2002/03 (table 3-7).<sup>53</sup> U.S. exports of the types of steel covered by the safeguard measures accounted for 59 percent of total U.S. steel exports by vessel in 2000/01, 40 percent in 2001/02, and almost 56 percent in 2002/03. The top 10 port districts accounted for almost 87 percent of these exports in 2000/01, approximately 91 percent in 2001/02, and 92 percent in 2002/03 (table 3-7). Further, Houston-Galveston appears as the leading port district for exports during the period, followed by Norfolk, with exports out of Philadelphia and New Orleans rising significantly in 2002/03. Approximately 74 to 77 percent of exports shipped from Houston-Galveston were of steel other than the types covered by the steel safeguard measures.<sup>54</sup>

**Table 3-7**

**Steel<sup>1</sup>: U.S. exports of domestic merchandise, by U.S. Customs Service Port District, 2000/01,<sup>2</sup> 2001/02,<sup>2</sup> and 2002/03,<sup>2</sup> and April 2003**

Port district	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	<i>Short tons</i>			<i>Percent</i>		
Houston-Galveston, TX . . .	199,417	228,028	200,621	0.6	14.3	-12.0
Philadelphia, PA . . . . .	54,752	31,894	166,097	203.4	-41.7	420.8
New Orleans, LA . . . . .	70,059	43,571	163,093	132.8	-37.8	274.3
Norfolk, VA . . . . .	150,353	119,546	111,098	-26.1	-20.5	-7.1
Charleston, NC . . . . .	17,481	14,468	93,864	436.9	-17.2	548.8
Baltimore, MD . . . . .	67,704	68,095	88,117	30.2	0.6	29.4
New York, NY . . . . .	83,568	84,670	65,359	-21.8	1.3	-22.8
Mobile, AL . . . . .	36,135	114,244	65,156	80.3	216.2	-43.0
Miami, FL . . . . .	61,341	53,096	50,128	-18.3	-13.4	-5.6
Los Angeles, CA . . . . .	74,891	57,331	45,304	-39.5	-23.4	-21.0
All others . . . . .	123,603	79,956	90,614	-26.7	-35.3	13.3
Total . . . . .	939,304	894,899	1,139,450	21.3	-4.7	27.3

<sup>1</sup> Includes steel classified under HS headings 7206-7302, 7304-7307, and 7312-7314. This grouping includes the types of steel covered by the safeguard measures, subject and exempt, as well as other steel.

<sup>2</sup> April 1-March 31.

Source: U.S. Census Bureau.

In 2002/03, most of the rise in steel exports occurred in the first quarter of calendar year 2003. The increase in steel exports in 2002/03 continued into April 2003; during this month alone U.S. exports totaled 529,073 short tons, equating to 46 percent of total steel exports for 2002/03.<sup>55</sup> Steel exports increased from the port districts of Detroit, Chicago, and Cleveland,<sup>56</sup> which had been negligible for many years in the past, along with districts of Philadelphia, New Orleans, Charleston, and Baltimore. The rise in exports through April 2003 was attributed to high demand along with higher prices for steel in China, and

<sup>52</sup> Includes steel classified under HS headings 7206-7302, 7304-7307, and 7312-7314. This grouping includes the types of steel covered by the safeguard measures, subject and exempt, as well as other steel.

<sup>53</sup> U.S. exports of steel (by volume) when compared to U.S. imports are quite small, equivalent to only 3 percent of U.S. imports of steel by vessel in 2000/01, 4 percent in 2001/02, and 5 percent in 2002/03.

<sup>54</sup> Compiled by the Commission from U.S. Census Bureau data.

<sup>55</sup> Compiled by the Commission from U.S. Census Bureau data.

<sup>56</sup> Testimony of The Honorable Jane Campbell, Mayor, City of Cleveland, OH, transcript of Commission hearing, June 20, 2003, p. 508.

the high value of the euro relative to the U.S. dollar making U.S. steel exports price competitive in European markets.<sup>57</sup>

## **Economic Effects of the Steel Safeguards Measures on Ports and Related-Service Providers**

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The effects of the steel safeguards on certain ports and related-service providers, as reported in Commission questionnaires, varied widely depending upon the extent to which they relied on steel for their business activity. The Commission collected data on ports and related-service providers' revenues related to overall imports and imports of steel, capital expenditures, wages and fringe benefits, employment, and hours worked, as shown in table 3-8.

Some of the largest declines in the various data on ports and related-service providers compiled from the Commission's questionnaire occurred before the implementation of the safeguard measures, but some appeared afterwards. However, estimating the extent of the effects of the steel safeguard measures in this sector is made more difficult due to the limited response to the Commission's questionnaires. Further, aggregate data were compiled because the majority of port authorities and related-service providers were unable to provide data specifically related to safeguard products. For landlord ports, revenue may be attributable to particular leases, but not necessarily to specific import flows as records are frequently not maintained at that level of detail for revenue streams or for the labor used to handle a variety of products aside from steel.

Industry participants also reported that not all of the decline in business was attributable to the steel safeguard measures, but the safeguard measures were certainly attributed as a factor in economic troubles. For example, shipping industry sources stated that the weakened world economy, the steel safeguards, a decline in the U.S. dollar relative to the euro, and a delay in U.S. grain exports in 2003 were adversely affecting the U.S. Great Lakes maritime industry.<sup>58</sup> Other maritime industry sources have noted that imports of steel have declined since 2000/01.

### ***Revenues and Profitability***

As reported by ports and related-service providers responding to the Commission's questionnaire, revenues from steel imports fell by a smaller proportion than total revenues fell in 2002/03, but by a much greater amount in 2001/02 (table 3-8). The fall in revenues from steel imports in 2003 made up about 10 percent of the decline in total revenue.

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<sup>57</sup> Scott Robertson, AMM.com, "Market forces shift, hike US steel sales to China," Mar. 17, 2003, found at <http://www.amm.com/subscrib/2003/mar/week3/0317tp05.htm>, retrieved Apr. 15, 2003; Scott Robertson, AMM.com, "Steel rolls out port's international shipping season," Apr. 24, 2003, found at <http://amm.com/subscrib/2003/apr/week4/0424st02.htm>, retrieved Apr. 24, 2003; and NewNet5.com, "Cleveland Port to Ship Steel: 155,000 Tons of Steel Exported," found at <http://www.newsnet5.com/tuesdayarchive/2149756/detail.html>, retrieved July 10, 2003.

<sup>58</sup> United States Great Lakes Shipping Association, written submission to the USITC, for Investigation No. 332-452, July 1, 2003, p. 2.

**Table 3-8**

**Port authorities and related service providers: Revenues, capital expenditures, employment, hours worked, and wages, 2000/01,<sup>1</sup> 2001/02,<sup>1</sup> and 2002/03<sup>1</sup>**

Item				Change			Changes reportedly due to the steel safeguards -1,000 dollars-
	2000/01	2001/02	2002/03	2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03	
	Value (1,000 dollars)			Percent			
Revenues							
from total imports <sup>2</sup> . . .	427,808	398,113	316,243	-26.1	-6.9	-20.6	( <sup>3</sup> )
Total revenues							
from steel imports <sup>2</sup> . . .	78,017	56,312	47,594	-39.0	-27.8	-15.5	( <sup>3</sup> )
Capital expenditures . . . .	33,800	34,234	56,017	65.7	1.3	63.6	( <sup>4</sup> )
Wages and fringe							
benefits paid to employees . . . .	198,290	185,421	171,812	-13.4	-6.5	-7.3	-3,986
	-----Number of employees-----			-----Percent-----			-----Number of employees-----
Total employees . . . . .	2,082	1,922	1,773	-14.8	-7.7	-14.8	-88
	-----Number of hours worked (1,000 hours)-----			-----Percent-----			-----Number of hours worked-----
Hours worked by employees . . . . .	9,536	8,459	7,620	-20.1	-11.3	-9.9	-688
	-----Number of respondents-----			-----Percent-----			-----Number of respondents-----
Total revenues from imports <sup>1</sup> . . . . .	17	17	16	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>3</sup> )
Total revenues from steel imports <sup>1</sup> . . . . .	15	15	14	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>3</sup> )
Capital expenditures . . . . .	8	8	9	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	1
Wages and fringe							
benefits paid to employees . . . . .	9	9	9	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	5
Total employees . . . . .	9	9	9	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	5
Hours worked by employees . . . . .	9	9	9	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	5

<sup>1</sup> April 1-March 31.

<sup>2</sup> Responses for those entities that supplied data for total revenues and revenues derived from steel. Several respondents supplied data for total revenues, but were unable to supply data on revenues from steel.

<sup>3</sup> Not applicable because respondents were not asked to quantify the changes in revenue attributable to the safeguards.

<sup>4</sup> Suppressed due to confidentiality.

<sup>5</sup> Not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

For many respondents, the effects of the safeguard measures correlate with their dependence on steel volumes. Several responding port authorities indicated that their imports of steel accounted for 16 to 57 percent of total import tonnage. Some respondents reported revenues from total steel imports that were directly proportional to total revenues. In many instances, though, the share of revenues from steel relative to total revenues were significantly lower than the share of steel tonnage relative to total tonnage handled by the port.

Questionnaire responses indicated that revenues from total imports and revenues related to imports of steel declined during 2000/01-2002/03, but the greatest decline was before the implementation of the safeguard measures (table 3-8). Although respondents did not comment on this decline, it was most likely attributable to the overall decline in steel imports as well as to other reasons (see in this chapter the

section, “Imports and Ports”). As previously noted, the majority of respondents were not able to separately provide data on revenues derived from imports of steel covered by the safeguard measures. The decline in revenues was attributed by respondents to reduced imports of steel resulting in less revenue from dockage and wharfage fees. In addition, revenues from leasing port property declined as importers required less warehouse space due to lower import levels and therefore terminated their leases. Respondents also reported that direct discharging steel from the vessel onto truck, rail, or barge virtually eliminated the wharfage fees paid to ports and terminal operators because steel was not unloaded onto the wharf for any significant period of time.

Ports have attempted to maintain steel imports or at least offset some of the effects of the safeguard measures on their customers, as well as to seek replacement business. In its questionnaire response, one port noted that an exclusion to the safeguard measures had allowed flat-steel cargo volumes to be maintained at the port. In most instances, respondents to the Commission’s questionnaire, including port authorities and stevedoring/terminal operator firms, reported that they have not changed their fee structure for steel or other commodities. However, one port authority reported that it had raised fees on all products in late calendar year 2001 and throughout calendar year 2002. A number of questionnaire respondents also reported searching for new customers shipping products other than steel. Several stevedoring/terminal operators stated that they were striving to reduce labor and other costs in order to offset the downturn in steel volumes.

In addition to data from questionnaires, information is also provided in written submissions that discusses steel imports at ports during 2000/01-2002/03. For example, the Port of Houston Authority reported that steel import tonnage as a share of total import tonnage through the port fell more prior to the implementation of the steel safeguard measures (from almost 25 percent in calendar year 2000/01 to 20 percent in 2001/02), than after the implementation of the safeguard measures (dropping to 17 percent in 2002/03).<sup>59</sup> Based on data from its public wharves at which steel is handled, a Port of Houston representative estimated that 508 jobs and \$36.6 million in revenue were lost in the local business community during calendar years 2001 and 2002 as a result of a decline in steel imports and the effects of the safeguard measures.<sup>60</sup> Port of Houston Authority revenue related to steel imports fell from \$10.0 million in calendar year 2002 to \$4.6 million in calendar year 2003, for a total decline of \$5.3 million. The Port of Houston’s lease revenues declined by slightly less than \$500,000 over calendar years 2001 to 2003, as a result of customers deciding not to renew their leases for port property. The Port of Houston estimates that such revenue will decline by another \$460,000 in 2004.<sup>61</sup> The decline in leasing was attributed to importers leasing less space for steel storage as they reduced their inventories and shifted to delivering steel to their customers directly after discharge from the ship.<sup>62</sup> In response to requests by its steel customers, the Port of Houston Authority cooperated with labor and steamship lines and reduced its wharfage charges on all steel products effective July 2002 from \$2.32 per short ton to \$1.65 per short ton.<sup>63</sup>

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<sup>59</sup> PPS Consult, on behalf of the Texas Free Trade Coalition, written submission, for Investigation No. 332-452, June 27, p. 2.

<sup>60</sup> These figures exclude adverse effects at private terminals along the Houston ship channel. *See* testimony of Wade Battles, Managing Director, Port of Houston Authority, before the USITC, hearing transcript, June 19, 2003, p. 323.

<sup>61</sup> Testimony of Wade Battles, Managing Director, Port of Houston Authority, transcript of Commission hearing, June 19, 2003, p. 324-325.

<sup>62</sup> Testimony of Wade Battles, Managing Director, Port of Houston Authority, transcript of Commission hearing, June 19, 2003, p. 353.

<sup>63</sup> Testimony of Wade Battles, Managing Director, Port of Houston Authority, transcript of Commission hearing, June 19, 2003, p. 323.

## *Capital Investment*

According to questionnaire responses, capital expenditures rose during 2000/01-2002/03 (table 3-8) due in large part to one respondent that had a minimal exposure to steel imports but reported large capital expenditures. However, responding port authorities indicated that they had not changed their capital expenditure plans, and noted that the safeguard measures had not adversely affected their ability to raise capital. Among other respondents, most indicated a slowing or cessation of capital expenditures attributable to both the steel safeguards and weak general economic conditions. Recent capital expenditures by this group were mainly of heavy-duty forklift trucks for moving steel loads, as opposed to large, multiple-year investments.

## *Employment and Wages*

According to responses to the Commission's questionnaire, the average number of employees, hours worked, and wages and fringe benefits decreased during 2000/01-2002/03 (table 3-8). Respondents attributed a portion of the loss in employment (-88 out of a reported 1,773 persons), hours worked (-688,000 out of 7,620,000 hours), and wages and fringe benefits (-\$3.9 million out of \$171.8 million) to the safeguard measures.<sup>64</sup> Based upon the trends reported in written submissions and questionnaire responses, and because many firms in the industry did not respond to the Commission's questionnaire, the reduction in employment, and particularly man-hours and wages (including fringe benefits), experienced by ports and related-service providers would likely be greater than the data presented in table 3-8.

The following are reported trends in man hours and/or wages paid at selected ports for unloading steel prior to, during, and after the safeguard measures were implemented.<sup>65</sup>

	Calendar year		
	2001	2002	2003
Ports of Los Angeles and Long Beach <sup>1</sup>			
Man hours .....	863,931	597,108	557,108
Wages paid ( <i>million dollars</i> ) .....	58	42	39
Ports of Texas (Beaumont, Chorpus Christi, Galveston, Houston, and Port Arthur)			
Man hours .....	215,900	182,500	(?)

<sup>1</sup> Reported by Pasha Stevedoring for its operations at the Port of Los Angeles and its own as well as other companies' operations at the port of Long Beach.

<sup>2</sup> Not available.

Both Pasha Stevedoring and maritime interests in Texas attribute the above cited declines in man hours for unloading steel to a decline in imports of steel caused by the safeguards.

Recently, in testimony before the Ways and Means Committee of the U.S. House of Representatives, officials of a longshoreman's local union from Texas, along with the Texas Free Trade Coalition, stated that the number of hours worked by longshoremen handling steel had declined since the imposition of safeguard measures, and that firms that handle steel imports, including the Port of Houston,

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<sup>64</sup> As noted in table 3-8, only 9 ports and related-service providers reported data on employment, hours worked, and wages and fringe benefits, and only 5 of these respondents provided data on the portion of these data that were attributable to the safeguard measures.

<sup>65</sup> Written statement (June 19, 2003) and transcript of Commission hearing (June 19, 2003, p. 316) of Tim Tess, Vice President Administration, Pasha Stevedoring and Terminals; and PPS Consult, on behalf of the Texas Free Trade Coalition, written statement, June 3, 2002, exhibit 2.



had laid-off employees due to the steel safeguards.<sup>66</sup> For example, in ports along the Texas Gulf Coast, ILA-member workers declined from 5,587 to 5,235 after the imposition of the steel safeguard measures.<sup>67</sup> Because of a reduction in hours worked, 104 ILA longshoremen in that region failed to qualify for fringe benefits during calendar year 2002.<sup>68</sup> Along the Texas Gulf Coast, according to an ILA representative, hours worked handling steel have traditionally accounted for over 40 percent of total ILA hours worked.<sup>69</sup>

### ***Trucking Services and Railroads***

The extent to which trucking service providers have either benefitted from or been adversely affected by the steel safeguard measures is uncertain. Steel trucked from ports tends to be short haul, under 150 miles. Steel trucked from steel mills tends to be trucked longer distances, by one estimate in the 480-mile range.<sup>70</sup> Truckers hauling steel typically derive their income based on the total freight weight being hauled.<sup>71</sup> The cost to haul steel is approximately comparable with hauling other products, such as lumber or building products.<sup>72</sup> Trucking firms may have annual or semiannual contracts with U.S. steel mills to deliver their product, whereas with imported steel at ports, trucking services are typically offered on a spot basis.<sup>73</sup> Testimony at the Commission's public hearing indicates that a significant number of independent owner-operator truckers have been adversely affected in the Texas West Gulf as a result of a decline in steel imports.<sup>74</sup> Thus, to the extent that U.S. shipments of steel have risen from U.S. steel mills and declined at ports, and depending on their proximity to ports and steel mills, trucking firms at various locations may either have been adversely or positively affected by the safeguard measures.<sup>75</sup>

Railroads have benefitted from transporting higher volumes of raw materials and steel to and from U.S. steel mills as a result of the steel safeguard measures and the reopening of a number of previously closed steel mills. Although precise data are not available, shipments of raw materials of the type used to produce metals in the aggregate likely did not exceed 12 percent of total freight originating on North American railroads and accounted for slightly more than 9 percent of gross revenue.<sup>76</sup> A

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<sup>66</sup> James O. Campbell, president, General Longshore Workers, International Longshoremen's Association Local No. 3000, and Walter A. Niemand, Board Member, Texas Free Trade Coalition, statements before the Trade Subcommittee, Ways and Means Committee, U.S. House of Representatives, Hearing on the Impact of the Section 201 Safeguard Action on Certain Steel Products, Mar. 26, 2003.

<sup>67</sup> Testimony of Michael W. Dickens, representative of the International Longshoremen's Association of the South Atlantic Gulf Coast District, transcript of Commission hearing, June 19, 2003, p. 327.

<sup>68</sup> Testimony of Michael W. Dickens, representative of the International Longshoremen's Association of the South Atlantic Gulf Coast District, transcript of Commission hearing, June 19, 2003, p. 327.

<sup>69</sup> Testimony of Michael W. Dickens, representative of the International Longshoremen's Association of the South Atlantic Gulf Coast District, transcript of Commission hearing, June 19, 2003, p. 328.

<sup>70</sup> Testimony of Pat Gallagher, President, PGT Trucking, transcript of Commission hearing, June 19, 2003, p. 337.

<sup>71</sup> Ibid.

<sup>72</sup> Ibid., p. 357.

<sup>73</sup> Ibid.

<sup>74</sup> Testimony of Walter A. Nieman, President, West Gulf Maritime Association, transcript of Commission hearing, June 19, 2003, p. 320.

<sup>75</sup> A representative from PGT Trucking stated that the safeguard measures were "desperately needed and played a vital role in bringing stability to the steel industry, one of its most important customers." He further noted that if "domestic shipments dry up or if major steel producers shut down entirely, the truckers are directly harmed (Testimony of Pat Gallagher, President, PGT Trucking, transcript of Commission hearing, June 19, 2003, p. 337).

<sup>76</sup> Estimated by the staff of the U.S. International Trade Commission based upon data from the Association of American Railroads for 2002, *Class I Railroad Statistics*, found at <http://www.aar.org/PubCommon/Documents/AboutTheIndustry/Statistics.pdf>, retrieved July 12, 2003. Freight and gross revenue figures were calculated from data for metallic ores; petroleum and coke, metals and products, and 10

(continued...)

substantial portion of U.S.-produced steel is transported at some point from steel mills by rail, whereas almost all imported steel is transported by truck from the port to the end user.<sup>77</sup> Several railroads have noted the increase in steel volume on their lines, and attribute this to the reopening of several U.S. steel mills.<sup>78</sup>

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<sup>76</sup> (...continued)  
percent of coal freight and revenues.

<sup>77</sup> Association of American Railroads, written submission to the USITC, for Investigation No. 332-452, June 16, 2003, p. 1-2.

<sup>78</sup> Wiley Rein & Fielding, LLP, on behalf of the Long Product Producers Coalition and the Coalition of Steel Consumers, written submission to the USITC, for Investigation No. 332-452, June 4, 2003, p. 60-63.

# CHAPTER 4

## SIMULATED IMPACT OF THE SAFEGUARD MEASURES

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### Introduction

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The request letter asked the Commission to provide an analysis of the economy-wide effects of the safeguard remedies using appropriate simulation models. In this chapter a computable general equilibrium (CGE) model is used to illustrate the potential effects of the steel safeguard measures on the U.S. economy including the impact on tariff revenues and terms-of-trade effects.<sup>1</sup> A CGE model captures economywide linkages between industries, and it can thus illustrate both the possible net impact of the safeguard measures on the U.S. economy as well as the possible distribution of the impacts on steel-producing and steel-consuming industries. A detailed description of the general equilibrium model and its sensitivity to particular assumptions is given in appendix G.

The model simulates a comparative static experiment, that allows a comparison of the simulated U.S. economy with, and without, the safeguard measures imposed. In the benchmark representation of the U.S. economy, U.S. trade, commodity, and primary factor markets are assumed to be in equilibrium. The imposition of the safeguard measures displaces the economy from its equilibrium, and the model computes the new equilibrium in terms of quantities and relative prices for all markets, including imports.

The model includes two assumptions common in the CGE literature: constant returns to scale and perfect competition. Thus, the illustrative impacts discussed here do not incorporate effects owing to market power. The net impact of these additional factors can not be predicted *a priori*. A formal quantitative model with extensive firm and industry level data, which are generally not available, would be required to analyze these impacts. The model, however, uses standard assumptions to approximate the general equilibrium while highlighting the economywide impacts of the safeguard measures.

The data used to calibrate the equilibrium incorporate many of the important determinants of the impact of the safeguard measures.<sup>2</sup> These include a careful quantification of the safeguard measures,<sup>3</sup> measurement of the share of covered product imports from covered countries, and input cost shares for all intermediate inputs (including those for steel and steel-containing products) and primary factors such as returns to labor and capital. Table 4-1 presents input cost shares for steel inputs. The model also

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<sup>1</sup> Terms-of-trade are the relative price of a country's exports compared to its imports. By reducing the demand for imports, a tariff levied by a large country causes the prices of those imported goods to fall on the world market relative to the country's exports, therefore improving its *terms of trade*. See Alan Deardorff's *Glossary of International Economics*, <http://www.econ.lsa.umich.edu/>, downloaded Aug. 7, 2003.

<sup>2</sup> An analysis of the factors that might be expected to determine the effect of the safeguard measures is presented in appendix D.

<sup>3</sup> The methodology used to quantify and apply the safeguard measures in the simulation model are presented in appendix G. The calculations use publicly available data on those tariffs applied to covered steel products imported from covered countries. The Commission was unable to find a publicly available quantification of specific product exclusions granted to certain importers of covered products from covered countries. It is likely that including such exclusions in the calculated model shock would slightly reduce the overall reported welfare loss, and would likely fall within the lower range of estimated welfare loss presented in the sensitivity analysis appearing in table 4-2 and appendix G.

incorporates parameters that characterize the sensitivity of demand for domestic and imported commodities to price changes, and that characterize the relationship between primary factors and output. The model assumes that intermediate material inputs are used in fixed proportions to output.<sup>4</sup> The data in the model reflect U.S. imports of steel products and aggregate economic conditions as they existed just prior to implementation of the safeguard measures in March 2002.

The analysis focuses on those impacts that arise from the relative price changes resulting from the imposition of safeguard tariffs.<sup>5</sup> Implementation of the safeguard measures increases the domestic (gross of tariff) price of imported steel, reduces U.S. demand for imported steel, and increases U.S. demand for domestic steel. The import-competing domestic steel industry responds to higher steel prices by expanding output. The steel-consuming industries pay higher prices for steel inputs. Steel-consuming industries respond to this competitive disadvantage by reducing output. The degree to which steel-consuming industries reduce output depends on how much steel they use and the demand characteristics for their output. The reallocation of resources implied by the safeguard measures also affects labor income, returns to capital, and tariff revenue. The model simulation results quantify these offsetting effects in an economywide framework.

## Economy-wide Effects

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Within the simulation model, the most relevant summary measure of the economy-wide effects of the safeguard measures is the simulated change in welfare, as measured by *equivalent variation*.<sup>6</sup> As outlined in appendix G of this report, there is uncertainty regarding the Commission's estimated welfare impact. The central estimate of the change in welfare depends critically on an assumed steel import-supply elasticity of ten. The sensitivity of the welfare estimate to the assumed import-supply elasticity arises because this parameter determines the terms-of-trade impact of the policy. Terms-of-trade effects and their importance for the steel-safeguard simulations are discussed at length in appendix G.

The Commission simulations estimated that the effect of the safeguard measures on the U.S. welfare ranged from a welfare gain of \$65.6 million to a welfare loss of \$110.0 million, with a central estimate of a welfare loss of \$41.6 million (see table 4-2). Halving the import-supply elasticity (setting it at five) generates a simulated welfare increase resulting from the steel safeguard measures of \$65.6 million. Doubling the import-supply elasticity (setting it at twenty) generates a simulated welfare loss

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<sup>4</sup> This indicates that there is no direct substitution between steel and plastic, for example, as intermediate inputs, but as the price of steel increases intermediate and final demand for products that use steel intensively will fall relative to products that use plastic intensively.

<sup>5</sup> To isolate the impacts on steel-consuming industries of the policy instrument, a tariff on imports of steel, the model tracks the flow of income to capital in each industry, but abstracts from a reallocation of capital across industries. In the short run it is assumed that the capital stock in an industry is held fixed (insensitive to price changes). Long-run reallocations of capital are not examined. Abstracting from minor capital-reallocation effects allows the Commission to analyze the direct and indirect price impacts on a detailed set of steel-consuming industries. The calculated model shock is based on the tariff levels imposed in the first year of relief. The tariff levels decline in years 2 and 3.

<sup>6</sup> Equivalent variation is the economywide welfare impact of a policy change in monetary terms and it is defined as the amount of income that would have to be given (or taken away from) the economy *before* the policy change to leave the economy as well off as the economy would be *after* the policy change. A positive figure for equivalent variation implies that the policy change would improve economic welfare. H.R. Varian, *Intermediate Economics: A Modern Approach*, fifth edition, New York: W.W. Norton & Company, 1999, p. 252-253.

**Table 4-1**  
**Purchased steel products: Cost shares of material inputs and value shares of gross output by industry categories, 1997**

Description	Cost share of purchased steel to all materials <sup>1</sup>	Value share of purchased steel to total output <sup>2</sup>
	----- Percent -----	
<b>Iron and steel mills:<sup>3</sup></b>		
Iron and steel mills <sup>4</sup> .....	25.5	18.8
Iron, steel pipe and tube from purchased steel <sup>4</sup> .....		
Rolled steel shape manufacturing <sup>4</sup> .....		
Steel wire drawing <sup>4</sup> .....		
<b>Other ferrous metals:</b>		
Custom roll forming .....	46.2	31.0
Ferroalloy and related product manufacturing .....	2.8	1.7
Ferrous metal foundries .....	4.6	2.6
Iron and steel forging and stamping .....	32.7	18.3
<b>Upstream:</b>		
Coal mining .....	1.8	1.0
Energy .....	0.3	0.1
Iron ore mining .....	3.4	2.3
<b>Fabricated metal products:</b>		
Ball and roller bearing manufacturing .....	11.9	6.4
Cutlery and flatware except precious manufacturing .....	7.1	2.8
Electroplating anodizing and coloring metal .....	7.0	3.1
Enameled iron and metal sanitary ware manufacturing .....	11.7	4.7
Fabricated structural metal manufacturing .....	24.2	13.5
Hand and edge tool manufacturing .....	16.9	8.1
Hardware manufacturing .....	16.8	8.7
Industrial pattern manufacturing .....	2.2	0.8
Kitchen utensil pot and pan manufacturing .....	7.6	4.8
Machine shops .....	8.5	4.2
Metal can, box, and other container manufacturing .....	16.9	13.1
Metal coating and nonprecious engraving .....	31.7	17.2
Metal heat treating .....	1.5	0.7
Metal tank heavy-gauge manufacturing .....	37.0	19.9
Metal valve manufacturing .....	8.9	4.2
Metal window and door manufacturing .....	16.4	9.4
Miscellaneous fabricated metal product manufacturing .....	12.3	6.9
Ornamental and architectural metal work manufacturing .....	29.2	15.7
Other ordnance and accessories manufacturing .....	0.9	0.3
Plate work manufacturing .....	34.6	16.8
Power boiler and heat exchanger manufacturing .....	25.4	12.3
Prefabricated metal buildings and components .....	37.0	26.6
Saw blade and handsaw manufacturing .....	30.6	14.7
Sheet metal work manufacturing .....	21.6	10.9
Small arms manufacturing .....	7.7	3.5
Spring and wire product manufacturing .....	45.6	24.1
Turned product and screw nut and bolt manufacturing .....	23.3	10.9
<b>Durable manufacturing:</b>		
Construction and mining machinery and equipment .....	8.3	5.8
Durable manufacturing, not elsewhere classified .....	2.3	1.5
Electric power transformers and motors .....	12.7	8.0
Electronic and electrical equipment .....	1.1	0.6
Farm and garden machinery and equipment .....	13.1	8.3
Industrial machinery and equipment .....	7.8	4.7
Major household appliances .....	8.6	6.2
Metal furniture .....	11.0	5.8
Motor vehicle parts .....	11.1	7.9
Motor vehicles and equipment .....	0.6	0.5
Other transport equipment .....	1.5	1.0
Railroad rolling stock manufacturing .....	11.2	8.4
Ship building and repairing .....	8.2	4.5

**Table 4-1—Continued**  
**Purchased steel products: cost shares of material inputs and value shares of gross output by industry categories, 1997**

Description	Cost share of purchased steel to all materials <sup>1</sup>	Value share of purchased steel to total output <sup>2</sup>
	-----Percent-----	
<b>Other sectors:</b>		
Agriculture and forest products . . . . .	0.4	0.2
Commercial and institutional buildings . . . . .	0.9	0.5
Construction maintenance and repair . . . . .	1.7	0.9
Highway street bridge and tunnel construction . . . . .	0.8	0.4
Manufacturing and industrial buildings . . . . .	0.2	0.1
Nondurable manufacturing . . . . .	0.2	0.1
Other new construction . . . . .	0.8	0.4
Residential construction . . . . .	1.4	0.8
Resource extraction, not elsewhere classified . . . . .	2.2	1.3
Services . . . . .	0.1	0.0
Water, sewer, and pipeline construction . . . . .	5.0	3.0

<sup>1</sup> Calculated from the ratio of steel inputs to the sum of all material inputs.

<sup>2</sup> Calculated from the ratio of steel inputs to the sum of all material inputs plus value-added factors (capital, labor, and indirect business taxes).

<sup>3</sup> Industry categories including subject products.

<sup>4</sup> Not delineated separately among consuming industries in the baseline table.

Source: Compiled from official statistics of the U.S. Department of Commerce, Bureau of Economic Analysis, 1997 Benchmark Input-Output Accounts.

**Table 4-2**  
**CGE simulation: Welfare sensitivity analysis of the safeguard measures**

Import-Supply Elasticity:	<i>Million dollars</i>
5	65.6
10 (central assumption)	-41.6
20	-110.0

Source: USITC calculations

resulting from the steel safeguard measures of \$110.0 million. In the context of income, the range of estimated welfare changes from respectively halving and doubling the central import-supply response is from a positive 0.0006 percent to a negative 0.0011 percent of gross domestic product (GDP). Table 4-2 also reports an estimated central welfare loss of \$41.6 million attributable to the safeguard measures, which amounts to 0.0004 percent of U.S. GDP. The Commission performed a more detailed set of sensitivity analyses on the model, which appear in appendix G.

Table 4-3 also reports the changes in other key income indicators.<sup>7</sup> The simulation model suggests that the increase in tariff revenue is likely to be offset by decreases in labor and capital income. The resulting change in GDP is a decline of about \$30 million (a change of less than 0.0003 percent).<sup>8</sup>

<sup>7</sup> These are nominal measures that are inherently dependent on the unit of measure chosen. As noted above, the true-cost-of-living index was selected as the deflator.

<sup>8</sup> In general, changes in income need not reflect, either quantitatively or qualitatively, the changes in welfare. Economic theory indicates that changes in welfare are more appropriate because they are not dependent on an arbitrary deflator, called a *numeraire* commodity or unit in which prices are measured. Often, the numeraire is  
(continued...)

**Table 4-3**  
**CGE simulation: Summary income changes from safeguard measures using central elasticity assumptions**

	<i>Million dollars</i>
<b>Income Changes:</b>	
Tariff revenue .....	649.9
Labor income <sup>1</sup> .....	-386.0
Capital income .....	
Iron and Steel Industry <sup>2</sup> .....	239.5
Other industries where capital income increases <sup>3</sup> .....	67.4
Industries (including steel-consuming) where capital income decreases .....	<u>-601.2</u>
	-294.3
<b>GDP</b> .....	<u>-30.4</u>

<sup>1</sup> The net effect on all labor in the U.S. economy. The model assumes a stylized labor market in which homogenous labor can move between industries.

<sup>2</sup> Domestic iron and steel is an aggregation of those industry categories of the input-output tables that would include the steel products covered by the safeguard measures: 331111 (iron and steel mills), 331210 (iron, steel pipe and tube from purchased steel), 331221 (rolled steel shape manufacturing), and 331222 (steel wire drawing). This definition of steel is broader than products covered by the safeguard measures. As this table presents income changes rather than percentage changes, use of the broader category does not understate the changes.

<sup>3</sup> Other benefiting industries include iron ore mining, ferroalloy and related product manufacturing, coal mining, custom roll forming, energy and services, which includes ports and their related service providers.

Source: USITC calculations.

## Industry Specific Effects

The model simulation results shown in table 4-4 suggest that the relative price of domestic iron and steel<sup>9</sup> would increase by 0.43 percent resulting from the imposition of the safeguard measures; the average price of domestic and imported iron and steel would increase by more than twice as much (0.94 percent).<sup>10</sup> As a result of these price changes, returns to capital in the iron and steel industry would increase by \$239.5 million (3.03 percent), and returns to capital in industries where returns to capital fell, decreased by \$601.2 million (0.01 percent), as shown in table 4-3. Other industries where capital income increases (e.g., iron ore mining, ferroalloy and related product manufacturing, coal mining, custom roll forming, energy and services) would experience increased capital returns of \$67.4 million (0.04 percent).

example, the requirement that prices sum to some constant. Alan Deardorff's *Glossary of International Economics*, <http://www.econ.lsa.umich.edu/>, downloaded Aug. 7, 2003.

<sup>9</sup> Domestic iron and steel is an aggregation of those industry categories of the input-output tables that would include the steel products covered by the safeguard measures: 331111 (iron and steel mills), 331210 (iron, steel pipe and tube from purchased steel), 331221 (rolled steel shape manufacturing), and 331222 (steel wire drawing). This definition of steel is broader than products covered by the safeguard measures. Using this broader definition means that the simulation will understate the impact of the safeguard measures on firms producing covered products when measured by percentage changes, but will not understate the impact when measured by absolute changes.

<sup>10</sup> These price impacts are small relative to the actual safeguard duties applied to specific shipments for a number of reasons. First, the level of commodity aggregation in the U.S. benchmark input-output accounts dictate that the domestic steel market is very broad and includes many non-covered products (see table 4-1 for the classification of Iron and Steel Mill Products). Second, there is a specific technology assumed for how domestic varieties and imported varieties of steel are combined (see appendix G). This technology indicates that only a portion (which depends on the proportion of covered imports) of the price increase on covered imports is passed on to the price index on combined domestic and imported steel. Finally, there is also a terms-of-trade effect, by which the safeguard measures reduce the world price of steel further mitigating the gross-of-tariff price increase.

Table 4-4

**CGE simulation: Industry specific results from safeguard measures using central elasticity assumptions**

	Measures of price changes				Change in Revenue
	Change in Output	Change in Labor Inputs	Change in	Change in	
			Producer Price	Composite Price	
-----Percent-----					Million dollars
Iron and Steel <sup>1</sup> . . . . .	1.98	3.04	0.43	0.94	2,515.3
<b>Other Ferrous Metals:</b>					
Custom roll forming . . . . .	0.07	0.06	0.32	0.32	16.3
Ferroalloy and related product manufacturing . . . . .	0.56	1.19	0.35	0.27	13.2
Ferrous metal foundries . . . . .	-0.11	-0.13	0.02	0.02	-18.6
Iron and steel forging and stamping . . . . .	-0.12	-0.45	0.11	0.11	-0.8
Total . . . . .					10.2
<b>Other Upstream:</b>					
Coal mining . . . . .	0.14	0.28	0.08	0.09	64.8
Energy . . . . .	0.01	0.03	0.02	0.02	89.0
Iron ore mining . . . . .	1.92	2.26	0.15	0.17	49.4
Total . . . . .					203.2
<b>Fabricated Metal Products:</b>					
Ball and roller bearing manufacturing . . . . .	-0.10	-0.15	0.04	0.04	-4.0
Cutlery and flatware, except precious metal manufacturing . . . . .	-0.03	-0.04	0.00	0.00	-0.6
Electroplating anodizing and coloring metal . . . . .	-0.02	-0.02	0.02	0.02	0.2
Enameled iron and metal sanitary ware manufacturing . . . . .	-0.02	-0.06	0.02	0.02	0.0
Fabricated structural metal manufacturing . . . . .	-0.05	-0.08	0.12	0.12	13.8
Hand and edge tool manufacturing . . . . .	-0.10	-0.16	0.05	0.04	-4.2
Hardware manufacturing . . . . .	-0.12	-0.21	0.04	0.04	-10.7
Industrial pattern manufacturing . . . . .	-0.07	-0.07	-0.01	-0.01	-0.8
Kitchen utensil pot and pan manufacturing . . . . .	-0.08	-0.14	0.03	0.02	-0.9
Machine shops . . . . .	-0.03	-0.03	0.04	0.04	2.9
Metal can box and other container manufacturing . . . . .	-0.05	-0.07	0.13	0.14	14.8
Metal coating and nonprecious engraving . . . . .	-0.02	-0.04	0.16	0.16	14.3
Metal heat treating . . . . .	-0.02	-0.04	-0.01	-0.01	-1.2
Metal tank heavy gauge manufacturing . . . . .	-0.23	-0.37	0.13	0.15	-5.6
Metal valve manufacturing . . . . .	-0.06	-0.12	0.01	0.01	-13.7
Metal window and door manufacturing . . . . .	-0.02	-0.04	0.09	0.09	7.8
Miscellaneous fabricated metal product manufacturing . . . . .	-0.12	-0.23	0.03	0.03	-12.3
Ornamental and architectural metal work manufacturing . . . . .	-0.03	-0.04	0.15	0.15	6.5
Other ordnance and accessories manufacturing . . . . .	-0.01	0.00	0.00	0.00	-0.3
Plate work manufacturing . . . . .	-0.12	-0.18	0.14	0.14	0.8
Power boiler and heat exchanger manufacturing . . . . .	-0.21	-0.34	0.04	0.06	-7.4
Prefabricated metal buildings and components . . . . .	-0.17	-0.21	0.26	0.29	4.5
Saw blade and handsaw manufacturing . . . . .	-0.15	-0.27	0.08	0.08	-1.0
Sheet metal work manufacturing . . . . .	-0.06	-0.09	0.09	0.09	7.0
Small arms manufacturing . . . . .	-0.05	-0.09	0.01	0.01	-0.7
Spring and wire product manufacturing . . . . .	-0.01	-0.14	-0.04	-0.04	-2.3
Turned product and screw nut and bolt manufacturing . . . . .	-0.14	-0.23	0.06	0.06	-16.0
Total . . . . .					-9.3

Table continued.



Table 4-4--Continued

**CGE simulation: Industry specific results from safeguard measures using central elasticity assumptions**

	Measures of price changes				Change in Revenue <i>Million dollars</i>
	Change in Output	Change in Labor Inputs	Change in	Change in	
			Producer Price	Composite Price	
-----Percent-----					
<b>Durable Manufacturing:</b>					
Construction and mining machinery and equipment	-0.18	-0.28	0.04	0.04	-39.0
Durable manufacturing nec	-0.04	-0.06	0.01	0.00	-93.6
Electric power transformers and motors	-0.18	-0.30	0.04	0.04	-30.5
Electronic and electrical equipment	-0.03	-0.05	-0.01	-0.01	-217.2
Farm and garden machinery and equipment	-0.13	-0.26	0.04	0.04	-25.2
Industrial machinery and equipment	-0.13	-0.20	0.02	0.03	-284.5
Major household appliances	-0.12	-0.18	0.04	0.04	-16.3
Metal furniture	-0.06	-0.10	0.04	0.03	-7.1
Motor vehicle parts	-0.24	-0.30	0.07	0.07	-365.8
Motor vehicles and equipment	-0.08	-0.14	0.02	0.02	-162.2
Other transport equipment	-0.08	-0.10	0.00	0.01	-124.5
Railroad rolling stock manufacturing	-0.21	-0.26	0.09	0.09	-12.4
Ship building and repairing	-0.04	-0.05	0.05	0.06	1.1
Total					-1,377.2
<b>Other Industries:</b>					
Agriculture and forest products	-0.01	-0.02	-0.01	-0.01	-56.1
Commercial and institutional buildings	-0.01	-0.01	0.01	0.01	3.7
Construction maintenance and repair	0.00	0.00	0.01	0.01	14.0
Highway street bridge and tunnel construction	0.00	0.00	0.00	0.00	1.8
Manufacturing and industrial buildings	0.00	-0.01	0.00	0.00	-0.1
Nondurable manufacturing	-0.01	-0.02	-0.01	-0.01	-299.2
Other new construction	-0.01	-0.01	0.01	0.01	4.6
Residential construction	-0.01	-0.01	0.01	0.01	-0.9
Resource extraction nec	-0.01	-0.04	0.00	0.00	-21.0
Services	0.00	0.00	0.00	0.00	-210.0
Water, sewer, and pipeline construction	-0.01	-0.01	0.03	0.03	5.6
Total					-557.6
<b>Grand Total</b>					<b>784.5</b>

<sup>1</sup> Domestic iron and steel is an aggregation of those industry categories of the input-output tables that would include the steel products covered by the safeguard measures: 331111 (iron and steel mills), 331210 (iron, steel pipe and tube from purchased steel), 331221 (rolled steel shape manufacturing), and 331222 (steel wire drawing). This definition of steel is broader than products covered by the safeguard measures. Using this broader definition means that the simulation will understate the impact of the safeguard measures on firms producing covered products when measured by percentage changes, but will not understate the impact when measured by absolute changes.

Source: USITC calculations.

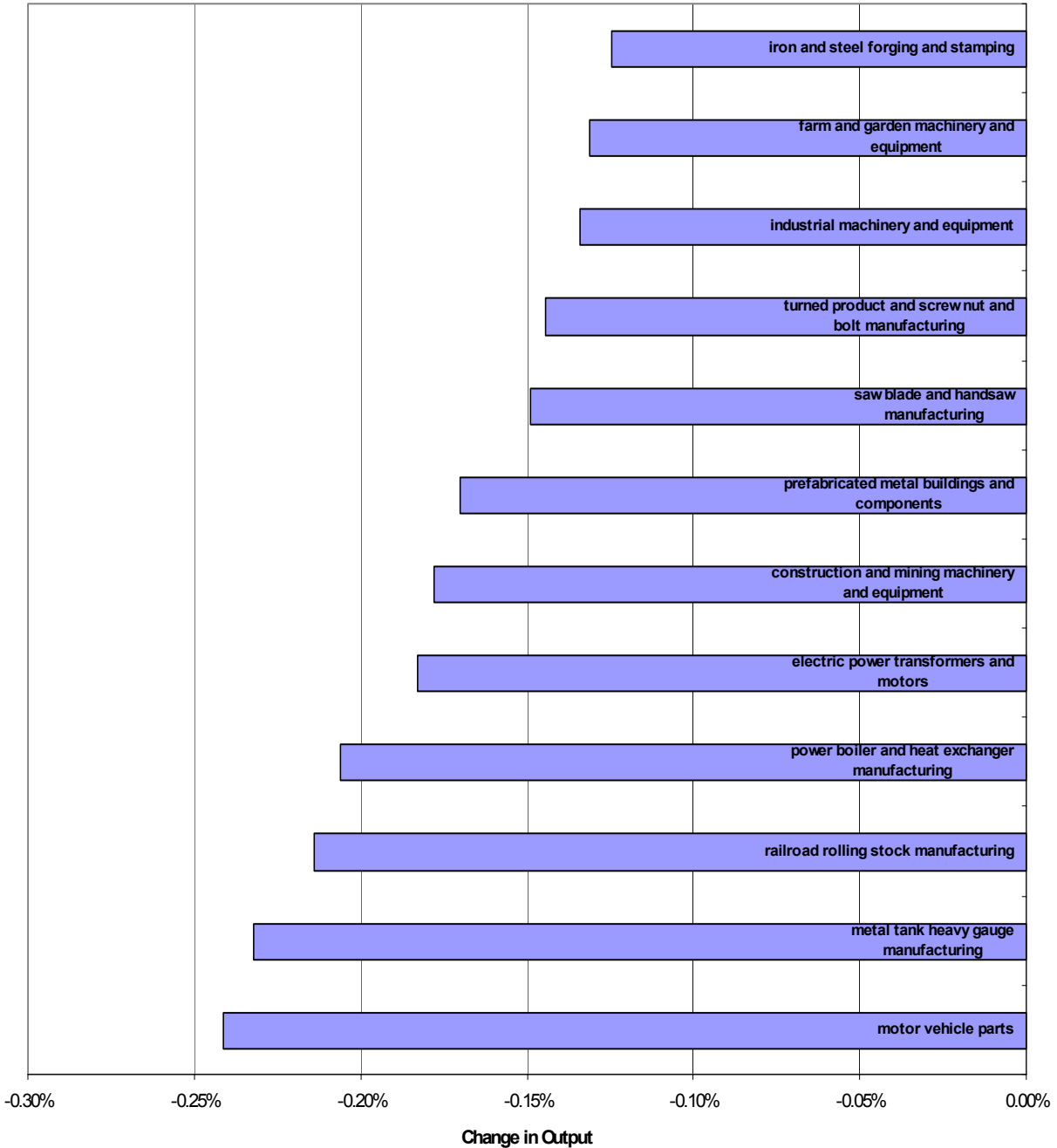
The impact of the safeguard measures on the output of steel-consuming industries varies across industries (table 4-4).<sup>11</sup> Industries that have relatively high steel and steel containing products cost shares

<sup>11</sup> Output changes are short-run estimates because the simulation does not consider reallocation of capital across industries because of the safeguard measures. The model is one of industry-specific capital. Assuming industry-specific capital is appropriate given the temporary nature of the safeguard measures and the length of the average productive life of capital in the steel-consuming industries. It is likely that manufacturers will react to temporary cost increases by continuing to operate at reduced earnings. If the safeguard measures were to persist

(continued...)

are typically most affected. Figure 4-1 presents the 12 industries that are the most affected by the safeguard measures, in terms of reduced output. All 12 industries have high input cost shares of steel.

**Figure 4-1**  
**CGE Simulation: Steel consuming industries with the largest percent change in output using central elasticity assumptions**



Source: USITC calculation

beyond three years, however, then output changes would be larger as capital is reallocated overseas or to more profitable industries.

The simulation results suggest that the motor vehicle parts industry contracts the most under the safeguard measures, with output falling by 0.24 percent (table 4-4). This result is not surprising given the motor vehicle parts industry's high cost share of steel and steel containing products (11.1 percent just for steel; table 4-1). Also included among the 12 industries in figure 4-1 are five industries that produce fabricated metal products; these industries face substantial competition from imported fabricated metal products.

The estimated impact of the safeguard measures on ports and their related service providers are accounted for in the service sector. As reported in table 4-3, revenue for services fell by an estimated 210.0 million dollars as a result of the safeguard measures.

Another way to compare the impacts on different industries is to examine the absolute change in revenue by industry. The advantage of examining revenue is that it is comparable across industries, while the disadvantage is that it can vary widely depending on the choice of nominal measurement units.<sup>12</sup> Revenue in the 12 most affected industries falls by between \$365 million (motor vehicle parts) and \$25 million dollars (farm and garden machinery and equipment). Detailed results for all industries are presented in table 4-4.

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<sup>12</sup> Nominal measures like revenue are inherently dependent on the unit of measure chosen. In this analysis, the true-cost-of-living index was selected as the deflator. See A. Deaton and J. Muellbauer, *Economic and Consumer Behavior* (Cambridge, England: Cambridge University Press, 1980) for background on the true-cost-of-living index. The modeled equilibrium only indicates relative prices so revenue changes are only obtained once an arbitrary numeraire commodity is chosen. By holding the true-cost-of-living index constant across the simulation analysis the Commission selects units of welfare as the numeraire commodity.



# CHAPTER 5

## THE POSSIBLE FUTURE IMPACT OF CONTINUING OR TERMINATING SAFEGUARD MEASURES

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### Introduction

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In response to the Committee's request, this chapter reviews the possible future impact of the steel safeguard measures for steel-consuming industries, and for U.S. ports and port related-service providers under two different scenarios. The first scenario involves continuation of the safeguard measures from September 2003 through March 2005, while the second scenario considers termination of the safeguard measures effective September 20, 2003. This chapter first discusses these two scenarios for steel-consuming industries and then for ports and port related-service providers. The assessment for each of these scenarios is based on information gathered from questionnaires, hearing testimony, and written submissions.<sup>1</sup>

In general, with the exception of a few firms, steel-consuming firms reported that, with continuation of the safeguard measures, there would be either no change or negative effects with regard to employment, profitability, and capital investment. Under the termination scenario, most steel-consuming firms reported that there would be either no change or improvements in profitability, capital investment, and employment.

### Steel-Consuming Industries

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This section examines the likely impact of both scenarios (continuation or termination) on employment, profitability, capital investment, and international competitiveness vis-a-vis foreign suppliers on steel-consuming industries. Firms were asked to indicate changes in these competitive factors under the two scenarios. The next section reviews the changes expected by firms if the current steel safeguard measures are continued through March 2005. The subsequent section discusses estimated changes reported by purchasers if the current safeguard measures are terminated effective September 20, 2003.

#### *Safeguards Continuing Scenario*

In the scenario in which safeguards are continued until March 2005, questionnaire responses indicate that more than one-half of steel-consuming firms reported that there would be no changes in employment levels (55 percent), capital investment (66 percent), and international competitiveness (52 percent) (table 5-1). However, regarding profitability expectations, most firms were split between

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<sup>1</sup> As noted in Chapter 1, useable purchaser questionnaire responses were received from 485 firms. With regard to ports and related-service providers, 128 questionnaires were mailed and 21 useable responses were received. In both cases, not all firms answered all questions so the total number of firms providing information may vary from question to question.

expecting that profits would fall or remain the same (about 46 percent for each). Less than 10 percent of reporting firms expected increases in employment, profits, and capital investments.

**Table 5-1**  
**Questionnaire responses from steel-consuming firms on expected future employment, profitability, capital investment, and international competitiveness, by percent<sup>1</sup>**

	Safeguard Measures Continued			Safeguard Measures Terminated		
	No change	Increase	Decrease	No change	Increase	Decrease
Employment . . . . .	54.7	5.9	39.4	55.1	34.1	10.8
Profitability . . . . .	46.1	8.1	45.9	39.0	48.5	12.5
Capital Investment . . . . .	66.0	9.0	25.1	58.5	32.5	9.0
International competitiveness . . . . .	52.1	15.4	32.5	50.7	37.9	11.4

<sup>1</sup> Note: sums may not add to 100 percent due to rounding.

Source: USITC calculations from questionnaire data.

In addition, several firms reported on the expected effects of continuation of the safeguard measures at the Commission hearings. For example, a representative from Caterpillar reported that “[i]f we are forced to continue to do business under these circumstances, we’ll continue to reduce costs to offset that. It creates uncertainty for employment. We’ll continue to use our offshore manufacturing sources to satisfy the demand around the world.”<sup>2</sup> In addition, a representative from the Precision Metalforming Association reported that “if the tariffs continue, there’s no question there will be fewer people employed. There will be lower profits in the industry, less equipment will [be] bought and more plants will close.”<sup>3 4</sup>

## Employment

Of the 426 firms that responded to this question, about 55 percent (233 firms) anticipated that there would be no change in employment if the steel safeguard measures were to continue for the full term (table 5-2). One distributor indicated that pricing has no effect on its employment level.

About 39 percent of reporting firms (168 of 426) reported that employment would decrease, with 74 of these 168 firms (44 percent) stating that employment would fall by less than 5 percent (table 5-2). The two sectors reporting the greatest impacts from safeguard measures predicted sharper declines. Over one-half of fabricators (43 of 73) indicated that their employment would fall. Motor vehicle parts manufacturers (42 of 69) anticipated that their employment would drop, with 6 of 42 stating that it would fall by more than 10 percent. Another distributor reported that continued relief would force manufacturers to shift jobs overseas in order to compete more effectively. One wire manufacturer representative reported that the continuation scenario “would reduce employment as the surge of imports of finished products into the U.S. increases,” and pointed out that the increased imports would be from countries both covered

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<sup>2</sup> Testimony of Dan M. Murphy, Executive Vice President, Global Purchasing Division, Caterpillar Inc., transcript of Commission hearing, June 19, 2003, p. 298.

<sup>3</sup> Testimony of William E. Gaskin, CAE, President, Precision Metalforming Association, transcript of Commission hearing, June 19, 2003, pp. 466-67.

<sup>4</sup> See also testimony of Calman J. Cohen, President, Emergency Committee for American Trade, transcript of Commission hearing, June 19, 2003, p. 298. Mr. Cohen stated that “the remaining tax . . . certainly limits their ability to grow. Even though it might be a small amount, it is still significant for many of them.”

**Table 5-2**

**Number of steel-consuming firms reporting predicted impact on steel-consuming industries' employment if safeguard measures are continued until March 2005, by industry**

Industry	Decrease (Percent)				Total change	No change	Increase (Percent)				Total
	>20	11-20	6-10	1-5			1-5	6-10	11-20	>20	
<b>Steel-product producers/processors/distributors:</b>											
Distributors . . . . .	3	1	6	9	19	57	2	1	0	0	3
Producers of hot/cold-rolled or coated forms . . . .	0	0	3	2	5	10	5	0	0	0	5
Welded pipe producers . . . .	1	1	4	1	7	12	1	1	0	0	2
Bar and wire finishers . . . .	2	1	2	1	6	10	2	0	0	0	2
Fastener producers . . . . .	0	2	0	6	8	11	0	0	0	0	0
Steel fabricators . . . . .	9	3	15	16	43	27	0	2	0	1	3
<b>Transportation:</b>											
Motor vehicles . . . . .	0	0	0	2	2	9	0	0	0	0	0
Motor vehicle parts . . . . .	3	3	17	19	42	23	3	1	0	0	4
Ships and shipping containers; military . . . . .	0	1	0	2	3	5	0	0	0	0	0
<b>Machinery and Equipment:</b>											
Heavy machinery . . . . .	0	0	2	2	4	10	0	1	0	0	1
Power, other machinery . . . .	2	2	4	2	10	19	0	0	0	0	0
<b>Construction . . . . .</b>	1	0	0	5	6	23	2	0	1	0	3
<b>Containers:</b>											
Steel barrels and cans . . . .	0	0	1	3	4	4	1	0	0	0	1
<b>Consumer and commercial goods:</b>											
Household Appliances . . . .	1	1	1	0	3	4	1	0	0	0	1
Furniture, hardware, cutlery . . . . .	1	1	0	4	6	9	0	0	0	0	0
<b>Total . . . . .</b>	23	16	55	74	168	233	17	6	1	1	25

Source: Compiled from data submitted in response to Commission questionnaires.

and exempt from the safeguard measures. At the hearing, several firms' representatives indicated that they believe more steel-consuming industry jobs will be lost if the steel remedies continue.<sup>5</sup>

About 6 percent of steel-consuming industry firms (25 out of 426) reported that continuation of the safeguard measures would increase their employment (table 5-2). The largest groups, by percent, of those expecting an increase in employment were hot/cold roller/coated form producers (25 percent) and household appliance manufacturers (13 percent), stating that their employment would increase by less than 10 percent.<sup>6</sup>

### Profitability

Reporting steel-consuming firms were evenly split on whether profitability would stay the same or decrease if the steel safeguard measures were to continue until 2005, with each group representing about 46 percent of the 434 reporting firms (table 5-3).<sup>7</sup> More than 57 percent of distributors (47 of 82) stated that they anticipated their profits would not change if the safeguard measures were to continue. Industries that had at least 50 percent of responding firms stating that there would be no change in profits

<sup>5</sup> For example, testimony of Terry Bowman, Vice President, Supply Chain Management, York International, transcript of Commission hearing, June 20, 2003, p. 720; and Wes Smith, President, E&E Manufacturing Corp. Inc.; transcript of Commission hearing, June 19, 2003, pp. 106-107.

<sup>6</sup> Each category had three firms reporting that they expected employment to increase.

<sup>7</sup> Of 434 reporting steel-consuming firms, 200 reported that they expected no change in profitability and 199 reported that they expected profits would decrease.

under this scenario include heavy machinery manufacturers (73 percent); ships, shipping containers, and military products producers (62 percent); power and other machinery manufacturers (59 percent); welded pipe manufacturers (57 percent); and construction (56 percent). Another machinery and equipment manufacturer echoed those sentiments, explaining that the steel safeguard measures have minimal impact on its overall corporate business.<sup>8</sup>

Of the 199 responding steel-consuming firms that predicted profits would be negatively affected, 129 reported that they expect profits to decrease by 10 percent or less (table 5-3). Motor vehicle parts manufacturers more frequently reported likely changes with about 25 percent (12 of 49) reporting that they anticipated profitability would decrease between 11 percent and 20 percent if safeguard measures continue until 2005. Steel fabricators also reported likely declines in profitability, with most expecting decreases by up to 10 percent. A hot/cold rolled or coated forms producer representative reported that market conditions are hurting profitability, supporting the view that although safeguards may continue, the health of the economy is most significant among all influences affecting the industry.<sup>9</sup> Another steel-consuming industry representative indicated that companies are faced with reducing profit margins and potentially moving manufacturing facilities outside the United States.<sup>10</sup> However, about 8 percent of reporting steel-consuming firms indicated that they anticipated profits would increase if the safeguard measures were to continue until 2005.

## Capital Investment

In the event that steel safeguard measures were to continue, 66 percent of reporting steel-consuming firms (278 of 423) indicated that their capital investment would experience no change (table 5-4). This trend was reflected most in the responses from heavy manufacturing, ships, shipping container and military, and fastener manufacturing, in which more than 80 percent of firms indicated there would be no change in capital investment.

About 25 percent of reporting steel-consuming firms indicated that capital investment would decrease under the continuation scenario (table 5-4). Many of the firms that reported an expected decrease were fabricators, motor vehicle parts manufacturers, and steel barrel and can manufacturing. Most of these firms reported expected falls in capital investment of less than 10 percent, while about one-third reported that they anticipated that capital investment would decrease dramatically, by more than 20 percent. A hot/cold rolled and coated forms producer representative stated that “with the continuation of relief, both volumes and margins will continue shrinking. This will not allow for a substantial capital investment plan.”<sup>11</sup> One fabricator representative noted that “with continued safeguards, we will need to slow capital investments,” while another fabricator representative stated that “current assets may be sold

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<sup>8</sup> Response to Commission questionnaire.

<sup>9</sup> Response to Commission questionnaire.

<sup>10</sup> Testimony of William G. Sutton, President, Air-Conditioning & Refrigeration Institute, transcript of Commission hearing, June 20, 2003, p. 715.

<sup>11</sup> Response to Commission questionnaire.



**Table 5-3**  
**Number of steel-consuming firms reporting predicted impact on steel-consuming industries' profitability if safeguard measures are continued until March 2005, by industry**

Industry	Decrease (Percent)				Total change	No	Increase (Percent)				Total
	>20	11-20	6-10	1-5			1-5	6-10	11-20	>20	
<b>Steel-product producers/processors/distributors:</b>											
Distributors . . . . .	9	5	5	9	28	47	6	1	0	0	7
Producers of hot/cold-rolled or coated forms . . . . .	2	0	1	2	5	10	5	1	0	0	6
Welded pipe producers . . . . .	3	2	0	3	8	12	1	0	0	0	1
Bar and wire finishers . . . . .	2	1	2	2	7	7	4	0	0	0	4
Fastener producers . . . . .	1	0	3	4	8	11	0	0	0	0	0
Steel fabricators . . . . .	9	8	11	19	47	21	2	2	0	1	5
<b>Transportation:</b>											
Motor vehicles . . . . .	0	0	2	3	5	5	0	0	0	0	0
Motor vehicle parts . . . . .	4	12	12	21	49	20	0	0	0	1	1
Ships and shipping containers; military . . . . .	0	1	0	2	3	5	0	0	0	0	0
<b>Machinery and Equipment:</b>											
Heavy machinery . . . . .	0	0	0	3	3	17	1	0	1	0	2
Power, other machinery . . . . .	5	0	2	3	10	17	1	0	1	0	2
Construction . . . . .	0	1	2	5	8	19	6	1	0	0	7
<b>Containers:</b>											
Steel barrels and cans . . . . .	2	0	1	3	6	4	1	0	0	0	1
<b>Consumer and commercial goods:</b>											
Household Appliances . . . . .	0	1	2	3	6	3	0	0	0	0	0
Furniture, hardware, cutlery . . . . .	2	0	1	3	6	8	0	0	0	0	0
<b>Total . . . . .</b>	<b>39</b>	<b>31</b>	<b>44</b>	<b>85</b>	<b>199</b>	<b>206</b>	<b>27</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>36</b>

Source: Compiled from data submitted in response to Commission questionnaires.

if safeguards are not eliminated.”<sup>12</sup> One household appliance manufacturer representative explained that “continued distortion of market pricing will lead to preferentially invest{ing} in other countries.”<sup>13</sup>

Of the 423 reporting steel-consuming firms, only 38 (9 percent) indicated that their firm’s capital investment would indeed increase with the continuation of the steel safeguard measures (table 5-4). These were mostly bar finishing producers and hot/cold rolled or coated forms producers, 29 percent of which each indicated that under the continuation scenario, firm capital investment would increase.

<sup>12</sup> Responses to Commission questionnaire.

<sup>13</sup> Response to Commission questionnaire.

**Table 5-4**  
**Number of steel-consuming firms reporting predicted impact on steel-consuming industries' capital investment if safeguard measures are continued until March 2005, by industry**

Industry	Decrease (Percent)				No Total change	Increase (Percent)				Total	
	>20	11-20	6-10	1-5		1-5	6-10	11-20	>20		
<b>Steel-product producers/processors/distributors:</b>											
Distributors . . . . .	6	0	3	2	11	62	5	3	0	0	8
Producers of hot/cold- rolled or coated forms . . . .	0	0	0	0	0	15	2	1	0	0	3
Welded pipe producers . . . .	3	1	1	0	5	12	1	1	0	0	2
Bar and wire finishers . . . .	2	1	1	0	4	8	4	1	0	0	5
Fastener producers . . . . .	0	0	1	1	2	16	0	1	0	0	1
Steel fabricators . . . . .	13	1	10	8	32	34	1	1	3	0	5
<b>Transportation:</b>											
Motor vehicles . . . . .	0	0	1	1	2	9	1	0	0	0	1
Motor vehicle parts . . . . .	8	7	8	7	30	38	0	0	0	0	0
Ships and shipping containers; military . . . . .	0	0	0	0	0	7	0	0	0	1	1
<b>Machinery and Equipment:</b>											
Heavy machinery . . . . .	0	0	0	0	0	13	0	1	0	0	1
Power, other machinery . . . .	3	0	1	2	6	20	1	0	0	1	2
<b>Construction</b> . . . . .	0	0	2	3	5	23	3	1	0	0	4
<b>Containers:</b>											
Steel barrels and cans . . . .	0	1	2	1	4	5	1	0	0	0	1
<b>Consumer and commercial goods:</b>											
Household Appliances . . . .	2	0	0	0	2	6	0	0	0	0	0
Furniture, hardware, cutlery . . . . .	2	0	0	1	3	11	1	0	0	0	1
<b>Total</b> . . . . .	39	11	30	26	106	279	20	10	3	2	35

Source: Compiled from data submitted in response to Commission questionnaires.

## International Competitiveness

A majority (234 of 449 or 52 percent) of steel-consuming firm representatives reported that under a scenario of continued relief, their firms would experience no change in their international competitiveness (table 5-5). All responding ships, shipping container, and military manufacturers and more than 75 percent of hot/cold rolled manufacturers, heavy machinery, and construction firms indicated that there would be no change.

**Table 5-5****Number of steel-consuming firms reporting predicted impact on steel-consuming industries' international competitiveness if safeguard measures are continued until March 2005, by industry**

<b>Industry</b>	<b>Increased</b>	<b>Decreased</b>	<b>Unchanged</b>
<b>Steel-product producers/processors/distributors:</b>			
Distributors .....	5	16	58
Producers of hot/cold-rolled or coated forms .....	3	3	14
Welded pipe producers .....	3	8	9
Bar and wire finishers .....	2	7	8
Fastener producers .....	1	5	13
Steel fabricators .....	9	44	23
<b>Transportation:</b>			
Motor vehicles .....	0	4	6
Motor vehicle parts .....	9	35	24
Ships and shipping containers; military .....	0	0	7
<b>Machinery and equipment:</b>			
Heavy machinery .....	1	2	12
Power, other machinery .....	1	7	19
<b>Construction</b> .....	2	3	25
<b>Containers:</b>			
Steel barrels and cans .....	0	5	6
<b>Consumer and commercial goods:</b>			
Household appliances .....	2	4	3
Furniture, hardware, cutlery .....	5	3	7
<b>Total</b> .....	<b>43</b>	<b>146</b>	<b>234</b>

Source: Compiled from data submitted in response to Commission questionnaires.

About one-third of reporting steel-consuming firm representatives (146 of 449) indicated that if the steel safeguard measures were continued, their international competitiveness would fall (table 5-5). This view was most prevalent among fabricators and motor vehicle parts manufacturers, with about 58 percent (44 of 76) of fabricators and 52 percent of vehicle parts manufacturers (35 of 68) indicating that their international competitiveness would decline. Two fastener manufacturers explained the relationship between safeguard measure continuation and international competitiveness. One fastener producer representative stated: "If we continue with [the steel safeguard] surcharges, our customers will receive more favorable pricing from offshore competitors." Another stated that "we cannot compete with foreign suppliers with continued relief."<sup>14</sup>

Slightly more than 15 percent of reporting steel-consuming firms (69 of 449) anticipated that their international competitiveness would increase under a continuation scenario (table 5-5). These firms were mostly furniture and hardware and cutlery industry firms, 75 percent of which indicated that their international competitiveness would increase if the safeguard measures continued.

### *Safeguards Termination Scenario*

Questionnaire responses indicate that more than one-half of steel-consuming firms expected no change in employment (55 percent), capital investment, and international competitiveness in the event the safeguard measures are terminated (table 5-1). However, almost one-half of the steel-consuming firms reported that they expect profitability to increase should safeguards be terminated at the mid-point.<sup>15</sup>

In addition, several firms reported on the expected effects of continuation of the safeguard measures at the Commission hearings. For example, a representative from Acuity Brands Lighting

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<sup>14</sup> Responses to Commission questionnaire.

<sup>15</sup> Almost 49 percent of reporting steel-consuming firms indicated that they would expect profits to increase under the termination scenario.

discussed the likely effects if the safeguards are terminated. According to this official, “Three things [would occur], first of all, the pendulum would probably swing back on our use of U.S. steel in our Mexican plants. We would slow down the migration over to Mexican suppliers, if not reverse it. Secondly, we would probably end the discussions with the Chinese suppliers, at least for imported steel as a raw material. Thirdly, our company is carrying a huge amount of debt right now. It would help us pay down some of that debt, which would make us a healthier company.”<sup>16</sup> In addition, a representative from the tool and die industry reported that “the elimination of the tariff will definitely give us a reprieve to get the costs, get the process improvements, get the capital going that we purchased in the last six to nine months at these auctions to try to drive down costs. So yes, it would make a huge impact whether that business – it has about 80 employees, would be viable for the future or not.”<sup>17</sup>

## **Employment**

Of the 425 firms that responded to this question, 55 percent (234 firms) reported that they expected there would be no change in employment if the steel safeguard measures were to be terminated (table 5-6). This result was consistent with findings from the same group under the continuing relief scenario.

However, more than 34 percent of the reporting steel-consuming industry firms (145 out of 425) reported that terminating the safeguard measures would increase their employment (table 5-6). Specifically, 42 of 74 fabricators and 35 of 70 motor vehicle parts manufacturers anticipated that their direct employment numbers would increase. Of these 145 steel-consuming firms, 88 percent anticipated that employment would increase by less than 10 percent. Distributors also reported that employment would increase under this scenario, 52 percent of which reported expected increases of up to 5 percent. Less than 5 percent (7 of 145) of reporting firms indicated that the termination of the steel safeguard measures would cause significant increases in employment of more than 20 percent.<sup>18</sup> A hot/cold rolled or coated forms producer representative summed up the relationship between employment and the safeguard measures: “Termination of relief will result in lower manufacturing costs and increased sales, thus creating more employment due to higher production levels.”<sup>19</sup> Similarly, a fabricator representative stated that “[t]ermination of relief would allow us to be more competitive overall in a world market thus contributing to sales and employment.”<sup>20</sup>

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<sup>16</sup> Testimony of Tom Naramoore, Senior Vice President of Global Sourcing, Acuity Lighting, transcript of Commission hearing, June 19, 2003, pp. 307-08.

<sup>17</sup> Testimony of Chris Dowding, President, Dowding Industries, Inc., transcript of Commission hearing, June 19, 2003, p. 464.

<sup>18</sup> USITC calculations from Commission questionnaire data.

<sup>19</sup> Response to Commission questionnaire.

<sup>20</sup> Response to Commission questionnaire.

Table 5-6

Number of steel-consuming firms reporting predicted impact on steel-consuming industries' employment if safeguard measures are terminated after September 20, 2003, by industry

Industry	Decrease (Percent)				No Total change	Increase (Percent)					Total
	>20	11-20	6-10	1-5		1-5	6-10	11-20	>20		
<b>Steel-product producers/processors/distributors:</b>											
Distributors . . . . .	1	0	3	1	5	56	11	3	2	3	19
Producers of hot/cold- rolled or coated forms . . . .	1	1	0	4	6	9	2	1	0	0	3
Welded pipe producers . . . .	0	1	1	2	4	11	4	2	0	0	6
Bar and wire finishers . . . . .	0	0	3	2	5	7	2	4	0	1	7
Fastener producers . . . . .	0	0	0	1	1	12	4	1	0	0	5
Steel fabricators . . . . .	0	1	0	3	4	28	15	19	5	3	42
<b>Transportation:</b>											
Motor vehicles . . . . .	0	0	0	0	0	8	2	0	0	0	2
Motor vehicle parts . . . . .	0	1	1	2	4	31	19	14	2	0	35
Ships and shipping containers; military . . . . .	0	0	0	0	0	5	2	1	0	0	3
<b>Machinery and Equipment:</b>											
Heavy machinery . . . . .	0	0	1	2	3	9	3	0	1	0	4
Power, other machinery . . . .	1	2	2	0	5	18	3	2	0	0	5
<b>Construction . . . . .</b>	0	0	1	5	6	20	3	2	1	0	6
<b>Containers:</b>											
Steel barrels and cans . . . .	0	0	0	0	0	6	2	2	0	0	4
<b>Consumer and commercial goods:</b>											
Household Appliances . . . .	0	0	0	1	1	5	2	0	0	0	2
Furniture, hardware, cutlery . . . . .	0	0	1	1	2	9	2	0	0	0	2
<b>Total . . . . .</b>	3	6	13	24	46	234	76	51	11	7	145

Source: Compiled from data submitted in response to Commission questionnaires.

Of the reporting firms, 46 (around 11 percent) indicated that they expect employment to decrease anywhere from 1 to more than 20 percent, with most (24 of 46) stating that they anticipated employment would decrease by less than 5 percent (table 5-6). This trend was particularly consistent with the reporting hot/cold rolled and coated forms producers and construction firms, which generally indicated that they expect employment would fall by less than 5 percent.

## Profitability

If the safeguard measures were to be terminated, almost one-half of steel-consuming firms (210 of 433 firms) indicated that profits would increase (table 5-7). Fabricators, motor vehicle parts manufacturers, and distributors made up the bulk of these 210 firms. Exactly one-half of those steel-consuming firms that expected likely increases in profits reported that they expect profits to increase by up to 5 percent; another 32 percent expect that profits would increase between 6 percent and 10 percent. Comments such as "there is a better possibility of profit with termination" of the steel measures and "more business opportunities" were noted throughout many of the questionnaires, especially from producers of hot/cold rolled and coated forms.<sup>21</sup>

<sup>21</sup> Responses to Commission questionnaire.

**Table 5-7**

**Number of steel-consuming firms reporting predicted impact on steel-consuming industries' profitability if safeguard measures are terminated after September 20, 2003, by industry**

Industry	Decrease (Percent)				No	Increase (Percent)				Total	
	>20	11-20	6-10	1-5		Total change	1-5	6-10	11-20		>20
<b>Steel-product producers/processors/distributors:</b>											
Distributors . . . . .	2	0	3	5	10	43	10	7	5	7	29
Producers of hot/cold-rolled or coated forms . . . . .	2	3	0	4	9	5	2	3	0	2	7
Welded pipe producers . . . . .	1	2	1	2	6	7	3	1	3	0	7
Bar and wire finishers . . . . .	2	1	1	1	5	7	1	3	2	1	7
Fastener producers . . . . .	0	0	0	1	1	13	2	1	1	0	4
Steel fabricators . . . . .	0	2	2	2	6	23	19	19	6	3	47
<b>Transportation:</b>											
Motor vehicles . . . . .	0	0	0	0	0	6	3	1	0	0	4
Motor vehicle parts . . . . .	0	0	1	3	4	18	23	20	4	0	47
Ships and shipping containers; military . . . . .	0	0	0	0	0	4	2	2	0	0	4
<b>Machinery and Equipment:</b>											
Heavy machinery . . . . .	0	0	0	0	0	7	7	0	0	0	7
Power, other machinery . . . . .	3	0	0	0	3	10	12	3	0	0	15
Construction . . . . .	0	0	1	6	7	13	8	4	1	0	13
<b>Containers:</b>											
Steel barrels and cans . . . . .	0	0	0	1	1	3	4	2	1	0	7
<b>Consumer and commercial goods:</b>											
Household Appliances . . . . .	0	0	0	0	0	2	5	2	0	0	7
Furniture, hardware, cutlery . . . . .	1	0	0	1	2	8	4	0	1	0	5
<b>Total . . . . .</b>	<b>11</b>	<b>8</b>	<b>9</b>	<b>26</b>	<b>54</b>	<b>169</b>	<b>105</b>	<b>68</b>	<b>24</b>	<b>13</b>	<b>210</b>

Source: Compiled from data submitted in response to Commission questionnaires.

More than 39 percent of reporting steel-consuming firms (169 of 433) indicated that if the steel safeguard measures were discontinued, their firms would not experience any change in profitability. Most fastener (72 percent); motor vehicle (60 percent); distributors (52 percent); and furniture, hardware, and cutlery (53 percent) manufacturers fell into this category.

About 12 percent of reporting steel-consuming firms expected profitability would indeed decrease if the steel safeguard measures were to be discontinued. Of these 54 firms, most steel-consuming industries were represented to some limited extent. Most notably, 42 percent of hot/cold rolled or coated forms producers and 30 percent of bar finishers and wire producers reported expected declines in profitability. Of the 54 reporting steel-consuming firms, almost 48 percent anticipated that their profitability would fall by 1 percent to 5 percent. About 20 percent of the reporting firms indicated that they expect profits to fall by more than 20 percent. The remaining steel-consuming firms were evenly distributed within these two extremes. One producer of hot/cold rolled or coated forms stated that "termination of relief will negatively impact prices and profitability."<sup>22</sup>

### Capital Investment

Almost 59 percent of reporting steel-consuming firms (248 of 424) indicated that under a termination scenario, there would be no change in their capital investment (table 5-8). One heavy

<sup>22</sup> Response to Commission questionnaire.

machinery producer explained that “tariffs will have no impact on our capital investment. Only increased demand will have an impact.”<sup>23</sup>

**Table 5-8**  
**Number of steel-consuming firms reporting predicted impact on steel-consuming industries’ capital investment if safeguard measures are terminated after September 20, 2003, by industry**

Industry	Decrease (Percent)				Total change	No	Increase (Percent)				Total
	>20	11-20	6-10	1-5			1-5	6-10	11-20	>20	
<b>Steel-product producers/processors/distributors:</b>											
Distributors . . . . .	1	1	1	0	3	60	5	6	4	2	17
Producers of hot/cold-rolled or coated forms . . . .	4	0	2	3	9	11	1	0	0	0	1
Welded pipe producers . . . .	1	3	0	0	4	11	0	3	1	1	5
Bar and wire finishers . . . . .	1	1	2	0	4	8	0	1	2	3	6
Fastener producers . . . . .	0	1	0	0	1	15	2	0	0	0	2
Steel fabricators . . . . .	1	1	1	2	5	28	14	15	5	7	41
<b>Transportation:</b>											
Motor vehicles . . . . .	0	0	0	0	0	10	1	0	0	0	1
Motor vehicle parts . . . . .	0	0	1	1	2	33	13	15	5	1	34
Ships and shipping containers; military . . . . .	0	0	0	0	0	6	1	1	0	0	2
<b>Machinery and Equipment:</b>											
Heavy machinery . . . . .	0	0	0	0	0	10	2	3	0	0	5
Power, other machinery . . . .	2	1	0	0	3	17	3	2	1	0	6
<b>Construction . . . . .</b>	0	0	3	2	5	19	3	3	0	0	6
<b>Containers:</b>											
Steel barrels and cans . . . . .	0	0	0	0	0	2	4	2	1	0	7
<b>Consumer and commercial goods:</b>											
Household Appliances . . . . .	0	0	0	0	0	7	0	1	0	0	1
Furniture, hardware, cutlery . . . . .	2	0	0	0	2	11	3	1	0	0	4
<b>Total . . . . .</b>	12	8	10	8	38	248	52	53	19	14	138

Source: Compiled from data submitted in response to Commission questionnaires.

Roughly one-third of firms (138 of 424) reported that capital investment would increase with the termination of the steel safeguard measures. More than 77 percent of steel barrel and can manufacturers and more than 55 percent of fabricators reported that capital investment would likely increase; most indicated an increase of up to 10 percent was likely.

Only 9 percent of reporting steel-consuming firms (38 of 424) indicated that termination of steel safeguard measures would lead to a reduction in capital investment (table 5-8). About 43 percent of hot/cold rolled or coated forms manufacturers and 22 percent of bar finishers indicated that if the safeguard measures were to end, their capital investments would fall.

## International Competitiveness

Under the terminated safeguard measures scenario, 51 percent of reporting steel-consuming firms (209 of 412) indicated that there would be no change in their international competitiveness (table 5-9). This result was particularly applicable for ships, shipping container and military manufacturers, furniture, and hardware and cutlery manufacturers, with more than 80 percent of both groups reporting that there would be no change in their competitiveness if safeguard measures were terminated in September 2003.

<sup>23</sup> Response to Commission questionnaire.

**Table 5-9****Number of steel-consuming firms reporting predicted impact on steel-consuming industries' international competitiveness if safeguard measures are terminated after September 20, 2003, by industry**

<b>Industry</b>	<b>Increased</b>	<b>Decreased</b>	<b>Unchanged</b>
<b>Steel-product producers/processors/distributors:</b>			
Distributors	25	6	44
Producers of hot/cold-rolled or coated forms	4	7	8
Welded pipe producers	10	3	6
Bar and wire finishers	8	1	11
Fastener producers	5	0	11
Steel fabricators	40	12	21
<b>Transportation:</b>			
Motor vehicles	2	1	7
Motor vehicle parts	36	6	25
Ships and shipping containers; military	0	1	5
<b>Machinery and equipment:</b>			
Heavy machinery	5	0	11
Power, other machinery	7	2	18
<b>Construction</b>	3	5	22
<b>Containers:</b>			
Steel barrels and cans	5	0	4
<b>Consumer and commercial goods:</b>			
Household appliances	5	1	3
Furniture, hardware, cutlery	1	2	13
<b>Total</b>	<b>156</b>	<b>47</b>	<b>209</b>

Source: Compiled from data submitted in response to Commission questionnaires.

Almost 38 percent of reporting steel-consuming firms (156 of 412) indicated that if the safeguard measures were terminated in September 2003, their international competitiveness would increase. For several industries, most firms indicated that their international competitiveness would increase, including steel barrel and can manufacturers and household appliance manufacturers (both 56 percent), fabricators (55 percent), motor vehicle parts manufacturers (54 percent), and welded pipe manufacturers (53 percent). One motor vehicle producer representative explained that "lower material costs resulting from termination of relief could be passed onto potential customers, therefore making us more competitive."

A much smaller group of about 11 percent (47 of 412 firms) indicated that, with termination of the safeguard measures, their international competitiveness would actually decrease. Most notably, 7 of 19 producers of hot/cold-rolled or coated forms indicated that termination would reduce their international competitiveness.

## **Ports and Related-Service Providers**

Five types of ports and related-service providers responded to relevant questions discussed here.<sup>24</sup> The Commission received 21 usable port and related-service provider questionnaire responses regarding the continuation and termination of safeguard measures. Similar to steel-consuming firms, ports and related-service firms were asked to indicate changes in steel import volumes, revenues, capital investment, wages, and other factors under the two scenarios.

<sup>24</sup> The five categories are (1) port authority, (2) private terminal operator, (3) stevedoring firm, (4) towing firm, and (5) warehouse.



## *Safeguards Continuing Scenario*

More than 65 percent of reporting port and related-service firms indicated that there would be no change in wages and capital investment if safeguards were continued (table 5-10). However, more than 60 percent indicated that the volume of steel imports and associated revenues would decrease.

**Table 5-10**  
**Summary table for ports and port-related services providers on expected future volume, revenue, capital investment and wages, by percent<sup>1</sup>**

	Safeguards Continued			Safeguards Terminated		
	No change	Increase	Decrease	No change	Increase	Decrease
Volume .....	31.6	5.2	63.2	27.8	72.2	0
Revenue .....	27.8	5.5	66.7	29.4	70.6	0
Capital Investment .....	70.6	0	29.4	52.9	47.1	0
Wages .....	64.7	12.0	23.5	58.8	35.3	5.9

<sup>1</sup> Note: sums may not add to 100 percent due to rounding error.

Source: USITC calculations from questionnaire data.

### Steel Import Volume

About 63 percent (12 of 19) of reporting port and related-services firms indicated that they expected steel import volumes to decrease if safeguard measures were to continue until March 2005 (table 5-11). One port-related services firm representative stated that “continuation of tariffs will result in intense pressure on margins and diminution of cargo handling opportunities” especially for “higher value steel products.”<sup>25</sup> One-third of those reporting likely decreases (4 of 12) reported that import volumes would decrease dramatically, by more than 20 percent. About 25 percent (3 of 12) indicated that they expect steel imports to decrease significantly, between 11 percent and 20 percent. Another 25 percent (3 of 12) reported under the continuation scenario, they would expect steel import volumes to decrease between 6 percent and 10 percent. The remaining 2 firms indicated that they would expect steel import volumes to decline by 5 percent or less.

**Table 5-11**  
**Number of ports and related-services firms reporting predicted impact on steel import volume, revenues, capital investment, and wages if safeguard measures are continued until March 2005**

Industry	Decrease (Percent)				No Total change	Increase (Percent)				Total	
	>20	11-20	6-10	1-5		1-5	6-10	11-20	>20		
Steel import volume .....	4	3	3	2	12	6	0	1	0	0	1
Revenues .....	3	2	3	4	12	5	0	0	1	0	1
Capital investment .....	0	2	1	2	5	12	0	0	0	0	0
Wages .....	1	2	1	0	4	11	1	0	1	0	2

Source: Compiled from data submitted in response to Commission questionnaires.

More than 31 percent (6 of 19) of port and related services representatives indicated that if steel safeguard measures were to continue, they would expect no changes in the level of steel import volumes (table 5-11). This result was particularly reflected in responses by port authority firms, representing almost 42 percent of all port authorities reporting. One port authority representative stated that “to keep the tariff will continue to hurt these industries to the point they may leave (go overseas or declare

<sup>25</sup> Response to Commission questionnaire.

bankruptcy protection).<sup>26</sup> Only one firm reported that it expected import volumes to increase, between 6 percent and 10 percent (table 5-11).

## Revenues

Almost 67 percent of reporting port and related-service firms (12 of 18) expected that under the continuation scenario, revenues would decrease (table 5-11). For example, one terminal firm indicated that “revenues in both the terminal and trucking industry will continue to decline if relief continues.”<sup>27</sup> More than 58 percent of these firms (7 of 12) expected that revenue would decrease by 10 percent or less (table 5-11). About 25 percent expected revenues to fall by over 20 percent if safeguard measures were to continue.

About 28 percent of firms (all of which are port authorities) indicated that they expect no change in revenues under the continuation scenario. One firm reported that it expects revenues to increase under the continuation scenario between 11 percent and 20 percent.

## Capital Investment

About 70 percent of reporting port and related-services firms (12 of 17) indicated that they expect no changes in capital investment if the steel safeguard measures were to continue until March 2005 (table 5-11). This trend was most prevalent among port authorities, with 90 percent indicating that there would be no changes in capital investment; 40 percent of reporting stevedoring firms also indicated that there would be no change. One terminal operator representative reported that “steel is a small commodity, for which we make no capital investments.”<sup>28</sup>

The remaining 29 percent of reporting port and related-services firms indicated that there would be some decrease in capital investment if safeguard measures were to continue. Most seem evenly split in their expectations, some indicating that capital investment would likely decrease slightly, up to perhaps 5 percent; others indicated that the decrease would be more significant, expecting the fall in capital investment to be between 11 percent and 20 percent; others would put the decrease in capital investment somewhere in between. One terminal operator representative spoke to the long-run implications of the safeguard measures, reporting that “lengthy tariffs will eventually impact ports’ ability to generate capital due to leasers going bankrupt and not paying leases.”<sup>29</sup> Another port authority representative concurred on the impact of the steel measures, stating that “steel is the principal commodity handled by {this} port.”<sup>30</sup>

## Wages

Almost 65 percent of reporting port and related-services firms (11 of 17) estimated that there would be no changes in wages if the steel safeguard measures were to continue through March 2005 (table 5-11). These firms were made up of primarily port authorities, plus a few stevedoring and towing firms.

Just less than 24 percent of the responding firms reported they expected under the continuation scenario that wages would fall. Three out of four firms claimed that wages would fall on average between 11 percent and 20 percent. One terminal operator representative reported that “less business equals less

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<sup>26</sup> Response to Commission questionnaire.

<sup>27</sup> Response to Commission questionnaire.

<sup>28</sup> Response to Commission questionnaire.

<sup>29</sup> Response to Commission questionnaire.

<sup>30</sup> Response to Commission questionnaire.

wages. Continuation of {the steel safeguard measures} will cause further staff reductions.”<sup>31</sup> Another stevedoring firm representative reported that “wages are part of collective bargaining agreements and are increased independently of steel volume. However, work opportunities diminish, so overall man-hours decrease.”<sup>32</sup> About 12 percent of port or related-service providers reported that they anticipated volumes would decrease if steel safeguard measures were to continue.

### *Safeguards Termination Scenario*

More than 70 percent of port and related-service providers indicated that under a termination scenario, they expected steel import volumes and revenues to increase (table 5-10). For capital investment and wages, almost 60 percent of reporting port and related services firms expected no changes. No ports and port-related service providers reported that they expect declines in steel import volume, revenues, or capital investment.

#### **Steel Import Volume**

If the safeguard measures are terminated, more than 72 percent of the reporting port and related service providers (13 of 18) indicated that steel import volumes would increase (table 5-12). Magnitudes varied greatly, where more than 65 percent of firms reported that they anticipated volumes would increase by at least 11 percent and possibly more than 20 percent. One port authority representative reported that “termination is expected to result in {a} rebound in steel tonnages within 6 months.”<sup>33</sup>

**Table 5-12**  
**Number of ports and related-services firms reporting predicted impact on steel import volume, revenues, capital investment, and wages if safeguard measures are terminated after September 2003**

Industry	Decrease (Percent)				No Total change	Increase (Percent)				Total	
	>20	11-20	6-10	1-5		1-5	6-10	11-20	>20		
Steel import volume . . . . .	0	0	0	0	0	5	1	3	4	5	13
Revenues . . . . .	0	0	0	0	0	5	1	4	3	4	12
Capital investment . . . . .	0	0	0	0	0	9	3	4	1	0	8
Wages . . . . .	0	0	0	1	1	10	1	3	2	0	6

Source: Compiled from data submitted in response to Commission questionnaires.

The remaining 28 percent of the port and related-service providers indicated that there would be no change in the steel volumes if steel safeguard measures were to be terminated. This response was most prevalent among port authorities. For example, one port representative indicated that if steel safeguard measures were terminated, “there will be no measurable increase in steel tonnage, {mainly} due to sanctioned countries’ newly acquired trading partners (i.e., Intra-Asia Market).”<sup>34</sup>

#### **Revenues**

Almost 71 percent of the port and related-services providers (12 of 17) indicated that under a termination scenario, they expect their revenues to increase (table 5-12). About one-third of those firms reporting increases indicated that they thought revenues would increase between 6 percent and 10 percent. Approximately one-third of firms reporting increases stated that revenues would increase by more than 20

<sup>31</sup> Response to Commission questionnaire.

<sup>32</sup> Response to Commission questionnaire.

<sup>33</sup> Response to Commission questionnaire.

<sup>34</sup> Response to Commission questionnaire.

percent. About 25 percent of reporting firms indicated that expect revenues would increase between 11 percent and 20 percent.

The remaining 29 percent of reporting port and related-services firms (5 of 17) indicated that, under the termination scenario, there would be no changes in their revenue. This response was most prevalent among port authorities; 40 percent of the reporting port authorities indicated that their revenues would remain the same.

## **Capital Investment**

Almost 53 percent of port and related-services firms (9 of 17) reported that under the termination scenario, the level of capital investment would not change (table 5-12).<sup>35</sup> All towing firms and 80 percent of port authorities indicated similarly.

The remaining port and related-services firms indicated that capital investment would increase under the termination scenario. More than 85 percent of reporting port and related-services firms reported that they expected increases not exceeding 10 percent.

## **Wages**

Almost 59 percent of reporting port and related-service firms (10 of 17) indicated that they expected no change in wages if safeguard measures were to end in September 2003 (table 5-12). Port authorities reported that they felt most strongly about this expectation, with 80 percent agreeing that wages would remain constant.

However, more than 35 percent disagreed and indicated that wages are expected to increase. One-half of those reporting that wages would increase under the termination scenario indicated that they expected wages to increase between 6 percent and 10 percent. A few others indicated that wage increases could be more, possibly between 11 percent and 20 percent. One stevedoring firm indicated that wages would increase modestly, around 5 percent or less. Only one firm reported expectations that wages would decrease under the termination scenario.

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<sup>35</sup> Almost 59 percent (248 of 424 steel-consuming firms) reported that they expect no change in capital investment under the termination scenario.

**APPENDIX A**  
**REQUEST LETTER AND**  
**FEDERAL REGISTER NOTICES**

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CHIEF OF STAFF

# Congress of the United States

## U.S. House of Representatives

COMMITTEE ON WAYS AND MEANS

1102 LONGWORTH HOUSE OFFICE BUILDING  
(202) 225-3625

Washington, DC 20515-6348

<http://waysandmeans.house.gov>

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JANICE MAYS,  
MINORITY CHIEF COUNSEL

March 18, 2003

*Re: DN: 2298*

The Honorable Deanna Tanner Okun  
Chairman  
U.S. International Trade Commission  
500 E Street, SW  
Washington, D.C. 20436

Dear Chairman Okun:

Since the President's March 20, 2002 imposition of tariffs on certain steel products pursuant to Section 203 of the Trade Act of 1974 (Investigation No. TA-201-73, Certain Steel Products), it has come to the attention of the Committee on Ways and Means that U.S. steel consuming industries are being impacted by the measures. Many manufacturers in steel consuming industries are concerned about competitive conditions affecting their industries.

Accordingly, on behalf of the Committee on Ways and Means of the United States House of Representatives, and under authority of section 332(g) of the Tariff Act of 1930, 19 U.S.C. §1332(g), I am requesting that the Commission institute a fact-finding investigation of the current competitive conditions facing the steel consuming industries in the United States, with respect to the tariffs imposed by the President on March 5, 2002, and to foreign competitors not subject to such measures. The Commission's review of these industries should provide information for the three-year period from April 2000 through March 2003, and the scope of the review should include all of the major domestic consuming industries.

The analysis should be conducted along sectoral lines in order to properly assess the impact on differing segments of the U.S. manufacturing sector, and also examine the data as related to steel products on which the President imposed steel safeguard measures.<sup>1</sup> To the extent possible, the investigation should address the effects of the steel safeguard remedies on steel consuming industries and on industries which rely on steel imports such as the ports, including the following:

<sup>1</sup> Proclamation 7529 of March 5, 2002, 67 Fed. Reg. 10553 (Mar. 7, 2002). The steel safeguard measures cover the following products: (a) certain carbon flat-rolled steel, including carbon and alloy steel slabs; plate (including cut-to-length plate and clad plate); hot-rolled steel (including plate in coils); cold-rolled steel (other than grain-oriented electrical steel); and corrosion-resistant and other coated steel; (b) carbon and alloy hot-rolled bar and light shapes; (c) carbon and alloy cold-finished bar; (d) carbon and alloy rebar; (e) carbon and alloy welded tubular products (other than oil country tubular goods); (f) carbon and alloy flanges, fittings, and tool joints; (g) stainless steel bar and light shapes; (h) stainless steel wire rod; (i) carbon and alloy tin mill products; and (j) stainless steel wire.

*\* Original to fax.*

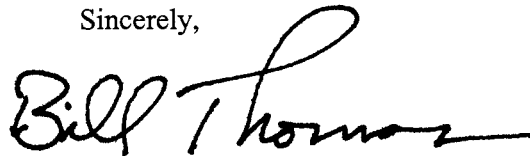
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OFC OF THE SECRETARY  
US INT'L TRADE COMM

03 MAR 25 AM 1:11

1. changes in employment, wages, profitability, sales, productivity, and capital investment of steel consuming industries;
2. an examination of the reported effects of the safeguard remedies on factors such as steel prices paid by consuming industries, steel shortages/availability, the ability of steel consumers to obtain required products or quality specifications, lead times and delivery times, contract abrogation, sourcing of finished parts from overseas by customers of steel consumers, and the relocation or shift of U.S. downstream production to foreign plants or facilities;
3. the impact of international competitive factors, such as relative differences in steel costs to foreign steel consuming industries, on steel consumers' exports and imports of steel-containing products;
4. an examination of any shifts in steel consuming patterns in the United States, i.e., how much steel was purchased from domestic steel producers by U.S. steel consuming industries before the safeguard action, and how has this sourcing changed following the implementation of the tariffs; and
5. a discussion of the likely impact on employment, profitability, capital investment, and international competitiveness of steel consuming industries of (1) continuation of the steel tariffs for the period September 2003 – March 2005 and (2) termination of the tariffs effective September 20, 2003.

The Commission should provide an analysis of the potential economy-wide effects of these safeguard remedies (e.g., on costs borne by steel consumers, tariff revenues entering the U.S. Treasury, income to steel producers, and the net effect on the U.S. economy) using appropriate simulation models. Please describe the models used, along with their assumptions and limitations, and indicate to the extent feasible their effects on the results presented. The Commission should provide its completed report no later than September 20, 2003. Our goal is to have the Commission provide a comprehensive assessment of the impact of the steel safeguard measures on the U.S. economy; therefore, I respectfully request that the Commission provide its report on this investigation and its section 204 steel monitoring report in a single document. I also request that the Commission's report be made public, consistent with the procedures set forth in section 332(g) of the Tariff Act of 1930 concerning the release of confidential business information. Thank you for your attention to this important matter.

Sincerely,



Bill Thomas  
Chairman



Dated: February 6, 2003.

**Fran P. Mainella,**

*Director, National Park Service.*

[FR Doc. 03-8499 Filed 4-9-03; 8:45 am]

BILLING CODE 4310-70-P

## INTERNATIONAL TRADE COMMISSION

[Investigation 332-452]

### Steel-Consuming Industries: Competitive Conditions With Respect to Steel Safeguard Measures

**AGENCY:** International Trade Commission.

**ACTION:** Institution of investigation and scheduling of public hearing.

**EFFECTIVE DATE:** April 4, 2003.

**SUMMARY:** Following receipt of a request on March 18, 2003, from the Committee on Ways and Means (Committee), U.S. House of Representatives, the Commission instituted investigation No. 332-452, Steel-Consuming Industries: Competitive Conditions with Respect to Steel Safeguard Measures, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)).

On March 5, 2003, the Commission instituted an investigation under section 204(a) of the Trade Act of 1974 (Inv. No. TA-204-9) in order to prepare a report on the results of its monitoring of developments relating to the domestic steel industry since the President imposed tariffs and tariff-rate quotas on imports of certain steel products (68 FR 12380, March 14, 2003). In its letter, the Committee on Ways and Means requests that the Commission provide its report in this section 332 investigation and its monitoring report in the section 204(a) investigation in a single document. In a March 27, 2003 letter to the Commission, the Office of the United States Trade Representative (USTR) referenced the format requested by the Committee and informed the Commission that USTR has no objection to receiving the section 204(a)(2) report and the section 332(g) report in a single document. Accordingly, the Commission will transmit to the President and the Congress these two separate reports in the requested format.

**FOR FURTHER INFORMATION CONTACT:** Information specific to this investigation may be obtained from James Fetzer, Project Leader (202-708-5403; [jfetzer@usitc.gov](mailto:jfetzer@usitc.gov)), Office of Economics; Karl Tsuji, Deputy Project Leader (202-205-3434; [tsuji@usitc.gov](mailto:tsuji@usitc.gov)), Office of Industries; or Catherine DeFilippo, Chief, Applied Economics Division (202-205-3253; [cdefilippo@usitc.gov](mailto:cdefilippo@usitc.gov)),

Office of Economics, U.S. International Trade Commission, Washington, DC, 20436. For information on the legal aspects of this investigation, contact William Gearhart of the Office of the General Counsel (202-205-3091; [wgearhart@usitc.gov](mailto:wgearhart@usitc.gov)). Hearing impaired individuals are advised that information on this matter can be obtained by contacting the TDD terminal on (202) 205-1810.

### Background

As requested by the Committee, the Commission will investigate the current competitive conditions facing the steel-consuming industries in the United States, with respect to tariffs and tariff-rate quotas imposed by the President on March 5, 2002, and with respect to foreign competitors not subject to such measures. As requested, the Commission will conduct its analysis along sectoral lines in order to assess the impact on differing segments of the U.S. manufacturing sector; and also examine the data as related to steel products on which the President imposed steel safeguard measures. To the extent possible, the investigation will address the effects of the safeguard measures on steel consuming industries and on industries that rely on steel imports such as the ports, including the following:

- (1) Changes in employment, wages, profitability, sales, productivity, and capital investment of steel-consuming industries;
- (2) An examination of the reported effects of the safeguard remedies on factors such as steel prices paid by consuming industries, steel shortages/availability, the ability of steel consumers to obtain required products or quality specifications, lead times and delivery times, contract abrogation, sourcing of finished parts from overseas by customers of steel consumers, and the relocation or shift of U.S. downstream production to foreign plants or facilities;
- (3) The impact of international competitive factors, such as relative differences in steel costs to foreign steel-consuming industries, on steel consumers' exports and imports of steel-containing products;
- (4) An examination of any shifts in steel-consuming patterns in the United States, *i.e.*, how much steel was purchased from domestic steel producers by U.S. steel-consuming industries before the safeguard action, and how has this sourcing changed following the implementation of the safeguard measures; and
- (5) A discussion of the likely impact on employment, profitability, capital

investment, and international competitiveness of steel-consuming industries of (i) continuation of the safeguard measures for the period September 2003-March 2005 and (ii) termination of the safeguard measures effective September 20, 2003.

In addition, as requested, the Commission will provide an analysis of the potential economy-wide effects of these safeguard measures (*e.g.*, on costs borne by steel consumers, tariff revenues entering the U.S. Treasury, income to steel producers, and the net effect on the U.S. economy) using appropriate simulation models.

The Committee asked that the Commission furnish its report by September 20, 2003, along with the Commission's section 204 steel monitoring report in a single document. The Committee also requested that the Commission make its report available to the public, consistent with procedures set forth in section 332(g) of the Tariff Act of 1930 concerning the release of confidential business information.

### Public Hearing

A public hearing in connection with this investigation is scheduled to begin at 9:30 a.m. on June 19, 2003, at the U.S. International Trade Commission Building, 500 E Street SW, Washington, DC. All persons have the right to appear by counsel or in person, to present information, and to be heard. Persons wishing to appear at the public hearing should file a letter with the Secretary, United States International Trade Commission, 500 E St., SW, Washington, DC 20436, not later than the close of business (5:15 p.m.) on June 2, 2003. In addition, persons appearing should file prehearing briefs (original and 14 copies) with the Secretary by the close of business on June 4, 2003. Posthearing briefs should be filed with the Secretary by the close of business on June 27, 2003. In the event that no requests to appear at the hearing are received by the close of business on June 2, 2003, the hearing will be canceled. Any person interested in attending the hearing as an observer or non-participant may call the Secretary to the Commission (202-205-1816) after June 4, 2003 to determine whether the hearing will be held.

### Written Submissions

In lieu of or in addition to appearing at the public hearing, interested persons are invited to submit written statements concerning the investigation. Written statements should be received by the close of business on June 27, 2003. Commercial or financial information which a submitter desires the

Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons. The Commission intends to publish only a public report in this investigation. Accordingly, any confidential business information received by the Commission in this investigation and used in preparing the report will not be published in a manner that would reveal the operations of the firm supplying the information. All submissions should be addressed to the Secretary at the Commission's office in Washington, DC. The Commission's rules do not authorize filing of submissions with the Secretary by facsimile or electronic means, except to the extent permitted by section 201.8 of the Commission's Rules, as amended, 67 FR 68036 (Nov. 8, 2002). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting our TDD terminal on (202) 205-1810.

By order of the Commission.

Issued: April 4, 2003.

**Marilyn R. Abbott,**

Secretary to the Commission.

[FR Doc. 03-8727 Filed 4-9-03; 8:45 am]

BILLING CODE 7020-02-P

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## DEPARTMENT OF JUSTICE

### Office of Justice Programs

#### Agency Information Collection Activities: Proposed Collection; Comments Requested

**ACTION:** 30-Day Notice of Information Collection Under Review: Extension of a currently approved collection; Certification of compliance with eligibility requirements of grants to reduce crimes against women.

The Department of Justice (DOJ), Office of Justice Programs (OJP) has submitted the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection is published to obtain comments from the

public and affected agencies. This proposed information collection was previously published in the **Federal Register** Volume 68, Number 20, page 4797 on January 30, 2003, allowing for a 60 day comment period.

The purpose of this notice is to allow for an additional 30 days for public comment until May 12, 2003. This process is conducted in accordance with 5 CFR 1320.10.

Written comments and/or suggestions regarding the items contained in this notice, especially the estimated public burden and associated response time, should be directed to The Office of Management and Budget, Office of Information and Regulatory Affairs, Attention Department of Justice Desk Officer, Washington, DC 20503. Additionally, comments may be submitted to OMB via facsimile to (202) 395-7285.

Request written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

*Overview of this information collection:*

(1) *Type of information collection:* Extension of a currently approved collection.

(2) *The title of the form/collection:* Certification of Compliance with Eligibility Requirements of Grants to Reduce Crimes against Women.

(3) *The agency form number, if any, and the applicable component of the department sponsoring the collection:* Form Number: none. Office on Violence Against Women, Office of Justice Programs, Department of Justice.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Institutions of Higher Education. Other: None. The grants to Reduce Violent Crimes Against Women on Campus Program was authorized through section 826 of the Higher Education Amendments of 1998 to make funds available to institutions of higher education to combat domestic violence, dating violence, sexual assault and stalking crimes.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond/reply:* It is estimated that 125 respondents will complete the application in approximately 30 minutes.

(6) *An estimate of the total public burden (in hours) associated with the collection:* The estimated total public burden associated with this application is 62 hours.

If additional information is required contact: Mrs. Brenda E. Dyer, Deputy Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 1600, Patrick Henry Building, 601 D Street NW., Washington, DC 20530.

Dated: April 4, 2003.

**Brenda E. Dyer,**

Deputy Clearance Officer, Department of Justice.

[FR Doc. 03-8687 Filed 4-9-03; 8:45 am]

BILLING CODE 4410-18-M

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## DEPARTMENT OF LABOR

### Employment and Training Administration

[TA-W-40,947]

#### **BASF Corporation, Vitamin Division, a Subsidiary of BASFIN Corporation, Including Leased Workers of Adecco, Wyandotte, MI; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance**

In accordance with Section 223 of the Trade Act of 1974 (19 U.S.C. 2273) the U.S. Department Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance on May 9, 2002, applicable to workers of BASF Corporation, Vitamin Division, a subsidiary of BASFIN Corporation, Wyandotte, Michigan. The notice was published in the **Federal Register** on May 17, 2002 (67 FR 35141).

At the request of the State agency, the Department reviewed the certification for workers of the subject firm. Information provided by the State shows that leased workers of Adecco were employed at BASF Corporation, Vitamin Division, a subsidiary of BASFIN Corporation to produce vitamin E, vitamin A and food blends/mixes at the Wyandotte, Michigan location of the subject firm.

Based on these findings, the Department is amending the certification to include leased workers of Adecco who were working at BASF Corporation, Vitamin Division, a subsidiary of BASFIN Corporation, Wyandotte, Michigan.

The intent of the Department's certification is to include all workers of BASF Corporation, Vitamin Division, a subsidiary of BASFIN Corporation who were adversely affected by increased imports.

The amended notice applicable to TA-W-40,947 is hereby issued as follows:

**Table A-1**  
**Federal Register notices regarding the section 203 safeguard measures**

<b>Date</b>	<b>Federal Register citation</b>	<b>Title</b>	<b>Description</b>
March 7, 2002	67 FR 10553	Presidential Proclamation 7529– To Facilitate Positive Adjustment to Competition From Imports of Certain Steel Products	Announcement of the section 203 remedy; identification of products and countries covered by the relief; and list of initial products excluded from relief
March 7, 2002	67 FR 10593	Presidential Memorandum of March 5, 2002–Action Under Section 203 of the Trade Act of 1974 Concerning Certain Steel Products	Memorandum for the Secretary of the Treasury, the Secretary of Commerce, and the United States Trade Representative
March 19, 2002	67 FR 12635	Technical Corrections to the Harmonized Tariff Schedule of the United States	Corrects several inadvertent errors and omissions in the Annex to Presidential Proclamation 7529 of March 5, 2002 (67 FR 10553) so that the intended tariff treatment is provided
June 4, 2002	67 FR 38541	Technical Corrections to the Harmonized Tariff Schedule of the United States	Corrects several inadvertent errors and omissions in the Annex to Presidential Proclamation 7529 of March 5, 2002 (67 FR 10553) so that the intended tariff treatment is provided
July 12, 2002	67 FR 46221	Exclusion of Particular Products from Actions under Section 203 of the Trade Act of 1974 With Regard to Certain Steel Products; Conforming Changes and Technical Corrections to the Harmonized Tariff Schedule of the United States	USTR’s determination that particular products should be excluded from actions under section 203 with regard to certain steel products
August 30, 2002	67 FR 56182	Exclusion of Particular Products From Actions Under Section 203 of the Trade Act of 1974 With Regard to Certain Steel Products; Conforming Changes and Technical Corrections to the Harmonized Tariff Schedule of the United States	USTR’s determination that particular products should be excluded from actions under section 203 with regard to certain steel products
November 14, 2002	67 FR 69065	Technical Corrections to the Harmonized Tariff Schedule of the United States	Corrects several inadvertent errors and omissions in the Annex to Presidential Proclamation 7529 of March 5, 2002 (67 FR 10553) so that the intended tariff treatment is provided
February 11, 2003	68 FR 6982	Technical Corrections to the Harmonized Tariff Schedule of the United States	Corrects several inadvertent errors and omissions in the Annex to Presidential Proclamation 7529 of March 5, 2002 (67 FR 10553) so that the intended tariff treatment is provided
March 31, 2003	68 FR 15494	Exclusion of Particular Products From Actions Under Section 203 of the Trade Act of 1974 With Regard to Certain Steel Products; Conforming Changes and Technical Corrections to the Harmonized Tariff Schedule of the United States	USTR’s determination that particular products should be excluded from actions under section 203 with regard to certain steel products
June 9, 2003	68 FR 34462	Technical Corrections to the Harmonized Tariff Schedule of the United States	Corrects several inadvertent errors and omissions in the Annex to Presidential Proclamation 7529 of March 5, 2002 (67 FR 10553) so that the intended tariff treatment is provided
Source: Various <i>Federal Register</i> notices.			



## **APPENDIX B**

# **DESCRIPTION OF STEEL PRODUCTS SUBJECT TO THE SECTION 203 SAFEGUARD MEASURES**

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## A. CARBON AND ALLOY FLAT STEEL

- 1. Slabs.**—Semifinished steel produced by continuous casting or by hot-rolling or forging. Slabs of carbon steel have a rectangular cross-section with a width at least two times the thickness. Slabs of other alloy steel have a width at least four times the thickness.
- 2. Plate (including cut-to-length plate and clad plate).**—Cut-to-length plate is flat-rolled steel of rectangular cross-section, having a thickness of 4.75 mm or more and a width which exceeds 150 mm and measures at least twice the thickness. It is flat (i.e., not in coils, and may be of any shape (rectangular, circular, or other). It may have been produced by rolling on a sheared-plate mill or by flattening and cutting-to-length a coiled plate. It may have patterns-in-relief derived directly from rolling (e.g., floor plate). It may be perforated, corrugated, or polished. Plate may also have been subject to heat-treatment and have been descaled or pickled. Clad plate is a flat-rolled product of more than one metal layer, of which the predominating metal is non-alloy steel, and the layers are joined by molecular interpenetration of the surfaces in contact. The metal other than non-alloy steel may be stainless steel, titanium, or any other metal. The product may be in the form of a flat plate or a coiled plate, may be of any thickness, and may be either hot- or cold-rolled.
- 3. Hot-rolled sheet and strip (including plate in coils).**—Includes carbon and alloy flat-rolled steel of rectangular cross-section, produced by hot-rolling. If in coils, it may be of any thickness. If in straight lengths, it is of a thickness of less than 4.75 mm and a width measuring at least 10 times the thickness. It may have patterns-in-relief derived directly from rolling (e.g., floor plate). It may be perforated, corrugated, or polished; may be either unpickled or pickled; may have been subject to various processing after hot reduction, including pickling or descaling, rewinding, flattening, temper rolling, heat treatment; and may have been cut into shapes other than rectangular.
- 4. Cold-rolled sheet and strip other than GOES (grain-oriented electrical steel).**—Includes carbon and alloy flat-rolled steel of rectangular cross-section, produced by cold rolling. If in coils, may be of any thickness. If in straight lengths, is of a thickness of less than 4.75 mm and a width measuring at least 10 times the thickness. It may have patterns-in-relief derived directly from rolling. It may be perforated, corrugated, or polished. May have been subject to various processing after cold reduction, including flattening, temper rolling, heat treatment, and may have been cut into shapes other than rectangular.
- 5. Corrosion-resistant and other coated sheet and strip.**—Flat-rolled carbon or alloy steel with a metallic or nonmetallic coating, other than tin or tin-free steel, and other than clad. Includes, galvanized, aluminized, zinc-aluminum alloy coated, galvanized (heat-treated after coating), terns-plate and terns-coated sheets, painted, and coated with plastic.
- 6. Tin-mill products.**—Flat-rolled products of carbon or alloy steel, plated or coated with tin or with chromium oxides or with chromium and chromium oxides. May be either in coils or in straight lengths.

## B. CARBON AND ALLOY LONG PRODUCTS

7. **Hot-rolled bar and light shapes.**—Bars are products which have a solid cross-section in the shape of circles, segments of circles, ovals, rectangles (including squares), triangles, or other convex polygons (including “flattened circles” and “modified rectangles,” of which two opposite sides are convex arcs, the other two sides being straight, of equal length, and parallel). Includes bars of a diameter of 19 mm or more in irregularly wound coils. Excludes carbon and alloy steel (including free-machining alloy steel) wire rod having a diameter of 5 mm or more but less than 19 mm. (These products are covered by section 203 relief on wire rod.) Includes free-machining carbon steel and high-nickel alloy steel bars and rods of any diameter. Includes angles, shapes, and sections (such as U, I, or H sections) not further worked than hot-rolled, hot-drawn, or extruded, with no linear dimension of 80 mm or greater when measured through a solid portion of the cross section. Includes hollow drill bars and rods of which the greatest external dimension of the cross-section exceeds 15 mm but does not exceed 52 mm, and of which the greatest internal dimension does not exceed one half of the greatest external dimension. Hollow bars and rods of iron or steel not conforming to this definition are included in pipe and tubing.
8. **Cold-finished bar.**—Bars, as defined by shape above, not in coils, which have been subjected to a cold-finishing operation such as cold rolling, cold drawing, grinding, or polishing.
9. **Rebar.**—Hot-rolled products which have a solid cross-section as described for bars above, and which contains indentations, ribs, grooves, or other deformations produced during the rolling process or twisted after rolling, for the purpose of improving the bond with concrete.

## C. CARBON AND ALLOY TUBULAR PRODUCTS AND FITTINGS

10. **Welded tubular products other than OCTG.**—Tubular products that are produced by bending flat-rolled steel products to form the hollow product with overlapping or abutting seams. Most such products are fastened along the seam by welding, although clipping, riveting, and forging are also used to fasten a seam. The seam produced by the fastening method may run either longitudinally or spirally along the length of the product. Excludes OCTG and carbon quality steel welded line pipe of an outside diameter that does not exceed 406.7 mm (the latter product is covered by section 203 relief on line pipe).
11. **Flanges and fittings.**—Includes fittings of carbon or alloy steel, mainly used for connecting the bores of two pipes or tubes together, or for connecting a pipe or tube to some other apparatus, or for closing the tube aperture. Does not include valves, or articles used for installing pipes and tubes but which do not form an integral part of the bore (e.g., hangers, stays, and similar supports, clamping or tightening bands, or collars (hose clips) used for clamping flexible tubing or hose to rigid piping, taps, connecting pieces, etc.)



## D. STAINLESS STEEL PRODUCTS

12. **Bar and light shapes.**—Includes bars and rods not in irregularly wound coils; also includes hot-rolled bars and rods in irregularly wound coils of circular cross section with a diameter of 19 mm or more. (Bars are products which have a solid cross-section in the shape of circles, segments of circles, ovals, rectangles (including squares), triangles or other convex polygons (including “flattened circles” and “modified rectangles,” of which two opposite sides are convex arcs, the other two sides being straight, of equal length, and parallel)). Also includes angles, shapes, and sections (such as U, I, or H sections) with no linear dimension of 80 mm or greater when measured through a solid portion of the cross section, not further worked than hot-rolled, hot-drawn, or extruded.
13. **Rod.**—Stainless steel of solid cross-section in irregularly wound coils. If of circular cross-section, having a diameter of less than 19 mm. If of alloy containing 24 percent or more of nickel, by weight, or of a shape other than circular, may be of any size.
14. **Wire.**—Cold-formed products in coils, of any uniform solid cross-section along their whole length, which do not conform to the definition of flat-rolled products.



**APPENDIX C**  
**HEARING CALENDAR**

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## CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

**Subject:** Steel Consuming Industries: Competitive Conditions  
with Respect to Steel Safeguard Measures

**Inv. No.:** 332-452

**Dates and Times:** June 19-20 2003, 9:30 a.m.

Sessions were held in connection with this investigation in the Main Hearing Room (room 101), 500 E Street, S.W., Washington, DC.

### CONGRESSIONAL APPEARANCES:

**The Honorable Nancy L. Johnson**, U.S. Congresswoman, 5<sup>th</sup> District, State of Connecticut

**The Honorable Peter J. Visclosky**, U.S. Congressman, 1<sup>st</sup> District, State of Indiana

**The Honorable Sherrod Brown**, U.S. Congressman, 13<sup>th</sup> District, State of Ohio

**The Honorable Thaddeus G. McCotter**, U.S. Congressman, 11<sup>th</sup> District, State of Michigan

**The Honorable Joe Knollenberg**, U.S. Congressman, 9<sup>th</sup> District, State of Michigan

**The Honorable Mike Rogers**, U.S. Congressman, 8<sup>th</sup> District, State of Michigan

**The Honorable Nick Smith**, U.S. Congressman, 7<sup>th</sup> District, State of Michigan

**The Honorable Vernon J. Ehlers**, U.S. Congressman, 3<sup>rd</sup> District, State of Michigan

**The Honorable Pete Hoekstra**, U.S. Congressman, 2<sup>nd</sup> District, State of Michigan

**The Honorable Bart Stupak**, U.S. Congressman, 1<sup>st</sup> District, State of Michigan

**The Honorable Ted Strickland**, U.S. Congressman, 6<sup>th</sup> District, State of Ohio

**The Honorable Marion Berry**, U.S. Congressman, 1<sup>st</sup> District, State of Arkansas

**The Honorable Paul D. Ryan**, U.S. Congressman, 1<sup>st</sup> District, State of Wisconsin

**The Honorable Donald A. Manzullo**, U.S. Congressman, 16<sup>th</sup> District, State of Illinois

**The Honorable Mark Steven Kirk**, U.S. Congressman, 10<sup>th</sup> District, State of Illinois

**The Honorable Phil English**, U.S. Congressman, 3<sup>rd</sup> District, State of Pennsylvania

**The Honorable Mark R. Kennedy**, U.S. Congressman, 6<sup>th</sup> District, State of Minnesota

**STATE APPEARANCES:**

**The Honorable Craig Foltin**, Mayor, The City of Lorain, Ohio

**The Honorable Jane Campbell**, Mayor, The City of Cleveland, State of Ohio

**The Honorable Larry P. Langford**, President, Jefferson County Commission of Birmingham,  
Alabama

**ORGANIZATION AND WITNESS:**

**TIME ALLOCATION:**

**PANEL ONE - CONSUMER OVERVIEW AND AUTOMOTIVE EQUIPMENT AND PARTS**

(Total: 65 minutes)

Hogan and Hartson  
Washington, D.C.  
on behalf of

Consuming Industries Trade Action Coalition Steel Task Force

**Jon Jenson**, Vice Chairman, Consuming Industries Trade Action Coalition Steel Task Force

**Laura Baughman**, President, Trade Partnership Worldwide

**Lewis Leibowitz** )  
 )-OF COUNSEL  
**Lynn Kamarck** )

Dykema Gossett  
Washington, D.C.  
on behalf of

Motor and Equipment Manufacturers Association (“MEMA”)

**Scott C. Meyer**, President and Chief Operating Officer, Ken-Tool and Chairman, MEMA

**Sanford B. Ring** )  
 )-OF COUNSEL  
**Tamara Jack** )

A.J. Rose Manufacturing Co.

**Douglas E. Krzywicki**, Chief Financial Officer, A.J. Rose Manufacturing Company

ArvinMeritor, Incorporated

**Jeffrey Stoner**, Vice President, World Wide Procurement, ArvinMeritor, Incorporated

Delphi Corporation

**Eric Sandford**, Deputy Director, Purchasing, Delphi Corporation

**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL ONE - CONSUMER OVERVIEW AND AUTOMOTIVE  
EQUIPMENT AND PARTS -CONT'D**

DURA Automotive Systems, Incorporated

**Larry A. Denton**, President and Chief Executive Officer, DURA Automotive Systems,  
Incorporated

E & E Manufacturing Company, Incorporated

**Wes Smith**, President, E & E Manufacturing Company,  
Incorporated

**John Guzik**, Vice President, E & E Manufacturing Company,  
Incorporated

Federal-Mogul Corporation

**Ramzi Y. Hermiz**, Vice President, Global Supply Chain Management,  
Federal-Mogul Corporation

Metaldyne

**Timothy D. Leuliette**, Chairman, President and Chief Executive Officer, Metaldyne

Transpro, Incorporated

**Layne R. Gobrogge**, Vice President Marketing, Transpro, Incorporated

Porter Wright Morris & Arthur  
Washington, D.C.  
on behalf of

San Luis Rassini International, Incorporated

**Robert Anderson**, President, San Luis Rassini International, Incorporated

**Leslie Alan Glick** )-OF COUNSEL

Textron Fastening Systems, Incorporated

**Richard L. Clayton**, President, Textron Fastening Systems, Incorporated

**David R. Breuhan**

**PANEL TWO - MACHINERY AND EQUIPMENT**

(Total: 35 minutes)



**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

Emergency Committee for American Trade

**Dan M. Murphy**, Executive Vice President, Global Purchasing Division,  
Caterpillar Inc.

**Calman J. Cohen**, President, Emergency Committee for American Trade

Sidley Austin Brown & Wood  
Washington, D.C.  
on behalf of

Caterpillar Inc.

**Dan C. Hanback**, Director, Global Purchasing Division, Caterpillar Inc.

**Scott A. Phillips**, Category Manager (Steel), Global Purchasing Division,  
Caterpillar Inc.

**William C. Lane**, Washington Director, Caterpillar Inc.

**Robert T.C. Vermeylen**, Attorney, Legal Services Division, Caterpillar Inc.

**Niall P. Meagher** )--OF COUNSEL

National Electrical Manufacturers Association

**John M. Meekam**, Manager, International Trade, National Electrical Manufacturers  
Association

Acuity Brands Lighting Group

**Tom Naramoore**, Senior Vice President, Global Sourcing, Acuity Brands  
Lighting Group

Advance Transformer Company

**Brian R. Dundon**, President, Advance Transformer Company

**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL TWO - MACHINERY AND EQUIPMENT - CONT'D**

The Lincoln Electric Company

**John Stropki**, Executive Vice President, The Lincoln Electric Company

Delta Brands, Incorporated

**Sam Savariego**, President and Founder, Delta Brands, Incorporated

**Lou Colatriano**, Consultant, Delta Brands, Incorporated

**Velinda Savariego**, Executive Vice President, Delta Brands, Incorporated

**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL THREE - PORTS, TRANSPORTATION SERVICES,  
AND IMPORTERS**

(Total: 30 minutes)

Free Trade in Steel Coalition

20 minutes

**Dennis Rochford**, Coordinator, Free Trade in Steel Coalition

**Tim Tess**, Vice President, Administration, Pasha Stevedoring & Terminals

**Walter A. Niemand**, Board Member, Texas Free Trade Coalition and  
President and Chief Executive Officer, West Gulf Maritime  
Association

**Michael Dickens**, District Representative, South Atlantic and Gulf  
Coast District International Longshoremen's Association

**Wade Battles**, Managing Director, Port of Houston Authority

Imports International, Incorporated

5 minutes

**Kenneth Cather**, Vice President, Quality Assurance, Imports International,  
Incorporated

PGT Trucking, Incorporated

5 minutes

**Patrick A. Gallagher**, President, PGT Trucking, Incorporated

**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL FOUR - METAL FORMING AND RELATED INDUSTRIES**

(Total: 85 minutes)

Dykema Gossett  
Washington, D.C.  
on behalf of

Coalition for the Advancement of Michigan Tooling

**Laurie S. Moncrief**, President, Schmalz Tool & Die

**Sanford B. Ring** )  
 )—OF COUNSEL  
**Tamara Jack** )

Precision Metalforming Association

**William E. Gaskin**, CAE, President, Precision Metalforming Association

The Steel Fastener Working Group

**Timothy N. Taylor**, Chairman, The Steel Fastener Working Group and President,  
MacLean Vehicle Systems

Ataco Steel Products Corporation

**WH Jens**, President and Chief Executive Officer, Ataco Steel Products Corporation

Bachman Machine Company

**John Wm. Ake**, Director Materials Management, Bachman Machine  
Company

Dixie Industrial Finishing Company

**James M. Jones**, Vice President, Dixie Industrial Finishing Company

Dowding Industries, Incorporated

**Chris Dowding**, President, Dowding Industries, Incorporated

GR Spring & Stamping, Incorporated

**Merle Emery**, Vice President, GR Spring & Stamping, Incorporated



**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**DAY TWO HEARING – Friday, June 20, 2003**

**PANEL FIVE - STEEL PRODUCERS, PROCESSORS,  
AND DISTRIBUTORS**

(Total: 70 minutes)

American Iron and Steel Institute

**Andrew G. Sharkey, III**, President and Chief Executive Officer,  
American Iron and Steel Institute

Steel Manufacturers Association

**Thomas A. Danjczek**, President, Steel Manufacturers Association

Stewart and Stewart  
Washington, D.C.  
on behalf of

United Steelworkers of America, AFL-CIO.CLC

**Stephen R. Francisco**, Legislative Representative, United Steelworkers  
of America

**Terence P. Stewart** )  
 )-OF COUNSEL  
**Patrick J. McDonough** )

Schagrin Associates  
Washington, D.C.  
on behalf of

Committee on Pipe and Tube Imports (CPTI) and CPTI 201 Coalition

**Glenn Baker**, Vice President, Marketing and Sales, Searing Industries, Incorporated

**Robert Bussiere**, General Manager, Fire Protection Products,  
Allied Tube & Conduit

**Mark Magno**, Vice President - Marketing, Wheatland Tube Company

**Roger B. Schagrin** )-OF COUNSEL

**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL FIVE - STEEL PRODUCERS, PROCESSORS,  
AND DISTRIBUTORS - CONT'D**

International Steel Group, Incorporated

**Mitchell Hecht**, Vice President, External Affairs and Public Policy,  
International Steel Group, Incorporated

Kenilworth Steel Company

**Bob Heltzel, Jr.**, President, Kenilworth Steel Company

Dewey Ballantine, LLP  
Washington, D.C.

and

Skadden, Arps, Slate, Meagher & Flom LLP  
Washington, D.C.  
on behalf of

National Steel Corporation and United States Steel Corporation

**Stephen Szymanski**, Manager, Sales, United States Steel Corporation

**William A. Noellert**, Chief Economist, Dewey Ballantine LLP

**Susan B. Hester**, Economist, Dewey Ballantine LLP

**Seth T. Kaplan**, Vice President, Charles River Associates

<b>Alan Wm. Wolff</b>	)	
<b>Kevin M. Dempsey</b>	)	—OF COUNSEL
<b>Jennifer Danner Riccardi</b>	)	
<b>Robert E. Lighthizer</b>	)	
<b>James C. Hecht</b>	)	—OF COUNSEL
<b>Stephen P. Vaughn</b>	)	
<b>Stephen J. Narkin</b>	)	

**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL FIVE - STEEL PRODUCERS, PROCESSORS,  
AND DISTRIBUTORS - CONT'D**

Wiley Rein & Fielding LLP  
Washington, D.C.  
on behalf of

Nucor Corporation  
Long Products Producers Coalition and the Coalition of Steel Consumers

**Terry S. Lisenby**, Chief Financial Officer, Nucor Corporation

**Seth Kaplan**, Vice President, Charles River Associates

**Peter Morici**, Professor of International Business, University of Maryland,  
College Park

**Charles Owen Verrill, Jr.**     )  
**Alan H. Price**                 )–OF COUNSEL  
**Timothy C. Brightbill**        )

Nucor Cold Finish

**Terry Cieslinski**, Cold Finish Manager, Nucor Cold Finish

Nucor Fastener

**Scott Wulff**, General Manager, Nucor Fastener

Stupp Corporation

**Donnell Efferson**, Senior Vice President Commercial, Stupp Corporation



**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL SIX - CONSTRUCTION**

(Total: 15 minutes)

Arrowhead Rebar Company

**Jayson Turner**, President, Arrowhead Rebar Company

CMC Steel Group

**Tom Yarbrough**, General Manager, SMI Rebar North Carolina

**Karl Schoenleber**, General Manager, SMI Rebar, South Carolina

Kerner Songer

**Robert Hoover**, Vice President, Kvaerner Songer

**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL SEVEN - CONSUMER AND COMMERCIAL GOODS**

(Total: 25 minutes)

Air-Conditioning & Refrigeration Institute

**William G. Sutton**, President, Air-Conditioning & Refrigeration Institute

**Bryan Kelly**, President, National Refrigeration and Air-Conditioning  
Products, Incorporated

**Terry Bowman**, Vice President, Supply Chain Management, York International

Association of Home Appliance Manufacturers

**Joseph M. McGuire**, President, Association of Home Appliance Manufacturers

Hearth, Patio & Barbecue Association

**Jack Goldman**, General Counsel, Director of Government Affairs, Hearth,  
Patio & Barbecue Association

KI, Incorporated

**Gary N. Van Handel**, Director Supply Chain Management, KI, Incorporated

**ORGANIZATION AND WITNESS:**

**TIME  
ALLOCATION:**

**PANEL EIGHT - SUPPLIERS TO STEEL PRODUCERS**

(Total: 30 minutes)

David J. Joseph Company

**Stephen W. Wulff**, Vice President, David J. Joseph Company

Gottlieb, Incorporated

**Robert W. Gottlieb**, President, Gottlieb, Incorporated

International Mill Service, Incorporated

**William R. Miller**, Vice President, International Mill Service, Incorporated

Magneco/Metrel, Incorporated

**Charles W. Connors**, Magneco/Metrel, Incorporated

Massey Energy Company

**John M. Poma**, Vice President-Human Resources, Massey Energy Company

Primary Energy

**Joseph T. Turner**, Managing Director, Primary Energy

Pyro Industrial Services, Incorporated

**John L. Carlson**, Chief Executive Director, Pyro Industrial Services, Incorporated

Refax, Incorporated

**Richard A. Oliver**, President, Refax, Incorporated

Stein, Incorporated

**James Conlon**, Vice President, Stein Incorporated

Tube City, Incorporated

**Thomas E. Lippard**, Executive Vice President, Tube City, Incorporated



**APPENDIX D**  
**MARKET CHARACTERISTICS AND THE**  
**POTENTIAL EFFECT OF THE**  
**SAFEGUARD MEASURES ON STEEL-**  
**CONSUMING INDUSTRIES**

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# **APPENDIX D**

## **MARKET CHARACTERISTICS AND THE POTENTIAL EFFECT OF THE SAFEGUARD MEASURES ON STEEL-CONSUMING INDUSTRIES**

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### **Introduction**

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This appendix describes how the safeguard measures may affect steel consuming industries. The first section explains how the safeguard measures on steel consuming industries are likely to affect different industries differently and even firms within a product sector differently depending on the characteristics of individual industries and markets.<sup>1</sup> The second section considers in more detail the potential effect of the measures on certain major steel consuming sectors. The information presents a theoretical foundation for the effects as reported by companies responding to the Commission's purchaser questionnaire as presented in Chapter 2.

A safeguard duty by design increases costs of imports covered by the measure. How that cost increase impacts firms and consumers across markets depends on how successfully firms can pass along the cost increase to buyers. This is the so-called "pass-through;" that is, how much of the cost increase can be passed through to the next level in the vertical chain of production, and possibly all the way to the final consumer. A number of factors related to market structure and firm bargaining power determine the ability of firms to pass the cost through. This appendix describes how industry and market characteristics in the steel consuming markets determine the pass through and the variability in effects across the diverse industries included in the steel consuming markets. Smaller producers in industries such as the motor vehicle parts and steel fabrication are likely to be particularly vulnerable to the safeguard measures because they purchase steel subject to the highest tariffs; have some of the highest cost shares of steel among steel consuming industries; have little or no market power; and purchase specialized products predominately from steel service centers.

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<sup>1</sup>While this appendix discusses how industries and/or firms are likely to be affected by the safeguard measures, information presented in chapter 2 discusses the actual effects as reported by companies that responded to the Commission's purchasers' questionnaire.

### ***Determinants of the Effect of Safeguard Measures on Product Costs and Prices in Steel Consuming Firms and Industries [3]***

These determinants fall into two categories—(1) determinants of the effects of safeguard measures on the costs of steel consuming firms and industries, and (2) determinants of the ability of steel consuming firms and industries to pass on higher costs to their customers.

(1) The extent to which a tariff increase as the result of safeguard measures is manifested as higher costs in steel consuming firms and industries may be relatively higher when:

- The share of steel in total costs is high.
- The average tariff applied to the varieties of steel purchased is high.
- Producers of the type of steel being purchased are relatively more concentrated, or better organized, than the buyers.
- The steel is being purchased through a market-sensitive institution such as a service center, trading company, or E-commerce.
- The steel consuming industry purchases mainly specialized steel.
- The steel consuming industry produces relatively few products, most or all of which contain steel.

and may be relatively lower when:

- The share of steel in total costs is low.
- The average tariff applied to the varieties of steel purchased is low.
- Firms in the steel consuming industry are relatively more concentrated, or better organized, than the steel-producing firms.
- The firms in the steel consuming industry are able to protect themselves from short-term price fluctuations by buying steel under long-term contracts.
- The steel consuming industry purchases mainly commodity steel (e.g. flat-rolled steel in standard specifications).
- The steel consuming industry produces multiple products, some of which are not steel-containing, and can readily alter its product mix.

(2) The ability of steel consuming firms to pass on steel price increases induced by the safeguard measures to their customers is relatively high when:

- The firms in the steel consuming industry are more concentrated, or better organized, than their customers.
- There are few substitutes for the products produced by the steel consuming industry.

and is relatively low when:

- The customers of the steel consuming industry are more concentrated or better organized than the firms in the steel consuming industry.
- There are one or more close substitutes for the products produced by the steel consuming industry.

## **Determinants of the Impact of Safeguard Measures**

The impact of safeguard measures varies from industry to industry, and even from firm to firm, depending on a number of factors, summarized in the box above. An obvious factor is that the tariff rate imposed by the safeguard measures varies by the type of steel an steel consuming firm may purchase. Other factors include the share of steel in total costs, which is influenced heavily by production technology; the degree of substitutability between steel from various countries, the flexibility of technology, the substitutability across products at different layers in the production chain and among final consumers, the relative degree of market power of buyers and sellers, industry concentration levels, and the type of market institutions through which steel is bought and sold. All these influence how much of



the imposed safeguard duties are absorbed or passed through to purchasers. The complexity of these markets makes firm answers both industry-specific and very difficult to determine.

### *Pass-Through of Tariffs*

How much of the tariff is passed through or transferred from the seller to the buyer depends on a number of factors. In a pure case, the downstream effect of a duty on imported steel, would be easy to calculate if

- (I) all steel was imported and subject to the duty,
- (ii) importers always raised their prices in proportion to the tariff,
- (iii) importers passed the full amount of the duty on to steel consuming firms,
- (iv) steel consuming firms always passed the full amount of the duty on to their customers, and
- (v) the activities of steel consuming firms were otherwise unchanged.

Under these conditions, the price of steel would increase by the tariff rate, while the price of steel-containing products would increase by the share of steel costs in the value of output prior to the duty multiplied by the tariff rate.<sup>2</sup>

However, real markets are complex and in most cases the importer of steel will be unable to pass on the full tariff increase and the steel consuming firm, in turn, will be unable to pass on the full cost increase it experiences from the portion of the tariff passed through to it. Typically, full pass-through of the price takes place only when the customer does not react to price increases by cutting back on purchases.<sup>3</sup> Hence, the ability of a seller to pass on a cost increase depends on the firm's ability to set prices. This ability to set price is, by definition, the firm's market power. Depending on their market power, firms will have to absorb some of the cost increase, and can pass the rest through to customers. Some sellers may willingly absorb more of the cost increase than in order to prevent lost sales or maintain customer good will. But it is certain that the extent to which the cost increase is spread across buyers and sellers will vary across industries and firms. And it is likely that the effect of the duty is felt through several stages of consumption. These indirect effects are captured in the modeling framework described in appendix E.

The impact of the safeguard measures may also be increased or decreased by other occurrences in the market. For example, a few months before the safeguard measures went into effect, LTV Steel, one of the largest domestic producers of flat rolled steel, ceased operations due to bankruptcy. This significant reduction in domestic supply contributed to the market effects resulting from the import-supply constraining nature of the safeguard measures, including both flat-rolled price increases and availability/delivery problems encountered by consumers.

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<sup>2</sup>Consider a simple but illustrative case in which the value of the output of a steel consuming industry product is divided as follows: 60 percent materials costs, 30 percent labor costs and 10 percent profit or other value-added. If 40 percent of materials costs are steel costs, then 24 percent of the value of output (40 percent of 60 percent, or  $0.4 \times 0.6$ ) are steel costs. Suppose a tariff of 30 percent is imposed on all steel purchased, and that steel costs rise by 30 percent as a result. If other materials costs remain the same, total materials costs will rise by 12 percent (30 percent of 40 percent, or  $0.3 \times 0.4$ ). If labor costs and profits per unit of output remain the same, then the price of the product will increase by 7.2 percent (30 percent of 24 percent, or  $0.3 \times 0.24$ ). This example applies either if all the steel is imported, or if the price of all steel purchased (domestic or imported) increases in proportion with the tariff.

This simplified calculation also assumes that the price effects in different industries are isolated from each other and do not "spill over" between industries in the form of general-equilibrium or terms-of-trade effects. See the final section of this appendix for more discussion.

<sup>3</sup>In technical language, if the buyers have perfectly inelastic demand. This case is rare.

## *Size of the Tariff*

The first factor affecting cost is the size of the tariff. Regardless how it is passed through different industries, the larger the tariff, the larger the impact. Most steel purchases are of various forms of flat-rolled steel, which are subject to the highest tariffs (plate, hot-rolled, cold-rolled, corrosion resistant and tin mill, but not slab, which was subject to a tariff rate quota).<sup>4</sup> Overall, on a quantity basis, most purchases were of flat rolled steel, with corrosion resistant steel accounting for the largest share.<sup>5</sup> This pattern prevailed on a value basis for most industries, except for bar and wire finishers and fastener producers (table D-1). However, the type of steel purchased varied widely by firms within each steel consuming industry (table D-2).

## *The Role of Cost Shares*

The ability or willingness of a buyer to absorb an increase in the price of steel depends in part on its share of the total cost of production, or if production costs are small relative to total costs, say for a high technology firm or a firm with large marketing cost, the value of total output.<sup>6</sup> The relative importance of steel as an input varies widely across steel consuming industries. For example, in 1997 steel accounted for 46.2 percent of all materials costs for custom roll forming (table D-3). Its value share in total output that year was 31.0 percent. For motor vehicles and equipment, steel constituted no more than 0.6 percent of either materials costs or output value.<sup>7</sup> Thus, other things being equal, one would expect changes in the price of steel to have a larger impact on the custom roll forming industry than on the motor vehicle industry.

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<sup>4</sup>Flat-rolled steel other than slab was subject to an increase in duties of 30 percent *ad valorem* in the first year of the measure, hot-rolled bar and light shapes and cold-finished bar were subject to an increase of 30 percent, rebar was subject to an increase of 15 percent, welded tube was subject to an increase of 15 percent, fittings were subject to an increase of 13 percent, stainless bar and stainless rod were subject to an increase of 15 percent, and stainless wire was subject to an increase of 8 percent in the first year.

<sup>5</sup>See a further discussion of this in chapter 2 under *Steel consumption*.

<sup>6</sup>Of the components of value-added mentioned here wages appear in total costs of goods sold but not materials costs, while profit does not appear in costs but does appear in value of total output (i.e. revenues).

<sup>7</sup>Although the cost share as calculated here is low for motor vehicles and equipment, it would be significantly higher if one were to include steel-containing intermediate inputs.

**Table D-1**  
**Value shares of purchases by product and industry, April 2002/March 2003**

Industry category	Slab	Plate	Hot-rolled	Cold-rolled	Corrosion resistant	Tin mill	Hot bar	Cold bar	Rebar	Welded pipe	Fittings	Stainless			Various <sup>1</sup>	Total
												Bar	Rod	Wire		
<b>Steel-product producers/processors/distributors:</b>																
Distributors .....	2.4	7.5	16.3	13.9	19.5	0.5	3.8	2.0	5.1	5.2	1.5	1.0	0.1	10.3	10.9	100.0
Producers of hot/cold-rolled or coated forms .....	35.3	0.0	28.0	25.5	2.4	0.0	3.6	0.0	0.0	1.4	0.0	0.0	0.0	0.0	3.7	100.0
Welded pipe producers .....	0.0	0.5	57.9	14.0	0.3	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	26.4	100.0
Bar and wire finishers .....	0.0	0.0	0.5	0.0	0.0	0.0	56.3	0.9	0.0	21.2	0.0	1.3	16.5	1.4	1.9	100.0
Fastener producers .....	0.0	0.0	2.5	1.8	0.2	0.0	5.0	16.5	0.0	0.0	0.0	0.0	67.7	0.8	5.5	100.0
Steel fabricators .....	0.0	0.1	6.4	40.8	6.4	0.4	14.3	1.3	0.5	2.4	1.5	0.1	0.5	0.1	25.2	100.0
<b>Transportation:</b>																
Motor vehicles .....	0.0	0.0	10.6	15.9	72.3	0.0	0.9	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	100.0
Motor vehicle parts .....	0.0	0.5	5.6	7.3	8.2	1.3	24.5	1.0	0.0	0.5	0.0	0.1	0.0	0.8	50.4	100.0
Ships and shipping containers; military .....	0.0	0.0	0.0	36.1	0.0	0.0	0.2	2.3	0.0	0.0	0.0	0.2	0.0	0.5	60.6	100.0
<b>Machinery and equipment:</b>																
Heavy machinery .....	0.0	32.8	15.6	2.0	0.0	0.0	16.6	3.1	0.0	13.5	14.4	0.1	0.2	0.0	1.8	100.0
Power, other machinery .....	0.0	0.5	0.6	79.2	1.4	0.0	1.1	2.2	0.0	8.6	0.0	3.5	0.0	0.0	2.9	100.0
<b>Construction</b> .....	0.0	2.4	8.4	4.7	32.4	0.0	6.0	0.0	12.6	0.6	0.0	0.4	0.4	0.1	31.9	100.0
<b>Containers:</b>																
Steel barrels and cans .....	0.0	0.0	0.0	7.9	0.0	83.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	100.0
<b>Consumer and commercial goods:</b>																
Household appliances .....	0.0	0.0	2.2	46.6	33.2	0.5	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	16.6	100.0
Furniture, hardware, cutlery .....	0.0	0.2	0.9	42.5	19.9	0.4	0.0	0.5	0.0	2.2	0.0	0.0	0.3	0.0	33.1	100.0

<sup>1</sup> Various denotes all reported purchases in which firms did not separate data by product purchased.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table D-2  
Number of steel-consuming firms in each industry reporting purchases of specific steel products**

	Hot-rolled										Weld				
	Total	Slab	Plate	Hot-rolled	Cold-rolled	Tin mill	Hot bar	Cold bar	Rebar	Weld pipe	Flange	Bar	Rod	Wire	
<b>Steel-product producers/processors/distributors:</b>															
Distributors .....	75	2	26	23	30	27	7	25	18	14	21	6	10	3	5
Producers of hot/cold-rolled or coated forms .....	22	6	1	12	11	5	0	3	1	0	2	0	0	0	0
Welded pipe producer	18	1	1	13	6	2	0	1	0	0	3	0	0	0	0
Bar and wire finishers .....	18	0	0	1	0	0	0	5	5	0	0	0	4	9	7
Fastener producers	15	0	0	5	5	2	0	5	3	0	0	0	1	5	5
Steel fabricators ...	66	0	8	33	42	24	3	15	8	1	12	2	3	2	2
<b>Transportation:</b>															
Motor vehicles .....	9	0	1	8	7	6	0	4	2	0	4	1	2	1	1
Motor vehicle parts	64	0	3	34	39	17	8	16	13	1	11	1	6	2	5
Ships and shipping containers; military	8	0	4	4	4	1	0	5	5	0	2	2	4	2	2
<b>Machinery and equipment:</b>															
Heavy machinery ..	15	0	15	11	4	1	0	8	6	0	6	3	1	1	0
Power, other machinery .....	30	1	8	8	14	7	0	8	11	1	8	8	9	2	4
<b>Construction .....</b>	<b>28</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>9</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>2</b>
<b>Containers:</b>															
Steel barrels and cans .....	12	0	0	0	6	2	8	0	0	0	1	0	0	0	0
<b>Consumer and commercial goods:</b>															
Household appliances .....	7	0	0	5	7	5	2	0	1	0	0	0	0	0	0
Furniture, hardware, cutlery .....	15	0	3	6	10	5	1	3	5	0	2	0	2	2	1
<b>Total .....</b>	<b>402</b>	<b>10</b>	<b>78</b>	<b>171</b>	<b>192</b>	<b>112</b>	<b>29</b>	<b>111</b>	<b>80</b>	<b>26</b>	<b>79</b>	<b>27</b>	<b>45</b>	<b>30</b>	<b>34</b>

Source: Compiled from data submitted in response to Commission questionnaires.

**Table D-3**  
**Purchased steel products: Cost shares of material inputs and value shares of gross output by industry categories, 1997**

Description	Cost share of purchased steel to all materials <sup>1</sup>	Value share of purchased steel to total output <sup>2</sup>
	----- Percent -----	
<b>Iron and steel mills:<sup>3</sup></b>		
Iron and steel mills <sup>4</sup> .....	25.5	18.8
Iron, steel pipe and tube from purchased steel <sup>4</sup> .....		
Rolled steel shape manufacturing <sup>4</sup> .....		
Steel wire drawing <sup>4</sup> .....		
<b>Other ferrous metals:</b>		
Custom roll forming .....	46.2	31.0
Ferroalloy and related product manufacturing .....	2.8	1.7
Ferrous metal foundries .....	4.6	2.6
Iron and steel forging and stamping .....	32.7	18.3
<b>Upstream:</b>		
Coal mining .....	1.8	1.0
Energy .....	0.3	0.1
Iron ore mining .....	3.4	2.3
<b>Fabricated metal products:</b>		
Ball and roller bearing manufacturing .....	11.9	6.4
Cutlery and flatware except precious manufacturing .....	7.1	2.8
Electroplating anodizing and coloring metal .....	7.0	3.1
Enameled iron and metal sanitary ware manufacturing .....	11.7	4.7
Fabricated structural metal manufacturing .....	24.2	13.5
Hand and edge tool manufacturing .....	16.9	8.1
Hardware manufacturing .....	16.8	8.7
Industrial pattern manufacturing .....	2.2	0.8
Kitchen utensil pot and pan manufacturing .....	7.6	4.8
Machine shops .....	8.5	4.2
Metal can, box, and other container manufacturing .....	16.9	13.1
Metal coating and nonprecious engraving .....	31.7	17.2
Metal heat treating .....	1.5	0.7
Metal tank heavy-gauge manufacturing .....	37.0	19.9
Metal valve manufacturing .....	8.9	4.2
Metal window and door manufacturing .....	16.4	9.4
Miscellaneous fabricated metal product manufacturing .....	12.3	6.9
Ornamental and architectural metal work manufacturing .....	29.2	15.7
Other ordnance and accessories manufacturing .....	0.9	0.3
Plate work manufacturing .....	34.6	16.8
Power boiler and heat exchanger manufacturing .....	25.4	12.3
Prefabricated metal buildings and components .....	37.0	26.6
Saw blade and handsaw manufacturing .....	30.6	14.7
Sheet metal work manufacturing .....	21.6	10.9
Small arms manufacturing .....	7.7	3.5
Spring and wire product manufacturing .....	45.6	24.1
Turned product and screw nut and bolt manufacturing .....	23.3	10.9
<b>Durable manufacturing:</b>		
Construction and mining machinery and equipment .....	8.3	5.8
Durable manufacturing, not elsewhere classified .....	2.3	1.5
Electric power transformers and motors .....	12.7	8.0
Electronic and electrical equipment .....	1.1	0.6
Farm and garden machinery and equipment .....	13.1	8.3
Industrial machinery and equipment .....	7.8	4.7
Major household appliances .....	8.6	6.2
Metal furniture .....	11.0	5.8
Motor vehicle parts .....	11.1	7.9
Motor vehicles and equipment .....	0.6	0.5
Other transport equipment .....	1.5	1.0
Railroad rolling stock manufacturing .....	11.2	8.4
Ship building and repairing .....	8.2	4.5

Continued table.

**Table D-3—Continued**  
**Purchased steel products: cost shares of material inputs and value shares of gross output by industry categories, 1997**

Description	Cost share of purchased steel to all materials <sup>1</sup>	Value share of purchased steel to total output <sup>2</sup>
	-----Percent-----	
<b>Other sectors:</b>		
Agriculture and forest products . . . . .	0.4	0.2
Commercial and institutional buildings . . . . .	0.9	0.5
Construction maintenance and repair . . . . .	1.7	0.9
Highway street bridge and tunnel construction . . . . .	0.8	0.4
Manufacturing and industrial buildings . . . . .	0.2	0.1
Nondurable manufacturing . . . . .	0.2	0.1
Other new construction . . . . .	0.8	0.4
Residential construction . . . . .	1.4	0.8
Resource extraction, not elsewhere classified . . . . .	2.2	1.3
Services . . . . .	0.1	0.0
Water, sewer, and pipeline construction . . . . .	5.0	3.0

<sup>1</sup> Calculated from the ratio of steel inputs to the sum of all material inputs.

<sup>2</sup> Calculated from the ratio of steel inputs to the sum of all material inputs plus value-added factors (capital, labor, and indirect business taxes).

<sup>3</sup> Industry categories including subject products.

<sup>4</sup> Not delineated separately among consuming industries in the baseline table.

Source: Compiled from official statistics of the U.S. Department of Commerce, Bureau of Economic Analysis, 1997 Benchmark Input-Output Accounts.

The shares of steel in raw materials costs and total costs, based on testimony, submissions, and questionnaire responses developed for this investigation, is presented in table D-4.<sup>8</sup> Cost shares in both tables D-3 and D-4 are higher for steel-product producers, processors and distributors and motor vehicle parts producers, than for producers of machinery and equipment and construction firms (other than rebar fabricators).

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<sup>8</sup>Table D-3 is based on economywide data from the input-output tables of the United States for 1997. Although this source has cost shares for a more detailed and comprehensive list of industries than the data in table D-4, the cost shares include some steel not subject to the safeguard measures. In table D-3, “steel” is an aggregation of those industry categories of the input-output tables that would include the steel products subject to this investigation: 331111 (iron and steel mills), 331210 (iron, steel pipe and tube from purchased steel), 331221 (rolled steel shape manufacturing), and 331222 (steel wire drawing).

Shares in table D-4 are larger for the most steel-intensive industries because calculations are based on less aggregated industry or firm level data that are generally not available to the public for all steel consuming industries. The cost share data presented in Morici (2003) are generally smaller for the most steel intensive industries because his calculations average high cost and value shares together with low cost and value shares across broader industry groups. Peter Morici, *An Assessment of Steel Import Relief Under Section 201 After One Year*, Mar. 2003, found at <http://www.steel.org/images/pdfs/MoriciPaper2003.pdf>, retrieved Apr. 1, 2003.

Table D-4

Purchased steel: Cost shares of purchased steel by industry categories, April 2002/March 2003

Industry	Testimony and submissions		Questionnaire responses	
	Share of costs <sup>1</sup>	Share of raw material costs	Share of raw material costs	Share of total costs of goods sold
		Percent		
<b>Steel-product producers/processors/distributors:</b>				
Distributors	almost 100.0	99.0	99.0	89.8
Producers of hot/cold-rolled or coated forms	40.0-100.0	95.3	95.3	74.0
Welded pipe producers	66.7-100.0	94.4	94.4	54.3
Bar and wire finishers	65.0-75.0	99.3	99.3	71.5
Fastener producers	---	95.1	95.1	35.9
Steel fabricators	37.8-70.0	90.0	90.0	42.3
<b>Transportation:</b>				
Motor vehicles	---	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Motor vehicle parts	40.0-95.0	79.8	79.8	38.6
Ships and shipping containers; military	---	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
<b>Machinery and equipment:</b>				
Heavy machinery	10.0-50.0	13.6	13.6	9.5
Power, other machinery	---	14.4	14.4	8.6
<b>Construction<sup>3</sup></b>				
Containers:	0.0-80.0	91.9	91.9	62.8
Steel barrels and cans	50.0-70.0	83.7	83.7	49.0
<b>Consumer and commercial goods:</b>				
Household appliances	---	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Furniture, hardware, cutlery	---	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Total	0.0-100.0	64.7	64.7	30.2

<sup>1</sup> Industry representatives reported steel share of costs in a variety of ways including as a share of raw material costs and as a share of total cost of the end product.

<sup>2</sup> Data suppressed due to confidentiality.

<sup>3</sup> Reported cost shares ranged from 0 to 20 percent of total construction project costs, to 25 percent of storage tank costs, and 60 to 80 percent of rebar costs.

Source: Compiled from data submitted in response to Commission questionnaires, hearing testimony, and submissions and interviews with industry sources.

## ***Substitutability***

The pass through of cost imposed by a duty on steel is constrained by the ability of purchasers to substitute inputs. The increase in steel costs, either directly or indirectly, is at least partly avoided if the steel consuming industry can substitute so as to use less tariff-bearing steel per unit of output. This substitution can happen in several ways. Subject steel can be replaced with domestic steel, or steel from countries that are not covered by the relevant tariffs. Buyers may substitute different grades of steel to avoid tariff increases. Multi-product firms may be able to alter the product mix to avoid cost increases. Similarly, firms with flexible technology can alter their steel needs to avoid cost increases. Firms can move to alternative materials such as aluminum or, in some circumstance, plastics. These are typically considered “long-run” changes. However, a significant increase in the cost of steel would tend to hasten the process and could, in some cases, stimulate significant adjustments in the short-run.

It is often easier to find alternative suppliers of commodity steel (e.g., forms of flat-rolled in standard specifications) than of specialty steel, which usually is available from a limited number of suppliers. While it varies by steel consuming industry, each industry has firms that purchase specialized steel products, increasing their exposure to any duty.<sup>9</sup> For example, the motor vehicle parts industry has a high percentage of producers who purchase specialized or engineered steels designed to meet high manufacturing tolerances and quality standards that are available from a limited number of suppliers. The impact of safeguard measures will vary across industries and among firms within those industries.

Substitution may also be limited by simple availability. Steel consuming firms that traditionally purchased from foreign sources that are affected by the duty, or from domestic mills that closed in the beginning of the relief period, need to establish business relationships with new steel suppliers. The extent to which domestic steel suppliers favor established customers over new customers is unknown, but steel consuming firms that must acquire new suppliers may experience disruptions in their ability to source material as they shift to new suppliers.

## ***Market Structure***

The ability of a firm to pass on price increases to its final customers, or to withstand price increases from its suppliers, is a function of its bargaining power, which is derived from its market power. Bargaining power is largely a function of relative size (that is, relative to the firms on the other side of the negotiation), strategic positioning or product differentiation (availability of substitutes, quality, reliability, ancillary services, etc). However, bargaining power may be enhanced, other things equal, in a more concentrated industry if competitors are able to act in concert, whether overt or tacit. In many cases there will be bargaining power on both sides of the market, that is on the part of buyers and sellers. In such cases, the extent of the pass through of a tariff is a negotiated result, determined by their relative bargaining power. Firms in concentrated industries tend to have more power to influence both their buying and selling prices.

The motor vehicle and can manufacturing industries are relatively concentrated. The construction and motor vehicle parts industries are relatively unconcentrated. Other things equal, the motor vehicle and can industries are more likely to be able to resist or reduce pass through of a duty to a greater extent than the construction or auto parts industries. In turn, the motor vehicle and can industries would be able to pass the increased cost from a duty through to customers more effectively as well. The ability to pass steel price increases on to customers can be limited, of course, by the market power of large customers or the

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<sup>9</sup>For further discussion, see chapter 2 under *Steel Consumption*.



existence of extensive excluded foreign competition.<sup>10 11</sup> One of the reasons frequently given for an inability to pass on costs is that there is increased competition from imports of steel-containing products.

Several steel consuming industries purchase enough of a particular type of steel to indicate that they could potentially exert market power over domestic steel mills: general construction (100 percent of the purchases of rebar), can manufacturers (82 percent of purchases of tin mill products; see table D-1) and steel service centers and distributors (at least one-half of the direct purchases from steel mills of hot-rolled, tubular products, stainless bar and stainless wire, and more than 40 percent of the purchases for plate, cold-rolled, and cold bar, see table D-5).<sup>12</sup> Of these industries, however, only can manufacturers are also highly concentrated by virtue of the small number of large firms in the industry.

No steel consuming industries or firms appear to be large enough to exert significant purchasing power over steel service centers and distributors. The construction and automotive industries are the predominant customers for steel service centers and distributors, primarily purchasing flat rolled steel and long products, but with neither industry making up more than 30 percent of the market for service center products.<sup>13</sup> Service centers handle more than 30 percent of steel shipments in North America. They are particularly significant for the construction industry.<sup>14</sup> They can provide customers with a wide variety of grades and sizes produced by various steel producers; organize price information in catalogs; provide prompt delivery in small quantities; and perform services such as cutting-to-length. Customers buying from service centers are in a position analogous to homeowners buying small quantities of building materials from home improvement chains. The success of a service center depends on its ability to offer a wide variety of heterogeneous, differentiated products, and service centers are more likely to sell to smaller steel consuming firms that do not tend to have the bargaining power to purchase directly from steel mills.

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<sup>10</sup>Markets in which the exercise of pricing power is restrained by the threat of entry are known as *contestable markets*. William J. Baumol, John C. Panzar and Robert D. Willig, *Contestable Markets and the Theory of Industry Structure* (New York: Harcourt Brace Jovanovich, 1982).

<sup>11</sup>For a further discussion see the section *Steel Prices*, chapter 2.

<sup>12</sup>Data in table D-5 are domestic steel mill shipments by industry market classifications in calendar year 2002 for steel categories containing products subject to this investigation, according to the American Iron and Steel Institute (AISI). Among the subject product categories, carbon and alloy flanges and fittings are not included because such producers are not included among reporting firms. Further, shipments of carbon and alloy slabs are not reported separately from ingots or other semifinished forms (i.e., blooms and billets). Commission efforts to develop information on import shipments by market segment were unsuccessful. For a more detailed version of table D-5, see appendix D.

<sup>13</sup>A report for the Steel Service Center Institute (SSCI) found that steel service centers and processors shipped steel products (without further breakout by type of products) primarily to construction and contractors' products (27.6 percent share in 1997, latest year available), automotive industry (21.1 percent share), and machinery manufacturers (15.5 percent). Powell, Woodward & Associates, Inc., study prepared for the SSCI, *Steel Consumption in the United States and Canada, End Use Markets, Products, Channels of Sale*, table 8, "Estimated shipments, steel service centers and processors by major market class, 1997," Sept. 2000, p. 27.

<sup>14</sup>Canadian Steel Producers' Association, "Steel and the Automotive Industry," at [http://www.canadiansteel.ca/oldsite/markets/markets\\_construc.html](http://www.canadiansteel.ca/oldsite/markets/markets_construc.html), dated April 1998, downloaded Oct. 10, 2001.

**Table D-5**  
**Shipment shares of steel products from domestic mills, by market classifications, 2002**

Market classification	Carbon and alloy <sup>1</sup> steel						Stainless steel					
	Plate	Hot-rolled sheet and strip <sup>2</sup>	Cold-rolled sheet and strip <sup>3</sup>	Coated sheet and strip <sup>4</sup>	Tin-mill products	Hot-rolled bars and light shapes	Cold-finished bar	Rebar	Tubular products <sup>5</sup>	Bar and light shapes	Rod	Wire
	Percent <sup>6</sup>											
1. Steel for converting and processing into:												
010 Wire and wire products												48.5
020 Hot- and cold-rolled sheets and strip		5.7	1.7	0.1			0.5				0.1	0.7
025 Sheet and strip for painting or coating		1.9	8.3	0.1								0.1
030 Pipe and tubes	2.6	16.4	5.5	0.3			12.1		4.2	0.3	0.3	
040 Cold-finished bars		0.2					12.7					
050 Other steel products, steel castings	0.1	0.5	1.2	0.3	0.1		0.2				0.4	0.3
060 Resale shipments	1.0	0.4	1.3	0.2	0.9		0.5		0.2			0.3
Total	3.6	25.1	17.9	1.1	0.1		26.0		4.4	0.4	49.8	5.2
Less shipments to reporting companies		4.7	6.8	0.1			12.0		0.2			
Total	1.1	20.4	11.1	0.9	0.1		14.1		4.2	0.4	49.8	5.2
2. 070 Forgings (other than for automotive and aviation)							10.1			0.6		
3. 080 Industrial fasteners							2.2			1.8		6.3
4. 140 Steel service centers and distributors	48.1	52.5	40.9	25.9	10.1		8.2		50.5	92.2	17.9	66.5
5. Construction and contractors' products:												
183 Metal building systems	0.2	2.6		4.7								
185 Bridge and highway construction	8.6			0.9								
187 General construction	18.9	6.7	1.5	4.3			23.2		0.8	100.0	1.9	
196 Culvert and concrete pipe	0.3		0.1	1.0								
270 Central air conditioning, heating, cooling, and ventilating systems	0.3	0.1	0.3	3.4								
290 Hardware		0.2	1.7	3.6						0.4		0.9
300 Plumbing equipment		0.4	1.0							0.4		0.2
322 Rain goods, roofing, and siding		0.1	0.7	4.0					0.5			
325 Framing and related products		0.1		3.7							0.3	
326 Doors and windows		0.1	0.2	0.5								
Total	28.3	10.3	5.5	26.0			23.2		1.6	100.0	2.4	0.9

Table continued.

**Table D-5—Continued**  
**Shipment shares of steel products from domestic mills, by market classifications, 2002**

Market classification	Carbon and alloy <sup>1</sup> steel						Stainless steel					
	Plate	Hot-rolled sheet and strip <sup>2</sup>	Cold-rolled sheet and strip <sup>3</sup>	Coated sheet and strip <sup>4</sup>	Tin-mill products	Hot-rolled bars and light shapes	Cold-finished bar	Rebar	Tubular products <sup>5</sup>	Bar and light shapes	Rod	Wire
	Percent <sup>6</sup>											
7. Automotive:												
330 Vehicles, parts, and accessories . . . . .	0.6	6.4	15.8	38.0		14.7	18.2		3.2			
340 Trailers, all types . . . . .	0.2						0.2		1.0			
350 Parts and accessories—Independent . . .	0.2	4.2	3.8	4.6	1.7	6.3	9.5		3.4	0.2	1.3	1.3
360 Independent forgers (automotive and aviation) . . . . .						7.7	0.2					
Total . . . . .	1.0	10.6	19.7	42.7	1.7	28.7	28.1		7.6	0.2	1.3	1.3
8. Rail transportation:												
370 Railway rails, track work, and equipment . . . . .							0.1					
390 Freight cars . . . . .	3.4	0.1	0.1			0.2						
395 Passenger cars, locomotives, and rapid transit . . . . .	0.4					0.1						
Total . . . . .	3.8	0.1	0.1			0.3						
9. 450 Shipbuilding and marine equipment . .	4.1									0.3		
10. 482 Aircraft and aerospace . . . . .												
11. Oil and gas industry:												
493 Drilling and transportation . . . . .	1.8					0.6	1.0		22.8	0.2		
494 Storage tanks . . . . .	3.1	0.2							0.6			
495 Oil and gas, and chemical process vessels . . . . .	2.3								0.1		0.2	
Total . . . . .	7.3	0.2				0.6	1.0		23.4	0.2	0.2	
12. Mining, quarrying, and lumbering . . . . .	0.1					0.2			0.1			
13. Agricultural:												
530 Agricultural machinery . . . . .	0.9	0.5	0.1			2.7	2.6		0.9			0.1
540 All other agricultural . . . . .			0.1	0.5			0.1					
Total . . . . .	0.9	0.5	0.2	0.5		2.7	2.7		0.9			0.1
14. Machinery, industrial equipment and tools:												
550 Bearings . . . . .						2.3	4.6		5.5	0.2	0.1	3.6
555 Construction and materials handling equipment . . . . .	2.6	0.7				2.6	4.9		1.3			
610 Metal working equipment . . . . .	0.7	0.2	0.3			0.9	0.4		0.5	0.2	22.8	3.6
650 Other industrial equipment . . . . .	1.6	0.5	0.1			2.0	3.5		1.2	0.6		2.2

Table continued.

**Table D-5—Continued**  
**Shipment shares of steel products from domestic mills, by market classifications, 2002**

Market classification	Carbon and alloy <sup>1</sup> steel						Stainless steel					
	Plate	Hot-rolled sheet and strip <sup>2</sup>	Cold-rolled sheet and strip <sup>3</sup>	Coated sheet and strip <sup>4</sup>	Tin-mill products	Hot-rolled bars and light shapes	Cold-finished bar	Rebar	Tubular products <sup>5</sup>	Bar and light shapes	Rod	Wire
	-----Percent-----											
14. Machinery, industrial equipment and tools (continued):												
652 Pumps, valves, and fittings . . . . .											0.8	0.4
653 Other food processing equipment . . . . .											0.2	
670 Hand tools . . . . .			0.2	0.1								
Total . . . . .	4.9	1.4	0.5	0.1	0.3	8.1	13.7	8.6	2.0	22.8	9.7	
15. Electrical equipment:												
681 Power and communication equipment . . . . .	0.2		5.0	0.5		0.1	3.5	2.3	0.3			0.2
682 Electrical conduit and raceways . . . . .		0.1	0.3	0.2								
690 Electric lighting equipment and fixtures . . . . .		0.1	1.2	0.2								0.1
Total . . . . .	0.2	0.2	6.5	0.8	0.1	3.5	3.5	2.3	0.3			0.3
16. Appliances, utensils, and cutlery:												
725 Major home appliances . . . . .		1.4	7.0	2.2		0.2	1.5					
735 Portable home appliances . . . . .		0.1	0.2	0.4								
760-780 Utensils, galvanized ware, cutlery, and table flatware . . . . .			1.2	0.1	0.6							
Total . . . . .	1.5	1.5	8.4	2.7	0.6	0.2	1.5					
17. Other domestic and commercial equipment:												
795 General purpose furniture . . . . .		0.2	2.0	0.1								
805 Domestic and commercial specialized equipment . . . . .		0.2	0.6	0.2								
819 Commercial and institutional equipment, all other . . . . .										0.1	0.3	
821 Surgical and hospital equipment . . . . .										0.2	0.8	0.2
829 Professional and scientific equipment, all other . . . . .										0.1		
835 Miscellaneous all other . . . . .	1.2	1.2	0.7	0.1								0.1
Total . . . . .	1.6	1.6	3.3	0.3						0.3	0.9	0.5

Table continued.

**Table D-5—Continued**  
**Shipment shares of steel products from domestic mills, by market classifications, 2002**

Market classification	Carbon and alloy <sup>1</sup> steel						Stainless steel			
	Plate	Hot-rolled sheet and strip <sup>2</sup>	Cold-rolled sheet and strip <sup>3</sup>	Coated sheet and strip <sup>4</sup>	Tin-mill products	Hot-rolled bars and light shapes	Cold-finished bar	Tubular products <sup>5</sup>	Bar and light shapes	Rod Wire
	-----Percent <sup>6</sup> -----									
18. Containers, packaging, and shipping:										
870 Cans-sanitary and general line . . . . .			0.6		82.2					
890 Crown caps and other closures . . . . .			2.1		5.1					
925 Steel barrels and drums . . . . .			0.8							
930 Shipping pails . . . . .			0.1			0.4				
940 Compressed gas cylinders . . . . .		0.1								
961 Baling, binding, strapping, and tying . .		0.7				0.1				
962 Miscellaneous boxes, containers, and components . . . . .			0.1							
Total . . . . .	0.1	0.8	3.8	0.1	87.4	0.6			1.2	0.1
19. 970 Ordnance and other military . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All market classification shipments <sup>7</sup> . .										
	----- (1,000 short tons) -----									
All market classification shipments . . .	3,261	16,372	10,883	17,861	2,976	3,224	478	1,750	2,383	61,207
Non-classified shipments . . . . .	1,583	6,542	1,801	1,274	51	3,317	788	4,678	835	62,302
subtotal domestic . . . . .	4,844	22,914	12,684	19,135	3,028	6,541	1,266	6,428	3,217	123,509
20. 980 Export (reporting companies only) . . .	57	116	526	521	107	141	18	0	125	6,274
Total, all groups . . . . .	4,901	23,030	13,210	19,657	3,134	6,682	1,285	6,428	3,342	129,783

<sup>1</sup> Excludes tool steels.

<sup>2</sup> Including plate in coils.

<sup>3</sup> Other than electrical steel.

<sup>4</sup> Includes corrosion-resistant sheet and strip.

<sup>5</sup> No distinction between welded and seamless tubular products. Excludes oil country tubular goods.

<sup>6</sup> Shipment shares less than 0.05 percent are not shown.

<sup>7</sup> Percentages may not sum to total due to rounding.

Source: Statistics of the American Iron and Steel Institute, Washington, DC (AIS 16C-12, 16A-12, and 16S-12).

The buyer-seller relationship in steel is shaped in many instances by long-term contracts. These contracts represent a high degree of coordination between producer and user, and permit more predictability in the price paid and received than do spot markets. Use of these contracts is reported to be a typical business practice in the motor vehicle industry.<sup>15</sup> Coordination between steel producers and automakers to develop new steel grades and applications for new automotive designs typically take place far in advance of production. Vehicle makers are thus able to assure a certain amount of price stability. The way in which changes in circumstances, such as the implementation of a tariff, influence the price may be determined by contingencies in the contractual arrangements, or by one side leaving the contract by pre-agreement or breaching. Although many steel consuming firms purchase steel through annual contracts, which may limit their exposure to the safeguard measures, in some cases contracts may be broken by suppliers or customers.<sup>16</sup>

Other market intermediaries for steel include trading companies, some of which are large international concerns, and e-commerce operations.<sup>17</sup> During the period examined, E-commerce operations have emerged to a limited degree in both non-ferrous metals and steel.<sup>18</sup>

## **Market Characteristics of Steel-Consuming Industries**

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### ***Sector and Industry Specific Market Characteristics***

The following section describes market characteristics for certain steel consuming industries in six sectors: steel-products producers, processors, and distributors; transportation equipment; machinery and equipment; construction; containers; and consumer and commercial goods. Based on market characteristics, each sector will feel the impact of the safeguard measures differently. Similarly, within sectors, individual firms will feel the effect of the safeguard measures differently.

Many firms in steel consuming industries are capital intensive, have highly automated production processes, and have recently experienced consolidation. Regardless of the industry or sector, the effects of the safeguard measures are likely to be magnified at smaller firms. Consistent with questionnaire responses and hearing testimony discussed in Chapter 2, smaller producers that purchase steel subject to

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<sup>15</sup>Canadian Steel Producers' Association, "Steel and the Automotive Industry," at [http://www.canadiansteel.ca/oldsite/markets/markets\\_auto.html](http://www.canadiansteel.ca/oldsite/markets/markets_auto.html), dated April 1998, downloaded Oct. 10, 2001. The information on the site about customer markets for steel is meant to describe an integrated North American market; see "Customer Markets for Steel: An Overview," at [http://www.canadiansteel.ca/oldsite/markets/market\\_overview.html](http://www.canadiansteel.ca/oldsite/markets/market_overview.html), dated April 1998, downloaded Oct. 10, 2001.

<sup>16</sup>See a further discussion of this topic in chapter 2 under the section *Contract Abrogation*.

<sup>17</sup>E-commerce represents the opposite extreme from vertical integration. Through e-commerce it is possible for buyers and sellers with no previous history to quickly make deals: for example, at Steel Market International (<http://www.steel-market.com/>) steel billets are offered from stock from Germany, India, Italy, and Ukraine, including postings from trading companies. As in the case of steel centers, buyers and sellers transacting steel through trading companies or e-commerce exhibit a high willingness to accept prices based on current market conditions, which may sustain impacts from the safeguard measures.

<sup>18</sup>Vincent De Sapio, "E-Commerce and Non-Ferrous Metals: Despite Potential Adoption Has Been Slow," *International Trade and Technology Review*, USITC publication 3457, October 2001 and Tracy Quilter, "Steel Sector Explores E-Commerce Although Wary of Quick Transition," *International Trade and Technology Review*, USITC publication 3363, October 2000, pp. 7-18.

the highest tariffs, have higher cost shares of steel among steel consuming industries,<sup>19</sup> have little or no market power, and purchase speciality products predominately from steel service centers appear to be particularly vulnerable.

The safeguard measures may also add momentum to certain pre-existing industry trends of firm strategies. For example, numerous factors contribute to shifts in manufacturing from U.S. facilities to foreign plants. Determining the weights to assign to these different factors when such a move actually takes place is difficult even at the firm level; across an industry or sector it becomes even more problematic. However, a relative increase in raw material costs, when combined with other considerations (even for a short time period), may convince steel consuming firms to move to overseas production or parts acquisitions. Although the imposition of safeguard measures likely contributed to some steel consuming firms moving to offshore manufacturing or sourcing of parts or products, it is impossible to specifically attribute the extent to which such activity resulted from safeguard measures.

### **Steel-Product Producers, Processors, and Distributors<sup>20</sup>**

Because steel accounts for a significant share of both input costs and cost-of-goods-sold, steel-products producers, processors, and distributors are affected by the safeguard measures. These effects are mitigated to some extent because firms in these industries source the majority of their steel from domestic producers, because firms in these industries purchase various grades and types of steel subject to different safeguard tariff rates between different product groups, and due to exclusions granted to some products consumed by this group.

Hot-rollers and cold-rollers, welded and seamless pipe producers, bar finishers, coating processors, and wire drawers use steel inputs covered by the safeguard measures to produce other steel mill products, many of which are also covered by the safeguard measures. For such firms, the safeguard measures should affect both input costs and selling price, although not necessarily in equal measure.<sup>21</sup> In contrast, industrial fastener producers, steel fabricators, forgers, and stampers process subject steel mill products into fabricated steel products that are not covered by the safeguard measures. Steel distributors and service centers purchase covered steel products from mills or importers and resell the products in smaller lot sizes to facilitate just-in-time delivery. They also perform cutting, slitting, and other value-added services to customer specifications.

In addition to questionnaire data in table D-4 and the BEA data in table D-3, industry representatives report that the share of steel as an input cost for steel-product producers, processors, and distributors ranges from 40 percent to almost 100 percent. Industry representatives also report that the share of steel as an input cost for both cold rollers and forgers ranges from 40 percent to 60 percent,<sup>22</sup> while steel represents 40 percent to 70 percent of the total cost of goods sold for metal formers.<sup>23</sup> For welded pipe, steel accounts for approximately two-thirds of the total cost of production,<sup>24</sup> and for bar

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<sup>19</sup>The industry reported cost shares in this section vary according to the concept of cost share used and may not be directly comparable across all industries and sectors. For further discussion, see the section *The Role of Cost Shares*, earlier in this appendix.

<sup>20</sup>Includes firms who both purchase and produce steel mill products.

<sup>21</sup>For instance, welded pipe producers face a higher tariff in their input (flat rolled) than on tubular products produced.

<sup>22</sup>Industry representative, correspondence with USITC staff, June 2, 2003; and industry representative, telephone interview with USITC staff, May 13, 2003.

<sup>23</sup>Industry representative, e-mail correspondence with USITC staff, May 20, 2003.

<sup>24</sup>Industry representative, telephone interview with USITC staff, May 22, 2003.

finishers, steel accounts for 65 percent to 75 percent of total production costs. Distributors and service centers purchase steel for resale; thus they report that steel comprises essentially all of their input costs.<sup>25</sup>

Many firms in these industries are highly capital intensive and in recent years a number of firms in the steel-product producer, processor, and distributor industries have consolidated, eliminating excess capacity through mergers and the exits of primarily smaller firms.<sup>26</sup> Such consolidation theoretically should have increased the market power of the consolidated firms, but it is unclear how much this was offset by structural changes in upstream and downstream industries. Alternatively, some of these industries, such as industrial fastener producers and steel fabricators, forgers, and stampers, are highly fragmented. With the exception of a few large firms, the firms within these industries are unlikely to wield much market power.

The ability of firms in these industries to limit the effect of the safeguard measures by substituting grades of steel subject to lower or no tariffs varies by industry. Although service centers predominantly purchase commodity grades of steel, there is growing customer demand for specialized grades from service centers.<sup>27</sup> The forging industry typically purchases specialized and proprietary steel products,<sup>28</sup> while bar finishers, wire drawers, and industrial fastener producers primarily purchase specialized products.<sup>29</sup> Cold-rolled producers purchase commodity, specialized, and proprietary grades of steel,<sup>30</sup> while hot-rolled producers purchase primarily commodity and specialized grades.<sup>31</sup>

Most firms in these industries purchase steel from both U.S. and foreign sources, with the majority of steel purchased being domestically produced.<sup>32</sup> However, hot-rolled producers purchase slabs primarily from foreign sources.<sup>33</sup> Also, a lack of regional feedstock suppliers on the West Coast raises the importance of foreign steel for coaters in that region.<sup>34</sup>

The prevalence of long-term contracts with mills varies widely in this sector. For example, the forging industry predominantly purchases steel directly from mills, under annual or bi-annual contracts. However, smaller firms within the forging industry regularly purchase steel from service centers, importers, or distributors (often at spot prices) because they cannot meet the minimum quantity requirements for direct mill sales.<sup>35</sup> In contrast, the majority of steel purchased by the cold-finished bar industry is purchased directly from mills, on a spot basis, with the remainder purchased under semi-annual or annual contracts. Distributors and service centers purchase steel primarily from mills and importers, using increasingly complex pricing arrangements.<sup>36</sup>

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<sup>25</sup>Industry representative, e-mail correspondence with USITC staff, May 19, 2003 and May 28, 2003.

<sup>26</sup>Industry representatives, e-mail correspondence and telephone interviews with USITC staff, May 13, 2003, May 19, 2003, May 22, 2003, May 28, 2003, and June 2, 2003.

<sup>27</sup>Industry representative, e-mail correspondence with USITC staff, May 19, 2003 and May 28, 2003.

<sup>28</sup>Industry representative, telephone interview with USITC staff, May 13, 2003.

<sup>29</sup>Industry representatives, e-mail correspondence with USITC staff, May 19-28, 2003.

<sup>30</sup>Industry representative, correspondence with USITC staff, June 2, 2003.

<sup>31</sup>Industry representative, correspondence with USITC staff, June 24, 2003.

<sup>32</sup>Industry representative, telephone interview with USITC staff, May 13, 2003, and industry representatives; industry representative, correspondence with USITC staff, June 2, 2003; and e-mail correspondence with USITC staff, May 19-28, 2003.

<sup>33</sup>Industry representative, correspondence with USITC staff, June 24, 2003.

<sup>34</sup>Industry representative, e-mail correspondence with USITC staff, July 18, 2003.

<sup>35</sup>Industry representative, telephone interview with USITC staff, May 13, 2003.

<sup>36</sup>Industry representative, e-mail correspondence with USITC staff, May 19, 2003 and May 28, 2003.



## Transportation Equipment

The U.S. transportation equipment sector is a leading consumer of steel mill products, led by the producers of motor vehicles and motor vehicle parts, which accounted for nearly 98 percent of domestic steel mill shipments for the transportation sector in 2002.<sup>37</sup> The bulk of the industry's steel purchases are subject to the highest safeguard tariffs: forms of flat-rolled carbon and alloy steel represent nearly 90 percent of domestic steel mill shipments to the motor vehicle and parts industries.

The U.S. motor vehicle industry<sup>38</sup> consists of the Big Three (Ford, DaimlerChrysler, and General Motors) and several Japanese and German transplant operations that produce passenger cars and light trucks. Although considerably less vertically integrated than before the divestiture of their extensive parts-making operations within the last 10 years, the Big Three still largely produce their own powertrains but outsource many other vehicle components and systems from independent producers. The Japanese and German transplants pursue similar manufacturing strategies.

In contrast, the parts industry comprises thousands of firms manufacturing a broad spectrum of components for both the vehicle producers (original equipment manufacturers (OEMs)) and the aftermarket (replacement parts). The OEM-supplying industry is characterized by its tier structure. An increasing level of sales is concentrated in a small number of large Tier 1 multinational producers that supply higher-valued modules and systems directly to the automakers. These producers purchase components from hundreds of smaller companies that make up Tier 2 and Tier 3.

The automotive industry is highly capital intensive, and manufacturing processes are largely automated. Consequently, it is possible that reductions in industry production levels related to the safeguard measures may result in higher unit production costs. Existing overcapacity may already prevent full utilization of installed machinery and equipment.

Although the vehicle and parts industries share some characteristics, differences in the market situation of the vehicle producers vis-a-vis the parts producers do exist. Despite the large quantities of steel consumed by the motor vehicle producers, the cost share of direct purchases of steel for motor vehicle producers is less than one percent.<sup>39</sup> In contrast, steel represents an estimated 40 percent to 95 percent of the cost of material inputs for the motor vehicle parts industry,<sup>40</sup> and purchased steel as a share of total raw material costs for the motor vehicle parts industry averaged nearly 80 percent for questionnaire respondents (table D-4).

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<sup>37</sup>Other steel consuming transportation industries include producers of railway equipment and ships and barges.

<sup>38</sup>Motor vehicles include passenger cars and light trucks, medium- and heavy-duty trucks, buses, specialty vehicles, motor homes, truck trailers, travel trailers and campers, and chassis and bodies.

<sup>39</sup>However, their vulnerability to the safeguard measures may be understated since they also purchase steel-containing products from the motor vehicle parts producers. The typical passenger car averaged 54 percent by weight of steel in 2001. See Office of Transportation Technologies, *Average Material Consumption for a Domestic Automobile*, found at Internet address <http://ott.doe.gov/facts/archives>, provided by MEMA, post-hearing submission to the USITC, for Investigation No. 332-452, June 27, 2003, p. 17.

<sup>40</sup>Raw materials account for nearly 40 percent of the typical contract metal-forming company's sales dollar; for those companies that manufacture steel components, the flat-rolled steel share of the total raw material cost ranges between 90 to 95 percent. PMA, post-hearing submission to the USITC, for Investigation No. 332-452, June 26, 2003, p. 2. Steel costs accounted for 40 percent to 70 percent of MEMA hearing participants' total cost of production. Testimony of Jon Jenson, Vice Chairman, Consuming Industries Trade Action Coalition (CITAC) Steel Task Force, transcript of Commission hearing, June 19, 2003, p. 139.

Highly engineered products and lengthy certification procedures for individual steel producers limit the ability for both vehicle manufacturers and parts producers to substitute steel from one supplier for another. The Big Three automakers purchase the majority of their direct steel requirements from North American steel suppliers,<sup>41</sup> and the Association of International Automobile Manufacturers (AIAM) indicates that its members procure more than 95 percent of the steel consumed in their U.S. operations from U.S. steel sources.<sup>42</sup> Because the vast majority of the steels purchased by these firms are produced domestically, the ability of automotive companies to obtain exclusions for comparable imported steel is likely to be limited.

Motor vehicle parts producers' ability to substitute steel sources is also constrained because they purchase specialized products that are available from a limited number of sources. These firms' purchases generally consist of specialized grade or engineered steels designed to meet high manufacturing tolerances and quality standards. Some of the large Tier 1 firms are able to take advantage of their manufacturing size to purchase directly from the steel mills, whereas other Tier 1 firms purchase from service centers. Because they generally lack the purchasing volume to buy directly from steel producers, Tier 2 and Tier 3 firms usually buy steel products from distributors or service centers. The automakers are able to purchase directly from the steel mills and enter into long-term contracts. Automakers have traditionally purchased steel pursuant to annual contracts, but many have moved to longer-term contracts, some of which extend for 3 to 5 years.<sup>43</sup>

The level of concentration in the motor vehicle assembly industry suggests that the automakers may be able to use their market power to limit increases in the price they pay for steel resulting from the safeguard measures and limit the impact of higher costs resulting from the safeguard measures by not accepting price increases from their component suppliers resulting from higher steel costs.<sup>44</sup>

In contrast, U.S. motor vehicle parts makers are more likely to source steel largely from more market-sensitive service centers and enter into shorter-term contracts than the automakers, thus wielding less purchasing and price influence with both their steel suppliers and the automakers.<sup>45</sup> In fact, these firms have reported contract abrogations and supply disruptions as a result of the safeguard measures.<sup>46</sup> Contract length varies among companies, with some companies entering into a mix of medium- and short-term contracts.<sup>47</sup> Some spot purchasing also occurs within the industry. Some parts manufacturers receive

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<sup>41</sup>Al Wrigley, "Car Talk: Wheeling and Dealing Steel in Detroit," *American Metal Market*, Dec. 23, 2002, p. 3.

<sup>42</sup>AIAM, post-hearing submission to the USITC, for Investigation No. 332-452, June 26, 2003, p. 1.

<sup>43</sup>As noted in a Dec. 23, 2002 article in the *American Metal Market*, "The percentage of multi-year contracts—including some three- and five-year deals—was higher than usual." Wrigley, "Car Talk."

<sup>44</sup>General Motors has indicated that, "we (GM) feel we have more leverage with the supply base today than we did a year ago." Brian Corbett, "GM aims to steady steel problems," *Ward's Engine and Vehicle Technology Update*, June 15, 2003, p. 3. However, one transplant automaker stated that U.S. steel companies deliberately breached its contracts by imposing price increases. Written submission of Mitsubishi Motors North America, June 20, 2003, p. 1. Another transplant automaker airlifted a steel shipment to the United States to avoid incurring a 30-percent price increase for domestically-produced steel. Post-hearing submission of AIAM, June 26, 2003, p. 2.

<sup>45</sup>For example, testimony of Jeffrey Stoner, Vice President, World Wide Procurement, ArvinMeritor, transcript of Commission hearing, June 19, 2003, p. 109. According to questionnaire responses, 79 percent of motor vehicle parts producers responding indicated that they were unable to pass along steel price increases to their customers.

<sup>46</sup>For further discussion, see chapter 2 under *Contract Abrogation*.

<sup>47</sup>Contracts range from 1 to 3 years. Testimony of Ramzi Hermiz, Vice President, Global Supply Chain Management, Federal-Mogul Corp., and Jeffrey Stoner, Vice President, World Wide Procurement, ArvinMeritor, Inc., transcript of Commission hearing, June 19, 2003, pp. 166, 180-181.

steel mill products from their customers through resale programs,<sup>48</sup> but these programs reportedly focus on commodity grade steels rather than engineered steels.<sup>49</sup>

Industry overcapacity and high levels of international competition likely contribute to the inability of the automotive producers to increase vehicle prices. International competition and overcapacity also tends to limit any market power OEM suppliers might have on the selling side, especially at the lower tiers, as the global industry is characterized by numerous, competitive firms. Suppliers are simultaneously under pressure to reduce component prices to gain and/or retain business with their customers,<sup>50</sup> and multi-year contracts between automakers and suppliers often include annual price reductions.<sup>51</sup> The demand for price cuts is not limited to automakers, however; large Tier 1 suppliers routinely make similar requests of their Tier 2 and Tier 3 suppliers.<sup>52</sup>

## **Machinery and Equipment**

The industries that make up this sector produce a wide and diverse spectrum of products ranging from electric motors and generators and related apparatus to farm, construction, and mining equipment. The leading steel consuming industries that produce machinery and equipment<sup>53</sup> typically are

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<sup>48</sup>Many of the leading U.S. automakers participate in resale programs, through which automakers reallocate their steel mill product purchases to their major suppliers of stampings and/or welded subassemblies. Wrigley, "Car Talk." For example, companies such as Ogihara America Corp., Oxford Automotive Inc., ThyssenKrupp Budd Co., and Tower Automotive Inc. receive most of the steel they use to produce body and structural stampings for domestic automakers on a reallocation basis from these automakers. Al Wrigley, "Vendors give thumbs up to flat-rolled resale program," *American Metal Market*, Dec. 20, 2002.

<sup>49</sup>MEMA, post-hearing submission to the USITC, for Investigation No. 332-452, June 27, 2003, p. 15. ArvinMeritor has a rebill program to supply primarily carbon steel to its parts suppliers. See testimony of Jeffrey Stoner, Vice President, World Wide Procurement, ArvinMeritor, Inc., before the USITC, hearing transcript, June 19, 2003, p. 163.

<sup>50</sup>Prior to contract award, the Big Three were reported to employ market testing, a process in which suppliers bid on a currently produced component and the existing manufacturer is required to meet the price to retain the contract. Automakers have also awarded contracts to the lowest bidder, disregarding established relationships with long-term suppliers that have incurred extensive capital outlays to produce the component. "Big 3 Squeeze Parts Makers; Firms Battle for Market Share Order Suppliers," *Globe and Mail*, Canadian Press, found at <http://itc.newsedge.com>, retrieved Apr. 28, 2003.

According to suppliers, this practice is prevalent with the more price-conscious Big Three, where cost rather than quality is considered to be of primary importance in contract awards. The German and Japanese transplant automakers, however, tend to develop more collaborative, long-term supplier relationships that emphasize a balance of cost and quality. The transplant automakers generally work with their suppliers to determine methods to reduce costs. Robert Sherefkin and Amy Wilson, "Why the Big 3 Can't be Japanese," *Automotive News*, Feb. 10, 2003, p. 6; "Annual OEM-Supplier Working Relations Study From Planning Perspectives: Domestic Big 3 Not Changing, Japanese Big 3 Keep Improving," May 12, 2003, found at <http://itc.newsedge.com>, retrieved May 12, 2003; and testimony of Larry A. Denton, President and Chief Executive Officer, DURA Automotive Systems, Inc., transcript of Commission hearing, June 19, 2003, pp. 222-23.

<sup>51</sup>For example, Dave Guilford, "GM Seeks Supplier Cost Cuts," *Automotive News*, Mar. 17, 2003, found at <http://www.autonews.com/article.cms?articleId=42920&a=a&bt=ford+price+cuts+suppliers>, retrieved Mar. 17, 2003; and testimony of Jeffrey Stoner, Vice President, World Wide Procurement, ArvinMeritor, Inc., transcript of Commission hearing, June 19, 2003, pp. 109-110.

<sup>52</sup>Testimony of Wes Smith, President, E&E Manufacturing Co., Inc., transcript of Commission hearing, June 19, 2003, p. 197.

<sup>53</sup>The machinery and equipment industry includes producers of power boilers and heat exchangers; farm, construction, and mining machinery and equipment; material-handling equipment such as overhead cranes, monorails, industrial trucks, tractors, and stacking equipment; power, distribution, and specialty electrical transformers; electric motors and generating equipment; switchgear and switchboard apparatus; relays and industrial control equipment; communication and energy wire and cable; current- and non-current carrying wiring devices; and

characterized by a top tier of large multinational producers (notably in industries producing farm, construction, and mining machinery; industrial truck and handling equipment; power transformers; and power boilers and heat exchangers) that dominate the market. Firms in this upper echelon typically exhibit a relatively high degree of vertical integration, highly automated production processes, and have experienced a substantial number of consolidations and departures in recent years.<sup>54</sup> Below this upper echelon, numerous other firms produce specialty or niche products or serve as component suppliers to the dominant firms.

The share of steel costs as a portion of material cost for firms in this sector varies widely (see table D-4). For a large percentage of the products produced within this sector the cost share of steel is about 10 to 30 percent, a range that was generally supported by testimony at the Commission's hearing.<sup>55</sup> However, many of these companies also purchase steel-containing parts and components. The purchase of certain specialized steels, such as cold-rolled, electrical grade steel, is a further obstacle for these steel consuming companies, as these products are manufactured by a limited number of domestic and foreign producers.

The ability of firms in these industries to limit the effect of the safeguard measures by substituting grades of steel subject to lower or no tariffs varies by industry. These industries consume various grades of steel, from subject commodity grades for the housing of certain products such as motors, generators, and transformers, to selected specialty grades such as non-subject grain- and non-grain-oriented electrical steels for the cores of electric motors, generators, and transformers.

Companies in some of these industries (particularly producers of boilers and heat exchangers; and power, distribution, and specialty transformers) purchase the steel mill products that they consume in their production operations directly from mills as well as from intermediate suppliers. Most of these industries purchase a majority of their steel from domestic sources. Industry sources indicate that for companies in these industries, steel service centers, are not typical suppliers. However, both hearing testimony and questionnaire responses indicate that firms in these industries may have purchased more from service centers recently.<sup>56</sup> The share of purchases of steel from steel service centers by heavy machinery manufacturers that responded to the purchasers questionnaire increased from 8.2 percent to 46.7 percent between 2001/02 and 2002/03.

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miscellaneous electrical equipment and components.

<sup>54</sup>Industry representatives, telephone interviews with USITC staff, May 20, 2003 and May 22, 2003.

<sup>55</sup>Caterpillar testified that its steel costs range between 10 percent to 15 percent, varying significantly with the type of product. Testimony of Dan M. Murphy, Vice President for Global Purchasing, Caterpillar, Inc., transcript of Commission hearing, June 19, 2003, p. 262. Advance Transformer indicated that steel represents 30 percent of total material costs for its electromagnetic ballasts but only 5 to 8 percent of material costs of its electronic ballasts and transformers. Testimony of Brian Dundon, President, Advance Transformer, transcript of Commission hearing, June 19, 2003, pp. 244, 261. Lincoln Electric stated that its electronic welding equipment has probably 10 to 15 percent steel content, while traditional and heavy industrial machinery such as transformer rectifiers could have between 30 to 35 percent steel costs. Testimony of John Stropki, Executive Vice President, The Lincoln Electric Company, transcript of Commission hearing, June 19, 2003, pp. 261-262. Acuity Lighting indicated that steel is a primary raw material accounting for more than 15 percent of overall product costs. Testimony of Tom Naramoore, Senior Vice President of Global Sourcing, Acuity Lighting, transcript of Commission hearing, June 19, 2003, p. 239. Delta Brands, a steel equipment manufacturer, also stated that steel inputs account for about 50 percent of the cost of its sales. Testimony of Sam Savariego, President, Delta Brands, Inc., transcript of Commission hearing, June 19, 2003, p. 263.

<sup>56</sup>For example, some firms indicated that after the implementation of the safeguard measures they increased their purchases from steel service centers because domestic mills had availability problems. Testimony of Brian Dundon, President, Advance Transformer, transcript of Commission hearing, pp. 267, 271-72 and testimony of Dan M. Murphy, Executive Vice President, Global Purchasing Division, Caterpillar Inc., transcript of Commission hearing, June 19, 2003, pp. 274-75.

Many of the companies that operate in this sector do not have the requisite purchasing clout to influence the terms of contracts from their steel suppliers, with only the top tier of multinational producers exhibiting the bargaining power necessary to exert any pressure on their suppliers. Moreover, many of the small-to-intermediate size companies in this sector have experienced competition from foreign suppliers. Cost increases associated with any increase in production costs are therefore either difficult or impossible to pass through to their customers.

Some firms in this sector secure their steel purchases through renewable annual contracts. This purchasing behavior is particularly the case with respect to power, distribution, and specialty transformers; motors and generators; and switchgear and switchboard apparatus.<sup>57</sup>

## Construction

Steel consuming industries in the construction sector include firms engaged in bridge, highway, and building construction; producers of metal buildings, architectural components, culvert pipe, and storage tanks; and rebar fabricators, among others.<sup>58</sup> The industries that compose this sector are fairly diverse. In the heavy construction industry (i.e., highway, bridge, water, and sewage projects), representatives indicated that the industry is concentrated and capital intensive.<sup>59</sup> However, according to industry sources, the architectural components industry is highly competitive and capital intensive, but not vertically integrated.<sup>60</sup> The rebar fabrication industry has become more concentrated in recent years but remains highly fragmented compared with most steel consuming industries,<sup>61</sup> with modest barriers to entry and little vertical integration.

The impact of the safeguard tariffs on the products commonly used in the construction sector varies significantly. Plate is subject to the highest safeguard tariffs while products such as pipe and reinforcing bar are subject to much lower tariff levels. Structural steel, of which the construction sector is the primary consumer, was excluded from the safeguard measures.

Industry sources report a wide range of estimated cost shares of steel for the construction industry, making it difficult to know the degree to which firms in these industries are affected by the safeguard measures (see table D-4). In the general construction industry, Nucor Corp. (Nucor), a leading steel products supplier to the construction industry, asserted that steel costs typically amount to less than 1 percent of the total construction project cost.<sup>62</sup> Likewise, CMC Steel Group (CMC), a rebar fabricator, also claimed that steel accounts for an insignificant share in the total cost of a construction project.<sup>63</sup> However, for industries in this sector that supply construction projects, steel can represent a major share of total costs. Steel reportedly accounts for 60 to 80 percent of the cost of delivered fabricated rebar.<sup>64</sup> For the storage tank industry, sources estimate that steel inputs account for approximately 25 percent of

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<sup>57</sup>Industry representatives, telephone interviews with USITC staff, May 23, 2003.

<sup>58</sup>Commission efforts to develop information on the steel purchasing patterns of construction-related producers were unsuccessful, other than for heavy construction, rebar fabricators, storage tanks, and architectural components.

<sup>59</sup>Industry representative, e-mail correspondence with USITC staff, July 10, 2003; industry representative, telephone conversation with USITC staff, July 15, 2003; and industry representatives, correspondence with USITC staff, July 2003.

<sup>60</sup>Industry representatives, telephone interviews with USITC staff, May 7-21, 2003.

<sup>61</sup>Industry representative, e-mail correspondence with USITC staff, June 27, 2003.

<sup>62</sup>Testimony of Terry Lisenby, Chief Financial Officer, Nucor Corp., transcript of Commission hearing, June 20, 2003, p. 539.

<sup>63</sup> Testimony of Tom Yarbrough, General Manager, SMI Rebar - North Carolina, CMC Steel Group, transcript of Commission hearing, June 20, 2003, p. 683.

<sup>64</sup>*Ibid.*

costs.<sup>65</sup> In the heavy construction industry, industry sources estimate that steel accounts for 0 to 20 percent of input costs.<sup>66</sup>

The widespread use of commodity-grade steel by firms in this sector, such as the architectural components and storage tank industries may limit the effect of the safeguard measures.<sup>67</sup> Although the steel products purchased by firms in the construction sector must meet industry standards for dimensions, chemical composition, and tensile strength, among other characteristics, they are predominantly of commodity grades produced by a wide range of manufacturers, including many in countries exempt from the safeguard measures.<sup>68</sup> Higher grade products are used when required in special applications. For example, rebar of high-strength low-alloy steel may be specified in areas of seismic activity that require a combination of strength, weldability, ductility, and bendability beyond the performance capabilities of normal carbon steel.<sup>69</sup> However, a low ability to substitute between different materials would tend to increase the effect of the safeguard measures.

More than 70 percent of the steel consumed by the heavy construction industry is purchased domestically, largely through spot purchases, although most or all industries in this sector use imported steel inputs to some degree. Heavy construction firms purchase primarily from steel mills and distributors.

In the rebar fabrication industry, steel is reportedly purchased primarily from domestic sources, but with a “significant” amount of imported steel.<sup>70</sup> Steel mills are the most important source of steel purchased by rebar fabricators, as most fabricators, and all large fabricators, buy directly from the steel mills or importers. Some of the smallest fabricators or those without the best credit might buy from distributors. One rebar fabricator source indicated that steel is purchased on a spot basis or on a fairly short time frame, perhaps a month or less. This fabricator also noted that the business is highly competitive and that the great majority of transactions are based on price.<sup>71</sup>

Manufacturers in the storage tank industry purchase steel primarily on a spot basis from domestic steel mills and service centers, and from foreign sources.<sup>72</sup> According to industry sources, the architectural components industry uses steel from both domestic and foreign sources. A few large architectural components firms purchase steel from mills, but most purchase from importers, distributors, and service centers and thus, are exposed to higher steel prices. Steel is purchased primarily through negotiated contracts.<sup>73</sup>

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<sup>65</sup>Industry representative, e-mail correspondence with USITC staff, July 17, 2003.

<sup>66</sup>Industry representative, e-mail correspondence with USITC staff, July 10, 2003; industry representative, telephone conversation with USITC staff, July 15, 2003; and industry representatives, correspondence with USITC staff, July 2003.

<sup>67</sup>Industry representative, e-mail correspondence with USITC staff, July 17, 2003, and industry representatives, telephone interviews with USITC staff, May 7-21, 2003.

<sup>68</sup>Some commodity-grade products may also be custom produced for a specific job (e.g., plates for bridges)

<sup>69</sup>“Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement,” ASTM A706/A706M-98, *Annual Book of ASTM Standards* (W. Conshohock, PA: American Society for Testing and Materials, 2000), vol. 01.04, sect. 1, pp. 330-334.

<sup>70</sup>Industry representative, e-mail correspondence with USITC staff, July 10, 2003; industry representative, telephone conversation with USITC staff, July 15, 2003; and industry representatives, correspondence with USITC staff, July 2003.

<sup>71</sup>*Ibid.*

<sup>72</sup>Industry representative, e-mail correspondence with USITC staff, July 17, 2003.

<sup>73</sup>Industry representatives, telephone interviews with USITC staff, May 7-21, 2003.

## Containers

Container-producing companies include producers of cans, barrels and drums, compressed-gas cylinders, and pails,<sup>74</sup> with can manufacturers accounting for about 80 percent of consumption of steel for the sector.<sup>75</sup> The steel container manufacturing sector's purchases of steel primarily consist of forms of flat-rolled steel that are subject to the highest safeguard tariff.

Steel-can manufacturing<sup>76</sup> is a concentrated and capital-intensive industry with a few large multinational food-can makers producing the great majority of cans. The entire manufacturing process for cans, from slitting the steel to packaging, is typically automated. The industry has experienced consolidation over the past 15 years as a result of the acquisition of the can manufacturing operations of many food-product manufacturers by the large multinational food-can makers.

The barrel and drum industry is highly capital intensive, highly automated, and relatively concentrated, primarily as a result of mergers and plant shutdowns, with the latter being driven principally by declining product demand. Transportation costs define the market for steel barrels and drums as the cost of shipping empty drums limits the effective market size.<sup>77</sup>

Steel represents the largest share of input costs for the industries in this sector. Industry sources estimate cost shares of steel relative to total production inputs at 60 percent to 70 percent for cans.<sup>78</sup> Industry sources estimate cost shares of steel relative to total production inputs at 50 to 70 percent for steel barrels and drums.<sup>79</sup>

Opportunities for substitution of steel from different sources are greater in the barrel drum industry than in the can industry. Barrel and drum makers primarily purchase commodity grade mill products, while can manufacturers account for the majority of the consumption of tin mill products, which are more specialized products, purchasing 82 percent of domestic shipments in 2002 (table D-1).

Can makers are dominated by a few large firms, which aggressively negotiate annual contracts with tin mill product suppliers; steel intermediaries play a minor role. Firms in this industry have traditionally had bargaining power with tin mill product suppliers. However, recent consolidation in the domestic tin mill products industry and the application of antidumping duties on tin mill products from Japan may have affected relative bargaining power in this market. Steel purchases are generally on an annual or multi-year contract basis. Because the cost of steel is such a large component of overall production costs, can manufacturers typically lock in the lowest steel prices through negotiated contracts.

Although most purchases by barrel and drum makers are made directly from domestic steel mills, some parts of this industry purchase through service centers and importers. The purchase arrangements vary among companies, with some firms having annual contacts with their steel suppliers, whereas others

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<sup>74</sup>Commission efforts to develop information on the steel purchasing patterns of the compressed-gas cylinder and steel pail manufacturers were unsuccessful.

<sup>75</sup>Compiled from 2000 statistics of the AISI.

<sup>76</sup>In the canning products manufacturing industry, there are three product segments: food, beverage, and general (such as paint and aerosols). Steel-can manufacturers dominate the food and general product categories, with the great majority of steel-can production being of food cans. In contrast, virtually all beverage cans are made from aluminum.

<sup>77</sup>In some instances, when the unit cost of domestic steel drums becomes excessive, some customers will shift their purchases to less-expensive, overseas suppliers and bulk ship the fill product to those points for filling. This results in the loss of both the domestic container production and filling activity.

<sup>78</sup>Industry representatives, telephone interviews with USITC staff, May 16, 20, and 21, 2003.

<sup>79</sup>*Ibid.*

work on the basis of monthly or quarterly agreements. The larger manufacturers rely considerably on renewable supply contacts; spot market purchases are relatively infrequent. There are very few corporate or contractual relationships between domestic steel container manufacturers and upstream suppliers or downstream customers.<sup>80</sup>

## **Consumer and Commercial Goods**

Steel consuming industries in the consumer and commercial goods sector include producers of major household appliances;<sup>81</sup> metal furniture, stands, and shelving; builders hardware; cutlery, kitchen ware, and sanitary ware; and non-powered hand tools. These industries are characterized by a few major multinational producers (particularly of major household appliances and non-powered hand tools), although numerous other firms also exist that either manufacture niche products or serve as component suppliers to the dominant firms. Although there has been a degree of consolidation in these industries, each industry also has a number of niche producers and suppliers of components or subassemblies to the larger, multinational participants. Individual companies in these industries are not sufficiently dominant to exert price pressure on steel suppliers. However, some companies can seek relief from higher steel prices by turning to foreign subsidiaries.

For example, each of three leading North American producers of major household appliances has manufacturing operations in both the United States and Mexico and can shift production from one country to another depending on cost and capacity considerations. Six of nine appliance producers reported decreased purchases of domestic steel following the imposition of the safeguard measures, but none reported increased purchases of imported steel (table 2-2). Rather than importing steel, the companies are importing finished appliances, chiefly from Mexico. Most appliance producers reported difficulty in obtaining steel following the imposition of the safeguard measures, in terms of the quantity available and/or the prices charged (table 2-24).

Manufacturing processes for many sector industries are highly automated, often utilizing numerically controlled computerized machining. In the sector's capital-intensive industries (such as major household appliances and mechanics hand tools), the leading firms are vertically integrated and these industries have experienced extensive consolidation in recent years. The hardware manufacturing industry reportedly has been affected more by consolidation in all aspects, including manufacturing, distribution, and retailing, than perhaps any other steel consuming industry, but it is not as highly capital intensive as some other sector industries.<sup>82</sup>

The share of steel input costs varies for these industries and for a number of products steel does not constitute a significant share of total costs. Publicly available data across broad consumer and commercial goods industries indicate that the share of total costs is less than 15 percent. The Air-Conditioning and Refrigeration Institute reported a range of 10 to 70 percent steel volume used per type of product, and the

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<sup>80</sup>Industry representatives, e-mail correspondence with USITC staff, May 22, 2003.

<sup>81</sup>The household appliance industry is segmented by differences in industry and market structures between major household appliances (e.g., refrigerators, ranges, washers, dryers, etc.) and portable (counter top) appliances. Major household appliances accounted for the bulk (87 percent, or \$32.5 billion) of all appliance sales (\$37.3 billion) in the United States during 2002. Compiled from official statistics of the U.S. Department of Commerce, BEA.

<sup>82</sup>William Ferrell, President and Chief Executive Officer, American Hardware Manufacturers Association, e-mail correspondence with USITC staff, May 21, 2003. Commission efforts to develop further information about purchasing patterns for this industry were unsuccessful.



Association of Home Appliance Manufacturers reported 27 to 84 percent steel volume.<sup>83</sup> Ki, Inc. testified that steel represents an estimated 10 percent of its material purchases and another 5 percent in fabricated-steel-type components, but may account for a higher portion of total costs for companies specializing in metal furniture.<sup>84</sup>

The ability of firms in these industries to substitute grades of steel subject to lower or no tariffs varies by industry. Steel products purchased by these industries are of various grades, with commodity grades for most products, but also some specialty grades for certain cutlery and certain components of non-powered hand tools. For most products in this sector, use of alternative materials to steel is not an option.

Although the majority of production in each of these industries is concentrated in a few large firms, the ability to pass on steel price increases to customers is limited because of the market power of large customers (such as large mass merchandisers with global purchasing strategies) that purchase based on price and the existence of extensive foreign competition. Because of this, major producers in each of these industries have sought price decreases from steel suppliers have also purchased from foreign-produced companies steel components or wholly fashioned products already incorporating the steel components.

The ability of firms in these industries to limit their exposure to the safeguard measures by negotiating long-term contracts and dealing directly with domestic steel mills also varies by industry. Firms in this sector procure steel from both U.S. and foreign sources. Most types of steels used in the major household appliance industry are procured domestically from service centers that assist producers in meeting just-in-time inventory requirements set by retail companies. Most major producers are inclined to maintain a limited number of contractual relationships with upstream or downstream firms, and instead rely on long-term contracts with a few key steel service centers.<sup>85</sup>

U.S. producers in other industries in this sector use a variety of methods for acquiring their steel inputs. Most U.S. manufacturers of cutlery, which often also import finished cutlery products under their brand names, buy both domestic and imported steel from U.S. steel distributors under short-term contracts.<sup>86</sup> Large firms in the non-powered hand-tool industry normally purchase from steel mills under annual contracts whereas smaller firms normally purchase from service centers on a spot basis. The majority of these purchases are of domestic steel, although some firms purchase forgings or stampings from abroad, and perform finishing and assembly in the United States.<sup>87</sup>

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<sup>83</sup>Post-hearing briefs of Stephen R. Yurek, General Counsel and Julie McCombs, Director of International Trade, ARI, p. 5 and David B. Calabrese, Vice President, Government Relations, AHAM, p.2.

<sup>84</sup>Ki, Inc. manufactures furniture that generally is used in the education system, government, and healthcare markets. Testimony of Gary Van Handel, Director, Supply Chain Management, Ki, Inc., transcript of Commission hearing, pp. 738-9.

<sup>85</sup>Industry representatives, telephone interview with USITC staff, May 9, 2003.

<sup>86</sup>Industry representatives, telephone interviews with USITC staff, May 12, 2003.

<sup>87</sup>Compiled by the USITC from industry publications; and USITC, "Hand Tools," *Country of Origin Marking: Review of Laws, Regulations, and Practices*, Investigation No. 332-366, USITC Publication No. 2975, July 1996, pp. 6-24 to 6-31.



**APPENDIX E**  
**FINANCIAL TABLES**

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**Table E-1**  
**Number of steel-consuming firms responding to changes due to safeguard measures, by type of response**

Response	Net Sales	Operating Income	Capital Expenditures	Subject input	Subject input
				products from U.S. producers	products from imports
-----Number of firms reporting-----					
<b>Decrease</b>					
Quantified .....	12	16	5	7	9
Did not quantify .....	3	3	1	1	2
<b>Increase</b>					
Quantified .....	8	7	2	29	11
Did not quantify .....	3	1	1	13	4
No change .....	29	29	31	23	16
Did not know change .....	6	4	6	4	4
Other response .....	15 <sup>1</sup>	14 <sup>2</sup>	12 <sup>3</sup>	16 <sup>5</sup>	10 <sup>7</sup>
No response .....	95	97	113 <sup>4</sup>	78 <sup>6</sup>	46 <sup>8</sup>
<b>Total .....</b>	<b>171</b>	<b>171</b>	<b>171</b>	<b>171</b>	<b>171</b>

<sup>1</sup> The respondents reported the following information: four indicated they could not quantify the data, seven indicated not available, one indicated undetermined, one indicated very poor business conditions, one indicated a minimal effect and one indicated that there were fewer new jobs and they were less competitive globally.

<sup>2</sup> The respondents reported the following information: seven firms indicated not available, one indicated undetermined, one indicated a minimal effect, four indicated that they could not quantify the data and one indicated that it would have been worse without remedy.

<sup>3</sup> The respondents reported the following information: seven indicated not available, four indicated they could not quantify the data and one indicated undetermined.

<sup>4</sup> Twenty-seven firms had reported no capital expenditures.

<sup>5</sup> The respondents reported the following information: seven indicated not available, four indicated that they could not quantify the data, one indicated increased cost per ton, one indicated base material cost increase by thirty percent, one indicated an increase of thirty-one percent, one indicated undetermined and one indicated a minimal effect.

<sup>6</sup> Three firms had reported no U.S. input products.

<sup>7</sup> The respondents reported the following information: Four indicated that they could not quantify the data, four indicated not available, one indicated increased volume and one indicated undetermined.

<sup>8</sup> Seventy firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-2

**Results of operations of U.S. steel distributor and/or service centers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Item	Change					
	2000/01	2001/02	2002/03	2000/01 to 2002/03	2000/01 to 2001/02	2001/01 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	1,546,253	1,222,919	1,190,623	-23.0	-20.9	-2.6
Cost of goods sold:						
Raw materials:						
Subject input products:						
From U.S. producers . .	948,167	804,044	811,162	-14.4	-15.2	0.9
From imports . . . . .	301,075	146,850	141,569	-53.0	-51.2	-3.6
Other raw materials . . .	14,749	9,604	9,829	-33.4	-34.9	2.3
Total raw materials . .	1,263,992	960,498	962,560	-23.8	-24.0	0.2
Direct labor . . . . .	56,106	48,183	46,589	-17.0	-14.1	-3.3
Other factory costs . . . . .	52,545	60,204	52,015	-1.0	14.6	-13.6
Total cost of goods sold . . . . .	1,372,643	1,068,885	1,061,164	-22.7	-22.1	-0.7
Gross profit or (loss) . . . . .	173,610	154,034	129,460	-25.4	-11.3	-16.0
SG&A expenses . . . . .	138,298	130,449	114,359	-17.3	-5.7	-12.3
Operating income or (loss) . . . . .	35,311	23,585	15,101	-57.2	-33.2	-36.0
Capital expenditures . . . . .	20,241	17,287	7,650	-62.2	-14.6	-55.7
	----Ratio to net sales (percent)----					
Cost of goods sold:						
Raw materials:						
Subject input products:						
From U.S. producers . .	61.3	65.7	68.1	6.8	4.4	2.4
From imports . . . . .	19.5	12.0	11.9	-7.6	-7.5	-0.1
Other raw materials . . .	1.0	0.8	0.8	-0.1	-0.2	0.0
Total raw materials . .	81.7	78.5	80.8	-0.9	-3.2	2.3
Direct labor . . . . .	3.6	3.9	3.9	0.3	0.3	0.0
Other factory costs . . . . .	3.4	4.9	4.4	1.0	1.5	-0.6
Total cost of goods sold	88.8	87.4	89.1	0.4	-1.4	1.7
Gross profit or (loss) . . . . .	11.2	12.6	10.9	-0.4	1.4	-1.7
SG&A expenses . . . . .	8.9	10.7	9.6	0.7	1.7	-1.1
Operating income or (loss)	2.3	1.9	1.3	-1.0	-0.4	-0.7
	----Number of firms reporting----					
Operating losses . . . . .	2	5	5			
Data for operations . . . . .	19	19	19			
Data for capital expenditures . . . . .	15	15	14			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-3**

**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. steel distributor and/or service centers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
-----Number of firms reporting-----					
<b>Decrease</b>					
Quantified .....	0	1	0	0	1
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	0	0	0	1	0
Did not quantify .....	0	0	0	1	0
No change .....	1	1	1	0	1
Did not know change ....	1	1	1	1	1
Other response .....	<sup>1</sup> 7	<sup>2</sup> 6	<sup>3</sup> 6	<sup>5</sup> 7	<sup>7</sup> 5
No response .....	10	10	<sup>4</sup> 11	<sup>6</sup> 9	<sup>8</sup> 11
<b>Total</b> .....	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>

<sup>1</sup> One firm indicated very poor business conditions, another firm indicated undetermined and five firms indicated NA.

<sup>2</sup> One firm indicated undetermined and five firms indicated not available.

<sup>3</sup> One firm indicated undetermined and five firms indicated not available.

<sup>4</sup> Three firms had reported no capital expenditures.

<sup>5</sup> One firm indicated 31 percent, another firm indicated undetermined, and five firms indicated not available.

<sup>6</sup> One firm had reported no U.S. input products.

<sup>7</sup> Four firms indicated not available and one firm indicated undetermined.

<sup>8</sup> Three firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-4

**Results of operations of U.S. steel hot/cold rolled or coated producers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	2,376,111	1,828,433	2,415,841	1.7	-23.0	32.1
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . . .	1,011,058	888,243	1,059,973	4.8	-12.1	19.3
From imports . . . . .	574,035	284,453	556,333	-3.1	-50.4	95.6
Other raw materials . . .	109,207	93,298	80,090	-26.7	-14.6	-14.2
Total raw materials . . .	1,694,300	1,265,994	1,696,396	0.1	-25.3	34.0
Direct labor . . . . .	176,398	183,493	200,228	13.5	4.0	9.1
Other factory costs . . . . .	289,033	277,589	287,268	-0.6	-4.0	3.5
Total cost of goods sold	2,159,731	1,727,076	2,183,892	1.1	-20.0	26.5
Gross profit or (loss) . . . . .	216,380	101,357	231,949	7.2	-53.2	128.8
SG&A expenses . . . . .	163,230	149,152	156,336	-4.2	-8.6	4.8
Operating income or (loss)	53,150	(47,795)	75,613	42.3	-189.9	258.2
Capital expenditures . . . . .	44,507	132,191	34,731	-22.0	197.0	-73.7
	----Ratio to net sales (percent)----					
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . . .	42.6	48.6	43.9	1.3	6.0	-4.7
From imports . . . . .	24.2	15.6	23.0	-1.1	-8.6	7.5
Other raw materials . . .	4.6	5.1	3.3	-1.3	0.5	-1.8
Total raw materials . . .	71.3	69.2	70.2	-1.1	-2.1	1.0
Direct labor . . . . .	7.4	10.0	8.3	0.9	2.6	-1.7
Other factory costs . . . . .	12.2	15.2	11.9	-0.3	3.0	-3.3
Total cost of goods sold	90.9	94.5	90.4	-0.5	3.6	-4.1
Gross profit or (loss) . . . . .	9.1	5.5	9.6	0.5	-3.6	4.1
SG&A expenses . . . . .	6.9	8.2	6.5	-0.4	1.3	-1.7
Operating income or (loss)	2.2	(2.6)	3.1	0.9	-4.9	5.7
	----Number of firms reporting----					
Operating losses . . . . .	6	7	4			
Data for operations . . . . .	12	12	12			
Data for capital expenditures . . . . .	12	12	12			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.



**Table E-5**  
**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. cold rollers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease</b>					
Quantified .....	1	1	0	0	0
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	2	1	0	2	2
Did not quantify .....	0	0	0	0	0
No change .....	3	4	5	4	4
Did not know change .....	1	1	1	1	1
Other response .....	<sup>1</sup> 2	<sup>2</sup> 2	<sup>3</sup> 2	<sup>4</sup> 2	<sup>5</sup> 2
No response .....	3	3	4	3	<sup>6</sup> 3
<b>Total</b> .....	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>

<sup>1</sup> Two respondents indicated that they could not quantify.

<sup>2</sup> Two respondents indicated that they could not quantify.

<sup>3</sup> Two respondents indicated that they could not quantify.

<sup>4</sup> Two respondents indicated that they could not quantify.

<sup>5</sup> Two respondents indicated that they could not quantify.

<sup>6</sup> One respondent had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-6

Results of operations of U.S. welded pipe producers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	2,817,352	2,436,415	2,635,155	-0.1	-13.5	8.2
Cost of goods sold:						
Raw materials:						
Subject input products:						
From U.S. producers . .	1,134,310	959,462	1,031,017	-9.1	-15.4	7.5
From imports . . . . .	278,576	184,460	283,778	1.9	-33.8	53.8
Other raw materials . . .	55,989	83,793	77,961	39.2	49.7	-7.0
Total raw materials . .	1,468,875	1,227,715	1,392,756	-5.2	-16.4	13.4
Direct labor . . . . .	295,946	285,834	300,750	1.6	-3.4	5.2
Other factory costs . . . . .	709,609	717,325	728,049	2.6	1.1	1.5
Total cost of goods sold	2,474,430	2,230,874	2,421,555	-2.1	-9.8	8.5
Gross profit or (loss) . . . . .	342,922	205,541	213,600	-37.7	-40.1	3.9
SG&A expenses . . . . .	183,924	185,274	180,207	-2.0	0.7	-2.7
Operating income or (loss)	158,998	20,267	33,393	-79.0	-87.3	64.8
Capital expenditures . . . . .	98,496	62,007	76,860	-22.0	-37.0	24.0
	----Ratio to net sales (percent)----					
Cost of goods sold:						
Raw materials:						
Subject input products:						
From U.S. producers . .	40.3	39.4	39.1	-1.1	-0.9	-0.3
From imports . . . . .	9.9	7.6	10.8	0.9	-2.3	3.2
Other raw materials . . .	2.0	3.4	3.0	1.0	1.5	-0.5
Total raw materials . .	52.1	50.4	52.9	0.7	-1.7	2.5
Direct labor . . . . .	10.5	11.7	11.4	0.9	1.2	-0.3
Other factory costs . . . . .	25.2	29.4	27.6	2.4	4.3	-1.8
Total cost of goods sold	87.8	91.6	91.9	4.1	3.7	0.3
Gross profit or (loss) . . . . .	12.2	8.4	8.1	-4.1	-3.7	-0.3
SG&A expenses . . . . .	6.5	7.6	6.8	0.3	1.1	-0.8
Operating income or (loss)	5.6	0.8	1.3	-4.4	-4.8	0.4
	----Number of firms reporting----					
Operating losses . . . . .	3	3	4			
Data for operations . . . . .	16	16	16			
Data for capital expenditures . . . . .	13	13	13			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-7**

**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. welded pipe producers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease</b>					
Quantified .....	1	2	1	1	2
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	2	1	1	3	0
Did not quantify .....	0	0	0	1	0
No change .....	2	2	3	1	3
Did not know change ....	1	1	1	0	1
Other response .....	<sup>1</sup> 1	<sup>2</sup> 1	<sup>3</sup> 1	<sup>5</sup> 2	<sup>6</sup> 2
No response .....	9	9	<sup>4</sup> 9	8	<sup>7</sup> 8
<b>Total</b> .....	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>

<sup>1</sup> One firm indicated that it can not quantify.

<sup>2</sup> One firm indicated that it can not quantify.

<sup>3</sup> One firm indicated that it can not quantify.

<sup>4</sup> Two firms had reported capital expenditures.

<sup>5</sup> One firm indicated that it can not quantify and one firm indicated that it increased cost per ton.

<sup>6</sup> One firm indicated that it can not quantify and one firm indicated that it increased volume.

<sup>7</sup> Four firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-8

Results of operations of U.S. bar and wire finishers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	326,637	264,310	272,005	-16.7	-19.1	2.9
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . . .	117,395	83,564	94,881	-19.2	-28.8	13.5
From imports . . . . .	85,667	82,876	80,422	-6.1	-3.3	-3.0
Other raw materials . . .	2,813	3,752	1,315	-53.3	33.4	-65.0
Total raw materials . . .	205,875	170,192	176,618	-14.2	-17.3	3.8
Direct labor . . . . .	20,849	18,804	18,461	-11.5	-9.8	-1.8
Other factory costs . . . . .	54,983	55,255	50,129	-8.8	0.5	-9.3
Total cost of goods sold	281,708	244,252	245,209	-13.0	-13.3	0.4
Gross profit or (loss) . . . . .	44,929	20,058	26,797	-40.4	-55.4	33.6
SG&A expenses . . . . .	32,224	27,815	26,359	-18.2	-13.7	-5.2
Operating income or (loss)	12,705	(7,757)	438	-96.6	-161.1	105.6
Capital expenditures . . . . .	12,630	23,768	10,400	-17.7	88.2	-56.2
	----Ratio to net sales (percent)----					
Cost of goods sold:						
Raw materials:						
Subject input products:						
From U.S. producers . . .	35.9	31.6	34.9	-1.1	-4.3	3.3
From imports . . . . .	26.2	31.4	29.6	3.3	5.1	-1.8
Other raw materials . . .	0.9	1.4	0.5	-0.4	0.6	-0.9
Total raw materials . . .	63.0	64.4	64.9	1.9	1.4	0.5
Direct labor . . . . .	6.4	7.1	6.8	0.4	0.7	-0.3
Other factory costs . . . . .	16.8	20.9	18.4	1.6	4.1	-2.5
Total cost of goods sold	86.2	92.4	90.1	3.9	6.2	-2.3
Gross profit or (loss) . . . . .	13.8	7.6	9.9	-3.9	-6.2	2.3
SG&A expenses . . . . .	9.9	10.5	9.7	-0.2	0.7	-0.8
Operating income or (loss)	3.9	(2.9)	0.2	-3.7	-6.8	3.1
	----Number of firms reporting----					
Operating losses . . . . .	1	5	6			
Data for operations . . . . .	14	14	14			
Data for capital expenditures . . . . .	9	9	9			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-9**

**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. bar and wire finishers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease</b>					
Quantified .....	1	0	0	0	1
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	1	0	0	2	0
Did not quantify .....	0	0	0	1	0
No change .....	2	3	1	1	3
Did not know change .....	0	0	0	0	0
Other response .....	<sup>1</sup> 1	<sup>2</sup> 1	<sup>3</sup> 1	<sup>5</sup> 1	0
No response .....	9	10	<sup>4</sup> 2	<sup>6</sup> 9	<sup>7</sup> 10
<b>Total</b> .....	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>

<sup>1</sup> One firm indicated not available.

<sup>2</sup> One firm indicated not available.

<sup>3</sup> One firm indicated not available.

<sup>4</sup> Four firms had reported no capital expenditures.

<sup>5</sup> One firm indicated not available.

<sup>6</sup> One firm reported no U.S. input products.

<sup>7</sup> Two firms reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-10**  
**Results of operations of U.S. fastener producers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>**

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	354,809	321,683	347,052	-2.2	-9.3	7.9
Cost of goods sold:						
Raw materials:						
Subject input products:						
From U.S. producers . . .	63,132	59,357	77,809	23.2	-6.0	31.1
From imports . . . . .	29,324	23,148	17,066	-41.8	-21.1	-26.3
Other raw materials . . . .	4,463	4,496	4,881	9.4	0.8	8.5
Total raw materials . . .	96,919	87,001	99,756	2.9	-10.2	14.7
Direct labor . . . . .	51,189	44,894	50,552	-1.2	-12.3	12.6
Other factory costs . . . . .	125,964	112,464	114,066	-9.4	-10.7	1.4
Total cost of goods sold	274,072	244,359	264,373	-3.5	-10.8	8.2
Gross profit or (loss) . . . . .	80,738	77,323	82,679	2.4	-4.2	6.9
SG&A expenses . . . . .	49,761	49,867	53,414	7.3	0.2	7.1
Operating income or (loss)	30,976	27,456	29,265	-5.5	-11.4	6.6
Capital expenditures . . . . .	4,417	2,314	10,902	146.8	-47.6	371.2
	----Ratio to net sales (percent)----					
Cost of goods sold:						
Raw materials:						
Subject input products:						
From U.S. producers . . .	17.8	18.5	22.4	4.6	0.7	4.0
From imports . . . . .	8.3	7.2	4.9	-3.3	-1.1	-2.3
Other raw materials . . . .	1.3	1.4	1.4	0.1	0.1	0.0
Total raw materials . . .	27.3	27.0	28.7	1.4	-0.3	1.7
Direct labor . . . . .	14.4	14.0	14.6	0.1	-0.5	0.6
Other factory costs . . . . .	35.5	35.0	32.9	-2.6	-0.5	-2.1
Total cost of goods sold	77.2	76.0	76.2	-1.1	-1.3	0.2
Gross profit or (loss) . . . . .	22.8	24.0	23.8	1.1	1.3	-0.2
SG&A expenses . . . . .	14.0	15.5	15.4	1.4	1.5	-0.1
Operating income or (loss)	8.7	8.5	8.4	-0.3	-0.2	-0.1
	----Number of firms reporting----					
Operating losses . . . . .	2	1	1			
Data for operations . . . . .	9	9	9			
Data for capital expenditures . . . . .	6	7	7			

<sup>1</sup> April 1-March 30.

<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-11**

**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. fastener producers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	----- <i>Number of firms reporting</i> -----				
<b>Decrease</b>					
Quantified .....	0	1	0	0	1
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	0	0	0	3	0
Did not quantify .....	0	0	0	0	1
No change .....	4	4	4	4	1
Did not know change .....	0	0	0	0	0
Other response .....	0	0	0	0	0
No response .....	5	4	5	2	1 <sup>6</sup>
<b>Total</b> .....	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>

<sup>1</sup> Four respondents had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-12

Results of operations of U.S. steel fabricators, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	1,156,659	1,034,088	1,047,553	-9.4	-10.6	1.3
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . . .	359,677	326,823	335,571	-6.7	-9.1	2.7
From imports . . . . .	21,523	21,819	26,990	25.4	1.4	23.7
Other raw materials . . .	46,592	39,885	40,429	-13.2	-14.4	1.4
Total raw materials . . .	427,792	388,527	402,990	-5.8	-9.2	3.7
Direct labor . . . . .	120,962	111,704	112,675	-6.9	-7.7	0.9
Other factory costs . . . . .	382,906	342,182	341,886	-10.7	-10.6	-0.1
Total cost of goods sold	931,660	842,413	857,551	-8.0	-9.6	1.8
Gross profit or (loss) . . . . .	224,999	191,675	190,002	-15.6	-14.8	-0.9
SG&A expenses . . . . .	148,426	139,912	137,878	-7.1	-5.7	-1.5
Operating income or (loss)	76,573	51,763	52,124	-31.9	-32.4	0.7
Capital expenditures . . . . .	35,122	37,810	17,889	-49.1	7.7	-52.7
	----Ratio to net sales (percent)----					
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . . .	31.1	31.6	32.0	0.9	0.5	0.4
From imports . . . . .	1.9	2.1	2.6	0.7	0.2	0.5
Other raw materials . . .	4.0	3.9	3.9	-0.2	-0.2	0.0
Total raw materials . . .	37.0	37.6	38.5	1.5	0.6	0.9
Direct labor . . . . .	10.5	10.8	10.8	0.3	0.3	0.0
Other factory costs . . . . .	33.1	33.1	32.6	-0.5	0.0	-0.5
Total cost of goods sold	80.5	81.5	81.9	1.3	0.9	0.4
Gross profit or (loss) . . . . .	19.5	18.5	18.1	-1.3	-0.9	-0.4
SG&A expenses . . . . .	12.8	13.5	13.2	0.3	0.7	-0.4
Operating income or (loss)	6.6	5.0	5.0	-1.6	-1.6	0.0
	----Number of firms reporting----					
Operating losses . . . . .	4	6	8			
Data for operations . . . . .	36	36	36			
Data for capital expenditures . . . . .	28	28	26			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.



**Table E-13**  
**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. steel fabricators, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	----- <i>Number of firms reporting</i> -----				
<b>Decrease</b>					
Quantified .....	4	6	1	3	1
Did not quantify .....	2	1	0	0	0
<b>Increase</b>					
Quantified .....	1	2	1	6	5
Did not quantify .....	1	0	0	5	2
No change .....	2	2	3	2	0
Did not know change ....	1	1	1	1	1
Other response .....	<sup>1</sup> 1	0	0	0	0
No response .....	24	24	<sup>2</sup> 30	19	<sup>3</sup> 27
<b>Total .....</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>

<sup>1</sup> One respondent indicated that there were fewer new jobs and that they were less competitive globally.

<sup>2</sup> Nine firms reported no capital expenditures.

<sup>3</sup> Nineteen firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-14

Results of operations of U.S. motor vehicles parts producers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>

Item				Change		
	2000/01	2001/02	2002/03	2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	2,246,215	2,140,179	2,232,372	-0.6	-4.7	4.3
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . .	661,046	687,268	732,089	10.7	4.0	6.5
From imports . . . . .	14,947	13,382	14,205	-5.0	-10.5	6.2
Other raw materials . . .	199,717	190,838	188,923	-5.4	-4.4	-1.0
Total raw materials . .	875,710	891,488	935,217	6.8	1.8	4.9
Direct labor . . . . .	198,137	194,198	207,430	4.7	-2.0	6.8
Other factory costs . . . . .	876,383	773,294	790,916	-9.8	-11.8	2.3
Total cost of goods sold	1,950,230	1,858,980	1,933,563	-0.9	-4.7	4.0
Gross profit or (loss) . . . . .	295,985	281,199	298,809	1.0	-5.0	6.3
SG&A expenses . . . . .	150,032	141,823	125,277	-16.5	-5.5	-11.7
Operating income or (loss)	145,953	139,376	173,532	18.9	-4.5	24.5
Capital expenditures . . . . .	137,921	100,895	80,595	-41.6	-26.8	-20.1
	-----Ratio to net sales (percent)-----					
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . .	29.4	32.1	32.8	3.4	2.7	0.7
From imports . . . . .	0.7	0.6	0.6	0.0	0.0	0.0
Other raw materials . . .	8.9	8.9	8.5	-0.4	0.0	-0.5
Total raw materials . .	39.0	41.7	41.9	2.9	2.7	0.2
Direct labor . . . . .	8.8	9.1	9.3	0.5	0.3	0.2
Other factory costs . . . . .	39.0	36.1	35.4	-3.6	-2.9	-0.7
Total cost of goods sold	86.8	86.9	86.6	-0.2	0.0	-0.2
Gross profit or (loss) . . . . .	13.2	13.1	13.4	0.2	0.0	0.2
SG&A expenses . . . . .	6.7	6.6	5.6	-1.1	-0.1	-1.0
Operating income or (loss)	6.5	6.5	7.8	1.3	0.0	1.3
	-----Number of firms reporting-----					
Operating losses . . . . .	3	2	3			
Data for operations . . . . .	19	19	19			
Data for capital expenditures . . . . .	16	16	16			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-15**  
**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. motor vehicles parts producers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease</b>					
Quantified .....	3	1	0	0	1
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	0	1	0	4	1
Did not quantify .....	0	0	0	1	0
No change .....	3	3	3	3	1
Did not know change .....	0	0	0	0	0
Other response .....	0	0	0	<sup>2</sup> 1	0
No response .....	13	14	<sup>1</sup> 16	10	<sup>3</sup> 16
<b>Total</b> .....	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>

<sup>1</sup> Three firms had reported no capital expenditures.

<sup>2</sup> One firm indicated base material cost increased by 30 percent.

<sup>3</sup> Eleven firms reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-16

Results of operations of U.S. heavy machinery producers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	1,088,166	739,984	731,088	-32.8	-32.0	-1.2
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . . .	78,585	59,932	59,564	-24.2	-23.7	-0.6
From imports . . . . .	4,499	3,296	3,490	-22.4	-26.7	5.9
Other raw materials . . .	581,821	474,785	400,074	-31.2	-18.4	-15.7
Total raw materials . . .	664,905	538,013	463,128	-30.3	-19.1	-13.9
Direct labor . . . . .	36,183	23,360	22,950	-36.6	-35.4	-1.8
Other factory costs . . . . .	256,296	119,325	176,997	-30.9	-53.4	48.3
Total cost of goods sold	957,384	680,698	663,075	-30.7	-28.9	-2.6
Gross profit or (loss) . . . . .	130,782	59,286	68,013	-48.0	-54.7	14.7
SG&A expenses . . . . .	75,235	57,585	56,874	-24.4	-23.5	-1.2
Operating income or (loss)	55,547	1,701	11,139	-79.9	-96.9	554.9
Capital expenditures . . . . .	15,947	9,591	5,628	-64.7	-39.9	-41.3
	----Ratio to net sales (percent)----					
Cost of goods sold:						
Raw materials:						
Subject input products:						
From U.S. producers . . .	7.2	8.1	8.1	0.9	0.9	0.0
From imports . . . . .	0.4	0.4	0.5	0.1	0.0	0.0
Other raw materials . . .	53.5	64.2	54.7	1.3	10.7	-9.4
Total raw materials . . .	61.1	72.7	63.3	2.2	11.6	-9.4
Direct labor . . . . .	3.3	3.2	3.1	-0.2	-0.2	0.0
Other factory costs . . . . .	23.6	16.1	24.2	0.7	-7.4	8.1
Total cost of goods sold	88.0	92.0	90.7	2.7	4.0	-1.3
Gross profit or (loss) . . . . .	12.0	8.0	9.3	-2.7	-4.0	1.3
SG&A expenses . . . . .	6.9	7.8	7.8	0.9	0.9	0.0
Operating income or (loss)	5.1	0.2	1.5	-3.6	-4.9	1.3
	----Number of firms reporting----					
Operating losses . . . . .	1	3	1			
Data for operations . . . . .	4	4	4			
Data for capital expenditures . . . . .	4	4	4			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-17**

**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. heavy machinery producers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease</b>					
Quantified .....	0	0	0	1	1
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	0	0	0	1	1
Did not quantify .....	0	0	0	0	0
No change .....	3	3	3	1	0
Did not know change .....	0	0	0	0	0
Other response .....	0	0	0	0	0
No response .....	1	1	1	1	1 <sup>2</sup>
<b>Total</b> .....	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

<sup>1</sup> One firm had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-18

Results of operations of U.S. power, other machiney producers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	2,382,194	2,220,557	2,368,243	-0.6	-6.8	6.7
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . .	154,793	132,302	148,277	-4.2	-14.5	12.1
From imports . . . . .	16,171	14,891	6,655	-58.8	-7.9	-55.3
Other raw materials . . .	967,991	868,835	922,141	-4.7	-10.2	6.1
Total raw materials . .	1,138,955	1,016,028	1,077,073	-5.4	-10.8	6.0
Direct labor . . . . .	220,452	210,207	218,361	-0.9	-4.6	3.9
Other factory costs . . . . .	470,077	479,559	515,199	9.6	2.0	7.4
Total cost of goods sold	1,829,484	1,705,794	1,810,633	-1.0	-6.8	6.1
Gross profit or (loss) . . . . .	552,710	514,763	557,610	0.9	-6.9	8.3
SG&A expenses . . . . .	392,566	386,501	381,185	-2.9	-1.5	-1.4
Operating income or (loss)	160,144	128,262	176,425	10.2	-19.9	37.6
Capital expenditures . . . . .	110,086	63,310	61,715	-43.9	-42.5	-2.5
	---Ratio to net sales (percent)---					
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . .	6.5	6.0	6.3	-0.2	-0.5	0.3
From imports . . . . .	0.7	0.7	0.3	-0.4	0.0	-0.4
Other raw materials . . .	40.6	39.1	38.9	-1.7	-1.5	-0.2
Total raw materials . .	47.8	45.8	45.5	-2.3	-2.1	-0.3
Direct labor . . . . .	9.3	9.5	9.2	0.0	0.2	-0.2
Other factory costs . . . . .	19.7	21.6	21.8	2.0	1.9	0.2
Total cost of goods sold	76.8	76.8	76.5	-0.3	0.0	-0.4
Gross profit or (loss) . . . . .	23.2	23.2	23.5	0.3	0.0	0.4
SG&A expenses . . . . .	16.5	17.4	16.1	-0.4	0.9	-1.3
Operating income or (loss)	6.7	5.8	7.5	0.7	-0.9	1.7
	----Number of firms reporting----					
Operating losses . . . . .	1	0	0			
Data for operations . . . . .	8	8	8			
Data for capital expenditures . . . . .	6	6	6			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-19**  
**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. power, other machinery producers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease</b>					
Quantified .....	0	0	0	0	0
Did not quantify .....	0	0	0	0	1
<b>Increase</b>					
Quantified .....	0	0	0	1	0
Did not quantify .....	1	1	1	1	0
No change .....	0	0	0	0	0
Did not know change ....	0	0	0	0	0
Other response .....	<sup>1</sup> 1	<sup>2</sup> 1	0	<sup>4</sup> 1	0
No response .....	6	6	<sup>3</sup> 7	5	<sup>5</sup> 7
<b>Total</b> .....	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>

<sup>1</sup> One respondent indicated a minimal effect.

<sup>2</sup> One respondent indicated a minimal effect.

<sup>3</sup> Two firms had reported no capital expenditures.

<sup>4</sup> One respondent indicated a minimal effect.

<sup>5</sup> Five firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-20

Results of operations of U.S. construction companies, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	1,466,920	1,144,501	1,053,705	-28.2	-22.0	-7.9
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . . .	665,546	572,682	520,295	-21.8	-14.0	-9.1
From imports . . . . .	27,276	18,446	9,737	-64.3	-32.4	-47.2
Other raw materials . . .	89,672	70,522	46,579	-48.1	-21.4	-34.0
Total raw materials . . .	782,494	661,650	576,611	-26.3	-15.4	-12.9
Direct labor . . . . .	143,221	127,471	121,751	-15.0	-11.0	-4.5
Other factory costs . . . . .	174,874	160,740	145,311	-16.9	-8.1	-9.6
Total cost of goods sold	1,100,589	949,861	843,673	-23.3	-13.7	-11.2
Gross profit or (loss) . . . . .	366,331	194,640	210,032	-42.7	-46.9	7.9
SG&A expenses . . . . .	198,416	184,059	169,055	-14.8	-7.2	-8.2
Operating income or (loss)	167,915	10,581	40,977	-75.6	-93.7	287.3
Capital expenditures . . . . .	28,684	16,990	18,092	-36.9	-40.8	6.5
	----Ratio to net sales (percent)----					
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . . .	45.4	50.0	49.4	4.0	4.7	-0.7
From imports . . . . .	1.9	1.6	0.9	-0.9	-0.2	-0.7
Other raw materials . . .	6.1	6.2	4.4	-1.7	0.0	-1.7
Total raw materials . . .	53.3	57.8	54.7	1.4	4.5	-3.1
Direct labor . . . . .	9.8	11.1	11.6	1.8	1.4	0.4
Other factory costs . . . . .	11.9	14.0	13.8	1.9	2.1	-0.3
Total cost of goods sold	75.0	83.0	80.1	5.0	8.0	-2.9
Gross profit or (loss) . . . . .	25.0	17.0	19.9	-5.0	-8.0	2.9
SG&A expenses . . . . .	13.5	16.1	16.0	2.5	2.6	0.0
Operating income or (loss)	11.4	0.9	3.9	-7.6	-10.5	3.0
	----Number of firms reporting----					
Operating losses . . . . .	1	5	7			
Data for operations . . . . .	17	17	17			
Data for capital expenditures . . . . .	13	12	13			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.



**Table E-21**

**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. construction companies, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease</b>					
Quantified .....	2	2	1	1	0
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	1	1	0	3	1
Did not quantify .....	1	0	0	1	0
No change .....	7	6	7	6	2
Did not know change ....	1	0	1	1	0
Other response .....	0	<sup>1</sup> 1	0	0	0
No response .....	5	7	<sup>2</sup> 8	5	<sup>3</sup> 14
<b>Total .....</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>17</b>

<sup>1</sup> One respondent indicated that it would have been worse without remedy.

<sup>2</sup> Four firms had reported no capital expenditures.

<sup>3</sup> Eleven firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-22

Results of operations of U.S. steel barrels and cans producers, 2000/01<sup>1</sup>, 2001/02<sup>1</sup>, 2002/03<sup>1</sup>

Item	2000/01	2001/02	2002/03	Change		
				2000/01 to 2002/03	2000/01 to 2001/02	2001/02 to 2002/03
	-----Value (\$1,000)-----			-----Percent-----		
Commercial net sales . . .	2,164,203	2,116,712	2,030,893	-6.2	-2.2	-4.1
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . .	806,535	795,835	797,129	-1.2	-1.3	0.2
From imports . . . . .	123,143	129,835	92,100	-25.2	5.4	-29.1
Other raw materials . . .	181,496	168,798	173,208	-4.6	-7.0	2.6
Total raw materials . .	1,111,174	1,094,468	1,062,437	-4.4	-1.5	-2.9
Direct labor . . . . .	178,109	164,829	161,452	-9.4	-7.5	-2.0
Other factory costs . . . . .	672,131	667,765	590,986	-12.1	-0.7	-11.5
Total cost of goods sold	1,961,414	1,927,062	1,814,875	-7.5	-1.8	-5.8
Gross profit or (loss) . . . . .	202,789	189,650	216,018	6.5	-6.5	13.9
SG&A expenses . . . . .	67,211	63,893	83,074	23.6	-4.9	30.0
Operating income or (loss)	135,578	125,757	132,944	-1.9	-7.2	5.7
Capital expenditures . . . . .	36,818	24,581	54,751	48.7	-33.2	122.7
	----Ratio to net sales (percent)----					
<b>Cost of goods sold:</b>						
<b>Raw materials:</b>						
<b>Subject input products:</b>						
From U.S. producers . .	37.3	37.6	39.3	2.0	0.3	1.7
From imports . . . . .	5.7	6.1	4.5	-1.2	0.4	-1.6
Other raw materials . . .	8.4	8.0	8.5	0.1	-0.4	0.6
Total raw materials . .	51.3	51.7	52.3	1.0	0.4	0.6
Direct labor . . . . .	8.2	7.8	8.0	-0.3	-0.4	0.2
Other factory costs . . . . .	31.1	31.5	29.1	-2.0	0.5	-2.4
Total cost of goods sold	90.6	91.0	89.4	-1.3	0.4	-1.7
Gross profit or (loss) . . . . .	9.4	9.0	10.6	1.3	-0.4	1.7
SG&A expenses . . . . .	3.1	3.0	4.1	1.0	-0.1	1.1
Operating income or (loss)	6.3	5.9	6.5	0.3	-0.3	0.6
	----Number of firms reporting----					
Operating losses . . . . .	1	0	0			
Data for operations . . . . .	5	5	5			
Data for capital expenditures . . . . .	3	3	3			

<sup>1</sup> April 1-March 30.<sup>2</sup> These are the changes for each line item which firms reported were the result of the safeguard remedies.

Source: Compiled from data submitted in response to Commission questionnaires.

**Table E-23**  
**Number of firms responding to changes due to safeguard remedies for the selected items by U.S. steel barrels and cans producers, by type of response**

<b>Response</b>	<b>Net Sales</b>	<b>Operating Income</b>	<b>Capital Expenditures</b>	<b>Subject input products from U.S. producers</b>	<b>Subject input products from imports</b>
	-----Number of firms reporting-----				
<b>Decrease</b>					
Quantified .....	0	1	1	0	1
Did not quantify .....	0	0	0	0	0
<b>Increase</b>					
Quantified .....	1	0	0	1	0
Did not quantify .....	0	0	0	0	0
No change .....	0	0	0	0	0
Did not know change ....	0	0	0	0	0
Other response .....	<sup>1</sup> 1	<sup>2</sup> 1	<sup>3</sup> 1	<sup>4</sup> 1	<sup>5</sup> 1
No response .....	3	3	3	3	<sup>6</sup> 3
<b>Total</b> .....	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>

<sup>1</sup> One firm indicated that it can not quantify.

<sup>2</sup> One firm indicated that it can not quantify.

<sup>3</sup> One firm indicated that it can not quantify.

<sup>4</sup> One firm indicated that it can not quantify.

<sup>5</sup> One firm indicated that it can not quantify.

<sup>6</sup> Two firms had reported no imports.

Source: Compiled from data submitted in response to Commission questionnaires.



**APPENDIX F**  
**TECHNICAL APPENDIX ON**  
**EMPLOYMENT ANALYSIS**

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# APPENDIX F

## TECHNICAL APPENDIX ON EMPLOYMENT ANALYSIS

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### Employment Analysis

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Using monthly employment and producer price data between January 2000 and December 2002, Francois and Baughman (2003) estimated that a 1 percent increase in the price of steel lowers employment by about 0.04 percent for a narrow definition of SC industries and by about 0.06 percent for a broader definition of SC industries.<sup>1</sup> These results are derived from estimating how much steel prices and employment in SC sectors are correlated, controlling for changes in overall manufacturing employment (minus employment in SC sectors). Figures F-1 and F-2 show the time trends in the data used in making their estimates.

Using these estimates and the 22 percent increase in the average price of hot/cold rolled steel (as measured in the producer price index) between December 2001 and December 2002, Francois and Baughman estimate that employment decreased by about 1.0 percent or about 50,000 workers for their narrow definition of SC sectors and by about 1.4 percent or 197,000 workers for their broader definition of SC sectors.<sup>2</sup> The authors also estimate that the decrease in employment represents almost \$4 billion in lost wages from February to November 2002.<sup>3</sup>

Although Francois and Baughman estimate the impact of the change in the price of steel, they do not specify what part of this total impact was due specifically to the steel safeguard measures. Also, their estimates rely on the assumption that changes in steel prices affect employment in SC manufacturing sectors, but *not* vice versa.

In addition, although Francois and Baughman control for changes in overall manufacturing employment, they assume that all other factors that may affect employment in SC sectors (such as changes in steel prices in foreign markets and wages for workers in SC sectors) are not correlated with the price of steel in the U.S. market and that lagged values of these other factors do not impact current

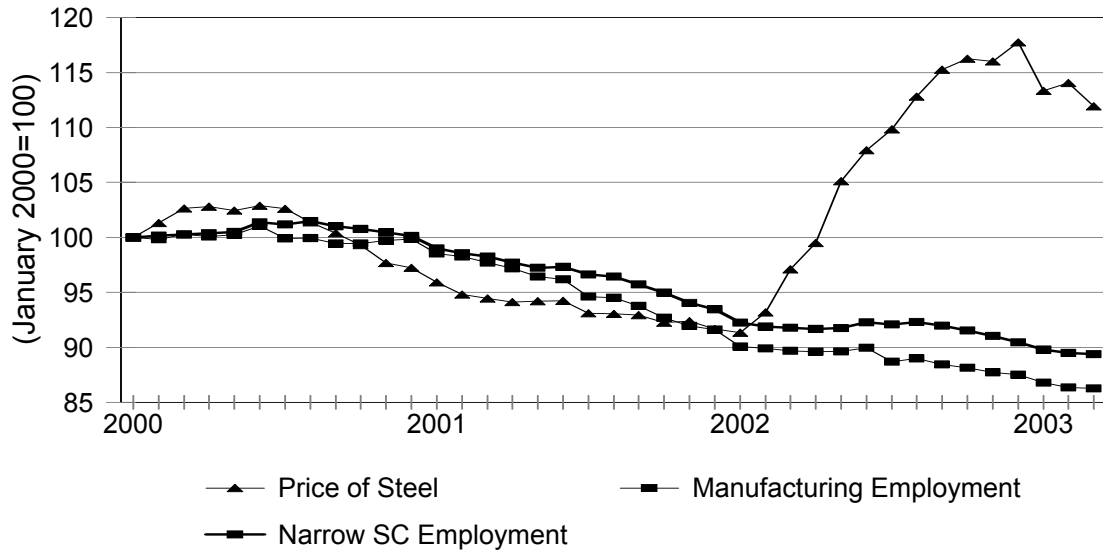
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<sup>1</sup>The authors use a *simple* average of the price of cold-rolled and hot-rolled steel from producer price indices. Their narrow definition of the SC industries includes the following Standard Industrial Classification (SIC) categories: metal fabrication (SIC 34), industrial machinery and equipment (SIC 35), and transportation equipment (SIC 37). In addition to the industries in their narrow definition, their broad definition includes electric distribution equipment (SIC 361), electrical industrial apparatus (SIC 362), household appliances (SIC 363), electric lighting and wiring equipment (SIC 364), chemical and related products (SIC 28), tires (SIC 301), petroleum refining (SIC 291), and nonresidential construction (SIC 15-17 minus SIC 152). Joseph Francois and Laura M. Baughman, "The Unintended Consequences of U.S. Steel Import Tariffs: A Quantification of the Impact During 2002." Paper prepared for the CITAC Foundation, Feb. 4, 2003, found at internet address <http://www.tradepartnership.com/pdf/jobstudy2002.pdf>, retrieved Apr. 24, 2003.

<sup>2</sup>Differences due to using logarithms.

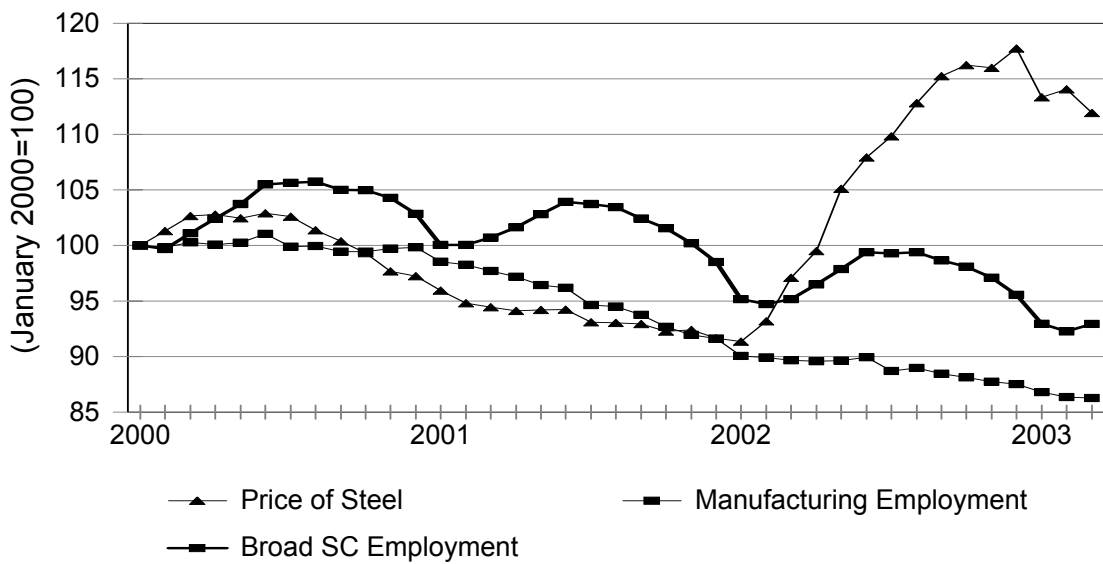
<sup>3</sup>This estimate assumes that the unemployed workers located similarly-paid employment within 4 weeks.

**Figure F-1**  
**Indices of the price of steel, manufacturing and employment for the narrow definition of SC industries, by month, January 2000-March 2003**



Source: Bureau of Labor Statistics, June 2003.

**Figure F-2**  
**Indices of the price of steel, manufacturing and employment for the broad definition of SC industries, by month, January 2000-March 2003**



Source: Bureau of Labor Statistics, June 2003.



employment in SC sectors. If steel prices and employment in SC sectors have common trends that are caused by other factors, Francois and Baughman's results could be biased.

Francois and Baughman indicate that their estimates are statistically significant, which given their assumptions means there is 95 percent confidence that increases in steel prices lowered employment in SC sectors to some extent. Interval estimates using their estimated standard error of the effect of steel prices indicate that this impact may vary in magnitude from their reported point estimates. For example, a confidence interval constructed by the USITC using their estimates indicates that there is a 95 percent chance that the change in employment in the broad definition of the SC sector resulting from the increase in the price of steel ranges anywhere from an increase of about 20,000 workers to a decrease of about 420,000 workers.

In an earlier paper using a CGE model, Francois and Baughman estimated that the increased input cost resulting from the safeguard measures recommended by the Commission would lead to a loss of between 36,200 to 74,500 jobs economy wide, and 15,300 to 30,600 jobs in SC industries.<sup>4</sup> Even the upper bound of these estimates, which were based on a higher safeguard tariff than those implemented by the President, are much smaller than the estimated employment decline in SC industries in their econometric model.<sup>5</sup>

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<sup>4</sup>Joseph F. Francois and Laura M. Baughman, "Estimated Economic Effects of Proposed Import Relief Remedies for Steel." Paper sponsored by the CITAC Foundation, Dec. 19, 2001, found at internet address [http://www.tradepartnership.com/pdf/Steel\\_Remedy.pdf](http://www.tradepartnership.com/pdf/Steel_Remedy.pdf), retrieved Mar. 7, 2003. For details of this GTAP-based model, see p. 13 and the technical appendix. The authors do not model the impact of the quotas proposed by Vice-Chairman Okun. Their employment estimates depend on their assumption that wages remain fixed.

<sup>5</sup>The CGE model used by Francois and Baughman assumes employment adjusts to the implementation of the proposed safeguard measures while wages are fixed. However, it would be expected that the safeguard measures would push the wage down, dampening the decrease in employment. Therefore, the employment effects from the CGE analysis are likely somewhat overstated.



**APPENDIX G**  
**TECHNICAL APPENDIX ON GENERAL**  
**EQUILIBRIUM SIMULATIONS OF THE**  
**SAFEGUARD MEASURES**

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# APPENDIX G

## TECHNICAL APPENDIX ON GENERAL EQUILIBRIUM SIMULATIONS OF THE SAFEGUARD MEASURES

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### Methodology

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The Commission uses a numeric general equilibrium model to analyze the impacts of the steel safeguard actions on the overall U.S. economy. The model is calibrated to the observed economy the prior to the imposition of the safeguard measures (2001/02). The model is a mathematical representation of the economy, simulating the interaction of producers and consumers, where each agent maximizes its own welfare subject to resource endowments and market prices. Resource and technological constraints interact with trade barriers to determine overall welfare. For this exercise, resource endowments and technologies are held constant across the policy simulation. Doing so allows for an experiment that controls for shocks that are contemporaneously correlated with the safeguard measures. Only those impacts that are specifically (structurally) attributed to the safeguard measures appear in the simulation. Thus, the technique employed is more akin to an ex-ante analysis, but it is employed in an ex-post analysis of the safeguard measures.

The motivation for using an ex-ante technique for assessing the safeguard actions is to isolate the impacts relative to other movements in the economy. Ex-post analysis typically explores statistical relationships between trade policy and changes and economic outcomes. Statistical relationships of this sort are critically dependent on a number of observations with different tariff levels. Given the limited number of observations (on a limited set of outcomes) beyond the date that the safeguard measures were imposed, an ex-post analysis would be very difficult and would yield questionable results. The simulations presented here rely on a particular theoretical structure of economic behavior to provide a framework for passing the effects of the steel tariffs onto the broader economy.

### Model Description

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General equilibrium models simulate interactions among producers and consumers within an economy in markets for goods, services, labor, and physical capital. The distinguishing feature of the general equilibrium approach is its economy-wide coverage and multisectoral nature. The model employed here explicitly accounts for upstream and downstream production linkages, intersectoral competition for labor, and international price changes. The model contains no intertemporal linkages, which is appropriate given the temporary nature of the safeguard actions.<sup>1</sup> The model can be divided into

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<sup>1</sup> Intertemporal decisions about how much aggregate consumption to forgo in an effort to generate future capital are not likely to be affected by the safeguard actions. Capital accumulation is contingent on the lifetime rate of return on the physical capital in question. Under normal parameterization, physical capital purchases are likely to generate revenue over many years or decades. Investors are unlikely to change their behavior significantly based on the short-run safeguard tariffs. Furthermore, the additional modeling overhead required to capture these minor effects would prevent the Commission from reporting consistent, highly disaggregated, results with respect to the steel-consuming industries.

three logical components that define the behavioral relationships: final demand behavior, production technologies, and the trade equilibrium.

### ***Final Demand Behavior***

The model considers two separate components of domestic final demand: private and public demand. Private household consumption is dictated by Cobb-Douglas utility over each product. Household consumption is limited by a budget constraint equal to the sum of factor incomes, net capital flows, and tax revenues, less government spending. Real public (government) spending is held constant in the model. Holding government spending fixed is consistent with welfare analysis under the assumption of separability of private consumption and publicly provided goods in the household utility function. The separability assumption is necessary in the absence of information about the total net benefits associated with government provision of public goods. The model assumes that changes in government revenues (due to changes in tariff policy) are lump-sum redistributed to households.<sup>2</sup>

### ***Production Technology***

Production technology is modeled using a nested constant elasticity of substitution (CES) value-added function.<sup>3</sup> Figure E-1 illustrates the production technology. At the bottom of the figure, inputs are combined to produce sectoral output  $X_j$ . In the value-added nest, capital and labor substitute for one another at a rate  $\phi_j$ . Domestic outputs of commodity  $i$  produced by sector  $j$ ,  $D_{ji}$ , are produced in fixed proportions according to the *make* coefficients in the social accounts. In general, the predominant output for a sector will be in its corresponding commodity, but some sectors will produce other commodities. The structure employed here accommodates details on both industries and commodities embedded in the *make* accounts available in the BEA input-output social accounts.

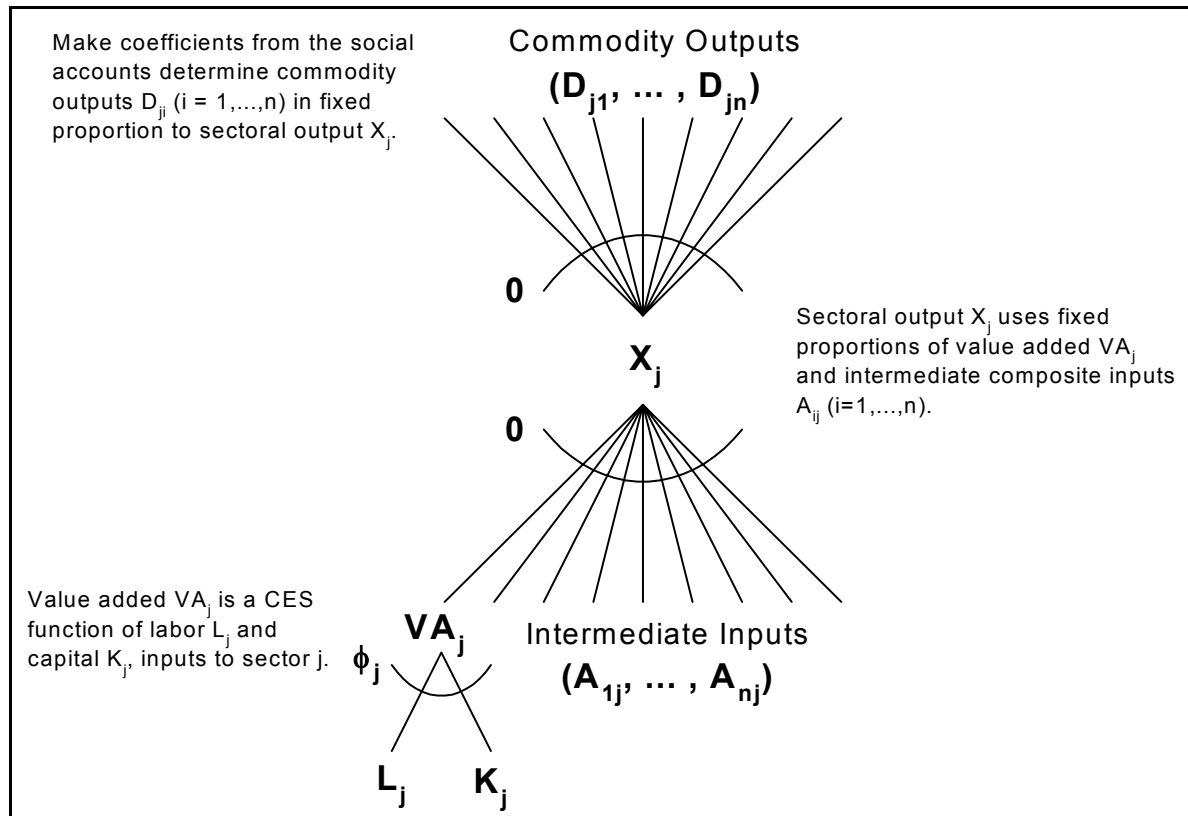
Factors of production—labor and capital—are assumed to be in fixed supply. This treatment is appropriate, because the model is not focused on aggregate employment, dynamic adjustment, or domestic tax issues. A single type of generic labor unit is assumed, and the supply of labor is fixed based on the observed value of labor payments. Capital is assumed to be sector specific and has a fixed supply. This assumption is appropriate because the temporary nature of the steel safeguard measures limit the advantages of reallocating capital across sectors. Furthermore, the safeguards will likely have a negligible impact on the aggregate capital stocks.

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<sup>2</sup> Using distortionary tax instruments (such as labor tax rates) to redistribute additional tariff revenues might decrease or increase the estimated welfare impacts of the safeguard measures. The increase or decrease in estimated welfare impacts depends on the marginal cost of public funds generated by the tax instruments, and the steel tariffs in question. See Charles L. Ballard and Don Fullerton, “Distortionary Taxes and the Provision of Public Goods,” *Journal of Economic Perspectives*, vol. 6, no. 3, pp. 117-131, 1992.

<sup>3</sup> For an introduction to CES production functions, see ch. 9 of P. R. G. Layard and A. A. Walters, *Microeconomic Theory* (New York: McGraw-Hill, 1978); ch. 9 of E. Silberberg, *The Structure of Economics* (New York: McGraw-Hill, 1990); and ch. 9 of J. W. Chung, *Utility and Production Functions: Theory and Applications* (Cambridge, MA: Blackwell Publishers, 1994).

**Figure G-1**  
**Production in the Simulation Model**



**T**

**rade Equilibrium**

Consistent with an Armington formulation of trade, imports of each commodity compete with the domestic variety.<sup>4</sup> For the analysis of the steel safeguard tariffs, however, additional varieties of steel imports were identified, and treated appropriately, in the model. These varieties included domestic steel, foreign non-covered products, foreign covered products imported from excluded countries, and foreign covered products that faced the tariffs. This formulation allows for the imposition of a tariff of the correct magnitude just on those products that covered by the duties. Models that do not treat the covered products separately are likely to generate biased welfare results, because in large-open-economy models small ad valorem tariffs on aggregate commodities generate significantly different results compared to a larger ad valorem tariff on a more disaggregate commodity. This aggregation bias is problematic even if appropriate weights are used to compute the ad valorem rate on the aggregate commodity. This aggregation bias is explored later in the analysis.

<sup>4</sup> See P. S. Armington, "A Theory of Demand for Products Distinguished by Place of Production," *IMF Staff Papers*, vol. 16, Mar. 1969, pp. 159-76.

The four varieties of steel<sup>5</sup> are combined at a constant elasticity of substitution. The resulting output is the composite steel commodity, which is available for domestic absorption.<sup>6</sup> Similarly, for the other commodities included in the model, imports and domestic varieties are combined at a constant elasticity of substitution to produce a composite commodity. The elasticity of substitution controls the economy's ability to switch between varieties of each product. For steel, sensitivity analysis is performed around the central estimate of 3.53.<sup>7</sup> For the other non-steel products the elasticity of substitution between domestic and foreign varieties is set to 4.<sup>8</sup>

To properly account for the size of the U.S. market relative to the rest of the world, the U.S. economy is modeled as a Large Open Economy (LOE). The model incorporates constant-elasticity import supply curves. Thus, the safeguard measures generate positive terms-of-trade effects for the U.S. economy. These beneficial terms-of-trade effects are an important feature of the model because the steel tariffs benefit the U.S. economy by depressing the world price of steel. Essentially, the United States is a large enough player in the world steel market that it can shift the burden of the tariffs onto foreign producers. These terms-of-trade impacts are analyzed below in the detailed results section.

The export market for U.S. products is identified by specifying the export-supply and export-demand functions. Parallel to specification of domestic and foreign import varieties, domestic output is disaggregated into commodities destined for the domestic market and those destined for foreign markets according to a constant elasticity-of-transformation (CET). This operationalizes the costly nature of switching between domestic and foreign markets. A balance-of-payments constraint closes the trade equilibrium requiring no change in capital flows due to the safeguard tariffs.

## Data, Benchmark, and Aggregations

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The simulation model represents the U.S. economy at the beginning of the safeguard action. The most recent benchmark table of the U.S. production technology (1997 BEA input-output accounts) is used as the primary data source. The benchmark accounts are adjusted to match aggregate economic conditions in March 2002, when the safeguard measures are implemented. Adjustments are made to reflect imports

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<sup>5</sup> For domestically produced steel, this composite steel commodity is broader than the actual safeguard coverage because the level of commodity aggregation in the U.S. benchmark input-output accounts dictate that the domestic steel market is very broad and includes many non-covered products (*see* table D-5 for the classification of Iron and Steel Mill Products). Domestic iron and steel is an aggregation of those industry categories of the input-output tables that would include the steel products covered by the safeguard measures: 331111 (iron and steel mills), 331210 (iron, steel pipe and tube from purchased steel), 331221 (rolled steel shape manufacturing), and 331222 (steel wire drawing).

<sup>6</sup> Domestic absorption is the measure of both intermediate and final demand for a product.

<sup>7</sup> The elasticity of substitution between varieties of steel is estimated to be 3.53 by David Hummels, "Toward a Geography of Trade Costs," (mimeo, Purdue University, 2000).

<sup>8</sup> This  $\sigma$  is often referred to as the "Armington" elasticity, *see* P. S. Armington, *op sit*. An Armington elasticity of 4 is adopted by Seth T. Kaplan and David A. Riker "The Net Welfare Effects of the 201 Steel Remedy," written submission to the Commission, June 20, 2003. An elasticity of 4 is also roughly consistent with the average of 1-digit estimates made by David Hummels, "Toward a Geography of Trade Costs," (mimeo, Purdue University, 2000). Assuming a common value across products, which are not directly related to the safeguard measures, is preferable in this context because the model will be driven by the input-output structure and not by anomalous trade elasticities on specific products. The relative confidence placed on the input-output data is higher than the confidence placed on the estimated trade elasticities for products that are not directly related to the safeguard measures. *See* Christine A. McDaniel and Edward J. Balistreri, "A Review of Armington Trade Substitution Elasticities," (2002, <http://www.georgetown.edu/faculty/ejb37/Papers/IDB.PDF>) for a discussion of the controversies surrounding trade elasticities in CGE analyses.



of steel products as they existed just prior to implementation of the safeguards. Although not as detailed as the specific tariff lines, the disaggregate BEA accounts provide significant detail on many primary and secondary industries related to the safeguard remedies. Specific industries modeled are presented in Table G-1. This table covers upstream industries that supply inputs to the steel industry and downstream industries that use steel inputs directly or indirectly. The modeled iron and steel industry includes establishments that are primarily engaged in the production of products covered by the safeguards: iron and steel mills; iron, steel pipe and tube from purchased steel; rolled steel shape manufacturing; steel wire drawing; and fabricated pipe and pipe fitting manufacturing.

**Table G-1**  
**Scope of industry coverage**

<b>Industry Containing Products Covered by Safeguard Measures</b>	
Iron and steel	
	<b>Other Primary Ferrous Metal Industries</b>
Custom roll forming	Ferrous metal foundries
Ferroalloy and related product manufacturing	Iron and steel forging and stamping
	<b>Other Upstream Sectors</b>
Coal mining	Energy
Iron ore mining	
	<b>Downstream Fabricated Metal Products</b>
Ball and roller bearing manufacturing	Metal valve manufacturing
Cutlery and flatware except precious manufacturing	Metal window and door manufacturing
Electroplating anodizing and coloring metal	Miscellaneous fabricated metal product manufacturing
Enameled iron and metal sanitary ware manufacturing	Ornamental and architectural metal work manufacturing
Fabricated structural metal manufacturing	Other ordnance and accessories manufacturing
Hand and edge tool manufacturing	Plate work manufacturing
Hardware manufacturing	Power boiler and heat exchanger manufacturing
Industrial pattern manufacturing	Prefabricated metal buildings and components
Kitchen utensil pot and pan manufacturing	Saw blade and handsaw manufacturing
Machine shops	Sheet metal work manufacturing
Metal can box and other container manufacturing	Small arms manufacturing
Metal coating and nonprecious engraving	Spring and wire product manufacturing
Metal heat treating	Turned product and screw nut and bolt manufacturing
Metal tank heavy gauge manufacturing	
	<b>Downstream Durable Manufactured Products</b>
Construction and mining machinery and equipment	Metal furniture
Durable manufacturing, not elsewhere classified (nec)	Motor vehicle parts
Electric power transformers and motors	Motor vehicles and equipment
Electronic and electrical equipment	Other transport equipment
Farm and garden machinery and equipment	Railroad rolling stock manufacturing
Industrial machinery and equipment	Ship building and repairing
Major household appliances	
	<b>Other Sectors</b>
Agriculture and forest products	Other new construction
Commercial and institutional buildings	Residential construction
Construction maintenance and repair	Resource extraction, nec
Highway street bridge and tunnel construction	Services, nec
Manufacturing and industrial buildings	Water sewer and pipeline construction
Nondurable manufacturing	

Source: USITC concordance.

## Safeguard Policy Experiment

Trade data in the year prior to the safeguard measures are used to compute a general measure of the safeguard tariffs. Hence, the computed rate does not reflect the change in trade because of the safeguards. As a benchmark, in the year leading up to the imposition of the safeguard measures the United States imported \$14.1 billion of iron and steel products. Narrowing the scope to only those

products covered by the safeguards, imports were \$8.7 billion. Accounting for countries not covered by the safeguard measures, benchmark imports covered by the safeguard were \$5.6 billion. Applying the safeguard rates to the customs value of covered imports (using the tariff-line level of aggregation) would have produced \$1.0 billion in tariff revenues (assuming no change in imports).<sup>9</sup> The implied *ad valorem* tariff rate on imports of covered products from covered countries is 18.34 percent. The specific experiment analyzed by the Commission is the imposition of a 18.34 percent tariff on steel imports of those products that are covered by the safeguards and that are imported from covered countries.<sup>10</sup>

## **Result Sensitivity and Other Modeling Issues**

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### *Terms-of-trade Effects*

One important aspect of the steel safeguard measures is their effect on the U.S. economy's terms of trade.<sup>11</sup> The size of the U.S. steel market relative to the world steel market indicates that the steel safeguard measures are likely to have an important impact on the world price of steel. So, although the tariffs increase prices for steel consumers, the burden of the tariffs is partially born by foreign producers. For small tariffs, the benefits of shifting the tax burden onto foreigners outweighs the costs to domestic consumers.<sup>12</sup> For large tariffs, the terms-of-trade benefits are outweighed by the costs to domestic consumers. To analyze the economy-wide effects of the steel safeguard measures it is important to establish what is a *large*, and what is a *small*, tariff for the covered products, in the context of the particular simulation model employed. Determining what is a large, as opposed to a small tariff, is best accomplished by plotting the relationship between welfare changes and the rate of protection, and is reported in Figure G-2.

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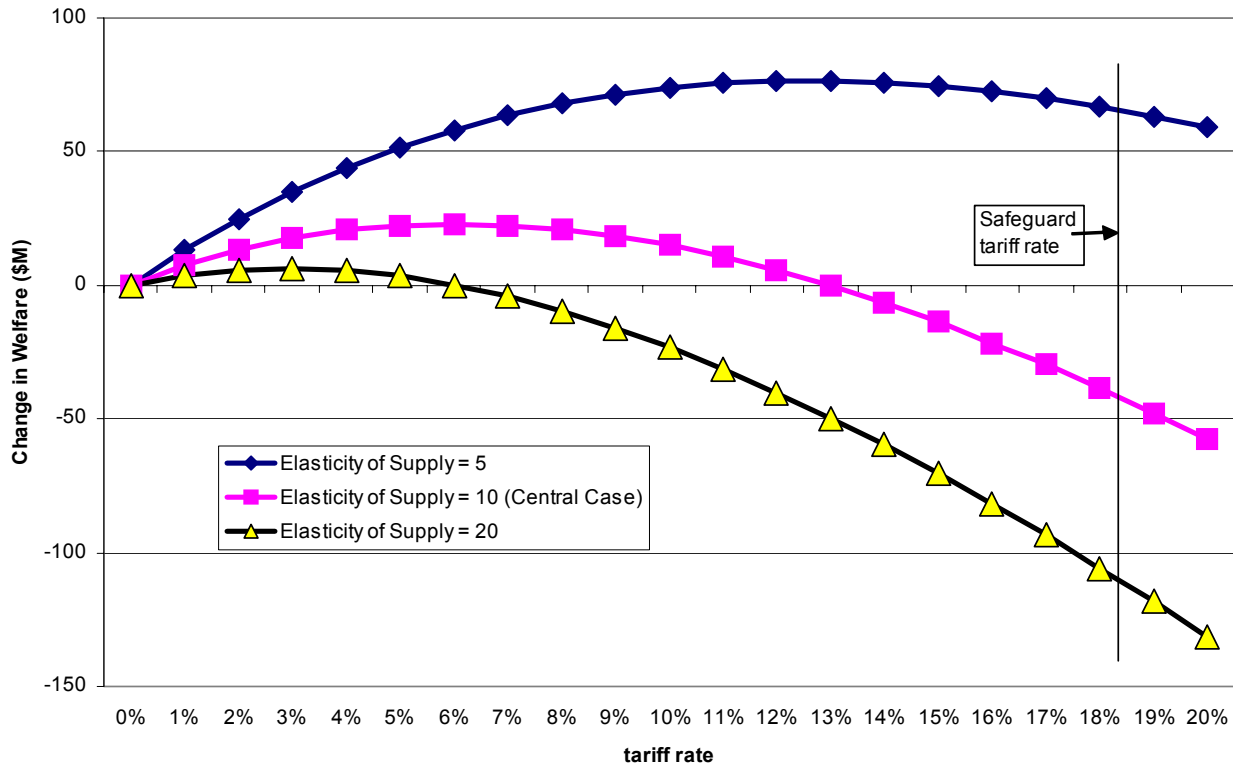
<sup>9</sup> The *ad valorem* safeguard rate applied to slab was zero because the quotas were not filled over the relevant period. If the slab tariff rate quota were filled, the implied *ad valorem* tariff rate on imports of covered products from covered countries would be larger.

<sup>10</sup> This experiment is based on the first year of the safeguard measures. Also, the experiment does not take into account product exclusions (other than the slab tariff rate quota) due to a lack of publicly available data on the extent to which imports were excluded from relief. If the experiment were based on the second or third years of the safeguard measures or accounted for product exclusions, the implied *ad valorem* tariff rate on imports of covered products from covered countries would be smaller.

<sup>11</sup> Seth T. Kaplan and David A. Riker argue, in their hearing submission, that terms-of-trade effects should be considered in the Commission's advice (Kaplan and Riker "The Net Welfare Effects of the 201 Steel Remedy," written submission to the Commission, June 20, 2003).

<sup>12</sup> See Paul R. Krugman and Maurice Obstfeld, *International Economics: Theory and Policy*, (Fourth Edition, MA: Addison-Wesley, 1997) for a proof that the optimal tariff is positive.

**Figure G-2**  
**Welfare impacts under alternative assumptions about the rate of trade protection and terms-of-trade effects**



Source: USITC calculations.

Figure G-2 illustrates how the net welfare impacts change as the tariff rate increases on the covered steel products. In the central case, an import supply elasticity of 10 is assumed. This elasticity is assumed based on the import demand elasticity of 3.53 and an observed reduction of 38 percent in the quantity (in tons) of covered steel imports in the year following the safeguard action. With an import supply elasticity of 10, the model predicts a 33 percent reduction in imports of the covered products, which indicates that the supply elasticity is likely to be close to 10. Assuming lower import supply elasticities (in this case, 5) generates significantly larger terms-of-trade effects, but significantly understates the change in import quantities. At a higher elasticity of 20, the terms-of-trade benefits are minimal.

### ***Model Sensitivity to Import-supply and Import-demand Elasticities***

There are two assumptions made in the simulation model that are critical to quantifying the economy-wide impacts of the safeguard measures on steel. These are the import-demand and the import-supply elasticities for the covered products that are from covered countries. The import demand elasticity is controlled by the elasticity of substitution between varieties of steel. As indicated in the earlier model description, the Commission relies on econometric evidence to identify this parameter. The econometric

evidence also estimated the standard deviation (around the central estimate of 3.53) for the substitution elasticity to be around 0.34. The sensitivity analysis conducted in this section is bound by two standard deviations above and below the central estimate.

As mentioned above, the Commission opted for a central import supply elasticity of 10. Import-supply elasticities above 10 will likely overstate the trade response, and import-supply elasticities below 10 will likely understate the trade response. The USITC acknowledges a great deal of uncertainty regarding this parameter, however, and therefore the sensitivity analysis is bound by 20 and 5. Table G-2 reports the welfare impacts associated with each sensitivity simulation. The USITC has the most confidence in the estimate given in the center cell (41.6).

**Table G-2**  
**Welfare sensitivity**

	Welfare Sensitivity (Million dollars)		
	Substitution Elasticity		
	2.85	3.53	4.21
<b>Import-Supply Elasticity:</b>			
5	58.7	65.6	71.6
10	-37.1	-41.6	-45.1
20	-96.4	-110.0	-121.2

Source: USITC calculations.

### *Aggregation Bias*

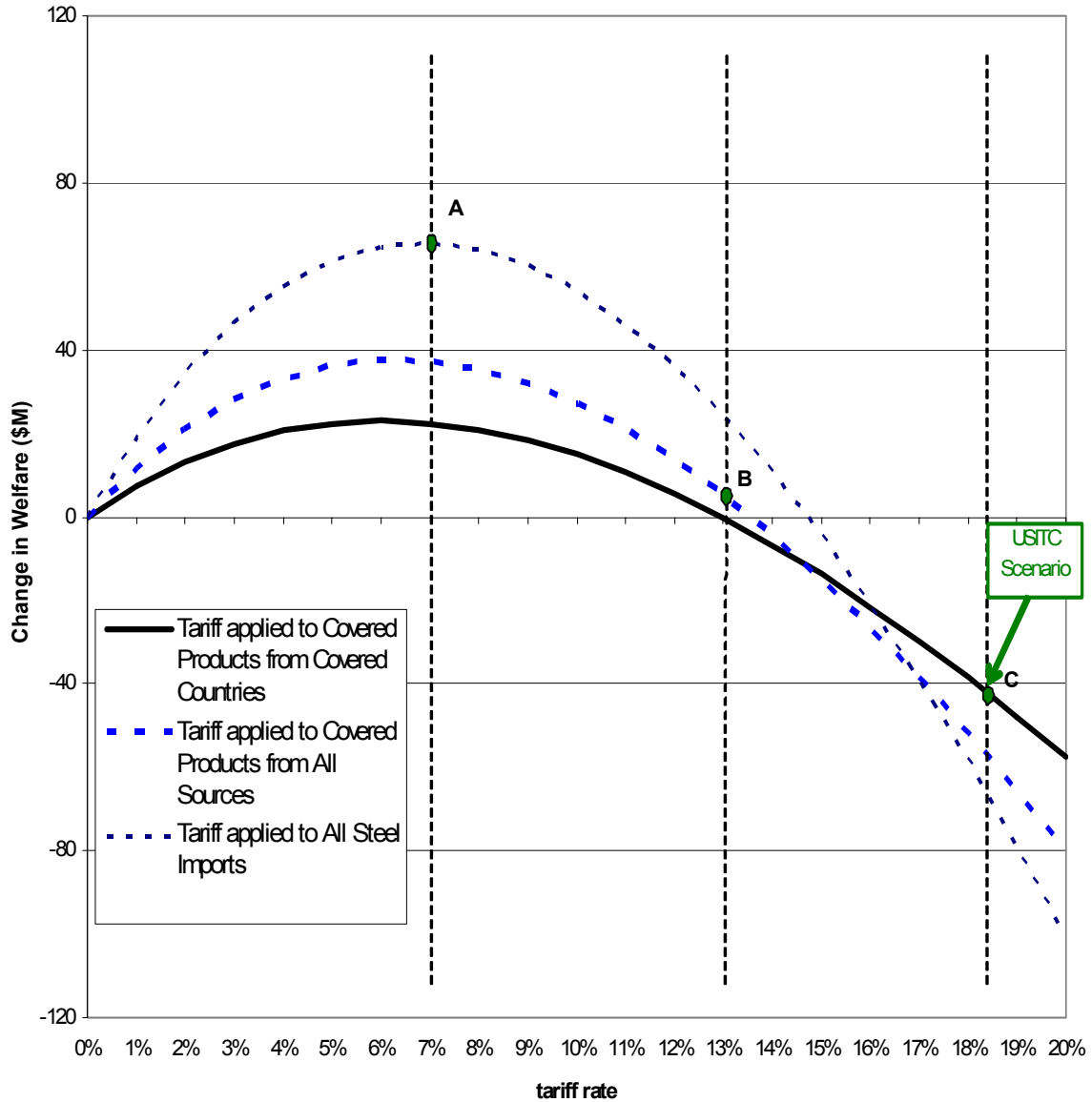
Different levels of aggregation can produce very different summary measures of the safeguard actions. Figure G-3 compares the relationship between welfare changes and the rate of protection over the modeled varieties of steel. Using the duty data to calculate the *ad valorem* rate of safeguard protection on aggregate iron and steel imports indicates a tariff of about 7 percent. Applying this rate to iron and steel imports in the simulation model indicates relatively large welfare gains from the tariffs (indicated in the figure with the point labeled A). In contrast, in the simulation examined by the Commission, an 18.34 percent tariff on only those imports that faced the duties, indicates a welfare loss of \$41.6 million (indicated in the figure with the point labeled C). As an intermediate case, Figure G-3 indicates a tariff of 13 percent on covered products from all countries at the point labeled B.

There are two key differences between the assumptions the Commission uses to quantify the impacts of the safeguard actions and the assumptions others have made using more aggregate model.<sup>13</sup> First, applying a given tariff to different product coverages produces different terms-of-trade effects. The different terms-of-trade effects are illustrated in Figure G-3 by the different lines. For example, applying a 7 percent tariff on all steel imports generates a \$66 million welfare gain, but applying a 7 percent tariff on covered products from covered countries (similar to the approach taken by the USITC) only produces a \$22 million welfare gain. This generates results consistent with economic theory, which suggest that the broader the coverage of a tariff the larger the terms-of-trade effect.

The second key difference between the model utilized by the Commission and more aggregate models concerns the actual calculation of the tariff rate. Accounting for countries not covered by the safeguards, benchmark imports covered by the safeguard were \$5.6 billion. Applying the safeguard rates to the customs value of covered imports (using the tariff-line level of aggregation) would have produced

<sup>13</sup> For example, the more aggregate model used by Seth T. Kaplan and David A. Riker “The Net Welfare Effects of the 201 Steel Remedy,”(written submission to the Commission, June 20, 2003).

**Figure G-3**  
**Welfare impacts under alternative assumptions about the rate of protection and terms-of-trade effects**



Source: USITC calculations.

\$1.0 billion in tariff revenues (assuming no change in imports).<sup>14</sup> The implied *ad valorem* tariff rate on imports of covered products from covered countries is about 18 percent. Applying the same computed duties to the aggregate covered product imports implies an *ad valorem* rate of about 13 percent, and

<sup>14</sup> The *ad valorem* safeguard rate applied to slab was zero because the quotas were not filled over the relevant period.

applying the same computed duties to aggregate iron and steel imports implies an *ad valorem* rate of only about 7 percent. Figure G-3 shows that these different methods produce different quantitative and qualitative impacts on welfare. It is important to consider these known aggregation biases when evaluating models of the steel safeguard measures.

### ***Productivity Changes and Long-run Impacts***

It has been suggested by Seth T. Kaplan and David A. Riker of Charles River Associates Incorporated that the Commission should consider the productivity increases brought about by the safeguard actions.<sup>15</sup> The simulation results reported in table 4-3, however, suggests the opposite reaction – productivity falls in the steel industry as labor inputs increase relative to the output increase. The productivity decrease is an endogenous reaction to the increase in steel prices and the drop in wages that result from the safeguard tariffs.

Evidence might be presented that productivity has increased via consolidation, but that increase does not directly indicate that the safeguard actions were instrumental in bringing about the changes or that larger increases might have occurred in the absence of the tariffs. In fact, the economic model suggest that, holding other factors constant, the tariffs allowed the steel industry to be less productive.

The productivity changes suggested by Kaplan and Riker are *assumed* and not generated by any economic model of the safeguard tariffs.<sup>16</sup> When one assumes that labor becomes more productive, there are substantial gains to economic welfare. The assumption of increased productivity relaxes overall scarcity of labor and expands the economy’s production possibility frontier.<sup>17</sup> Kaplan and Riker argue that the steel industry could not reorganize in the absence of the safeguard measures, indicating a very different analysis from the exogenous productivity increases that they suggest.<sup>18</sup> Their submission indicates that prior to the safeguard action some distortion was preventing the economy from reaching the production frontier and that the safeguards offset that distortion in a way that moved the economy to a more efficient position. An analysis that shifts the production frontier is not consistent with the motivating suggestion that the safeguard measures move the economy toward the frontier, by offsetting a benchmark distortion.

In this report, the Commission does not model the suggestion made by Kaplan and Riker that the safeguard action enabled the domestic steel industry to secure financing for profitable investments. Proper analysis of such a scenario would require a structural model that includes the benchmark distortion in the capital market. Furthermore, the analysis would need a structural link that indicates how the safeguards interact with the capital market distortions. Kaplan and Riker provide no modeling of the proposed benchmark distortions, nor do they offer any guidance on the link between the safeguards and the benchmark distortions.

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<sup>15</sup> Seth T. Kaplan and David A. Riker “The Net Welfare Effects of the 201 Steel Remedy,” submitted to the Commission June 20, 2003.

<sup>16</sup> In their post-hearing brief CITAC explains that Kaplan and Riker:  
...manipulates its [Computable General Equilibrium] CGE analysis in an effort to demonstrate that there is a “free lunch” whereby, all parties, including steel consumers, actually benefit from higher prices and reduced availability of steel...(p. 3, appendix).

The issue of productivity in the steel industry is explored in more detail below.

<sup>17</sup> A *production possibility frontier* is a diagram showing the maximum output possible for one good for various outputs of another (or several others), given a certain level of technology and factor endowments (land, labor and capital) of an economy. Also called the *transformation curve*. Alan Deardorff, *Glossary of International Economics*, <http://www.econ.lsa.umich.edu/>, downloaded August 7, 2003.

<sup>18</sup> Kaplan and Riker (2003).

If suggestions made by Kaplan and Riker were incorporated into the analysis, the welfare implications of exogenously increasing productivity in the short or long run are easily computed without a complex numeric model, because small relaxations of overall labor scarcity have only minor impacts on relative prices (the shift in the production frontier is roughly parallel). Using the BEA benchmark data, employee compensation in the iron and steel industry in 1997 was \$14.8 billion. If the scarcity of this input is relaxed by 2 percent (as Kaplan and Riker suggest) the economy gains \$296 million annually. Accounting for a 10 year stream of these gains discounted at 5 percent the Commission estimates an aggregate gain of \$2.6 billion which is comparable to the aggregate gain assumed by Kaplan and Riker (of \$2.75 billion). Adopting Kaplan and Riker's suggestion, to include exogenous productivity increases, would simply increase the welfare impacts reported above by about \$2.6 billion. As Kaplan and Riker point out in their analysis, assumed productivity gains of this magnitude, swamp the relatively small simulated effects of the tariffs. However, as explained above the productivity changes suggested by Kaplan and Riker are *assumed* and not generated by any economic model.





**APPENDIX H**  
**INVESTIGATION OF THE “ITC**  
**QUESTIONNAIRE TIP SHEET”**

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# APPENDIX H

## INVESTIGATION OF THE “ITC QUESTIONNAIRE TIP SHEET”

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### Introduction

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During the course of Investigation No. 332-452, *Steel-Consuming Industries: Competitive Conditions with Respect to Steel Safeguard Measures*, the Commission received information that a group had disseminated a document entitled “ITC Questionnaire Tip Sheet” (Tip Sheet) to some of the companies that may have received the questionnaire or had been in a position to complete the questionnaire in this investigation. Certain advice contained in the Tip Sheet urged recipients to reply to the questionnaire in a misleading way or to exaggerate estimates in their responses. As a very significant portion of the data presented in the report is based on questionnaire data, the Commission needed to analyze whether this guidance materially affected its fact-finding.

The Commission’s role in general fact-finding investigations under Section 332(g) of the Tariff Act of 1930 is to gather information and to present its factual findings in a report. A USITC study has value because the Commission, as an independent, non-partisan, fact-finding institution, has the resources necessary to collect and analyze data and information, and to present that information in an impartial manner. Actions that call into question the integrity of a Commission report must be addressed. Therefore, the Commission decided it to be necessary and appropriate to expend considerable time and valuable resources to understand how this incident affected the Commission’s fact-finding.<sup>1</sup>

The following is a description of the investigation conducted by the Commission, the results of that investigation, and the Commission’s evaluation of the data from responding firms including those who received the Tip Sheet as well as the data excluding responses from those who received the Tip Sheet.

### Investigation

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At the hearing on June 19, 2003, the Commission announced that it was aware that a group had disseminated a document entitled “ITC Questionnaire Tip Sheet.”<sup>2</sup> The Commission announced that it

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<sup>1</sup> The Commission considers the question of whether the conduct by those participating in an investigation could compromise the objectivity of the information received in response to questionnaires to be a serious matter. Accordingly, the Commission will address separately the conduct during the Commission’s investigation of those responsible for the creation and distribution of the Tip Sheet.

<sup>2</sup> Opening Statement of Chairman Deanna Tanner Okun, Investigation No. 332-452, *Steel-Consuming Industries: Competitive Conditions with Respect to Steel Safeguard Measures*. An attorney representing a company interested in this proceeding submitted in confidence the Tip Sheet to the Commission on June 4, 2003, as part of his client’s pre-hearing brief. CPTI 201 Coalition, pre-hearing brief to the USITC for Investigation No. 332-452, June

was investigating the matter and during the course of the two days of hearings, the witnesses and counsel were asked whether they or their organizations had received, otherwise seen, participated in the preparation of, or were otherwise aware of an “ITC Questionnaire Tip Sheet.”<sup>3</sup>

The Tip Sheet is a two-page document that advised potential questionnaire respondents about how to complete the Commission’s questionnaire.<sup>4</sup> This advice ranged from “answer all questions” and “estimates are allowed if exact data is {sic} not available” to certain advice that recommended that questionnaire respondents should exaggerate the impact of the safeguard measures on their firms. For example, the document encouraged respondents to use estimates that favor “a more compelling story.” It also urged respondents to answer the questionnaire in a particular way by stating that it is “important” that respondents’ “projections for the future should be even more bleak than what has happened to date.” In addition, the Tip Sheet encouraged respondents to “{b}e creative and ‘extrapolative’,” and to “multiply the impact of a particular adverse development.” It suggested that estimates were the best means to accomplish this end.

The Commission began to define the universe of those who may have received the document by asking witnesses during the course of the two days of hearings whether they had prepared, received, or otherwise were aware of the Tip Sheet. Three attorneys either answered in the affirmative (Sanford B. Ring and Roger Schagrin) or indicated that they would respond in the post-hearing submission (Tamara Jack).<sup>5</sup> Based on the e-mail that transmitted the Tip Sheet to a number of recipients, the Commission knew that the document had been disseminated by an association.<sup>6</sup> Following the hearings, Chairman Okun sent post-hearing questions to the two individuals known to have seen the Tip Sheet and to 26 firms or associations. The Commission compiled the list of associations from those associations that had entered an appearance before the Commission or those associations with whom the Commission consulted at the beginning of the investigation to develop its questionnaire mailing list. Through this investigation, the Commission was able to clarify who created the Tip Sheet, who disseminated it and who received the document.

Attorney Sanford B. Ring, counsel to the Motor and Equipment Manufacturers Association (MEMA), acknowledged drafting the Tip Sheet and a transmittal memorandum to assist the motor vehicle parts producers that are members of MEMA in completing the investigation’s questionnaires.<sup>7</sup> At the direction of \* \* \*, Mr. Ring also provided the document to another association, the National Electrical

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4, 2003, pp. 13-14, Exh. 4.

<sup>3</sup> See Transcript of Commission Hearing, June 19, 2003, p. 146 (Commissioner Stephen Koplan). See also Transcript of Commission Hearing, June 19, 2003, pp. 254-55, 457-58 (Commissioner Stephen Koplan); Transcript of Commission Hearing, June 20, 2003, pp. 597-98, 694, 766, 820 (Commissioner Stephen Koplan).

<sup>4</sup> A copy of the Tip Sheet can be found at the end of this appendix.

<sup>5</sup> See Transcript of Commission Hearing, June 19, 2003, pp. 160-61, 484; Transcript of Commission Hearing, June 20, 2003, pp. 604-05.

<sup>6</sup> See CPTI 201 Coalition, pre-hearing brief to the USITC for Investigation No. 332-452, June 4, 2003, pp. 13-14; Roger B. Schagrin, Fax to the USITC for Investigation No. 332-452, June 19, 2003; Roger B. Schagrin, Response to Chairman Okun for Investigation No. 332-452, June 30, 2003, Attachment 2.

<sup>7</sup> Sanford B. Ring, Response to the USITC for Investigation No. 332-452, June 25, 2003, p. 1; Sanford B. Ring, Response to Chairman Okun for Investigation No. 332-452, June 30, 2003, p. 1. See also MEMA, Response to Chairman Okun for Investigation No. 332-452, July 2, 2003, p. 2 (“MEMA received the Document from its ITC counsel, Dykema Gossett”).

Manufacturers Association (NEMA), which was not his client.<sup>8</sup> Representatives for both MEMA and NEMA acknowledged that they electronically transmitted the Tip Sheet to a group of firms and associations.<sup>9</sup> <sup>10</sup> MEMA transmitted the documents on April 28, 2003, to 69 individuals at 38 firms and 2 associations.<sup>11</sup> MEMA retransmitted the documents on May 1 and 2, 2003.<sup>12</sup> NEMA transmitted the Tip Sheet on May 1, 2003, to 401 individuals at 347 firms.<sup>13</sup> The Specialty Equipment Market Association (SEMA) transmitted the Tip Sheet to one of its members that later chose not to submit a questionnaire.<sup>14</sup> As a result of the investigation, the Commission determined that the Tip Sheet was distributed to a minimum of 386 firms.<sup>15</sup>

## **Tip Sheet Recipients Submitting Questionnaire Responses**

After defining the universe of likely recipients, the Commission examined whether any of the firms that received the Tip Sheet had submitted questionnaire responses in this investigation. Of the 386 firms that are known to have received the Tip Sheet, the Commission received 34 purchaser questionnaire responses. These companies range in size from small to large purchasers of subject steel products and represent several industry sectors.

In this investigation, the Commission received 485 questionnaires from firms that indicated that they had purchased subject steel products. Thus, those firms that both received the Tip Sheet and submitted questionnaires represent approximately 7.0 percent of the responses in the Commission's database. A similar ratio, however, is higher in particular industry sectors as the Tip Sheet was disseminated to MEMA and NEMA members, who are comprised primarily of firms in the automotive parts, industrial fastener and energy sectors. The industry sectors most affected were industrial fasteners and automotive parts, where 28.6 percent and 22.1 percent of the Commission questionnaire responses for each of those industry sectors, respectively, had received the Tip Sheet.

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<sup>8</sup> Sanford B. Ring, Response to the USITC for Investigation No. 332-452, June 25, 2003, p. 3; NEMA, Response to Chairman Okun for Investigation No. 332-452, June 27, 2003, p. 9.

<sup>9</sup> MEMA, Response to Chairman Okun for Investigation No. 332-452, July 2, 2003, p. 2; NEMA, Response to Chairman Okun for Investigation No. 332-452, June 27, 2003, pp. 1-8.

<sup>10</sup> The Commission notes that at the hearing, the witness for NEMA denied any knowledge of the Tip Sheet after being asked twice about it. Transcript of Commission Hearing, June 19, 2003, pp. 254-58. A day later, by letter, the witness changed his response to "yes." John Meakem, Manager, International Trade, NEMA, Letter to Chairman Okun for Investigation No. 332-452, June 20, 2003.

<sup>11</sup> Arent Fox, General Counsel to MEMA, Response to Chairman Okun for Investigation No. 332-452, August 25, 2003, p. 2.; MEMA, Response to Chairman Okun for Investigation No. 332-452, July 2, 2003, p. 2 and Attachment 1.

<sup>12</sup> \* \* \*

<sup>13</sup> NEMA, Response to Chairman Okun for Investigation No. 332-452, June 27, 2003, pp. 1-8.

<sup>14</sup> SEMA, Response to Chairman Okun for Investigation No. 332-452, July 15, 2003, p. 1.

<sup>15</sup> There is no evidence that any respondents (or potential respondents) to the Ports' and Related Services' Questionnaire received the tip sheet.

## Results of Investigation

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In order to assess the extent to which the questionnaire data may have been affected by the distribution of the Tip Sheet, the Commission closely examined the 34 responses of the firms that received the document. First, the Commission examined the 34 questionnaire responses of these firms to determine if their responses to questions exhibited any significant differences from the responses from other responding steel consuming firms. This comparison was done both relative to all responding firms and, in particular, relative to firms in the same industry sectors that may have had similar experiences. This analysis indicated that the responses of the firms that received the Tip Sheet differed to varying degrees from responses from all other responding steel consuming firms; however, responses from those firms that received the Tip Sheet generally were similar to those of other steel consuming firms in the same industry sectors (e.g., fabricators and motor vehicle parts producers).

The Commission also examined responses to all of the questions using two databases, one which included the 34 questionnaire responses and one without these 34 responses. Comparing the total responses to each question using both of these databases indicates that overall responses generally varied only slightly, with greater variances for some questions than others. In all cases where the Commission report discusses the percentage of steel consuming firms that responded to a certain question, the overall percentage changes only slightly based on the inclusion or exclusion of these 34 responses. For example, with regard to questions on contract price changes since the imposition of the safeguard measures, slightly less than one half (i.e., about 48 percent) of all steel consuming firms reported that contract prices had changed. If the 34 responses from the firms that received the Tip Sheet were excluded from the data, the percentage of firms reporting that changes in contract prices occurred was similar (44 percent). A comparison of the responses of firms in the motor vehicle parts industry (an industry which had a large number of tip sheet recipients) indicates that 74 percent of all motor vehicle parts firms reported experiencing changes in contract prices, compared to the 87 percent for the Tip Sheet recipients alone.

With respect to spot prices, approximately 51 percent of all responding firms reported that spot prices had changed since the imposition of the safeguards measures. When the 34 responses are excluded, the result is 52 percent. In the motor vehicle parts sector, 42 percent of all recipients reported changes in spot prices, while 44 percent of Tip Sheet recipients stated that spot prices had changed. With regard to questions on contract modification or abrogation, 29 percent of all responding firms reported that their contracts with steel suppliers were modified or abrogated. If Tip Sheet recipients are excluded, 26 percent of all responding firms indicated contract modifications or abrogation.

In examining whether steel consuming firms were able to pass on their increased costs of steel to customers, 19 percent of firms reported they were successful in passing on the increased costs of steel, while 43 percent were not. When excluding those firms which received the Tip Sheet, the data show that 20 percent of firms were successful in passing on increased steel costs to consumers, while 40 percent were not. On the question of whether firms had difficulties obtaining steel, the data are exactly the same (49 percent reporting no change in their ability to obtain steel) whether the 34 responses are included or not and the Tip Sheet recipients responses are the same (32 percent reporting no change in the ability to obtain steel) as compared to all other motor vehicle parts producers.

In some cases, information is presented on the basis of the number of firms reporting and not a percentage basis. In these cases, exclusion of the 34 responses of firms that received the Tip Sheet lowers the absolute number of responses; however, the general story remains the same. For example, questionnaire responses from all steel consuming firms indicate that many had difficulties obtaining steel

and this led to problems such as allocations (120 firms) and delayed deliveries (169 firms), or longer lead times (176). Excluding the 34 responses from firms that received the Tip Sheet reduced these numbers (107 reported allocations, 146 reported delayed deliveries, and 156 reported longer lead times), but the numbers were still significant.

With regard to Tip Sheet recipients, the Commission paid particular attention to steel consuming firms' responses to the question of the likely future impact of continuation or termination of the steel safeguard measures. As the responses to these questions are predictions and are not based on hard or verifiable data, there exists a greater potential for exaggeration. Again, the Commission examined the 34 responses of the firms that received the Tip Sheet with all other steel consuming firms and compared overall results with and without these 34 responses. As can be seen in the following tables, the results are similar in both cases (i.e., where the 34 responses are included and where they are excluded).

**Table H-1**  
**Questionnaire responses from all steel-consuming firms on expected future employment, profitability, capital investment, and international competitiveness, by percent<sup>1</sup>**

	Safeguard Measures Continued			Safeguard Measures Terminated		
	No change	Increase	Decrease	No change	Increase	Decrease
Employment .....	54.7	5.9	39.4	55.1	34.1	10.8
Profitability .....	46.1	8.1	45.9	39.0	48.5	12.5
Capital Investment .....	66.0	9.0	25.1	58.5	32.5	9.0
International competitiveness .....	52.1	15.4	32.5	50.7	37.9	11.4

<sup>1</sup> These data include responses from all responding SC firms, including the 34 responses from firms that received the "ITC Questionnaire Tip Sheet".

Source: USITC calculations from questionnaire data.

**Table H-2**  
**Questionnaire responses from steel-consuming firms (excluding those steel-consuming firms that received the "ITC Questionnaire Tip Sheet") on expected future employment, profitability, capital investment, and international competitiveness, by percent<sup>1</sup>**

	Safeguard Measures Continued			Safeguard Measures Terminated		
	No change	Increase	Decrease	No change	Increase	Decrease
Employment .....	54.2	5.9	39.0	55.2	33.6	11.2
Profitability .....	46.6	8.7	46.6	38.5	48.3	13.3
Capital Investment .....	67.0	9.7	23.3	59.0	31.3	9.7
International competitiveness .....	52.6	15.3	32.1	50.5	38.0	11.5

<sup>1</sup> These data **exclude** responses from the 34 responses from steel-consuming firms that received the "ITC Questionnaire Tip Sheet".

Source: USITC calculations from questionnaire data.

## Questions Related to Verification

A number of participants inquired as to whether the Commission could conduct verifications of the questionnaires of the Tip Sheet recipients. The statute authorizes the Commission to verify information provided to it during an investigation and each firm submitting a questionnaire certified its

understanding that the information submitted is subject to audit and verification.<sup>16</sup> Typically, the Commission conducts verification either if the data of a response differs from the industry as a whole or similarly situated firms or if the respondent firm is so large that it represents a substantial percentage of the industry. Neither variable was present in this case. The Commission decided not to undertake such verifications because, first, as noted above, the 34 questionnaire responses of the firms did not appear to differ significantly from similarly situated firms. Second, while a few of the firms that received the Tip Sheet are large in size, no respondent firm was so large that it represented a substantial percentage of the industry sectors.

The Commission also considered the fact that it would be difficult, if not impossible, to verify certain portions of the questionnaires responses pertaining to the question of the likely future impact of continuation or termination of the steel safeguard measures. Again, responses to these questions are predictive and are not based on data that are verifiable. Given the impossibility of determining the degree to which any of the recipients of the Tip Sheet actually followed its advice to exaggerate estimates or make more dire predictions and the fact that an official at each firm submitting a questionnaire response was required to certify that the information in the firm's questionnaire is "complete and correct to the best of his/her knowledge and belief,"<sup>17</sup> the Commission determined that the most appropriate action for it to take was the investigation it conducted in comparing the responses of those who received the Tip Sheet with those that did not.

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<sup>16</sup> 19 U.S.C. § 1333(a).

<sup>17</sup> Purchasers' Questionnaire, *Steel-Consuming Industries: Competitive Conditions with Respect to Steel Safeguard Measures*, Investigation No. 332-452.



## ITC QUESTIONNAIRE TIP SHEET

THE OVERRIDING GOAL IS TO TELL A COMPELLING STORY. IN SOME CASES, THE QUANTITATIVE DATA MAY SPEAK FOR ITSELF. IN OTHER CASES, THE STORY HAS TO BE ELICITED QUALITATIVELY IN NARRATIVE PORTIONS OF THE QUESTIONNAIRE.

WE WANT TO DEMONSTRATE THAT THE ADVERSE IMPACT OF THE TARIFFS ON STEEL USERS HAS BEEN SIGNIFICANT, AND THAT IT WILL BE EVEN WORSE GOING FORWARD. IT IS IMPORTANT TO BEAR THIS POINT IN MIND AS YOU ANSWER THE QUESTIONS – YOUR PROJECTIONS FOR THE FUTURE SHOULD BE EVEN MORE BLEAK THAN WHAT HAS HAPPENED TO DATE.

- 1) The ITC will attach instruction booklets to the questionnaires. Please read these instructions prior to completing the questionnaires.
  - Answer all questions.
  - If the answer to any question is none, write “None.”
  - **If information is not readily available from your records in exactly the form requested, provide estimates and designate it by the letter “E”.**
- 2) To the maximum extent possible, make reasoned and rational allocations among steel products. While the goal is to convince the Administration to terminate the steel tariff program in its entirety, it is possible that the Administration could act on a product-by-product basis. Thus, accurate allocation among products is important.
- 3) As stated above, **estimates are allowed** if exact data is not available. However, estimates should be resolved in favor of a more compelling “story.”
- 4) The following points should be highlighted when discussing the changes experienced due to the Steel 201 safeguard measures:
  - Loss of U.S. jobs.
  - Facility shut-downs / slowdowns.
  - Direct importing of semi/finished parts, irrespective of whether from a related or unrelated producer.
  - Purchasing/importing from tariff excluded countries (e.g., Canada, Brazil, Turkey, Mexico).
  - Sales lost to semi/finished parts imported by other parts producers or the parts purchasers.
  - Profits lost due to inability to pass on steel costs.
  - Inability to adequately reinvest.
- 5) Be creative and “extrapolative”
  - For example, question III-2 of the 332 questionnaire asks the respondent to report employment pre- and post-safeguard tariffs, and ascribe an absolute value to the change due to the steel tariffs.

While it may be that Company A directly lost 300 jobs due to shifting parts production to an offshore affiliate, if the move also caused Company A to send 200 other non-steel jobs

to gain economies of scale, etc., then a total loss of 500 jobs may be attributed to the tariffs.

- This same type of argument could be made with regard to capital expenditures . . . That the Company was going to invest X million dollars in the U.S., but sourcing decisions related to steel will cause more than just direct steel dollars going offshore.

- Similarly, even if only anecdotal, multiply the impact of a particular adverse development.

If Company A lost sales of its widgets to Buyer B, because Buyer B purchased from offshore Exporter C, Company A could speculate that the floodgates have been opened for Exporter C with Buyer B, and Company A fears additional lost sales and revenue going forward. In addition, Company A fears that Exporter C will go after Buyers D, E, and F, too.