Number PB03-1 January 2003

International Economics Policy Briefs

Steel Policy: The Good, the Bad, and the Ugly

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Background

While the US steel industry has been in distress for decades, the "steel crisis" of 1999-2001 was particularly acute. More than 30 steel producing and steel processing firms fell into bankruptcy between 1997 and 2001, and most of the failures occurred after President Bush took office.[1] During his presidential campaign, Bush promised steelworkers that he would not neglect them. As the crisis worsened, the steel industry and the United Steel Workers of America (USWA) pressed the Bush administration to make good on its campaign promise.

In response, President Bush launched a three-pronged steel strategy in June 2001. The first prong sought to address global excess steel capacity. The second prong sought an end to subsidies and other market-distorting practices. These two prongs have been pursued under the auspices of the Organization for Economic Cooperation and Development (OECD).

On balance, US steel policy in 2001 and 2002 has not been nearly as helpful to the US steel industry as partisans hoped.

The third prong was a Section 201 investigation to determine whether "safeguards" should be imposed against 33 types of steel imports. In October 2001, the US International Trade Commission (ITC) made affirmative or evenly divided determinations that 16 of the 33 types of steel "are being imported into the United States in such increased quantities that they were a substantial cause of serious injury or threat of serious injury" to US steel producers.[2] In contrast to the require-

1. For a list of bankruptcies, see USWA (2002).

2. Under US law, evenly divided determinations (covering 4 types of steel) are tantamount to affirmative injury findings. See USITC (2002a) for the official ITC determinations.

ments for an antidumping or a countervailing duty case, a safeguard investigation requires no demonstration that steel imports are sold unfairly. In December 2001, the commissioners gave their remedy recommendations to President Bush—remedies that took the form of tariffs, quotas, or tariff-rate quotas (TRQs) against the injurious imports.

In March 2002, President Bush chose to impose tariffs against 14 of the 16 products found by the ITC to be injuring the domestic steel industry.[3] President Bush imposed 30 percent tariffs on flat steel products, hot-rolled bars, and cold-finished bars, and tariffs up to 15 percent on other steel products. On steel slabs (unfinished steel that is processed in US integrated mills to make flat steel products), President Bush adopted a TRQ: all imports in excess of 6 million short tons are subject to a tariff of 30 percent, but all slab imports up to 6 million short tons face no additional duty.[4] The safeguard remedies are scheduled to be phased down each year and abolished completely after March 2005.

Canada, Mexico, and other countries that have preferential trade agreements with the United States are excluded from the Section 201 remedies, as are developing countries whose steel imports fall below a *de minimis* threshold.[5] In 2000, the United States imported 32.1 million short tons of steel, of which only 29 percent (9.3 million short tons) were subject to the safeguard tariffs levied by President Bush in March 2002. The remaining 71 percent were covered by ITC findings of no injury or by initial country exclusions.[6]

This policy brief reviews the good, the bad, and the ugly dimensions of US steel policy in 2001 and 2002. On balance, the policy has not been nearly as helpful to the US steel industry as partisans hoped. At the same time, it is not nearly as bad as some steel consumers and foreign exporters may have feared. Nevertheless, the policy should be dramatically changed in the coming months to avoid potentially ugly consequences. In this policy brief, we offer recommendations geared both toward averting the ugly consequences and toward achieving a lasting solution to the problems that beset the steel industry.

The Good—Global Trade Liberalization Is Progressing

President Bush's decision to protect the US steel industry with Section 201 tariffs had no economic justification. Before relief was granted, we calculated that safeguard tariffs would cost over $400,000 annually per job saved in the steel industry.[7] Moreover, they would result in net job losses in the economy due to downstream layoffs, which is why most of President Bush's economic advisers expressed their opposition.

Few could argue that the US steel industry was not distressed, but objective observers certainly questioned whether trade was the problem and whether trade protection was the right solution. The administration's steel tariffs were driven not by an economic match between problems and solutions but by two political motivations. The first was the noble goal of passing Trade Promotion Authority (TPA) in Congress; the second was the less noble goal of buying the steel industry's support in congressional and presidential elections.

President Bush's steel decision had international ramifications. Foreign steel exporters and their governments threatened retaliation, which could have soured the atmosphere for global and regional trade negotiations (the Doha Round and the Free Trade Area of the Americas). The good news is that the steel tariffs have furthered the cause of global trade liberalization by helping Bush obtain TPA. So far, the negative international consequences of the steel decision have neither led to trade retaliation nor to a breakdown of trade negotiations.

Trade Promotion Authority

For several years, trade negotiating authority was stalled in the House of Representatives. In November 1997, President Clinton and his congressional allies, fearing a loss, pulled their trade bill from the House floor. In September 1998, the House voted against "fast-track" by a margin of 243 to 180. In

3. During the course of its investigation the majority of the ITC found that plate, hot-rolled sheet and strip, cold-rolled sheet and strip, and coated steel were a "like" product and could be treated as a single product for the purpose of determining injury and recommending relief. Two minority ITC commissioners considered tin to be included in the flat product group. Thus, some prefer to classify President Bush's remedy as covering 11 out of 13 types of steel imports. However, we think the decision to group the flat products is misleading and will likely be faulted by the WTO.

4. The 6 million short-ton quota applies to non-NAFTA slab imports only. Mexico and Canada are permitted to export an unlimited amount of slab to the United States without triggering tariffs. Slab imports from non-NAFTA countries were on track as of August 2002 to approach 7.5 million short-tons in 2002, so the 30 percent tariffs may have been triggered sometime in the fourth quarter of 2002.

5. The steel industry is pressing the Bush administration to revoke the exclusions of countries such as India and Turkey for some steel products on the grounds that their exports to the US market now exceed the *de minimis* thresholds.

6. These figures come from Hillman (2002).

7. See Hufbauer and Goodrich (2002).

December 2001, the House passed its version of TPA (the new name for "fast track") by a single vote; in July 2002, the House approved the TPA conference report by just three votes.

Several factors contributed to the successful passage of TPA in 2002, and President Bush's steel policy was arguably among them. Of the 31 members of the House who voted against TPA in 1998 and for TPA in 2001 and 2002, 10 were members of the House Steel Caucus. No one has acknowledged an explicit deal between the Bush administration and Caucus members, but at a minimum the Section 201 steel investigation gave these 10 representatives "political cover" to vote for TPA. All 10 won their November 2002 elections with at least 60 percent of the vote, so with the benefit of hindsight, they probably could have afforded to vote for TPA regardless of the administration's steel decisions.[8] But the administration's actions certainly afforded these 10 Representatives comfort in the November elections.

President Bush's decision to protect the US steel industry with Section 201 tariffs had no economic justification.

The United States has historically resorted to protectionist measures in order to launch or implement major trade negotiations.[9] The "one step back, two steps forward" strategy is tolerable if the protectionist step backward is the minimum necessary to obtain the larger prize. In this case the larger prize is TPA and the resulting opportunity to complete regional and global trade deals (the FTAA and the Doha Round), which promise to improve US and global welfare by hundreds of billions of dollars annually. For example, one study estimates that a 33 percent reduction in world trade barriers could increase US welfare by $177 billion annually and world welfare by $613 billion annually.[10]

The TPA package included renewal and expansion of Trade Adjustment Assistance (TAA). The new TAA provides a 65 percent tax credit for health insurance as well as income maintenance and job training for displaced workers. The new TAA package also includes a wage insurance program for older workers, a concept advocated in previous Institute policy briefs.[11] The 65 percent tax credit for health insurance is extended to non-Medicare eligible retired workers over the age of 55 whose pensions are administered by the Pension Benefit Guarantee Corporation owing to the bankruptcy of their former employers. This provision to help retirees was motivated by the plight of retired steel workers, and it certainly counts among the "good" outcomes of US steel policy. Expanded TAA benefits partly assuage public fears about growing imports and may increase congressional sympathy for future trade liberalization.

Product Exclusions

As soon as President Bush announced the steel tariffs, domestic steel consumers and foreign steel exporters complained that they were being forced to pay for Bush's gift to the steel industry. Leading the charge, the European Union and Japan publicly threatened to retaliate against hallmark US exports from politically sensitive congressional districts—such as textiles from Southeast states and citrus products from Florida—in advance of the November 2002 mid-term elections.

Hence if not for the product exclusions on steel imports subject to a 30 percent tariff increase, an additional $233 million worth of steel imports (between 600,000 and 700,000 short tons) would have been displaced by the Section 201 remedies.

To deflect the foreign backlash, the administration immediately announced that it would exempt certain items from the steel tariffs if domestic firms were not able to produce adequate quantities of highly similar steel goods. In practice, the product exclusion process devolved into a balancing act: the Bush administration tried to grant just enough product exclusions to prevent foreign retaliation, but not so many as to exhaust the goodwill previously gar-

8. Unofficial campaign results from CNN (2002).
9. See Bergsten (2002).
10. See Brown, Deardorff, and Stern (2001).
11. See Hufbauer and Goodrich (2001, 2002). The wage insurance proposal in those policy briefs was based on the policy brief of Kletzer and Litan (2001).

nered with the steel industry, the USWA, and congressional members of the Steel Caucus.

Some product exclusions were granted immediately, and others came in batches throughout the summer of 2002. Altogether, the 3.5 million short tons of exclusions granted to date cover 727 steel products and constitute 25 percent of the tonnage covered by Bush's Section 201 remedy. However, it should be noted that half the product exclusions (measured by volume) cover unfinished steel that is imported by integrated steel firms for further processing.[12] While product exclusions for unfinished steel clearly are not detrimental to integrated firms, the USWA resents the fact that its employers are essentially outsourcing the initial stages of production.[13]

We calculate that, of the steel imports that would ordinarily be subject to a 30 percent tariff increase in the second and third quarters of 2002, 46 percent (by value) entered with a product exclusion and faced a negligible tariff.[14] Furthermore, by our calculations only 31 percent of such imports can afford to "eat" a 30 percent tariff increase. Hence if not for the product exclusions on steel imports subject to a 30 percent tariff increase, an additional $233 million worth of steel imports (between 600,000 and 700,000 short tons) would have been displaced by the Section 201 remedies.

Foreign steel exporters gain much more from product exclusions than do domestic steel consumers. Some foreign steel exporters with product exclusions actually benefit from the overall system of Section 201 protection because the rest of their foreign competitors still face safeguard tariffs of up to 30 percent. Unlucky foreign competitors without exclusions operate at a distinct disadvantage in the US market. Meanwhile, US steel consumers have to pay the going price to all steel suppliers. Lucky foreign steel exporters with product exclusions can therefore raise the prices they charge US steel consumers by a substantial fraction of the 30 percent tariff and pocket the additional profits, technically known as "quota rents."[15]

US government-fostered largesse in the form of quota rents served to appease Japanese and European steel producers and their governments, which agreed to put off retaliation until after the World Trade Organization (WTO) hears the case against the US steel safeguards. We believe that the safeguard tariffs will be found inconsistent with WTO standards and thus liable to WTO-sanctioned retaliation. The legal case, including appeals, will likely be concluded in late 2003.

US tonnage consumption of steel (inclusive of imports) was less in 2001 than in 1964, despite the fact that the real value of US durable goods consumption increased over 150 percent during this period.

If Japan and the European Union had instead gone ahead with immediate retaliation—citing an ambiguous but untested provision of the WTO Agreement on Safeguards—the atmosphere for further global trade liberalization would have worsened.[16] The Bush administration deserves credit for avoiding this outcome.

Mixed Blessings—Steel Prices and Productivity Both Up

In this section, we examine two phenomena to illustrate that there is no such thing as a free lunch. First, productivity in the US steel industry has con-

12. Figures come from USTR (2002a).

13. Unfinished imports are detrimental to minimills, and Nucor led the charge to impose 40 percent tariffs against unfinished imports for the sole purpose of driving up the operating costs of roller mills (a type of integrated mill that produces finished goods by rolling imported slab), which represent an emerging threat to minimill dominance in the steel industry.

14. See appendix A for details of this calculation. The products that would ordinarily face a tariff increase of 30 percent are plated steel, hot-rolled flat steel, cold-rolled steel, coated steel, tin, hot-rolled bars and light shapes, and cold-finished steel from countries that are subject to the remedies for these products. Other types of steel, as well as steel imports from Canada, Mexico, and developing countries are not considered in this calculation.

15. The CEO of POSCO, Korea's quasi-public steel producer, which received a 826,720 short ton exception to supply U.S. Steel, recently said in the *Chicago Tribune* (2002), "I would like to extend personal gratitude to Mr. Bush for putting in place the steel safeguards and other initiatives," adding that "I am extremely skeptical that this kind of protectionist measures for U.S. steelmakers will contribute to the industry restructuring and reviving itself." The tendency of protection to create quota rents is further analyzed in Hufbauer and Wada (1999).

16. Article 8.3 of the WTO Agreement on Safeguards states: "The right of suspension referred to in paragraph 2 shall not be exercised for the first three years that a safeguard measure is in effect, provided that the safeguard measure has been taken as a result of an absolute increase in imports ..." The legal controversy is whether affected parties are permitted to unilaterally judge that US steel imports are not increasing in absolute terms. The United States said "no". The European Union and Japan said "yes", but agreed to refrain from retaliation due to the product exclusions and the quota rents they enjoyed.

Table 1 Snapshot of the US steel industry in 1964, 2001, and 2002

	Millions of short tons								*Units*		
	Apparent US steel consumption [1]	**Total US raw steel production**	**Traditional US steel production**	**US minimill steel production [2]**	**Total US steel exports**	**Total US steel imports**	**Finished steel exports [3]**	**Unfinished steel imports**	**Steel production workers [4]**	**Average weekly hours**	**Production per worker-hour**
1964	130.0	126.8	113.8	13.0	4.1	6.6	6.6	0.0	515,600	41.2	0.11
2001	116.4	99.9	52.2	47.7	6.1	30.1	23.6	6.5	161,800	44.6	0.27
Change 1964-2001	-13.6	-26.9	-61.6	34.7	2.0	23.5	17.0	6.5	-353,800	3.4	0.15
Projected 2002 [5]	115.0	101.5	49.9	51.6	5.9	32.5	23.4	9.1	144,000	45.6	0.31

1. Apparent consumption is roughly equal to [production - exports + imports], but it is technically defined as [*shipments* - exports + finished imports + stock changes]. Data for shipments and stock changes are not reported here.
2. In 1964, traditional production included two types of integrated production: open hearth production and blast oxygen furnace production. Today, all integrated mill production uses blast oxygen furnaces.
3. All steel imports in 1964 are assumed to be finished.
4. Figures are for SIC 331 and are averaged based on monthly data.
5. 2002 figures are generally projected by utilizing the appropriate year-to-date through October 2002 data from the AISI. The three exceptions are the growth rate for apparent steel consumption, which is taken from the IISI, the growth rate for raw steel production, which was taken from the AISI's December 2002 data and the data on production workers and weekly hours, which was taken from the BLS's December 2002 data.

Notes: USGS figures are originally reported in metric tons. Components may not add to totals due to rounding.

Sources: USGS (2002a, 2002b) for most 1964 tonnage data; Barringer and Pierce (2000, p.260) for minimill production in 1964; AIIS (2002) for apparent steel consumption in 2001 and 2002; BLS (2002b) for labor data; and AISI (2002a, 2002b) for other data.

tinued its upward trend in 2002, which is good for steel consumers and bad for the USWA, since the ranks of dues-paying members get downsized. Second, thanks in part to the Section 201 tariffs, steel prices are up, which is good for steel producers but bad for steel consumers.

Productivity in the US Steel Industry

Table 1 presents a snapshot of the US steel industry in 1964, 2001, and 2002. The most striking figure is that US tonnage consumption of steel (inclusive of imports) was *less* in 2001 than in 1964, despite the fact that the real value of US durable goods consumption increased over 150 percent during this period.[17] The US economy is much less steel intensive today than in previous years, and US demand for steel has been essentially stagnant for four decades. Moreover, consumption of steel is projected to decline further in 2002, despite the moderate upturn in the economy relative to 2001.

At the same time, competition on the supply side of the market has intensified dramatically, both from foreign and domestic sources. Although integrated steel producers and the USWA concentrate their blame on imports, over half the decline in traditional integrated steel production is attributable to the rise of domestic minimills, such as Nucor and Steel Dynamics. Traditional integrated steel production decreased by 62 million short tons between 1964 and 2001, while minimill production increased by 35 million short tons.

Moreover, US integrated steel mills are the sole importers of unfinished steel, which they further process and sell with markups; thus, unfinished steel imports help rather than harm integrated steel producers. When seen in these terms, the increase in finished steel imports (17 million short tons between 1964 and 2001)—the kind of steel imports that compete with the final output of domestic mills—was less than half the corresponding increase in minimill production. Minimills, not imports, are the main force crowding integrated steel firms.

The rise of minimills allows finished steel to be made more efficiently. To cite just one statistic, each

17. Data for the consumption of durable goods comes from the BEA (2002) and is deflated using the Consumer Price Index published by the BLS (2002a).

employee in Nucor's minimills makes three times as many tons of steel as each employee at US Steel (the largest integrated steel producer in the United States and second to Nucor in absolute production).[18] To be sure, both input and output mixes differ between the two firms, but the differences do not cancel out the crude comparison of annual tons per worker. Over the past four decades, Nucor has been profitable every year, while US Steel has often incurred losses.

Improvements in labor productivity are good for steel consumers, because productive firms take market share from less productive firms by offering better quality and reduced prices. As a result, however, less productive firms and their workers suffer and are eventually driven out of the steel industry. The combination of stagnant demand and rising productivity (especially in nonunionized minimills) is the greatest threat to the USWA—not imports.[19] At current levels of productivity and annual worker hours, the United States could make all the steel it made in 1964 with less than 175,000 production workers, which would increase the current production workforce by only 30,000. If all finished steel imports in 2002 were replaced with domestic production, about 32,000 additional steel production workers would be needed to fill this demand. An additional 30,000 to 32,000 production workers would bring the total industry production workforce to the actual number of steel production workers just two short years ago and the increase would still be less than one-tenth of the steel production jobs lost since 1964 (some 343,000 jobs) solely due to increases in productivity and weekly hours.

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In our previous policy brief, we predicted that a moderate Section 201 remedy would increase the gross number of jobs in the steel industry by a mere 3,500. The number of steel production workers in November 2002 was the same as in February 2002 and is almost the same as the monthly average for 2002. Although it is possible that the Section 201 remedy saved some jobs by preventing further layoffs, we continue to be baffled by the willingness of unionized workers to believe that protection is a great benefit to them. When will they realize that their union leaders wrongly vilify imports and make false promises about the payoff from protection?

Steel Prices

The purpose of the steel safeguard was to increase domestic steel prices. However, domestic prices for some steel products rose much more than most observers expected, prompting a campaign to remove the tariffs in 2003. Specifically, the Motor and Equipment Manufacturers Association got a resolution introduced in the House that calls on President Bush to review the steel tariffs in March 2003, six months earlier than required by US law.[20] The influential National Association of Manufacturers has a longstanding policy of remaining neutral on specific protectionist measures, but in October 2001 it moved toward a position opposed to the Section 201 tariffs by adopting this resolution—over the strenuous objections of its steel-producing members:

> *Whereas a stable domestic steel industry is in the national interest, whereas there are overriding considerations of general importance to American industry in having a well-functioning steel market and whereas the recently imposed steel tariffs have had a negative impact on steel users, we therefore resolve that the NAM International Economic Policy Committee should be convened to develop a policy position on steel trade that is appropriate for all constituencies.*[21]

On December 11, 2002, the International Economic Policy Committee of NAM passed a statement, which will likely be approved by the NAM board in February 2003, that calls on President Bush to instruct the ITC to conduct a study by July 31, 2003, on how

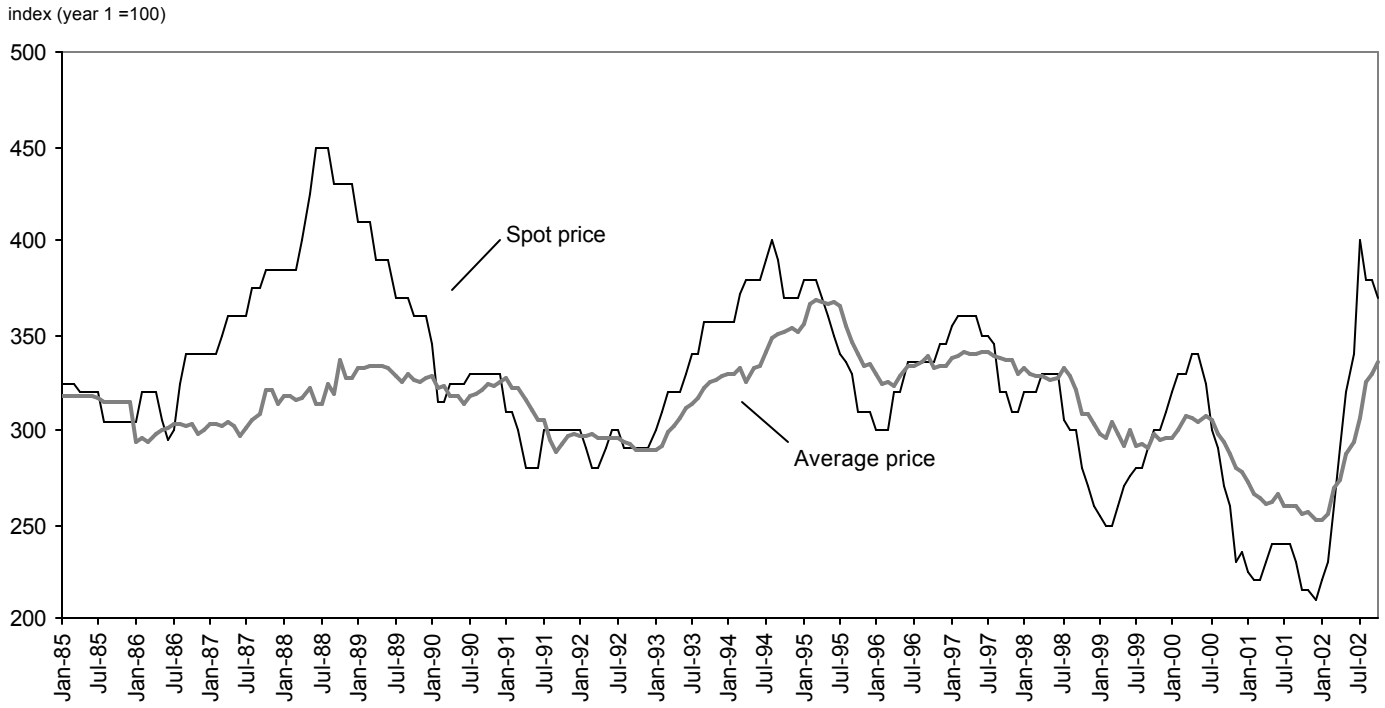
18. Based on 2001 annual reports, see US Steel (2002) and Nucor (2002). US Steel Corporation operates a foreign mill in Slovakia, but the Slovakian output and employees are not included in this calculation.

19. There has been considerable discussion recently about the value of the dollar, the effect of the exchange rate on imports, and the health of the US manufacturing sector, particularly industries like steel. For contrasting views on the issue, see Baily (2002) and Blecker (2002).

20. The resolution is H. CON. RES. 507.

21. Quoted in American Metal Market (2002).

Figure 1 Average price vs. spot market price of hot-rolled sheet, 1985-2002



Note: Average price is calculated using the Producer Price Index for hot-rolled carbon sheets and a base of $297 per ton in 2000 as reported by the ITC.

Sources: BLS (2002), USITC (2001, p. FLAT C-4), SMA (2002), and *Purchasing Magazine* (2002).

steel tariffs have affected steel producers and steel consumers. It may strike some as surprising that the ITC was not required to predict how tariffs would affect steel consumers during the Section 201 investigation, but US law does not require an impact assessment. The proposed NAM statements also call on President Bush to appoint a blue-ribbon panel of outside experts to recommend a plan of action.

How much have steel prices increased in 2002, particularly since the tariffs were imposed in March? The answer depends on the product and the conditions under which it is sold. The most commonly cited benchmark of steel prices is the price reported by *Purchasing Magazine* for hot-rolled steel sheet. However, this is a "spot market" price and a substantial quantity of hot-rolled steel is either sold under long-term, large-volume contracts, or "sold" by a steel firm to itself for further processing. The producer price index, collected by the Bureau of Labor Statistics (BLS), better measures movements in the average price of hot-rolled sheets because it is based on surveys that include all types of transactions. But the producer price index does not express the price in dollar terms, so it is often overlooked. In figure 1, we have approximated the average price of hot-rolled sheets by multiplying its producer price index by a conversion factor based on publicly available data from the Section 201 investigation. While the spot market price almost doubled in 2002 (from $220 to $400 per ton) before declining slightly, the average price of hot-rolled sheet based on the producer price index increased 30 percent or about $80 per ton.

To be sure, hot-rolled sheet is only one type of steel and many factors besides tariffs affect domestic steel prices. The central question is, "How much has the average domestic steel price increased due to the Section 201 tariffs?" That question is difficult to answer. Industry associations from both sides of the steel issue have released studies on steel prices, but neither camp has rigorously addressed the central question.[22] In our previous policy brief, we used a partial equilibrium model to predict that the average price of domestic steel would increase 2.7 to 3.6 percent, depending on the strength of the Section 201 remedies. This estimate was in line with other calculated estimates at the time.

Judging from the producer price index for steel as a whole (SIC 331), the average steel price increased

22. See Morici (2002) and Mueller (2002).

about 8.4 percent between the first and third quarters of 2002. This observation suggests that our earlier estimate was too conservative, implying that we understated the cost to steel consumers. We now revisit our estimates by regressing the percentage change in the producer price index for steel as a whole on a number of independent variables that are likely to affect domestic steel prices.[23] Analyzing the producer price index for steel as a whole may overlook important differences between steel products, but finished steel products pass through a variety of stages, which distributes the price effects of tariffs throughout the menu of products that the industry offers. In essence, the regression model calculates the effect on domestic prices of a 10 percent increase in the tariff on aggregate steel imports from "remedy countries", holding the pre-tariff price of those imports and other factors constant.[24] Remedy countries are those like Japan and the European Union that did not get a free pass as Canada, Mexico, and developing countries did.

Table B.1 in appendix B shows the results of the regression. Most of the substantive independent variables have plausible signs and are statistically significant. The model indicates that every 10 percent tariff increase on steel imported from remedy countries results in almost a 7 percent increase in the average domestic steel price. However, the average tariff increase against aggregate steel imports from remedy countries has been considerably less than 30 percent due to product exclusions and importantly due to the large volume of products from remedy countries on which no additional tariffs were imposed. As a consequence, the calculated average increase in domestic steel prices as a consequence of safeguard tariffs is considerably less than 21 percent (30 percent times 0.7).[25] Based on the confidence interval of the model, we are 90 percent confident that the safeguard tariffs raised the average price of all domestic steel products between 1.3 percent and 5.1 percent between the first and third quarters of 2002 and our best guess is a 3.3 percent increase. For various reasons, however this estimate is likely to understate the effect of the safeguard tariffs.[26]

Even a 5.1 percent price increase may not sound severe. Indeed, the steel industry incessantly asserts that the safeguard tariffs merely gave a modest price lift from historical lows.[27] However, a seemingly moderate price increase can have severe consequences for steel-consuming firms whose balance sheets are already strained by the struggling economy and who face overseas competition that can buy steel at cheaper prices.[28] Also, the tariffs have been extremely disruptive to US firms that rely on steel imports to make consumer goods. Perhaps most importantly, while any price increase helps the bottom line of steel producers, the price increases in 2002 are clearly not enough to save high-cost integrated firms. Thus, our conclusion echoes our previous policy briefs: safeguard tariffs hurt consumers of domestic steel but the corresponding benefits to steel producers are manifestly insufficient to cure their woes. The tie-breaker is the plight of US firms that rely on imported steel, which are being forced to overcome severe (and unjust) barriers to their operations.

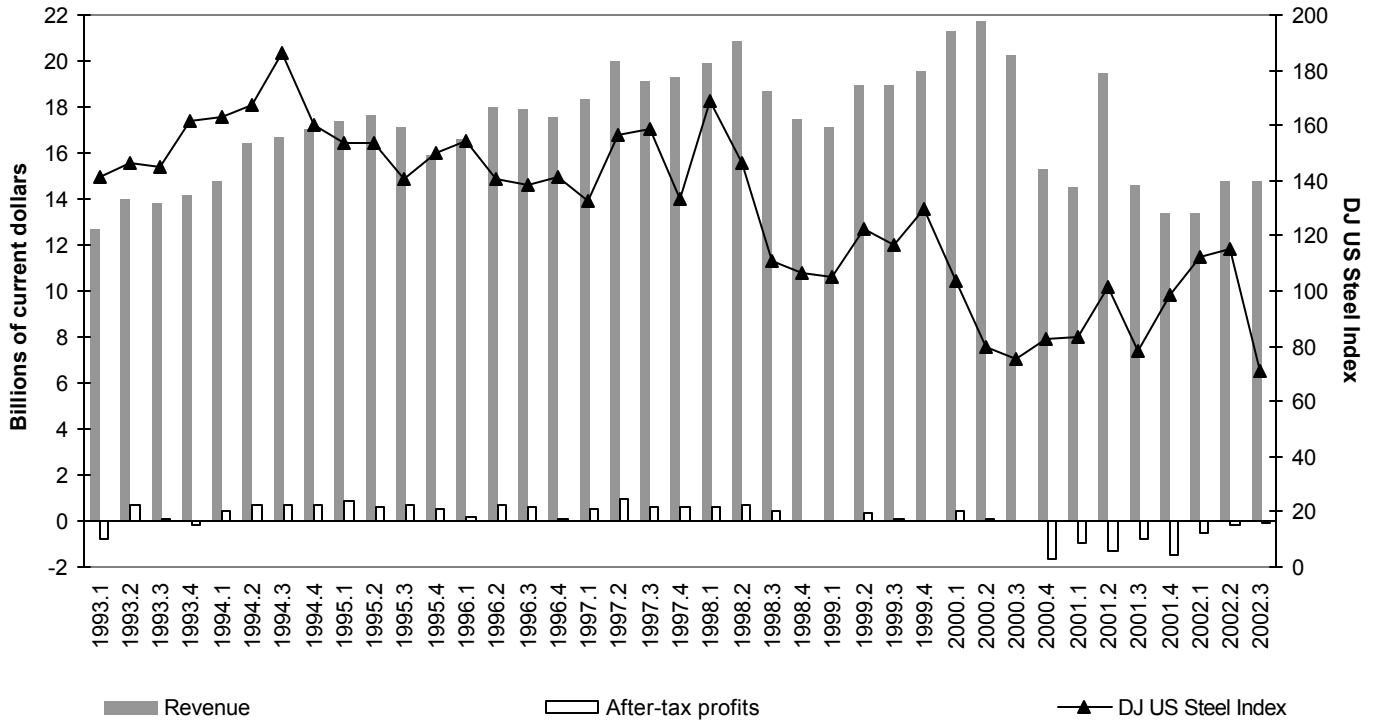
Despite the Section 201 tariffs, all the antidumping orders and increased capacity utilization, the steel industry as a whole will still take an after-tax loss for the year 2002.

The Bad—Many US Integrated Steel Firms Are Still in Trouble

Despite the recent increase in steel prices, many integrated mills are still incapable of making healthy profits. The reason why many integrated mills lose money even with higher steel prices is simple: their average costs are even higher. In this section, we

23. All variables except the quarterly dummy variables were expressed in natural logarithms. Percentage changes are approximated by the first difference in logarithmic values.
24. See appendix B for more details of this regression and subsequent simulation. By aggregate steel imports, we mean all steel products that fall under SITC 67, regardless of whether they are included in the Section 201 remedies.
25. A price response of 0.66 may be a rough estimate for how much the price of a specific domestic steel product should increase (in percentage terms) for each 1.0 percent increase in the tariff on a specific steel product from a remedy country. Another rule of thumb could be that 39 percent (3.3 divided by 8.4) of the increase in a particular domestic steel product's price is attributable to the Section 201 tariffs. However, the price response may be greater or lesser depending on the product.
26. See appendix B for further explanation.
27. We agree with Mueller (2002) that comparing current steel prices to historical steel prices is a fruitless exercise, given the magnitude of the change that the steel industry has undergone in recent years. The increase in productivity driven by minimills should generally cause steel prices to decline.
28. For example, Francois and Baughman (2002) and Crandall (2002) found that even small increases in the price of domestic steel have serious consequences for steel-consuming industries.

Figure 2 Sales, profits, and stock price in the US iron and steel industry, 1993-2002



Note: Dow Jones (DJ) Steel Index values are taken on the last day of each quarter.

Sources: US Census Bureau (2002); Yahoo Finance (2002).

examine the reasons why the performance of the US steel industry as a whole is consistently poor.

Sales, Profits, and Stock Prices

Figure 2 shows the revenue and after-tax profits for the US iron and steel industry along with the price of the Dow Jones Steel Index on a quarterly basis from 1993 to the third quarter of 2002.[29] Stock prices are largely a function of expected profits, and steel stocks had a bad year in 2002. During the first three quarters of 2002, the Dow Jones Steel Index lost more value in percentage terms (27.7 percent) than the Dow Jones Industrial Average (24.2 percent), despite the absence of accounting scandals in the steel industry.[30] Stock markets are not always right, but figure 2 illustrates that change in the Dow Jones Steel Index has been a good leading indicator of steel revenue in subsequent quarters.

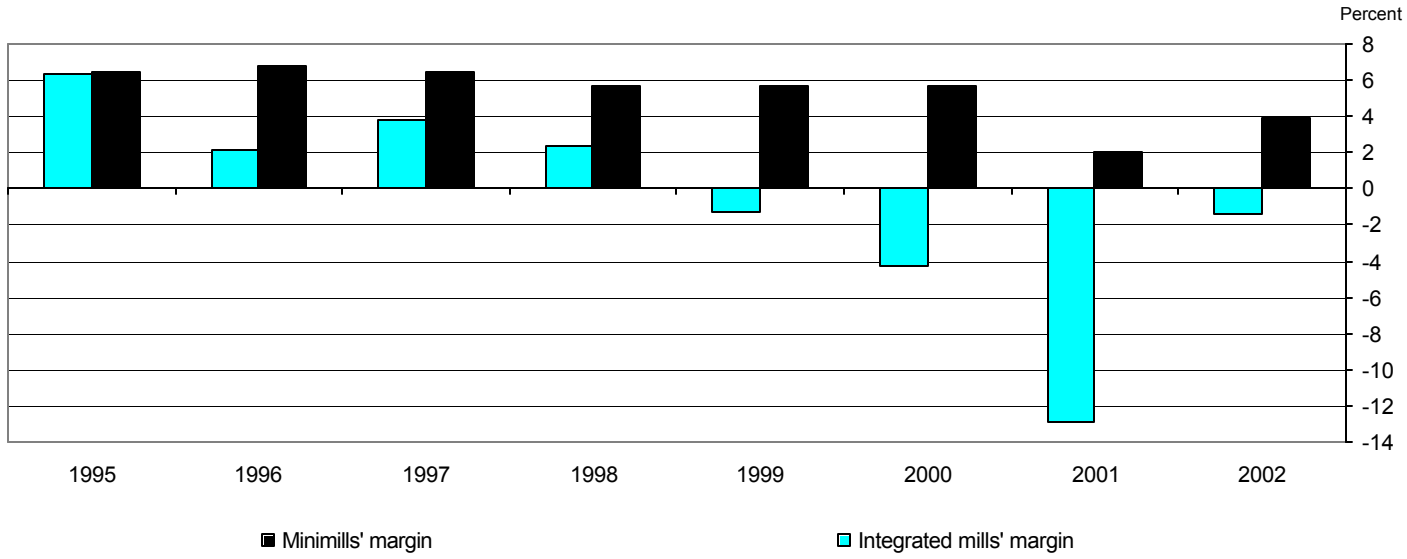
During the period from 1993Q1 to 2002Q3, the iron and steel industry as a whole has never made an after-tax quarterly profit of more than $1 billion. The steel industry lost $800 million after taxes through the first three quarters of 2002. Despite the Section 201 tariffs, all the antidumping orders, and increased capacity utilization, the steel industry as a whole will still take an after-tax loss for the year 2002.

Based on the sales figures for the second and third quarters of 2002 and assuming a 3.3 percent price increase, the Section 201 tariffs are responsible for only $1 billion in additional *revenue* for the steel industry. Although this figure may be conservative, it should be kept in mind that additional *profits* are considerably less because downstream steel producers must pay higher prices for raw steel.

In the "pre-crisis" period of 1996 to 1998, the industry earned $19.22 per short ton produced, a profit margin of less than 3 percent. In the "crisis" period of 1999 to 2001, the industry lost $16.30 per short ton produced, a loss of less than 3 percent.[31] Although average steel prices declined about 10 percent in the "crisis period" relative to the "pre-crisis"

29. The Dow Jones Steel Index consists of seven US firms: AK Steel, Allegheny Technologies, Carpenter Technology, Nucor, Ryerson Tull, US Steel, and Worthington Industries.
30. Data comes from Yahoo (2002).
31. Production data (not shown) is from USGS (2002a).

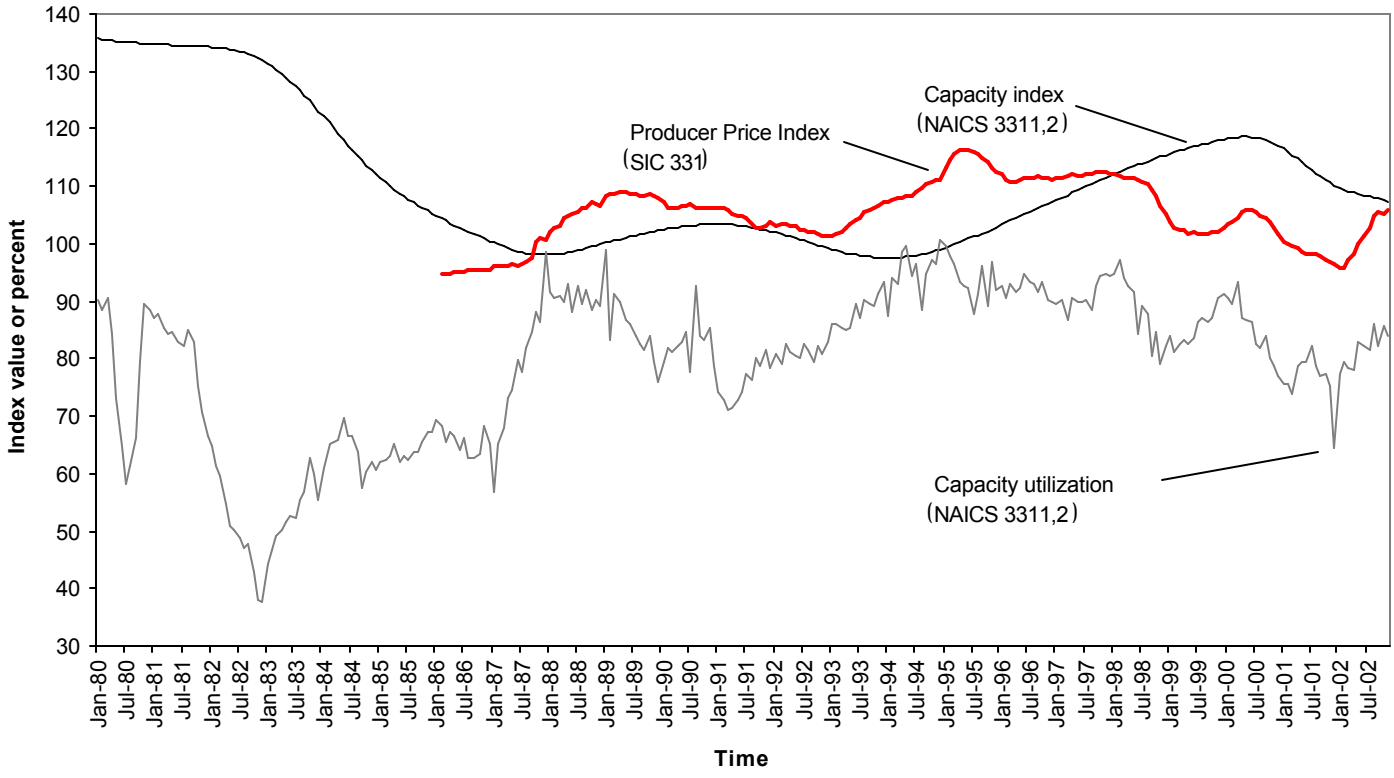
Figure 3 Profit margins of minimills and integrated mills, 1995-2002



Note: Profit margin is calculated as net income (excluding unusual items) as a percent of revenue. See footnote 32 for the companies that constitute each sample.

Source: SEC (2002).

Figure 4 Performance of the US steel industry



Note: For explanation of SIC 331, see footnote 1 in Appendix B; NAICS 3311,2 is very similar to SIC 331.

Sources: BLS (2002 c) for Producer Price Index; FRB (2002) for capacity index and capacity utilization.

period, profit margins deteriorated only 5.5 percent, due to the shift in steel production away from high-cost integrated mills to minimills.

Figure 3 shows the annual operating margins for a sample of US integrated mills and a sample of US minimills between 1995 and 2002.[32] While the minimills remained profitable (even during 2001), integrated mills are still losing money in 2002. Although the competitive advantages of minimills have been in place for a long time, figure 3 illustrates an important point emphasized in our previous policy briefs: steel protection helps strong firms more than weak ones.

Capacity in the US steel industry

Figure 4 shows steel capacity and capacity utilization between 1980 and 2002 and the producer price index for steel since 1986. US steel capacity was rationalized substantially between 1983 and 1987 (dropping 25 percent) and remained essentially flat until 1994. Between 1994 and 2000, minimills increased capacity much faster than integrated mills shed capacity, so US steel capacity as a whole expanded by 20 percent. Since 2001, steel capacity has declined sharply, which has helped push capacity utilization up to 86 percent in August 2002.[33]

However, the US steel industry faces an important Catch-22: In order for the steel industry as a whole to turn a profit, prices need to be extremely high, but high prices encourage steel firms to increase capacity and output, which drives down steel prices. The capacity increases that started in 1988 and in 1995 both followed a period of rising steel prices. The same thing will probably happen in 2003. In 2001, eight flat-rolled mills that accounted for 16 million short tons of annual capacity were idled, but now four of them have restarted, adding 10 million short tons back to US steel-making capacity. LTV Corporation, whose idled assets were sold to new owners (the International Steel Group, ISG) in 2002, is the biggest component of the fluctuation in flat-rolled capacity (6 to 7 million short tons).[34] The stock market is astutely betting that this increase in steel supply will drive down steel prices and profits, which helps explain the poor performance of the Dow Jones Steel Index.

Pathetic efforts by the administration to induce US steel firms to restructure can also be considered among the "bad" aspects of US steel policy. To appear even-handed, the Bush administration required US steel producers to submit reports to the USTR by September 5, 2002, documenting how they planned to restructure. The steel firms were also asked to submit public versions of the report (i.e. deleting confidential business information) by the same deadline. Four months later there have been zero public reports. But the September press releases issued by the steel firms describing the confidential versions suggest that the reports are probably not worth reading.

We do not believe tariffs are essential to keep the capitalist engine working; in fact, safeguards—in the absence of industry restructuring—only hurt the engine's performance.

The press releases have three common elements, which can be paraphrased as:

- We have been restructuring for many years resulting in many lost jobs.
- We plan to reduce costs and improve quality in the future.
- Safeguard tariffs need to remain in place for two more years in order to implement our plan.[35]

In a capitalist economy, nearly every firm—no matter the industry, country, or time period—has plans to reduce costs and improve quality. We do not believe tariffs are essential to keep the capitalist engine working; in fact, safeguards—in the absence of industry restructuring—only hurt the engine's performance. Nor do we believe the industry should be given "credit" for past restructuring that was forced upon it by market forces. The real question should

32. 2002 data includes the first three quarters if available and is taken from SEC (2002). The samples closely correspond to the sample used by the International Trade Commission in its *Industry, Trade, and Technology Review*, which regularly includes a similar chart. In this paper, the integrated mill sample includes ACME Metals, AK Steel, Bethlehem Steel, LTV, Ispat Inland, US Steel, Weirton, and National Steel. The minimill sample includes AmeriSteel, Nucor, Oregon Steel, and Steel Dynamics. Some firms are not included in some years due to closings and mergers.

33. Utilization of *raw* steel capacity, as reported by the AISI (2002b), has been 90 percent for the period January-October 2002. The data in figure 4 pertain to the steel industry as a whole. In contrast, capacity utilization for durable goods manufacturing as a whole has hovered around 70 percent in 2002 and has not reached the 90 percent range since 1967, according to data from the FRB (2002).

34. Figures come from Steel Business Briefing (2002), quoting Mark Parr of McDonald Investments.

35. The press releases also usually endorse the continued use of antidumping tariffs and countervailing duties.

be: What actions are US steel producers taking that would not be possible without tariffs? The press releases do not answer this question.

In our view, the steel industry should emphasize measures that reduce capacity permanently. Sadly, although Section 201 requires recipient industries to restructure in exchange for protection, the Bush administration lacks the gumption to ask hard questions about capacity reduction—much less to subject steel industry replies to public scrutiny.

Legacy Costs

Legacy costs are health care and pension obligations that integrated steel firms owe to their retirees. These costs were estimated to run some $13 billion in net present value as of 1999.[36] In 1999, health expenditures for retirees at seven integrated steel firms amounted to $15 per ton of steel, and pension benefits added another $50 per ton. These seven integrated firms lost about $7 per ton in 1999 (and much more in 2000 and 2001), so legacy costs are a substantial obstacle to profitability.[37] The legacy cost dilemma arises from the fact that legacy costs weaken the financial position of a firm but simultaneously act as a "poison pill" that prevents a merger with another firm that has a stronger balance sheet.

The legacy cost dilemma arises from the fact that legacy costs weaken the financial position of a firm but simultaneously act as a "poison pill" that prevents a merger with another firm that has a stronger balance sheet.

Bethlehem Steel, with its $9 billion in legacy costs, illustrates this dilemma.[38] Bethlehem filed for Chapter 11 bankruptcy in October 2001. Under Chapter 11, the firm continues to operate but can forestall debt payments (including legacy costs). Bethlehem wants to merge with another domestic steel producer to avoid liquidation under Chapter 7.

On January 6, 2003, it was announced that ISG (the company formed from the assets of LTV and Acme Metals) had offered to purchase substantially all of Bethlehem's assets and to assume a small fraction of Bethlehem's liabilities for a total cost of $1.5 billion. This offer will likely be approved soon by Bethlehem's management, the USWA, and the bankruptcy judge even though Bethlehem listed $2.7 billion worth of property, plant, and equipment as of November 30, 2002.[39]

What will happen to Bethlehem's workforce remains to be seen. ISG has a general agreement with the USWA that apparently will apply when ISG assumes control of Bethlehem's assets. The USWA generally supports ISG's efforts because ISG's cost-cutting strategy has focused on eliminating salaried employees and trimming benefits more so than cutting wages and eliminating job opportunities for hourly workers. But much of Bethlehem's total workforce (perhaps 40 percent) will likely be laid off. Late in 2002, Bethlehem planned on giving its older workers an early retirement proposal, but the Pension Benefit Guarantee Corporation (PBGC) foreclosed that option by assuming control of Bethlehem's pension plan in December 2002. Once the PBGC assumes control of a pension plan, the company cannot increase the PBGC's liability by offering more generous pension benefits as part of an early retirement package. ISG may be contemplating offering early retirement proposals to older workers that would expand upon the terms of its existing agreement with the USWA. However, any of Bethlehem's workers who are laid off would likely qualify for health benefits and wage insurance under the TAA program enacted by Congress in 2002 as part of the TPA package.

Since the US government is now picking up part of the legacy costs of liquidated firms via the enhanced TAA program, some say that Chapter 7 liquidation or Bethlehem-style asset sales are not such bad outcomes. Assets are sold in a competitive fashion and the new owners escape the burden of legacy costs and restrictive union contracts. Under these circumstances, the new owners should be able to operate profitably. In individual cases, the capitalist system—underpinned by bankruptcy liquidation—is working just as Joseph Schumpeter prescribed!

The benchmark, however, should be whether the liquidation system as a whole—taking public and private actors together—performs efficiently, not whether it works for an individual steel firm. In a

36. Figure comes from Klinefelter (2002). Another potential "legacy cost" is the cost of future environmental cleanup; however, we set this issue aside (as many others do) mainly for lack of even ballpark estimates.

37. Data on pension and health care costs is from USWA (2001) Net loss per ton is derived from this data as well as annual reports maintained by the SEC (2002). The seven major integrated steel firms are U.S. Steel, Bethlehem, LTV, AK Steel, National Steel, Ispat-Inland, and Wheeling-Pittsburgh. LTV has since been liquidated.

38. See Crenshaw (2002).

39. SEC (2002)

Chapter 7 liquidation, the firm's assets are sold to pay secured creditors to the extent possible and the remaining unsecured obligations (such as legacy costs) are simply not fulfilled. As a result, a substantial part of legacy costs, together with loan guarantees and adjustment costs, become a public obligation. Hard-nosed advocates of market capitalism might say that the right answer is to get the government out of the business of paying legacy and adjustment costs and making loan guarantees. We disagree with their prescription; more importantly, we do not think hard-nosed capitalism is about to become public policy—for steel or any other major sector. We think the sensible approach is to accept the government safety net, and then ask how to improve its efficiency over the medium term.

Seen as a system, private liquidation fosters public subsidization. A new private firm gets the benefit (steel assets at a cheap price) while the public budget is saddled with various costs (legacy obligations, loan guarantees, employment insurance, etc). If public costs were a one-time event, that might be acceptable. However, the public burden is not just a one-time event. Instead *ex post* public assistance in all its guises feeds the cycle of overcapacity that leads to future firm failures.[40]

Two other factors compound this problem. First, the USWA contributes to the cycle of failure by insisting that all union contracts be roughly comparable. The buyer of liquidated assets is thus pressured to meet the unionized standard for salary, benefits, and work rules. This is a high standard in the face of nonunion competition and can lay the groundwork for future bankruptcies. Second, public support for the US steel industry provides a handy excuse for other countries to subsidize their steel industries, which they are inclined to do anyway. This in turn provokes trade remedies both in the United States and elsewhere. The pathological combination of private markets and public subsidies is not, of course, confined to the United States. It is an endemic feature of the steel industry in Europe and other parts of the world.[41]

The Bethlehem saga illustrates another aggravating circumstance to this cycle. In order to complete its deal with ISG, Bethlehem wanted to cut its workforce by offering early retirement to older workers. It is generally good to reduce the number of steel workers, but there is a moral hazard problem: Bethlehem and other failing steel firms have every incentive to offer overly generous terms to induce early retirement because they have no intention of fufilling them and have every intention of passing the costs on to the government. The Pension Benefit Guarantee Corporation—whose financial resources are already stretched too thin—intervened to prevent additional early retirements, which in this case put capacity reduction and the renegotiation of restrictive union contracts in jeopardy, although in the end, it appears that ISG managed to overcome these hurdles.

The first step the United States should take is to offer to suspend the steel safeguards against any country that commits to the US plan to end market distortions in the steel industry.

We think the medium-term solution lies in reducing high-cost capacity rather than artificially limiting competition through trade protection. Minimills, which have low fixed costs, have been doing well for years. But reducing high-cost capacity will require a very difficult political decision: Congress will have to appropriate additional money without giving in to the temptation to use public money as a life-support system for failing steel firms. In our previous policy brief, we proposed a "Grand Bargain" where the government would assume a portion of the legacy costs of some integrated firms, if those firms were willing to reduce total capacity in a merger. The Bush administration shows no willingness to pursue this or any other legacy cost initiative (aside from its grudging acceptance of the enhanced TAA provisions). Thus, the various bills in Congress that address legacy costs stand little chance of becoming law. Given the tenor of the bills as written, this may be a good outcome, because congressional sponsors generally attempt to preserve capacity rather than eliminate it.[42] However, as laid out in our recommendations, we think it is possible to condition legacy cost relief on capacity reduction and *buy out* rather than *bail out* high-cost steel producers.

40. The Emergency Steel Loan Guarantee Act of 1999 offers loan guarantees to the steel industry, but has only been utilized once. Since the Act did not induce creditors to loan money to LTV and Geneva Steel despite the 85 percent (or more) guarantee, several House bills contain language to make the program even more generous. We think this is a very bad idea. See Cooney (2002) for additional details on the House bills.

41. Nor is the cycle confined to the steel industry. Shipbuilding is another pathological case.

42. See Cooney (2002) for a summary and status report for these various bills.

The Ugly—US Steel Policy Provokes International Trade Conflicts

The international dimensions of US steel policy are primarily debated in the OECD and the WTO. The first two prongs of President Bush's steel plan—to reduce excess capacity and market-distorting practices—are being pursued in leisurely fashion in quarterly OECD meetings. The third prong—Section 201 relief—has been challenged by seven countries and the European Union under WTO rules. US trading partners have also challenged the WTO legality of other US steel-related policies, notably the Byrd Amendment and the methodologies used to determine antidumping (AD) and countervailing duties (CVD).

Both the United States and the international community link these various issues, but do so in different ways. The United States argues that trade remedies are triggered by excess capacity resulting from public and private distortions and that AD, CVD, and safeguard measures are needed to force the international community to curtail the distortions, thereby reducing high-cost, excess capacity. The international community sees US penalty duties, especially AD tariffs, as thinly disguised protection, which should be put on the negotiating table as part of a comprehensive effort to eliminate market distortions. Both sides are correct in identifying each other's market-distorting practices, but the central failure of US steel policy has been to insist that foreign countries reform their practices without offering concessions of its own.

OECD Steel Meetings

The first few meetings of steel-producing countries at the OECD have focused on the elimination of excess capacity. There is no internationally accepted definition of what constitutes "excess" capacity. Among the worst definitions is one frequently used in US steel industry and USWA publications: Excess capacity equals domestic capacity minus domestic consumption. This flawed definition serves only to paint the United States as a victim and would be appropriate only in a fantasy world of 100 percent capacity utilization and balanced trade in the steel industry.

A better definition of excess capacity would be capacity that is habitually unprofitable (after deducting public subsidies from private revenues). Some form of this definition appears to be gaining ground in OECD talks. However, all habitually unprofitable steel firms assert that they would be profitable if only their habitually unprofitable competitors would shut down. As a result, the OECD capacity reduction talks have made little progress. The OECD participants did set a goal of eliminating 130 million short tons of gross steelmaking capacity by 2005, and they established a peer-review mechanism to monitor each country's progress. Given this "soft" framework, the 130 million-ton goal will only be met to the extent that market forces dictate. Even if market forces take out 130 million short tons of old, high-cost capacity, nothing precludes the installation of 130 million (or more) tons of new low-cost capacity. Indeed, the recent worldwide steel price increase makes it less likely that old, high-cost capacity will be retired and more likely that new, low-cost capacity will be installed.

President Bush's safeguard tariffs—the third prong of his "comprehensive" steel plan—has served to undermine the first two prongs of his plan by inducing other countries to enact their own safeguards against steel imports. In our previous policy brief, we predicted a "domino effect"—other countries would enact protectionist barriers on both steel and other products if the United States went ahead with its steel safeguards. Our prediction has been more than vindicated. In the first nine months of 2002, there have been 116 non-US safeguard investigations (94 in the "steel and metals" industry including those by the European Union and Canada) as compared to 20 non-US safeguard investigations during the 12 months of 2001.[43] For the first time, the worldwide number of new safeguard investigations for all products is on track to exceed the number of new AD investigations (109 through the first nine months of 2002), and the number of exporters included in a safeguard investigation is always much larger than in an AD investigation.[44]

At the September 2002 OECD meeting, the United States proposed a four-part plan to eliminate the market distortions that give rise to excess steel capacity:

- Prohibit all subsides to the steel industry—except for subsidies intended to facilitate the closing of steel capacity (i.e. health and pension legacy costs, plus environmental legacy costs).

- Abolish all market access barriers—except safeguards and AD/CVD duties.

- Enforce domestic laws that combat anticompetitive practices.

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43. The United States initiated 33 steel safeguard investigations bringing the total number of safeguard investigations worldwide to 53 in 2001. The United States has not initiated any safeguard investigations in 2002, except for one against China under a special safeguard provision.
44. Data from Stevenson (2002).

Table 2 Overlap between Section 201 and AD/CVD tariffs

Section 201 Tariff Increase	Subject to AD/CVD: No	Subject to AD/CVD: Yes	*Total*	*Percent share of "yes"*
Slab TRQ	1	4	5	80
8%	6	1	7	14
13%	12	2	14	14
15%	21	37	58	64
30%	49	128	177	72
Subtotal: Affected by Section 201	89	172	261	66
Not affected by Section 201	212	213	425	50
Total	301	385	686	56

Notes: Numbers represent the number of 10-digit classifications within chapters 72 and 73 of the Harmonized Tariff Schedule. We can reject the null hypothesis that Section 201 tariff increases and AD/CVD orders are independent under both a chi-squared test and a Fisher exact test.

Sources: US Customs Department (2002a, 2002b).

- Strictly limit new preferential financing to the steel sector, such as multilateral loans and export credits.

The European Union and other steel producers initially objected to the US proposal because it did not reform US trade remedy laws, which the international community believes are abused to the point of market distortion. In the OECD meetings in December 2002, the steel producing nations agreed to a compromise. They will first discuss the elimination of most subsidies and then discuss the reform of trade remedy laws—but in order to succeed the two sets of discussions would ultimately have to be tied together into a single agreement. In other words, other countries will insist that the United States reform its trade remedy laws (perhaps in the Doha negotiations) before they agree to limit their steel subsidies. Until the December OECD meeting, the United States adamantly refused to take the one step necessary to jumpstart international negotiations—putting its own protection on the negotiating table.[45] Now that the US stance has softened, we urge the Bush administration not to scuttle whatever progress is made on the subsidies front by taking a hard line on trade remedies. To this end, in the final section, we offer a proposal to reform the way the United States applies trade remedies.

US government and steel officials often dismiss the need for US concessions by asserting that the United States is the "world's steel dumping ground." This claim is specious. The United States does import a larger quantity and value of steel than any other country, but this is true of hundreds of products simply because the US economy is much larger than that of any other country. For the year 2001, if the value of iron and steel imports is taken as a share of GDP, Japan (0.07 percent) ranks as the most closed followed by the United States (0.15 percent), and the European Union (0.16 percent for extra-EU imports). Twelve other countries imported more steel as a share of GDP in 2001, and the average for these 15 importing nations was 0.41 percent.[46] Thus, the average importer in this sample had almost *triple* the US openness to iron and steel imports in 2001.

The primary reason why steel imports made up such a small share of US GDP in 2001 was the prevalence of AD and CVD orders and investigations. Of the 336 US AD and CVD orders in place as of November 2002, 57 percent (191) were related to iron and steel.[47] Between 1980 and 2000, $18 billion of steel imports have been subject to an AD or a CVD investigation, and $10 billion of imports were penalized with an AD or CVD tariff.[48]

Moreover, there is a substantial overlap between US AD/CVD orders and US Section 201 tariffs, as is shown in table 2. There are 686 types of iron and steel products at the 10-digit level of the US Harmo-

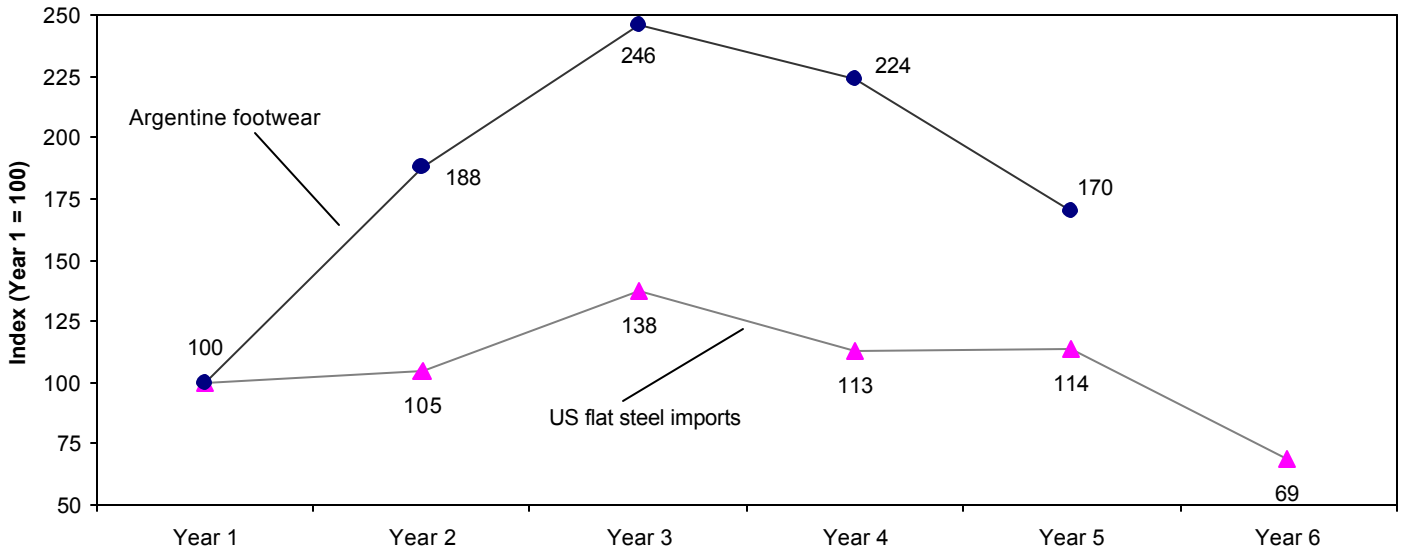
45. The same attitude— "It's your fault, not mine. You reform first."—cramped the US negotiating stance in the run-up to the failed Seattle Summit in October 1999.

46. The data comes from the WTO (2002b) and IMF (2002). These 15 importing nations were the only ones that imported more than $1 billion worth of iron and steel imports in 2001.

47. USITC (2002b).

48. Figures come from Hillman (2002).

Figure 5 Comparison of import surges preceding US steel and Argentine footwear safeguards



Note: Year 1 in the Argentine footwear case is 1991, while year 1 is 1996 in the US steel case. See footnote 53 for an explanation of how we treated data in year 6.

Sources: Ministry of Economy, Trade, and Industry of Japan (1992) and USITC (2002c).

nized Tariff Schedule. Of these 686, 172 are affected by Section 201 remedies and 385 are affected by AD or CVD orders. Of the 425 iron and steel products not affected by Section 201 remedies, half are subject to an AD/CVD order and half are not. But, of the 261 iron and steel products affected by Section 201 remedies, two-thirds are *also* affected by an AD or CVD order. In other words, for the most part Section 201 remedies and AD/CVD orders are in practice, complementary measures, not alternative measures.[49]

This correlation between Section 201 remedies and AD/CVD orders suggests a legal dilemma for US steel import policy. One possibility is that petitioners in AD/CVD cases have been injured by steel imports *not* subject to the AD/CVD investigation, which raises the question of whether the ITC improperly blames steel imports subject to the AD/CVD investigation for materially injuring the domestic industry. Alternatively, the US safeguard decision may have been a primary function of steel import prices rather than a primary function of steel import volume. Volume increases are an essential element of a safeguard case, both under the WTO Agreement on Safeguards and US law. Under either explanation of the observed correlation, US steel producers are "double-dipping" on protectionism and steel producers in other countries are not happy about it.

WTO Dispute Settlement

The WTO Agreement on Safeguards permits temporary protective tariffs for distressed industries, but the associated obligations are relatively strict. The United States simply ignored many of the obligations. Moreover, the coverage of US safeguard tariffs was substantial. President Bush applied tariffs to about $10 billion worth of steel imports—the equivalent of two decades worth of AD and CVD orders. With this background, it comes as no surprise that the international community is asking the WTO to condemn the safeguard tariffs.

The first problem with the US safeguard action is that the ITC included imports from Canada and Mexico (which constitute almost a fifth of total US steel imports) in its injury investigation, but President Bush did not subject NAFTA partners to his tariff remedies. In a previous case, the WTO Appellate Body rebuked the United States for this practice and required "parallelism"—that NAFTA partners be included in both the injury investigation and the remedy, or not be included at all.[50]

49. The null hypothesis between Section 201 and AD/CVD orders has a less than one in ten thousand chance of being true under both a chi-squared test and a Fisher exact test.

50. The text of NAFTA requires that the United States exclude Canada and Mexico from safeguard remedies or provide them with immediate compensation. This provision of NAFTA is probably inconsistent with WTO obligations, although no country has directly challenged the NAFTA provision.

After the ITC made its remedy recommendations, USTR Robert Zoellick sent a letter to the ITC Commissioners asking (among other things) if their injury determinations would have been different had imports from Canada and Mexico been excluded from the injury investigation. The Commissioners said "no", but did not give extensive analysis nor did they hold further hearings. The WTO will probably find fault with the missing parallelism.

In the spirit of our earlier Grand Bargain, we propose that the US government offer to assume a percentage of a steel firm's total long-term legacy obligation (inclusive of environmental legacy costs) equal to the percentage of its capacity that the firm is willing to permanently shutter.

The second problem with the US Section 201 action is that increased imports of like or directly competitive steel products are not the principal cause of the domestic industry's distress. Article 2.1 of the WTO Agreement on Safeguards permits safeguards:

> *... **only** if that Member has determined ... that such product is being imported into its territory **in such increased quantities**, absolute or relative to domestic production, and under such conditions as to cause or threaten to cause serious injury to the domestic industry that produces **like or directly competitive products** (emphasis added) ...*

The United States has been accused of violating each of the bold phrases. There is no dispute that US imports of most steel products increased between 1996 and 1998 and then declined between 1998 and 2001—in some cases to sub-1996 levels.[51] The WTO Appellate Body in a previous safeguard case involving footwear imports by Argentina deemed that "the increase in imports must have been recent enough, sudden enough, sharp enough, and significant enough, both quantitatively and qualitatively, to cause or threaten to cause 'serious injury'."[52]

The United States is making the heroic attempt to meet this burden by contending that low steel prices in 2000 and 2001 were largely caused by the increase in imports up through 1998. This argument will likely fall on deaf ears because steel import prices continued to fall between 1998 and 2001, even as the quantity of imports declined substantially. Thus, while the United States may be able to prove that, in 2001, steel was being imported "under such conditions" (low prices) as to cause serious injury, it will not be able to meet the two-pronged test that steel was being imported "in such increased quantities" and "under such conditions" as to cause serious injury to the domestic industry.

Figure 5 compares the percentage increases in imports in the safeguard cases involving both Argentine footwear imports and US imports of flat steel products.[53] The five years shown in the figure are 1991 to 1995 for Argentine footwear imports and 1996 to 2000 for US flat steel imports, with a projection for 2001 in order to simulate the evidence facing the ITC during the injury investigation.[54] Considering that the WTO Appellate Body found that the increase in footwear imports was insufficient to justify Argentina's safeguard, the United States has little hope of winning its case. The growth peak in the quantity of US flat steel imports was barely half that of Argentine footwear imports. Although the decline from the peak in the fourth and fifth years under safeguard investigation was steeper for Argentine footwear, US flat steel imports were projected to fall precipitously in 2001 to half their 1998 levels. Moreover, Argentine footwear imports were 70 percent above the original level in the fifth year as compared to a mere 14 percent increase in the US steel case by the fifth year (and an absolute decline when annualized data from the sixth year is taken into account).

Other WTO members also make persuasive arguments that the ITC failed to adequately separate the harm caused by increased imports from the harm caused by other factors, such as minimills, legacy costs, and changes in demand. Furthermore, other members contend that the ITC should not have considered four or five disparate flat steel products to

51. Technically, the ITC only considered the first half of 2001 in its injury investigation but imports on a year-to-date basis were still declining relative to the same period in 2000.
52. WTO (1999, paragraph 131).

53. For this calculation, flat steel imports are defined as slabs, plate, hot-rolled steel, cold-rolled steel, and coated steel according to the definition used by the majority of the ITC. Tin and grain-oriented electrical steel are not included in this definition.
54. We annualized data for 2001 by multiplying the growth rate of imports for flat steel products in the first six months of 2001 compared to the same period in 2000 by the annual data for 2000 to produce a seasonally adjusted projection for 2001 flat steel imports. Simply doubling imports for the first six months of 2001 would result in an upwardly biased projection because steel imports generally peak in the second quarter.

be a single "like or directly competitive" product for the purpose of assessing injury. Indeed, considering unfinished steel slabs to be like or directly competitive with tin and other flat finished steel products, seems about as logical as filling a car with imported crude oil rather than gasoline.

Finally, even if the United States prevails on all these contested issues, it will have a difficult time meeting an additional WTO requirement—that the remedy be proportional to the harm caused by imports. In fact, there is a negative correlation between the products with the strongest Section 201 remedies and the products that experienced the largest percentage increases in import volume between 1996 and 2001. Put another way, the products with smaller percentage increases in import volume received stronger trade remedies.[55]

The Section 201 case is not the only instance where US steel policy has been challenged in the WTO. Recently the Commerce Department changed its methodology in response to adverse WTO rulings regarding the calculation of AD and CVD steel duties. Meanwhile, a WTO panel found that the Continued Dumping and Subsidy Offset Act (the Byrd Amendment) is inconsistent with WTO obligations. The United States is appealing the decision on the Byrd Amendment (the appeal will allow at least one more disbursement to petitioners while hearings take place).

Unlike the Section 201 tariffs, which can be rescinded unilaterally by the President, Congress would have to repeal the Byrd Amendment in order to best comply with the WTO Appellate Body ruling. Greg Mastel, Chief Trade Counsel in 2002 for the Senate Finance Committee, confidently predicted that the Senate would choose not to comply with the WTO rulings on the Byrd Amendment.[56] If so, the precedent set in the recent WTO arbitration ruling in the Foreign Sales Corporation (FSC) case does not bode well for US exporters.[57] The Byrd Amendment shells out over $200 million annually to petitioning firms (inclusive of steel firms). Under the FSC precedent, each of the 11 trade partners that challenged the Byrd Amendment could impose prohibitive tariffs on $200 million of US exports each year.

If the United States chooses not to comply with adverse WTO rulings on the Section 201 tariffs, as well as the Byrd Amendment, other countries may feel forced to retaliate. A "steel war" will not advance the prospects for substantial trade liberalization in the FTAA or the WTO. On the other hand, if the United States does comply with WTO dispute settlement decisions, then Congress may be especially skeptical of any trade package coming out of the FTAA or WTO that reforms safeguard, AD, or CVD remedies. Putting all this together, despite the passage of TPA, difficult trade negotiations are made all that much harder—both at home and abroad—by conflicts over US steel policy.

Recommendations

The administration needs to pursue a new steel strategy that can gain support from both Congress and the international community. Pressure is building on the domestic front from steel users who resent paying extra for steel in a weak economy. On the international front, pressure has waned slightly due to product exclusions and high world steel prices. However, declining steel prices in 2003 and WTO disapproval of US safeguard tariffs seem almost inevitable. When those two events occur, trade partners will again turn up the heat on the United States. Many steps need to be taken but most of them require at least tacit approval from the US Congress. Here we offer recommendations that we think will be beneficial to the steel industry and possibly palatable to Congress.

International Dimension

The first step the United States should take is to offer to suspend the steel safeguards against any country that commits to the US plan to end market distortions in the steel industry. The Bush administration can take this step unilaterally. Since US safeguard tariffs will probably be disapproved by the WTO Appellate Body in late 2003, this bargaining chip should be used quickly before the panel and Appellate Body make their decisions.

In addition, the United States could propose to clarify the language in the WTO Agreement on Safeguards regarding the time frame for safeguard investigations. As written, nothing in the WTO Agreement explicitly prevents a country from imposing safeguards on the grounds that imports of a product have increased substantially since the Marrakesh Declaration was signed in 1994. The time frame could

55. The data comes from the USITC (2002c). We annualized data for 2001 by multiplying the growth rate of imports for each steel product in the first six months of 2001 compared to the same period in 2000 by the annual data for 2000 to produce a seasonally adjusted projection for 2001 imports, in order to replicate the evidence facing the ITC at the time of the investigation. Simply doubling imports for the first six months of 2001 would result in an upwardly biased projection because steel imports generally peak in the second quarter. The 33 products were ranked by the percentage increase in import quantity from 1996 to 2001 (annual projection) and by the magnitude of the tariff remedy. The Spearman rank correlation is statistically significant at the 98 percent confidence level and has a value of –0.43.

56. Quoted in *Inside US Trade* (2002).

57. See Hufbauer (2002).

be tightened—for example, to the most recent 36-month period for which data is available at the time of the investigation.

Foreign steel producers fear AD investigations launched by the US steel industry as much if not more than safeguard measures. In the first stage of an AD case, the plaintiffs need only to prove that imports are being sold at less-than-fair-value (LTFV); the domestic industry does not need to show that low prices are the result of a less-than-fair-practice, such as a cartel, a subsidy, or predatory pricing.[58] This is akin to accusing students who earn high test scores of cheating without alleging (much less proving) that they improperly collaborated or had advance knowledge of the questions. Thus, unfair trade remedies purportedly combat a process (unfair competition) solely on the basis of an outcome (export prices that are either below average cost—the great majority of cases—or that are below prices charged in the home market or third country markets). In the second stage of an AD case, the petitioners must prove that imports sold at LTFV cause material injury or threat of material injury to a domestic industry. "Material injury" has come to be interpreted as slight injury.[59]

We propose a new system to replace the material injury test with a test that is directly aimed at the market-distortion issue. The administration should propose legislation that has the effect of applying a "smoking gun" test to cases involving industries (such as steel) that suffer from systemic market distortions. Once the Commerce Department finds LTFV sales, the ITC should determine, based on the preponderance of the evidence, whether the subject imports are sold at LTFV because of market-distorting practices. If so, then the existence of a less-than-fair-practice (LTFP) would suffice to prove that the domestic industry is *threatened* by material injury.[60] Under our proposal, in the absence of an LTFP, the United States would not impose AD tariffs. Of course, even if unfair practices are not distorting steel trade, the industry could seek safeguard tariffs, provided that imports are causing serious injury.[61]

We think that a proposal along these lines would be attractive to the international community. It offers a new approach to the market-distortion problem not by gutting the AD statute, but by focusing the statute on the unfair practices rather than the unfavorable outcomes.

Domestic Dimension

Pressure on the Bush administration to "do something" for the steel industry will intensify before the 2004 presidential election, especially once the WTO has disapproved the Section 201 tariffs. In the spirit of our earlier Grand Bargain, we propose that the US government offer to assume a percentage of a steel firm's total long-term legacy obligation (inclusive of environmental legacy costs) equal to the percentage of its capacity that the firm is willing to permanently shutter.[62] A firm could also reduce its legacy liability if it were willing to buy out and permanently shutter a portion of another firm's capacity. The capacity bought out would be added to the purchaser's total capacity for the purpose of determining the equivalent amount of legacy liability transferred to the government. This offer should stand regardless of any merger activity but would encourage mergers rather than Chapter 7 liquidation. After a predetermined date, say the end of 2004, the offer would be pulled from the table. This deadline would provide an incentive to high-cost steel producers to reduce their capacity quickly and would encourage stronger firms to merge with bankrupt firms before Chapter 7 liquidation. By offering not a bailout but a buyout, we think the pathological cycle fostered by the current public subsidy/private market system would be brought to an end.

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58. Under current law, the Commerce Department can find that imports are sold at LTFV on the basis of predation (exporting to the United States at prices below the marginal cost of production) but in practice this clause is rarely invoked. Predation would obviously be deemed a LTFP under our proposal.

59. Congress has statutorily defined "material injury" as "harm that is not inconsequential, immaterial, or unimportant", language that gives the ITC maximum latitude to find injury.

60. Article 3.7 of the WTO Anti-Dumping Agreement requires that "A determination of a threat of material injury shall be based on facts and not merely on allegation, conjecture or remote possibility. The change in circumstances which would create a situation in which the dumping would cause injury must be clearly foreseen and imminent … [t]he totality of the factors considered must lead to the conclusion that further dumped exports are imminent and that, unless protective action is taken, material injury would occur." We believe our proposal is WTO-consistent because if a LTFP is identified, then the threat is "clearly foreseen and imminent".

61. In the Doha Round, the United States should work to generalize this proposal to other industries and negotiate language in the WTO Anti-Dumping Agreement that requires this alternative methodology.

62. For example, if a steel firm is willing to permanently close half its capacity (and not sell it to another firm), the government would take half the firm's legacy costs.

Appendix A Calculating the Effect of Product Exclusions

Table A.1 lays out the details of our calculations. The first step in calculating the effect of product exclusions is to obtain data on the value of steel imports subject to tariffs and the value of the tariffs collected.[1] We did so for the steel products subject to an immediate 30 percent tariff from remedy countries only.[2] The apparent tariff rate is the ratio of duties to the dutiable value of steel imports for the first quarter of 2002. Prior to the Section 201 tariffs, this apparent rate was about 1.2 percent.[3] Thus, we assume that a 1.2 percent tariff is the norm for these products and is the tariff that must be paid even if an exporter enjoys a product exclusion.[4]

The next step is to calculate the value of steel imports that are subject to product exclusions in the post-Section 201 period. To do so, we use a system of two equations:

Equation (1) (1.2%+30%)(Included Value) + (1.2%)(Excluded Value) = Duties

Equation (1) $.312(V_i) + .012(V_e) = D$

"Included Value" means imports subject to an immediate 30 percent tariff increase. "Excluded Value" means imports that would be subject to an immediate 30 percent tariff increase if not for *product* exclusions. Imports from *countries* not subject to Section 201 remedies are not part of any equation in this appendix.

Equation (2) (Included Value) + (Excluded Value) = (Dutiable Value)

Equation (2) $V_i + V_e = V_d$

By twice substituting equation (2) into equation (1) and rearranging, we obtain equations for the excluded value and the included value.

Equation (3) $V_e = [D - (.312)(V_d)] / -.3$

and

Equation (4) $V_i = [D - (.012)(V_d)] / .3$

Table A.1 shows that in the second and third quarters of 2002, 46 percent of the steel value ordinarily subject to a 30 percent tariff increase entered the United States with a product exclusion. However, this percentage was declining for several months (until September) due to a combination of factors. First, many product exclusions are capped and exporters may be running into those caps. Second, the selling price of steel increased during this period, which encourages steel exporters to absorb, or "eat", the Section 201 tariffs. It should be kept in mind that many product exclusions were granted in August, which explains the increase in the share of steel value subject to a product exclusion. The effect of the August exclusions may become even more visible in the fourth quarter than it was in September.

The final step in these calculations is more tenuous because it requires an assumption about how steel trade would differ in the absence of Section 201 tariffs. For the period 1996 to 2000, the average growth in imports of these steel products from remedy countries both in the second and third quarters compared to the first quarter was 22.3 percent.[5] Demand for steel is generally highest in the second and third quarters of a year due to the construction and manufacturing business cycles. We use this growth rate to project the value of imports of these steel products if there had been no Section 201 tariffs.[6]

The value of steel displaced by the 30 percent tariffs is calculated as the difference between projected imports and the actual dutiable value. The safeguard tariffs against these imports, even when mitigated by the product exclusions, have reduced

1. These data can be obtained from USITC (2002d).
2. The data analyzed in this appendix is a subset of the steel market and is narrower in scope than the data considered in the following appendix. The products analyzed in this appendix are plated steel, hot-rolled flat steel, cold-rolled steel, coated steel, tin, hot-rolled bars and light shapes, and cold-finished bars. A list of countries that are not subject to tariff increases on some or all of these products is provided by the USTR (2002b).
3. The Section 201 tariffs went into effect in late March of 2002, but we consider the entire first quarter to be "pre-Section 201 tariffs".
4. This apparent tariff rate is slightly below the 2001 MFN tariff rates for these products. Apparently, MFN tariffs have been further phased down in 2002.
5. Steel imports in the third quarter were more erratic than in the second quarter, thus we weighted each growth rate by the inverse of the standard error to obtain an average increase in both the second and the third quarters of 22.3 percent compared to first quarter levels between 1996 and 2000.
6. This estimate is probably reasonable for 2002 because, although importers rushed steel into the United States in the first quarter (prior to the Section 201 tariffs), steel imports in the second and third quarters should have also been strong in the absence of Section 201 tariffs due to the domestic supply shortage.

steel imports from remedy countries in these product categories by 54 percent. Considering the magnitude of the product exclusions, it appears that 30 percent tariffs are sufficient to reduce affected imports by about 69 percent despite rising steel prices. On a related note, this fact will make it difficult for the United States to prove in the WTO that the remedies are proportional to the amount of injury caused by imports. Given the rather moderate import "surge", tariffs that displace 69 percent of affected imports appear punitive.

Assuming that steel imports with product exclusions would have been displaced at the same 69 percent rate if there had been no exclusions, it is possible to approximate the real effect of the exclusions by taking 69 percent of the excluded value. On this arithmetic, product exclusions are responsible for about $233 million in additional steel imports from remedy countries during the second and third quarters combined. The average price of these imports is probably between $390 and $333 per ton, which puts the quantity between 600,000 and 700,000 short tons. However, it should be kept in mind that in the absence of *product* exclusions, US steel importers may have resorted to *countries* (such as Canada and Mexico) that were totally excluded from the Section 201 remedies.

Table A.1 The effect of product exclusions for steel products subject to 30% tariff (in millions of dollars and percent)

	Year 2002									First quarter	Second quarter	Third quarter	Second + third quarter
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep				
Dutiable value (V_d)	229.7	288.7	141.3	90.0	77.2	106.9	145.3	145.4	176.0	659.7	274.2	466.7	740.9
Calculated duties (D)	2.4	3.1	2.6	15.2	12.3	19.1	26.8	29.3	26.4	8.1	46.6	82.5	129.1
Applied tariff rate (percent)	1.1	1.1	1.8	16.9	15.9	17.9	18.4	20.2	15.0	1.2	17.0	17.7	17.4
Excluded value (V_e)[1]	229.7	288.7	141.3	43.0	39.3	47.6	61.8	53.5	95.1	659.7	129.9	210.4	340.3
Included value (V_i)[2]				46.9	38.0	59.4	83.5	91.9	80.9		144.2	256.4	400.6
Share excluded (percent)	100	100	100	47.8	50.9	44.5	42.5	36.8	54.0	100.0	47.4	45.1	45.9
Share included (percent)				52.2	49.1	55.5	57.5	63.2	46.0		52.6	54.9	54.1
Assumed value of trade in the absence of Section 201 tariffs[3]										659.7	806.8	806.8	1,613.6
Dutiable value displaced by Section 201 tariffs (assumed value - dutiable value)											532.7	340.1	872.7
Share of assumed value displaced											66.0	42.1	54.1
Percent decrease in imports subject to 30 percent tariff increase[4] (percent)											78.7	57.0	68.5
Effect of product exclusions (percent decrease times excluded value)											102.2	119.9	233.2

Source: USITC (2002d).

1. Formula used in this calculation is $V_e = [D - (.312)(V_d)] / -.3$. See page 20 for details.
2. Formula used in this calculation is $V_i = [D - (.012)(V_d)] / .3$. See page 20 for details.
3. Second and third quarter assumed values of trade in the absence of Section 201 tariffs are calculated by adding 22.3 percent to first quarter dutiable value. This growth rate is consistent with growth patterns in the second and third quarters relative to the first quarter between 1996 and 2001 when the second quarter is weighted twice as much as the third quarter due to lower standard error for mean percent income over the first quarter.
4. The percent decrease in imports subject to a 30 percent tariff increase is calculated by deducting the excluded value from the base of assumed value of trade in the absence of Section 201 tariffs before dividing the dutiable value displaced by the adjusted base.

Appendix B The Effect of Section 201 Remedies on Domestic Steel Prices

A regression model calculates the effect of one independent variable on a dependent variable, holding the values of other independent variables constant. In our model, the dependent variable is the change in the natural logarithm of the producer price index for SIC 331.[1] The change in the natural logarithm can be interpreted as the approximate percentage change in the variable. This is a convenient property for expressing results.

For this index and the independent variables, we have a continuous set of data from the second quarter of 1989 to the third quarter of 2002, although quarterly observations on some variables are created by averaging monthly data. The independent variables include three binary variables to indicate observations from the second, third, and fourth quarters of a year and six continuous variables, all of which enter the model as changes in their natural logarithms (facilitating interpretation as percentage changes). The six continuous independent variables are:

1. The (monthly averaged) leading index for the steel industry, which includes among its components the average weekly hours per production worker in SIC 331, the real value of new iron and steel orders, the real value of shipments of household appliances, the S&P stock price index for steel companies, a measure of automobile sales, the

1. SIC 331 is one of the broadest definitions of steel. It roughly corresponds to the broad definition of steel imports used in this model which is SITC 67. We use the international classification system because the units (and thus the unit-values) are more homogenous. The sample of steel products covered in this appendix is much broader than the sample considered in appendix A.

Table B.1 The effect of Section 201 tariffs on the average domestic steel price

			Regression model		
Independent Variable	**Coefficient**	**Standard error**	**t statistic**	**Upper bound**	**Lower bound**
Change in Leading Index	-0.201	0.112	-1.800	-0.427	0.024
Change in Coincident Index	0.346	0.135	2.570	0.075	0.618
Change in Capacity Index	-0.379	0.200	-1.890	-0.782	0.025
Change in initial price of subject imports	-0.471	0.214	-2.200	-0.903	-0.039
Change in final price of subject imports	0.664	0.224	2.960	0.212	1.117
Change in quantity of subject imports	0.072	0.015	4.860	0.042	0.101
Equals 1 in 2nd quarter only	-0.006	0.005	-1.350	-0.015	0.003
Equals 1 in 3rd quarter only	0.000	0.004	-0.070	-0.009	0.009
Equals 1 in 4th quarter only	-0.007	0.004	-1.670	-0.016	0.001
Constant	0.004	0.003	1.320	-0.002	0.011

Number of observations: 54
Adjusted R^2: 0.51
Durbin-Watson Statistic: 1.38

Note: The dependent variable is the Change in ln(Producer Price Index - SIC 331). The sample includes quarterly observations from 1989Q2 to 2002Q3. Monthly data was averaged to create quarterly observations on some variables. The upper and lower bounds correspond to the 95 percent confidence interval.

(table continues next page)

growth rate of the price of steel scrap, an index of new private housing units, the growth rate of M3, the Purchasing Manager's Index, and a trend adjustment.

2. The (monthly averaged) coincident index for the steel industry, which includes among its components the industrial production index for SIC 331, the real value of iron and steel shipments, total employee hours for SIC 331, and a trend adjustment.
3. The (monthly averaged) capacity index for the steel industry.
4. The quarterly customs value price (unit value) of imports from remedy countries, which we refer to as the original price because it is exclusive of all tariffs (and exclusive of freight and insurance costs).
5. The quarterly landed duty-paid price (unit value) of imports from remedy countries, which we refer to as the final price because it includes safeguard and other tariffs (as well as freight and insurance costs).
6. The quarterly quantity of imports from remedy countries. The quantity and the associated unit values are for all steel imports under SITC 67, which includes many steel products that are not subject to Section 201 remedies due to product exclusions, country exclusions, or an ITC finding of no injury to the domestic industry.

The first part of table B.1 shows the results of this regression. The relevant coefficient for our purposes is the one for the change in the natural logarithm of the final price of subject imports, which is 0.687. In other words, the effect on the dependent variable of a 1.0 percent increase in the final price of subject imports holding the initial price (exclusive of tariffs) constant is about 0.7 percent.

To quantify the effect of the Section 201 tariffs on domestic steel prices, we undertook a simulation using the coefficients and predicted values from our regression model. The next section of table B.1 shows the behavior of each of the independent variables in 2002. In our simulation, we sum the changes in each

Table B.1 *(continued)*

	Actual data		2002Q3 Simulation		
Independent variable	**2002Q2**	**2002Q3**	**Baseline**	**With tariffs**	**Without tarrifs**
Change in Leading Index	0.005	-0.002	= (.005- .002) X -0.201 = -0.001		
Change in Coincident Index	0.014	0.009	= (.014+ .009) X 0.346 = 0.008		
Change in Capacity Index	-0.021	-0.025	= (-.021- .025) X -0.379 = 0.017		
Change in initial price of subject imports	*0.007*	*0.040*	= (.007+ .040) X -0.471 = -0.022		
Change in final price of subject imports	**0.041**	**0.054**	X **0.664**	**(.041+.054)**	*(.007+.040)*
				X .664 = .063	*X .664 = .031*
Change in quantity of subject imports	-0.277	0.161	= (-.277+ .161) X 0.072 = -0.008		
Equals 1 in 2nd quarter only	1	0	0 X -0.006 = 0.000		
Equals 1 in 3rd quarter only	0	1	1 X 0.000 = 0.000		
Equals 1 in 4th quarter only	0	0	0 X -0.007 = 0.000		
Constant	0.004	0.004	0.004 X 1.000 = 0.004		

		With tariffs	Without tarrifs
Subtotal:	**-0.002**	**-0.002**	**-0.002**
Effect of final price:		**+ 0.063**	**0.031**
Total:		**0.061**	**0.029**
Difference between scenarios:		**0.032**	

Note: A 0.032 change in the natural logarithm of the Producer Price Index corresponds to a 3.3 percent increase. The 90 percent confidence interval is a 1.3 to a 5.1 percent increase in price.

Sources: USGS (2002c) for leading index and coincident index; FRB (2002) for capacity index; USITC (2002d) for quantity as well as initial and final prices of subject imports; and Tomz, Wittenberg, and King (2000, 2001) for simulation instructions and software.

continuous independent variable for the second and third quarter of 2002 and make the appropriate changes in the binary variables to produce an expected change in the dependent variable. Then we simply set the change in the final price of subject imports equal to the change in the initial price of subject imports to "undo" the Section 201 tariff increase and thereby generate a new expected change in the dependent variable.

The difference between the two expected values of the dependent variable is 0.032, indicating the Section 201 tariffs have increased the average domestic steel price by 3.3 percent from their first quarter of 2002 base value. This estimate is statistically different from zero at the 90 percent confidence level. Based on the simulation, we are 90 percent confident that the increase in the average domestic steel price due to the safeguard tariffs is between 1.3 percent and 5.1 percent.

However, there are several reasons why this estimate is on the conservative side. First, we only assess the final price of steel imports from remedy countries in our simulation. Thus, the apparent tariff increase (of about 5.3 percent on steel as an aggregate) understates the actual tariff increase because only imports that actually enter the United States "count" in the calculation. If imports that are prohibited by the Section 201 tariffs had in fact entered the United States, the apparent tariff rate would increase.[2]

Second, we do not manipulate other variables that are likely to be affected by the Section 201 remedies. For example, the Section 201 remedies may have caused both the leading index and the coincident index to increase slightly. If so, the net effect on domestic steel prices would probably be positive because the magnitude of the positive coefficient of the coincident index is larger than the magnitude of the negative coefficient of the leading index.

Finally, we do not manipulate the import quantity variable because we do not think the associated coefficient is substantive. The coefficient of the import quantity variable is near zero but positive, which probably indicates that when the producer price index rises, steel imports increase simultaneously (even holding their price constant). Increased foreign imports are almost certainly reduce the domestic price. Considering all these caveats, the estimated 3.3 percent increase should be considered the lower bound of the *domestic* price impact of Section 201 tariffs.

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2. However, if the apparent tariff rate were corrected to reflect the influence of imports prohibited by the Section 201 tariffs, the coefficient of the final price of imports would likely decrease somewhat.

References

American Institute for International Steel (AIIS). 2002. US Steel Market Analysis. http://www.aiis.org/chairmans_us/?file=statement.htm (accessed December 11).

American Iron and Steel Institute (AISI). 2002a. *Selected Steel Industry Data.* http://www.steel.org/stats (accessed January 6).

American Iron and Steel Institute (AISI). 2002b. *Raw Steel Production through Week Ended December 14, 2002.* http://www.steel.org/stats/weekly/2002/021214.htm (accessed December 17).

American Metal Market. 2002. "NAM committee to rethink policy on '201' tariffs." October 17. http://www.amm.com/index2.htm (accessed November 4).

Baily, Martin Neil. 2002. Persistent Dollar Swings and the US Economy in *The Overvalued Dollar in the World Economy,* ed. C. Fred Bergsten and John Williamson. International Economics Special Report 15. Washington: Institute for International Economics. December.

Barringer, William H. and Kenneth J. Pierce. 2000. *Paying the Price for Big Steel*. Washington: American Institute for International Steel. http://www.aiis.org/pdfs/book.pdf (accessed November 6).

Bergsten, C. Fred. 2002. "A Renaissance for United States Trade Policy?" *Foreign Affairs* November/December. http://www.iie.com/papers/bergsten1002.htm.

Blecker, Robert A. 2002. *Let It Fall: The Effects of the Overvalued Dollar on U.S. Manufacturing and the Steel Industry.* http://www.steel.org/images/pdfs/blecker.pdf (accessed November 5).

Broderick, Thomas J. 2002. *Testimony Before the House Subcommittee on Commerce, Trade, and Consumer Protection*. Washington: House Subcommittee on Commerce, Trade, and Consumer Protection.

Brown, Drusilla K., Alan V. Deardorff, and Robert M. Stern. 2001. *Impacts on NAFTA Members of Multilateral and Regional Trading Arrangements and Initiatives and Harmonization of NAFTA's External Tariffs.* Ford School Discussion Paper 471. November 4, 2002.

Bureau of Economic Analysis. 2002. *Gross Domestic Product.* Washington: BEA.

Bureau of Labor Statistics (BLS). 2002a. *Consumer Price Index.* Washington: BLS.

Bureau of Labor Statistics (BLS). 2002b. *Current Employment Statistics*. Washington: BLS.

Bureau of Labor Statistics (BLS). 2002c. *Producer Price Indexes.* Washington: BLS.

Cable News Network (CNN) 2002. *Election Results: House of Representatives.* http://www.cnn.com/ELECTION/2002/pages/house/index.html (accessed November 6).

Chicago Tribune. 2002. "South Korea steelmaker could export lessons". October 30.

Cooney, Stephen. 2002. *Steel Industry and Trade Issues.* Congressional Research Service Report for Congress RL31107. October 10. Washington: CRS.

Crandall, Robert W. 2002. *The Futility of Steel Trade Protection*. http://www.criterioneconomics.com/documents/crandall_report.pdf (accessed November 6).

Crenshaw, Albert B. 2002. "U.S. Targets Steel Firm's Pension Plan." *The Washington Post*, December 17, p.E01.

Federal Reserve Board (FRB). 2002. *Capacity Utilization and Industrial Capacity*. Washington: FRB. http://www.federalreserve.gov/releases/g17/caputl.htm (accessed December 17)

Francois, Joseph F. and Laura M. Baughman. 2002. *Estimated Economic Effects of Proposed Import Relief Remedies for Steel.* http://www.citac.info/remedy/index.htm (accessed November 6).

Hillman, Jennifer. 2002. *Perspectives on the Global Metals Trade.* Presentation to the Metal Service Center Institute (MSCI), May 2002. Chicago, IL: MSCI.

Hufbauer, Gary Clyde. 2002. *The Foreign Sales Corporation: Reaching the Last Act?* International Economics Policy Brief 02-10. Washington: Institute for International Economics. November.

Hufbauer, Gary Clyde and Ben Goodrich. 2001. *Steel: Big Problems, Better Solutions.* International Economics Policy Brief 01-09. Washington: Institute for International Economics. July.

Hufbauer, Gary Clyde and Ben Goodrich. 2002. *Time for a Grand Bargain in Steel?* International Economics Policy Brief 02-01. Washington: Institute for International Economics. January.

Hufbauer, Gary Clyde and Erika Wada. 1999. *Steel Quotas: A Rigged Lottery.* International Economics Policy Brief 99-05. Washington: Institute for International Economics.

Inside US Trade. 2002. "Senate Aide Sees Congress Refusing to Address Adverse WTO Rulings." September 30.

International Iron and Steel Institute. 2002. *Report of the Secretary General.* http://www.worldsteel.org/media/iisi36/shortrangeoutlook.pdf (accessed November 6).

International Monetary Fund (IMF). 2002. *World Economic Outlook Database.* September. http://www.imf.org/external/pubs/ft/weo/2002/02/data/index.htm (accessed November 4).

Ministry of Economy, Trade and Industry of Japan (METI). 2002. First Written Submission of the Government of Japan. WTO Case WT/DS249. Tokyo: METI.

Kletzer, Lori G. and Robert E. Litan. 2001. *A Prescription to Relieve Worker Anxiety.* International Economics Policy Brief 01-02. Washington: Institute for International Economics and The Brookings Institution. February.

Klinefelter, Bill. 2002. Testimony Before the House Subcommittee on Commerce, Trade, and Consumer Protection. September 10. Washington: House Subcommittee on Commerce, Trade, and Consumer Protection.

Morici, Peter. 2002. The Impact of Steel Import Relief on US and World Steel Prices: A Survey of Some Counterintuitive Results. http://www.steel.org/images/Morici_Paper.pdf (accessed November 4).

Mueller, Hans. 2002. The Impact of 201 Tariffs on US Steel Users and Foreign Steelmakers: A Critique of Peter Morici's Survey of Some Counterintuitive Results. http://www.aiis.org/speeches/muellerstudy_0702.pdf (accessed November 4).

Nucor. 2002. *2001 Annual Report.* November 4.

Purchasing Magazine. 2002. *Steel Flash Report.* October 31.http://www.manufacturing.net/PUR/index.asp?layout=articleWebzine&articleid=CA256185 (accessed November 6).

Steel Business Briefing. 2002. *Daily Email Newsletter.* September 24.

Steel Manufacturers Association. 2002. *Statement on Recent Press Comments on Steel Prices*. http://www.steelnet.org/new/20020606_statement_prices.htm (accessed November 6).

Stevenson, Cliff. 2002. *Global Trade Protection Report* 2002 *Update.* Received by email on October 25, 2002.

Tomz, Michael, Jason Wittenberg and Gary King. 2000. "Making the Most of Statistical Analyses: Improving Interpretation and Presentation." *American Journal of Political Science* 44, no. 2, April.

Tomz, Michael, Jason Wittenberg, and Gary King. 2001. CLARIFY: Software for Interpreting and Presenting Statistical Results. Version 2.0. Cambridge, MA: Harvard University.

United States Census Bureau. 2002. *Quarterly Financial Report Past Press Releases*. Washington: United States Census Bureau.

United States Customs Service. 2002a. *Steel 201 Remedy Coverage Guide.* Washington: United States Customs Service. September. http://www.customs.gov/impoexpo/steel_docs/remedy_pub.xls (accessed December 11).

United States Customs Service. 2002b. *Steel 201 Remedy Coverage Guide.* Washington: United States Customs Service. October. http://www.customs.gov/impoexpo/steel_docs/steel_remedy_guide-updated_public_version.xls (accessed December 11).

United States Geological Survey (USGS). 2002a. *Iron and Steel Statistics.* Reston, VA: USGS.

United States Geological Survey (USGS). 2002b. *Mineral Commodity Summaries: Iron and Steel.* Reston, VA: USGS.

United States Geological Survey (USGS). 2002c. *Historical Data for Metal Industry Indicators*. Reston, VA: USGS.

United States International Trade Commission (USITC). 2001. *Staff Report: Volume III.* Publication 3479. Washington: USITC.

United States International Trade Commission (USITC). 2002a. ITC Details Its Determinations Concerning Impact of Imports of Steel on US Industry. http://www.usitc.gov/er/nl2001/ER1023Y1.PDF (November 4).

United States International Trade Commission (USITC). 2002b. *Antidumping and Countervailing Duties in Place.* Washington: USITC.

United States International Trade Commission (USITC). 2002c. *US Imports of Steel Products*. Washington: USITC.

United States International Trade Commission (USITC). 2002d. USITC Interactive Tariff and Trade DataWeb. Washington: USITC.

United States Securities and Exchange Commission (SEC). 2002. *EDGAR Company Search.* http://www.sec.gov/edgar/searchedgar/companysearch.html (accessed November 4).

United States Trade Representative (USTR). 2002a. *Follow-Up To Request for Information on Steel Exclusion Process.* Content received by e-mail (accessed November 4).

United States Trade Representative (USTR). 2002b. *Developing Countries with Products Not Excluded From the Remedies.* http://www.ustr.gov/sectors/industry/steel201/2002-03-05-exclusions.PDF (accessed November 5).

United Steelworkers of America (USWA). 2001. *The Crisis in American Steel.* http://www.uswa.org/sra/pdf/Steel Update Presentation 8-14-01.pdf (accessed November 4).

United Steelworkers of America (USWA). 2002. *Steel Companies Filing for Bankruptcy.* http://www.uswa.org/sra/pdf/Steel Bankruptcies 8-16-02.pdf (accessed November 4).

U.S. Steel. 2002. *2001 Annual Report*. November 4, 2002.

World Trade Organization (WTO). 1999. *Argentina – Safeguard Measures on Imports of Footwear Report of* the *Appellate Body*. WT/DS121/AB/R. http://docsonline.wto.org/DDFDocuments/t/WT/DS/121ABR.DOC (accessed November 4).

World Trade Organization (WTO). 2002a. *Agreement on Safeguards*. http://www.wto.org/english/docs_e/legal_e/25-safeg.pdf (accessed November 4).

World Trade Organization (WTO). 2002b. *Leading exporters and importers of iron and steel, 2001*. http://www.wto.org/english/res_e/statis_e/its2002_e/section4_e/iv34.xls (November 4).

World Trade Organization (WTO). 2002c. *Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994*. http://www.wto.org/english/docs_e/legal_e/19-adp.pdf (accessed November 4).

Yahoo. 2002. *Yahoo! Finance.* http://finance.yahoo.com (accessed in December 11).