

The Steel Industry: An Automotive Supplier Perspective\*

by

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### I. Executive Summary

The domestic steel manufacturing industry is in the midst of a period of financial good fortune not seen in recent memory. Such good fortune has coincided not *with* the period of Section 201 safeguards in the United States, but the period *since that time*. Since the end of 2003, steel prices have risen by as much as 100 percent—selling at a premium in the U.S. market—while the market values of steel manufacturers have increased by 50 percent or more.

The U.S. market dynamics that have benefited steel manufacturers in the United States have taken their financial toll, however, on their customers—in particular the motor & equipment manufacturing industry.<sup>1</sup> The firms in this industry: (a) have little market power; and (b) face competition from imports that did not have to deal with distortions in the market such as availability, quality issues, and premium steel prices. In this report, we compare and contrast the fortunes of the steel manufacturing and automotive supplier industries both during and after the period in which the United States imposed additive Section 201 safeguards to assist the steel manufacturers (March 2002 – December 2003). As part of this process, we analyze the (changing) dynamics in the two industries, including:

- **Profitability:** In 2004, U.S. steel manufacturing firms enjoyed their highest profits in years. Automotive suppliers have faced financial difficulties. See **Tables 1A-1G**.
- **Forecasts:** Not only are current profits much higher for steel manufacturers than automotive suppliers, projections point toward continued disparity. Investors' implicit projections reflected in companies' market values show steel companies with market values suggesting continued high profits in the future. See **Tables 2A and 2B**. Such optimistic projections are echoed by analysts and the steel manufacturers themselves.
- **Import Levels:** Steel import shares have stayed essentially at or below their ten-year average levels since 2000. These modest levels fall far short of the spike in 1998 and have largely served to supplement the domestic industry—which is operating at near-full capacity—in response to increased demand in the U.S. market. See **Table 3A**. The automotive

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<sup>1</sup> The Motor and Equipment Manufacturers Association represents manufacturers of motor vehicle components, tools and equipment, automotive chemicals, and related products used in the production, repair, and maintenance of all classes of motor vehicles. MEMA represents over 700 companies. Herein after, these companies are referred to as automotive suppliers.

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supplier industry, by contrast, has recently felt more competitive pressures from imports.<sup>2</sup> See **Table 4**.

- **Utilization:** Capacity utilization rates have increased to ten-year highs for U.S. steel manufacturers. See **Tables 5A and 5B**. Utilization rates are forecast to be near 100 percent globally by 2005. See **Table 5C**. This is in stark contrast to the reported capacity utilization figures seen for various steel products in their nadir of 1998. See **Table 5D**.
- **Market Power:** Since 2001, the U.S. steel manufacturing industry has become more concentrated. See **Table 6A**. It is now more concentrated than the global steel industry. No significant gains, however, have been made in market concentration for steel automotive suppliers.
- **Prices:** Steel prices initially rose in the months following the enactment of the 201 safeguards before largely stabilizing. However, since the repeal of the 201 safeguards, steel prices have increased significantly in the United States.

Contrasting these diverging results in the two industries with their relative levels of government pension assistance produces an unintuitive result. For example, the healthy steel industry continues to derive the most total benefit of any industry in the form of pension relief. The U.S. government has assumed billions of dollars in pension plan liabilities for legacy steel companies. The steel industry, in fact, represents more than 53 percent of the claims assumed by the Pension Benefit Guarantee Corporation (“PBGC”). The much larger automotive supplier industry represents approximately 1.2 percent of such claims. See **Tables 7A and 7B**.<sup>3</sup>

Whether such unintuitive results should hold is a matter for policy makers to consider. We note, however, that the recent policy rationale to remove earlier government assistance to the steel manufacturers (201 safeguards) was largely based on the general health of the steel industry in December 2003. As seen in this report, the steel industry of February 2005 is significantly healthier than it was in December 2003.

We divide this report into four sections. This first section provides an executive summary of our findings. The second section presents a brief background on the history and structure of these two industries. Steel manufacturing and the automotive supplier industry are compared and contrasted in Section III. The final section concludes.

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<sup>2</sup> Sherefkin, Robert, “Survey: Tier 2s hesitate to seek steel price relief,” Automotive News, April 12, 2004.

<sup>3</sup> In this table, the automotive supplier industry is most closely defined as “motor vehicle equipment.”

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### II. Changes in the Steel Industry

Steel has been an integral part of the U.S. manufacturing economy for well over 100 years and remains so today. During this long history, the industry has experienced many changes, including consolidation, changes in demand patterns, changing patterns of international trade, increased worker productivity, and the growth of mini-mills. This section focuses on that history and recent (since 2000) factors impacting the steel industries. Specifically, we look at the current market dynamics facing steel manufacturing and automotive suppliers.

#### A. The Steel Manufacturing Industry

From the days of Andrew Carnegie, some of the largest companies in the United States have been steel manufacturers.<sup>4</sup> With productivity increases and shifts in demand to substitute products, this industry does not occupy the same place today in the U.S. industrial structure as it did years ago. However, it still includes three large companies with significant market shares:

- **U.S. Steel:** With a current market capitalization of over \$6.0 billion, it is expected to control over 13 percent of the U.S. steel market in 2005.<sup>5</sup> See **Table 6A**. Its profits have witnessed a significant shift since the end of the 201 safeguards. After losses in each of the four quarters of 2003, it has enjoyed positive—and increased—earnings in each of the four quarters of 2004.<sup>6</sup> See **Table 1F**.
- **Nucor Corp.:** The largest mini-mill steel producer in the United States is also expected to claim nearly 13 percent U.S. market share in 2005. See **Table 6A**. Nucor's 2004 earnings of more than \$1 billion were almost 10 times its average profits over the prior three years. See **Table 1G**. These profits—and expectations of future profits—have allowed Nucor to

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<sup>4</sup> Andrew Carnegie became the world's richest man when he sold all his steel holdings to J.P. Morgan for \$500 million in 1901. Retrieved from <http://www.u-s-history.com/pages/h981.html>, January 18, 2005.

<sup>5</sup> Retrieved from <http://moneycentral.msn.com/investor/home.asp>, February 4, 2005.

<sup>6</sup> Compustat database, Standard & Poor's Research Insight, November 20, 2004; and "United States Steel Corporation," Form 8-K, January 24, 2005. This is largely attributable to its: (a) 47 percent increase in revenue; with (b) no significant increase in volume. Glader, Paul, "U.S. Steel Swings to Profit as Sales Surge Some 47%," The Wall Street Journal, January 25, 2005, p. A2.

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increase its market value by over 100 percent in the last year (through February 3, 2005) to more than \$9.0 billion.<sup>7</sup>

- **Mittal:** Mittal is the recent combination of LNM Holdings and Ispat International. The newly formed company has also announced the buyout of International Steel, which will give the company 18 percent of the U.S. steel market in 2005. See **Table 6A**. With pro forma revenues of \$30 billion and annual production capacity of 70 million tons, Mittal has now become the world's largest steel manufacturer.<sup>8</sup>

### 1. *Emergence of the Mini-mills*

The current U.S. steel manufacturing industry differs from its historical operations when integrated steel manufacturers dominated the market. One change to this structure has been the appearance of the mini-mills.

The mini-mill emerged within the steel industry in the 1960s as a more cost-efficient means of steel production. Mini-mills produce steel from scrap materials in electric arc furnaces, which lowers their capital requirements and overall costs. The mini-mill resurfaced in 1989 with the founding of Nucor Corporation, which remains a major mini-mill company, along with Steel Dynamics.

Mini-mills have taken significant market share from integrated steel companies. While traditional steel production decreased by 62 million short tons from 1964 (the year of the founding of the first mini-mill) to 2001, mini-mill production increased by 35 million short tons.<sup>9</sup> Moreover, while 2001 represented the worst year for traditional steel companies in terms of losses, both Nucor Corporation and Steel Dynamics recorded gains. This is not surprising in that mini-mills had historically been estimated to have a lower cost structure than integrated manufacturers, which allows them to profit at a lower price.<sup>10</sup>

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<sup>7</sup> Compustat database, Standard & Poor's Research Insight, November 20, 2004; and retrieved from <http://moneycentral.msn.com/investor/home.asp>, February 4, 2005.

<sup>8</sup> Press Release, Ispat International N.V., October 25, 2004.

<sup>9</sup> Hufbauer, Gary Clyde and Goodrich, Ben, "Steel Policy: The Good, the Bad, and the Ugly," International Economics Policy Brief, October 2003, p. 5.

<sup>10</sup> Each worker at Nucor Corp. is estimated to be able to manufacture three times as many tons of steel as an employee at U.S. Steel. Hufbauer, Gary Clyde and Goodrich, Ben, "Steel Policy: The Good, the Bad, and the Ugly," International Economics Policy Brief, October 2003, p. 6.

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This historical difference may have changed with recent industry dynamics. With the integrated mills' consolidations, the PBGC's assumption of billions of dollars in legacy pension liabilities (see below), and the increased price of steel scrap; recent estimates suggest that integrated mills in their current form are lower cost producers than mini-mills.<sup>11</sup> This appears to be a global trend, as steel manufacturers have increased their productivity per employee approximately three-fold from the 1980s to 2003.<sup>12</sup>

### 2. *Changing Global Demographics of Demand*

Over the past three years, the U.S. and world steel industries have undergone structural changes, which have recently driven the price for all types of steel well above their 20-year averages. These sustained improvements in the steel industry have been solidified by two global forces that have structurally changed the steel market: (1) increases in world demand (in particular China); and (2) the consolidation of the steel industry.

In total, the demand for steel has increased significantly in recent years, especially in North America. As recently stated by the Organization for Economic Co-operation and Development ("OECD"):

The steel market was exceptionally buoyant in 2004 when global steel consumption jumped by 8.8% over the 2003 level ... The strongest increase in apparent steel consumption was recorded in North America (+15%) ...<sup>13</sup>

The growth in demand is forecast to continue: "The outlook for 2005 remains good as world steel demand should continue to grow by some 5%."<sup>14</sup>

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<sup>11</sup> This differential is forecast to continue in 2005. "Global Steel Alert," World Steel Dynamics, January 6, 2005, p. 20.

<sup>12</sup> Glader, Paul, "Accidents Rise in Steel Sector, Sparking Closer Look at Safety," The Wall Street Journal, January 26, 2005, p. A4.

<sup>13</sup> "Bright Outlook for Steel Industry in 2005-06 Forecast at OECD/IISI Conference," OECD, January 17, 2005, retrieved from [http://www.oecd.org/document/27/0,2340,en\\_2649\\_201185\\_34282331\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/27/0,2340,en_2649_201185_34282331_1_1_1_1,00.html), January 31, 2005.

<sup>14</sup> "Bright Outlook for Steel Industry in 2005-06 Forecast at OECD/IISI Conference," OECD, January 17, 2005, retrieved from [http://www.oecd.org/document/27/0,2340,en\\_2649\\_201185\\_34282331\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/27/0,2340,en_2649_201185_34282331_1_1_1_1,00.html), January 31, 2005.

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### a. China

China is not a part of the three upcoming steel Sunset Reviews at the U.S. International Trade Commission (see below), as it was not one of the countries found to be dumping these steel products into the United States—and causing material injury to the U.S. steel manufacturers. The explosive growth in the Chinese economy,<sup>15</sup> however, has required it to increase steel making capacity in recent years.

China is now the world's largest steel consumer and steel producer. One analyst compares the current industrialization process being experienced by China as similar to that of the industrial revolution in the United States from 1870 to 1930 with the exception that China is “starting from a base of 1.2 billion people.”<sup>16</sup> As seen in **Tables 3A and 3C**, China's steel demand has been growing (2001-Forecasted 2005). This heavy steel demand is expected to continue in China.<sup>17</sup>

In response to this growth in domestic consumption, China's domestic production has expanded. Chinese output has risen at a compounded annual growth rate of over 20 percent from 2001-2004. With its growth, China has had difficulty supplying its home market from domestic supply. This dynamic is expected to continue, with analysts forecasting that China will be a net importer of steel for years to come.<sup>18</sup>

This trend is echoed by the U.S. steel manufacturing industry, which recently commented on China's potential impact—or lack thereof—on the domestic steel market. Steel Dynamics' CEO stated in a February 2005 press release:

We believe that our business, and the majority of the U.S. steel industry, will not be negatively affected in the near term by China's efforts to moderate its growth rate or by steel exported

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<sup>15</sup> Browne, Andrew and Pottinger, Matt, “China's Economy Grows 9.5%, Renewing Fears of Overheating,” The Wall Street Journal, January 26, 2005, p. A2.

<sup>16</sup> “Outlook for Steel,” The Wall Street Transcript, Analyst Interview of Mark L. Parr, June 14, 2004, p. 3.

<sup>17</sup> Glader, Paul, “Nucor Reports Strong Earnings, Plans for Technology Expansions,” The Wall Street Journal, January 28, 2005, p. B4.

<sup>18</sup> With its historical production being on generally lower-quality steel products, China will have the most difficulty meeting demand for premium-quality products for the foreseeable future. Perlitz, Uwe, “Steel market in China: Constraints check more powerful growth,” Deutsche Bank Research, August 6, 2004; and “China to remain net steel importer years to come,” AFP, Beijing, February 1, 2005, retrieved from <http://au.biz.yahoo.com/050201/33/361m.html>, February 10, 2005.

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from China. On the contrary, we believe China for a number of years will require vast amounts of steel for its own use and growth and will not have the capacity to satisfy its own needs for flat-roll steel, wide-flange beams, and SBQ bars, the types of steel that Steel Dynamics makes.<sup>19</sup>

### b. Rest of the World

Outside of China, world demand for and supply of steel has remained fairly stable. It is also expected to remain this way in the near future.<sup>20</sup> With the major industrialized economies of Western Europe and Japan remaining stable, there is not expected to be a significant increase in demand—or supply—in these regions. Projections suggest slight increases in both capacity and production outside of China.<sup>21</sup>

### 3. *Changing Domestic Supply Conditions*

The foundation for the current consolidation of the U.S. steel industry began in 2001 when 17 companies filed for bankruptcy protection. See **Table 9A**. Before these bankruptcies, the large legacy costs in the form of health care and pension obligations held by U.S. integrated steel firms prevented most forms of consolidation. In effect, these legacy costs acted as a “poison pill.”<sup>22</sup>

Yet, larger firms were able to acquire the assets of less healthy companies once they liquidated or filed for bankruptcies. Liquidations allowed larger steel manufacturers to select desirable assets. In the case of bankruptcies, companies were shielded from debtors, which allowed other firms to purchase bankrupt firms’ assets and not their liabilities.<sup>23</sup>

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<sup>19</sup> “Steel Dynamics Reports Record Results for 2004,” February 2, 2005 Press Release, retrieved from <http://www.steeldynamics.com>, February 4, 2005.

<sup>20</sup> Asian steel demand (outside of China) is the exception and is expected to rise due to the tsunami rebuilding efforts. Teo Leng Lee, Vivian, “Tsunami rebuilding seen raising demand for steel,” *American Metal Market*, December 20, 2004.

<sup>21</sup> The country making the primary impact on these ROW (rest of world) changes is the United States. Removing the projected increases in production domestically, there is very little growth forecast elsewhere.

<sup>22</sup> As a broad metric, in 1999, the health care and pension obligations of steel manufacturers were estimated to cost approximately \$13 billion. Hufbauer, Gary Clyde and Goodrich, Ben, “Steel Policy: The Good, the Bad, and the Ugly,” *International Economics Policy Brief*, October 2003, pp. 1-2.

<sup>23</sup> International Steel Group has purchased the assets of five bankrupt companies including Bethlehem Steel Corp., LTV Corp. and Weirton Steel Corp. They were able to buy these assets while avoiding onerous debt and labor

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With significant increases in demand and concurrent decreases in capacity, steel supplies have been strained in the United States. Steel consumers have reported shortages, long lead times, and an inability to access certain products:

- A U.S. government report in 2004 highlighted how steel consumers were subject to shortages that forced them to cut back production.<sup>24</sup>
- Fabricators have reported having difficulty acquiring certain metal products especially in the spot market.<sup>25</sup>

#### 4. *Government Assistance*

Throughout its history the steel industry has received various forms of government assistance.<sup>26</sup> Recently, the government has provided assistance through: (1) international trade safeguards; and (2) pension relief.

##### a. *International Trade Safeguards*

The U.S. government provided “201” safeguards over a wide variety of steel products in March 2002. As seen in **Table 10**, the Section 201 tariffs were to provide for three years of relief with a declining schedule.<sup>27</sup> Of the 32.1 million short tons of steel that had been imported

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costs. Pauly, David, “Steel’s Booming – Better Take the Money and Run,” December 14, 2004, retrieved from <http://www.bloomberg.com>, January 10, 2005.

<sup>24</sup> Cooney, Stephen, “Steel: Price and Availability Issues,” CRS, Resources, Science, and Industry Division, Updated April 16, 2004.

<sup>25</sup> Petry, Corinna, “Time for Fabricators,” Metal Center News Online, September 2004.

<sup>26</sup> Barringer, William H. and Pierce, Kenneth J., Paying the Price for Big Steel, American Institute for International Steel, Washington, DC, 2000.

<sup>27</sup> Certain products were excluded from these tariffs, including: (a) those from Canada and Mexico; (b) those from developing countries with less than three percent market share; and (c) highly specialized steel that could not be manufactured in sufficient quantities domestically. Hufbauer, Gary Clyde and Goodrich, Ben, “Next Move in Steel: Revocation or Retaliation?,” International Economics Policy Brief, October 2003, p. 2; and Hufbauer, Gary Clyde and Goodrich, Ben, “Steel Policy: The Good, the Bad, and the Ugly,” International Economics Policy Brief, October 2003, pp. 1-2.

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into the United States in 2000, 29 percent (9.3 million short tons) were covered by the March 2002 safeguard tariff.<sup>28</sup>

In December 2003, President Bush repealed the 201 tariffs approximately 20 months after initiation—16 months before they were scheduled to expire. In considering whether the current government actions in the steel industry remain appropriate, there are many factors policy makers could consider. Briefly, here, we review the factors that President Bush cited as his reason for removing one form of government intervention (the steel 201 safeguards) in December 2003: (a) improved performance by domestic steel manufacturers; (b) new labor agreements; and (c) improved economic conditions for the steel industry.<sup>29</sup> To the degree these factors would still be relevant in such considerations, it is clear that—despite removal of the 201 safeguards—these factors would be truer on balance today than they were in December 2003.

### *i. Changes in the Steel Manufacturing Industry's Health from December 2003-February 2005*

The steel manufacturing industry of February 2005 is much healthier than it was in December 2003. The year 2004 was likely the best in recent memory, and the industry's success is projected to continue. As seen below, this was quantified by higher profit levels, more optimistic projections, increased capacity utilization, and other metrics. Consistent with this, U.S. Steel enjoyed profits in each of the four quarters of 2004.<sup>30</sup> Nucor's 2004 profits also dwarfed the profits they had earned in recent years.<sup>31</sup>

### *ii. Changes in the Steel Manufacturing Industry's Labor Situation from December 2003-January 2005*

Although not explicitly described in this paper, the labor situation in the steel manufacturing industry remains stable based in part on the same labor agreements referenced by President Bush.

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<sup>28</sup> Hufbauer, Gary Clyde and Goodrich, Ben, "Next Move in Steel: Revocation or Retaliation?," International Economics Policy Brief, October 2003, p. 2; and Hufbauer, Gary Clyde and Goodrich, Ben, "Steel Policy: The Good, the Bad, and the Ugly," International Economics Policy Brief, October 2003, pp. 1-2.

<sup>29</sup> "Fact Sheet: The Presidential Determination on Steel," White House Office of Communications, December 2003.

<sup>30</sup> Glader, Paul, "U.S. Steel Swings to Profit as Sales Surge Some 47%," The Wall Street Journal, January 25, 2005, p. A2.

<sup>31</sup> Glader, Paul, "Nucor Reports Strong Earnings, Plans for Technology Expansions," The Wall Street Journal, January 28, 2005, p. B4.

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### *iii. Changes in the Steel Manufacturing Industry's Economic Conditions from December 2003-January 2005*

Economic conditions in the U.S. steel industry have improved in the last 14 months. Among the quantitative ways to measure such changes are: (i) the rise in demand in 2004, which is forecasted to grow again in 2005; (ii) increased market values (stock prices for U.S. steel manufacturers; (iii) the nearly doubling of steel prices in 2004; and (iv) the reductions in the numbers of bankruptcies. Such dynamics have led the CEOs of Nucor and U.S. Steel—and other steel manufacturers—to recently state publicly their anticipation of continued financial good fortunes.

In addition to steel products subject to the 201 restrictions in 2002-2003, more than one hundred antidumping or countervailing duty orders remain in place for the steel industry.<sup>32</sup> Such orders face the possibility of being discontinued as situations warrant. In the coming months, for example, the U.S. International Trade Commission will conduct Sunset Reviews on orders for three products from 13 countries:

- Certain Hot-Rolled Flat-Rolled Carbon-Quality Steel Products From Brazil, Japan, and Russia;
- Certain Stainless Steel Plate From Belgium, Canada, Italy, Korea, South Africa, and Taiwan; and
- Certain Stainless Steel Sheet and Strip From France, Germany, Italy, Japan, The Republic of Korea, Mexico, Taiwan, and The United Kingdom.<sup>33</sup>

#### b. Pension Obligations

In addition to its role in international trade, the government has also played a role in recent steel manufacturing market dynamics through the PBGC. Established in 1974, the PBGC was designed to ensure the sustainability of pension benefits to retirees regardless of potential termination of their plans by employers. With the founding of the PBGC, many steel companies

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<sup>32</sup> Ikenson, Dan, "Ready to Compete: Completing the Steel Industry's Rehabilitation," *Cato Institute*, June 22, 2004, p. 7.

<sup>33</sup> Additional Sunset Reviews are planned for other steel products later in 2005. Retrieved from <http://www.usitc.gov> website on January 26, 2005.

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began to under fund their pension programs systematically, as the federal government accepted the burden of payment. As stated by the Executive Director of the PBGC in 1990:

The PBGC and the steel industry have been intertwined since our birth ... it is because of the losses caused by the steel industry's restructuring that the letters PBGC too often appear in the same sentence as [the Savings and Loan Associations].<sup>34</sup>

By the year 2002, the steel industry accounted for approximately \$7.6 billion of the total \$9.3 billion PBGC loss due to completed and probable pension plan terminations.<sup>35</sup> As stated by the Executive Director of the PBGC in 2004 in an interview with Business Week:

You won't find anything in ERISA [the Employee Retirement Income Security Act] that says the PBGC should help particular industry sectors. However, if you look at PBGC's claims, fully 72% have come from just two industries, airlines and steel. Those industries represent less than 5% of insured participants. The result is that companies with well-funded plans are supporting the pension obligations of companies whose plans the PBGC has trusted.<sup>36</sup>

The PBGC Data Book makes these quantifications more clear. Steel firms represented the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> highest single employer firms to the PBGC through 2003. These three firms alone—Bethlehem Steel, LTV Steel, and National Steel—constituted nearly 40 percent of all claims. The primary metals industry in total was estimated to have constituted more than 53 percent of all claims. See below and **Tables 7A and 7B**.

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<sup>34</sup> James B. Lockhart III, Executive Director of the Pension Benefit Guarantee Corporation, remarks to the Steel Survival Strategies Conference, June 1990.

<sup>35</sup> "Funding Squeeze: U.S. Economic Recovery Threatened by Rising Pension Expenses, New Survey Says," Canadian Investment Review, Spring 2003, retrieved from <http://www.investmentreview.com/archives/2003/spring/exchange.pdf>, January 18, 2005.

<sup>36</sup> Byrnes, Nanette, "Q&A with PBGC's Bradley Belt," BW Online, July 19, 2004, retrieved from [http://www.businessweek.com/magazine/content/04\\_29/b3892020\\_mz001.htm](http://www.businessweek.com/magazine/content/04_29/b3892020_mz001.htm), January 18, 2005.

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**PBGC Claims For Steel Manufacturing and Consuming Industries**

<b>Classification</b>	<b>Steel Manufacturing</b>	<b>Automotive Supplier Industry</b>
“Top Ten” Ranked Companies by Claims at PBGC	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> , 8 <sup>th</sup> , and 10 <sup>th</sup>	--
Percentage of Total Claims	53.5 percent <sup>37</sup>	1.2 percent <sup>38</sup>
Total Claims (\$ billion)	9.4	0.2
Employees (000)	100.2	702.2

Conversely, the automotive supplier industry has received only a modest level of analogous pension benefit assistance from PBGC in comparison to the smaller steel manufacturing industry. None of the top ten firms presenting claims to the PBGC were automotive suppliers. (The top ten firms constituted more than 60 percent of total claims.) As a result, the automotive supplier industry had only made 1.2 percent of all claims to PBGC, while increasing pension costs have depressed the profits of automotive suppliers.<sup>39, 40</sup> More importantly, however, the PBGC funds in the steel industry have potentially contributed to the heavy consolidation.

While the figures above appear to be large, earlier studies have examined government “subsidies” to the steel industry and found them to be in the tens of billions of dollars. A 2000 Study by Barringer and Pierce estimated total subsidies (PBGC, tariffs, etc.) at more than \$23 billion.<sup>41</sup> An earlier (1989) study by Ernst & Young calculated the subsidies as more than \$30 billion.<sup>42</sup>

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<sup>37</sup> Primary metals.

<sup>38</sup> Motor vehicle equipment.

<sup>39</sup> Pension Insurance Data Book 2003, Pension Benefit Guaranty Corporation, Tables S-5 and S-19.

<sup>40</sup> For example, Tower Automotive, Inc. recently filed for bankruptcy protection citing among other causes, higher health and pension costs. “Tower Automotive Files for Bankruptcy,” Reuters, February 2, 2005.

<sup>41</sup> Barringer, William and Pierce, Kenneth, “Paying the Price for Big Steel,” American Institute for International Steel, 2000.

<sup>42</sup> Ernst & Young Consulting, Report on Government Assistance to the U.S. Steel Industry, (n.p.: Ernst & Young Consulting, Oct. 1989), p. 2.

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### 5. *Productivity*

Mechanical and process improvements for both integrated and mini-mills have led the industry to be more productive (per worker). Output per worker has increased for both types of mills. Since the 1980's productivity has increased from an average of approximately ten man-hours per finished ton to an average of three man-hours per finished ton.<sup>43</sup>

#### B. The Automotive Supplier Industry

The automotive supplier industry developed alongside the automobile industry at the turn of the century. Since that time, the automotive supplier industry has been forced to respond to an ever-changing environment of technological advancement and foreign competition. Today, 800 major suppliers comprise the automotive supplier industry.<sup>44</sup>

The industry can be broken into two primary segments: (1) original equipment ("OE") segment; and (2) aftermarket segment. The OE segment comprises approximately 70 percent of the total automotive supplier industry with the aftermarket segment accounting for the remaining 30 percent.<sup>45</sup>

#### 1. *Automotive Supplier Industry Segments*

The OE segment manufactures parts sold directly to automobile manufacturers for the production of new cars, such as wheels, brake systems, seats and airbags.<sup>46</sup> The suppliers of these parts are roughly divided into three tiers. Tier 3 suppliers serve as the first link of the automotive parts supply chain, supplying finished and raw materials to the other two supplier tiers. These firms tend to be smaller than those of the other two supplier tiers. Tier 2 suppliers sell parts and materials to Tier 1 suppliers, who then manufacture finished components to be sold directly to the automobile industry. Two of the industry leaders in Tier 1 are Delphi Corporation and Visteon Corporation.<sup>47</sup>

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<sup>43</sup> Retrieved from <http://www.steel.org/facts/thenewsteel.htm>, February 10, 2005.

<sup>44</sup> "Motor Vehicle Parts and Accessories," [Business & Company Resource Center](#).

<sup>45</sup> "U.S. Automotive Parts Industry 2004 Annual Assessment," Automotive Team, Office of Aerospace and Automotive Industries, International Trade Administration, Department of Commerce, May 2004.

<sup>46</sup> "Motor Vehicle Parts and Accessories," [Business & Company Resource Center](#).

<sup>47</sup> "U.S. Automotive Parts Industry 2004 Annual Assessment," Automotive Team, Office of Aerospace and Automotive Industries, International Trade Administration, Department of Commerce, May 2004.

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The aftermarket segment is divided into two main categories: (1) replacement parts; and (2) accessories. Replacement parts are finished components built to replace OE parts that have become worn or damaged. OE parts generally need replacement after approximately seven to 12 years of use. Mechanical products, such as engines and suspension parts, form the largest sector of replacement parts. Accessories, on the other hand, are considered luxury parts that are made for comfort, convenience, safety, and customization. Consumers purchase accessories as add-ons after the original sale of an automobile.<sup>48</sup>

### 2. *Employment*

As seen in **Table 9B**, automotive suppliers employ more than 700,000 domestic employees. This labor force is approximately seven times that of the steel manufacturing industry.<sup>49</sup>

### 3. *Market*

The automotive supplier industry is a major consumer of steel and other raw materials, sourcing the former primarily from U.S. mills and service centers. **Table 9C** illustrates the flow of steel from its raw materials to various sectors of the automotive supplier industry. Often steel is not sold directly to the steel consumers, but is first shipped to a service center for distribution. In 2003, 29.6 percent of steel shipments were to service centers in comparison to only 15 percent directly from the U.S. mills to automotive consumers.<sup>50</sup>

Automotive suppliers export relatively little product in comparison to their domestic sales, but the level of imports has been increasing. As seen in **Table 4**, imports of automotive parts increased more than 12 percent in the first 11 months of 2004. This is also reflected in the automotive supplier industry's trade imbalance increasing more than 270 percent—to \$28.0 billion—from 1998 through November 2004.<sup>51</sup> See **Table 4**.

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<sup>48</sup> "U.S. Automotive Parts Industry 2004 Annual Assessment," Automotive Team, Office of Aerospace and Automotive Industries, International Trade Administration, Department of Commerce, May 2004.

<sup>49</sup> The ratio presented of approximately 7:1 employees may far understate the ratio of steel consuming industry employees to steel manufacturing industry employees. A 2000 study, for example, estimated that ratio as more than 40:1. See Barringer, William and Pierce, Kenneth, "Paying the Price for Big Steel," American Institute for International Steel, 2000.

<sup>50</sup> 2003 Annual Statistical Report, American Iron and Steel Institute, 2003.

<sup>51</sup> The automotive parts industry is used as a proxy for the automotive supplier industry in this calculation. Retrieved from <http://ita.doc.gov/td/auto/update04.pdf>, January 31, 2005.

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Concern exists that the automotive supplier industry may see falling sales in the coming years, as increased costs are not met with equal increases in price. The combination of an antiquated supply system and pressure to lower costs accounts for the prediction of many analysts that the automobile industry may lose half of its domestic suppliers to bankruptcies, mergers or migration to other industries by 2010.<sup>52</sup>

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<sup>52</sup> “U.S. Automotive Parts Industry Assessment,” Automotive Team, Office of Aerospace and Automotive Industries, International Trade Administration, U.S. Department of Commerce, May 2004.

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### III. Diverging Trends

The recent trends in the domestic steel market have had opposite effects on the U.S. automotive supplier industry and the U.S. steel manufacturing industry. The U.S. automotive supplier industry experienced bankruptcies and declining profits. In contrast, U.S. steel manufacturers enjoyed one of their best years in decades in 2004. These contrasting fortunes are predicted to continue.

#### A. Profitability

For steel manufacturers, 2004 represented their highest profit level in years. U.S. Steel, for example, reported positive—and increasing—earnings in each of the four quarters of 2004, while reporting losses in each of the four quarters of 2003. See **Table 1F**. Nucor—while modestly profitable in certain quarters of 2003—saw significant gains in reported earnings in 2004.<sup>53</sup> See **Table 1G**. Steel Dynamics in 2004 set records for volume, sales, and profits in each of its three steelmaking operations.<sup>54</sup> Such profit gains have allowed the firms to bankroll hundreds of millions of dollars in cash:

- Nucor increased its cash holdings from approximately \$350 million at the end of 2003 to approximately \$800 million at the end of 2004.<sup>55</sup>
- U.S. Steel increased its cash holdings from approximately \$316 million at the end of 2003 to more than \$1 billion at the end of 2004.<sup>56</sup> See **Table 1H**.
- Steel Dynamics more than doubled its cash holdings—to over \$150 million in 2004.<sup>57</sup>

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<sup>53</sup> Retrieved from <http://finance.yahoo.com>, February 2, 2005.

<sup>54</sup> “Steel Dynamics Reports Record Results for 2004,” February 2, 2005 Press Release, retrieved from <http://www.steeldynamics.com>, February 4, 2005.

<sup>55</sup> “Nucor Corporation,” Form 8-K, January 27, 2005.

<sup>56</sup> “United States Steel Corporation,” Form 8-K, January 24, 2005.

<sup>57</sup> Steel Dynamics had reported cash of \$160 million as of September 30, 2004, but it had not yet submitted an audited balance sheet for December 31, 2004. However, it reported earnings of \$82 million in the fourth quarter of 2004. “Steel Dynamics Reports Record Results for 2004,” February 2, 2005, Press Release, retrieved from <http://www.steeldynamics.com>, February 4, 2005; and retrieved <http://finance.yahoo.com>, February 4, 2005.

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**Tables 1A and 1B** compare the 2004 overall profitability in the steel manufacturing and automotive supplier industries. Both when looking at individual companies and comparing across the entire index, the steel manufacturing industry has recently earned higher profit margins. This is especially true recently. See **Tables 1D-1G**.

These high profit rates for the U.S. steel manufacturing industry appear to reflect its market structure as opposed to “rewards” for development seen in many industries (*i.e.*, software, pharmaceuticals, medical devices, etc.) where high-risk R&D can generate high profit margins. By contrast, there is essentially no R&D in the steel manufacturing industry.<sup>58</sup>

### B. Future Profits

The 2004 profits in steel manufacturing and the corresponding declines in the automotive supplier industry have already occurred. As such, they cannot generally be “fixed” by market changes or government intervention (or lack thereof). Rather, the focus of any such potential fixes would be more aptly placed upon whether such discrepancies are likely to exist in the future.

Perhaps the most consistent quantitative results analyzed were the optimistic projections for steel manufacturing and the pessimistic projections for the automotive suppliers. Steel Dynamics’ CEO, for example, recently stated “As we look ahead to 2005, we are optimistic about the sustainability of favorable domestic steel market conditions. Our existing steel manufacturing capacity will permit us to increase shipments by an additional 10 percent in 2005, allowing us to take advantage of the anticipated favorable market climate.”<sup>59</sup>

The optimistic projections are also partially explained by the fixing of prices in long-term contracts. For example, The Wall Street Journal reported that Nucor “... has shifted the majority of its business, or 65%, toward long-term contracts, which will continue to realize higher pricing levels that were established last [2004] year.”<sup>60</sup> Also, Stelco reported that it has already

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<sup>58</sup> As a broad comparative example, neither Nucor nor U.S. Steel reported any R&D in 2004, while Microsoft incurred nearly \$8 billion (more than 20 percent of its revenue). Retrieved from [finance.yahoo.com](http://finance.yahoo.com) on February 7, 2005. This pattern appears to be consistent with steel manufacturers historically, which have consistently reported R&D of less than 1 percent of sales since at least 1974. Barringer, William and Pierce, Kenneth, “Paying the Price for Big Steel,” American Institute for International Steel, 2000.

<sup>59</sup> “Steel Dynamics Reports Record Results for 2004,” February 2, 2005, Press Release, retrieved from <http://www.steeldynamics.com>, February 4, 2005.

<sup>60</sup> Glader, Paul, “Nucor Reports Strong Earnings, Plans for Technology Expansions,” The Wall Street Journal, January 28, 2005, p. B4.

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(February 8, 2005) entered into contracts for more than half of its 2005 business—at prices that are 30 percent higher than 2004.<sup>61</sup> In addition, steel demand worldwide is expected to rise in 2005. With these dynamics, Nucor itself projected that its first quarter 2005 profits would more than double its first quarter 2004 results.<sup>62</sup>

These factors have market participants and analysts predicting a strong 2005 for the steel manufacturing industry—similar to the best-in-recent-memory results seen in 2004—and a poor 2005 for the automotive supplier industry:

- Nucor’s CEO in a Business Week interview, stated that he “ ... believes the “bullish cycle” could stretch out for years ...”<sup>63</sup>
- A year end report from The Detroit News, stated, “It was a tough year for the automotive parts industry, and it won’t get any easier in 2005.”<sup>64</sup>
- In a recent conference call with investors, steel manufacturer AK Steel Corp. “... expects substantially higher operating earnings in 2005 ....”<sup>65</sup>
- Auto maker ArvinMeritor stated in its 2004 Form 10-K, “We believe the availability and price of steel will continue to challenge our industry in 2005.”<sup>66</sup>
- U.S. Steel’s CEO justified its increase in dividends by 60 percent, “The substantial increase in our quarterly dividend rate reflects our confidence in our financial outlook ....”<sup>67</sup>

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<sup>61</sup> “Stelco Gets 30% Increase in Contract Pricing for 2005,” SBB e-letter, February 8, 2005.

<sup>62</sup> Nucor Corporation, “Nucor Reports Record Results for 2004,” Press Release, January 27, 2005.

<sup>63</sup> Aston, Adam, “Suddenly Steel Has Industrial Strength,” Business Week, October 18, 2004, p. 133.

<sup>64</sup> “Outlook for 2005,” The Detroit News Auto Insider, December 30, 2004.

<sup>65</sup> Leonard, Jim, “AK Sticks Neck Out in Predicting 2005 Results,” American Metal Market, January 27, 2005, p. 4.

<sup>66</sup> “ArvinMeritor, Inc.,” Form 10-K, October 3, 2004.

<sup>67</sup> The 60 percent increase was to its common shares, although it also declared a dividend on Series B Mandatory Convertible Preferred Shares. “United States Steel Corporation Declares Increased Common Stock Dividend,” United States Steel Press Release, January 25, 2005.

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A more direct—and quantitative way to review this issue is to observe the behavior of investors purchasing rights to future profits of the firms in the industries (*i.e.*, their stock). Such investors are essentially buying (or selling) the rights to all future (per share) earnings. Thus, the price paid for stock reflects a credible and an unbiased forecast of future profitability. On this point, the evidence for the optimistic steel manufacturing/pessimistic automotive supplier industry is quantitatively clear:

- The Dow Jones Steel index covering steel manufacturers increased by more than 70 percent throughout 2004 and into 2005 (through February 3, 2005). The Dow Jones Auto Parts index showed an overall decline since December 31, 2003, despite the Dow Jones, NASDAQ and S&P indices all increasing. See **Table 2C**.
- Nucor and U.S. Steel—the largest domestically focused steel manufacturers—each saw their stock price *rise* more than 65 percent in 2004 (through February 3, 2005). Similar increases were experienced by U.S. steel manufacturers involved in the upcoming Sunset Reviews. See **Table 2A**.

With market prices reflecting the amount investors are willing to pay for the right to all future profits, the changing values reflect investors' updating their forecasts of steel manufacturers and steel consumers. Such trends are particularly relevant in the steel industry where many of its large players (constituting a large market share) are publicly traded. The data that are available: (a) make it clear that the steel industry's expectations have grown more optimistic in 2004; and (b) the public portion of the automotive supplier industry has seen its forecasts change more pessimistically than the economy as a whole.

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**Change in Value: December 31, 2003 – February 3, 2005**

<b>Company/Index</b>	<b>Change In Market Capitalization Value</b>
Nucor Corp.	105.9 percent
U.S. Steel Corp.	67.3 percent
Dow Jones Steel Index	76.1 percent
U.S. Public Petitioning Steel Companies <sup>68</sup>	94.8 percent
Delphi Corp.	-26.9 percent
Visteon Corp.	-31.8 percent
Dow Jones Auto Parts Index	-5.4 percent
Dow Jones Index	1.3 percent
S&P Index	7.0 percent

C. Imports

Most domestic industries face some form of competition from foreign companies, and these two industries are no exception. The U.S. steel manufacturing industry *requires* imports, as it does not hold the production capacity to serve the entire domestic market—even at today’s nearly “full production” levels. Modest levels of imports continue to supplement U.S. production in the domestic market.

Since 2001, imports have been generally consistent with 10 year average market share levels. These modest levels fall far short of the levels imported in 1998. See **Table 3A**. This also appears to be the case not only for steel in general, but for the products at issue in the upcoming Sunset Review cases, where subject imports (*i.e.*, imports from countries subject to the AD/CVD orders) have remained below 1998 levels. Based on 1998 market shares, their current market share estimates range from 1.4 percent (hot-rolled) to approximately 8.5 percent (stainless sheet and strip). See **Table 11** and below.

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<sup>68</sup> U.S. public petitioning steel companies are U.S. publicly-held steel companies that are Petitioners in one of the three upcoming Sunset Review cases.

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**Percentage of Subject Imports Relative to 1998 Levels and Current Market**

<b>Product</b>	<b>2004 Subject Imports as a Percent of 1998 Subject Imports</b>	<b>Estimated 2004 Subject Imports' Market Share<sup>69</sup></b>
Certain Hot-Rolled Flat-Rolled Carbon-Quality Steel Products	15.1 percent	1.4 percent
Certain Stainless Plate	45.7 percent	8.1 percent
Certain Stainless Sheet and Strip	53.6 percent	8.5 percent

In fact, domestic steel production in 2004 has been characterized as, "...the best shipping year for the [steel manufacturing] industry in at least ten years."<sup>70</sup>

Imports have not traditionally been a major force in the automotive supplier industry, generally garnering a market share of approximately 5 percent.<sup>71</sup> However, these figures have been increasing significantly in recent years—by 12 percent in 2004. This has led to an increase in the trade imbalance for automobile parts, for example, with concurrent increases in imports. See **Table 4**.

**D. Utilization Rates**

In heavy manufacturing industries like steel and the automotive supplier industry, capacity utilization is one sign of industry health. See **Tables 5A and 5B**. The steel manufacturing industry's capacity utilization figures—in general and for specific steel products—is closely monitored in part for this reason. Over the years, it has fluctuated with business cycles and other changes to market dynamics.

With the increased worldwide demand and capacity reductions, the U.S. steel manufacturing industry enjoyed its highest utilization rates in years in 2004—94 percent.<sup>72</sup> This reflects an increase from the 85 percent rate seen in 2003 or the recent low of 79 percent in 2001.

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<sup>69</sup> These calculations assume a similar level of domestic consumption in 2004 and 1998. If consumption has increased (decreased), the market shares would be proportionately lower (higher).

<sup>70</sup> "U.S. Mill Shipments Hit 10-Year High," *Steel Business Briefing*, January 19, 2005.

<sup>71</sup> U.S. International Trade Commission, *Steel: Monitoring Developments in the Domestic Industry*, Publication 3632, September 2003.

<sup>72</sup> American Iron and Steel Institute, telephone interview with Precision Economics, January 2005.

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It also is higher than the rates witnessed by the domestic industry in the year preceding the filing of cases now under Sunset Review consideration. See **Table 5D**.

### E. Market Power

U.S. steel manufacturing is more concentrated than the global steel market. The U.S. steel manufacturing industry is estimated in 2005 to have three companies with a total market share of approximately 43 percent. This translates to a Hirschman-Herfindahl Index (“HHI”)<sup>73</sup> of approximately 669.5. See **Table 6A**. Such concentration does not extend to the global steel industry, in which: (a) no single firm holds more than a 4 percent market share; and (b) the top 10 firms hold only 27 percent of the market.<sup>74</sup> See **Table 6B**.

This level of concentration/market power in the United States, in part, reflects the removal of many older, inefficient plants from the market through bankruptcy and/or consolidation. It has been reported that the number of solvent steel manufacturers in North America decreased from 90 in 1998 to 57 in January 2005. The latter group appears to represent the “healthier” survivors, as there were only 3 in bankruptcy in January 2005 (there were reported to be 28 in bankruptcy in 2003).<sup>75</sup>

In contrast to the steel industry, the automotive supplier industry has less market concentration. For example, a recent analysis found that there has been little consolidation among the larger of the automobile suppliers. It also found that consolidation has somewhat “gone in reverse”, as the market share of the top 25 suppliers has decreased (1992-2002).<sup>76</sup>

The lack of market power in the automotive supplier industry may partially explain the surcharges and renegotiations of long term contracts between the steel manufacturers and the automotive supplier industry.<sup>77</sup> As steel raw material costs have increased, steel manufacturers

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<sup>73</sup> The HHI represents the sum of the squares of all of the firms’ market shares. See Shy, Oz, Industrial Organization, The MIT Press, Cambridge, MA, 1995.

<sup>74</sup> This may explain, in part, the price premiums seen in the U.S. steel industry. See “The Outlook for Steel: Background and Issues Paper,” OECD Special Meeting at High-Level on Steel Issues, Paris, January 12-13, 2005, retrieved from <http://www.oecd.org/dataoecd/20/49/33951169.pdf>, January 21, 2005.

<sup>75</sup> Deutsch, Claudia, “Is the Steel Industry in a Boom or on a Bubble,” The New York Times, January 18, 2005, p. C1.

<sup>76</sup> McKinsey & Company, “The Right Restructuring for US Automotive Suppliers,” *Perspectives on Corporate Finance and Strategy*, Number 13, Autumn 2004, pp. 1-4.

<sup>77</sup> See, for example, “Global Steel Alert,” World Steel Dynamics, January 6, 2005, p. 19.

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have been able to pass on these higher costs to the automotive supplier industry in the forms of higher prices and surcharges.<sup>78</sup> The automotive supplier industry has been much less successful in passing such price increases on to the automobile manufacturers.<sup>79, 80</sup> For example, Tower Automotive recently filed for Chapter 11 bankruptcy protection, as it was one of several steel consuming companies that cited their inability to pass on steel cost increases.<sup>81</sup>

### F. Steel Prices

In essentially all categories, steel prices increased in 2004 after the removal of the 201 safeguards.

#### 1. *Global and U.S. Steel Price Increases from 2001 to 2004*

Steel prices experienced a downward trend over the 1990s, climaxing in early 2002 with U.S. and foreign steel prices hitting their lowest point in ten years. See **Tables 12 and 13**. U.S. steel companies found their profits and market values falling. By the end of 2002, steel prices began to climb. Since that time:

- Prices remained generally stable in 2003.
- Prices increased significantly in 2004.

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<sup>78</sup> See, for example, “Global Steel Alert,” World Steel Dynamics, January 6, 2005, p. 19.

<sup>79</sup> The ITC reported that only three steel-consuming firms successfully passed on price increases to their customers, while 38 were unsuccessful. (Seven reported being both successful and unsuccessful.) U.S. International Trade Commission, Steel: Monitoring Developments in the Domestic Industry, Publication 3632, September 2003, Table 2-4.

<sup>80</sup> See, for example, a tracking of steel surcharges retrieved from <http://www.steelking.com/steel/index.cfm>, February 1, 2005.

<sup>81</sup> “High Raw Material Costs Plague US Auto Sector,” SBB e-letter, February 8, 2005.

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The 2004 rise in steel prices impacted most forms of the product. Nucor, for example, reported that the average price it received on all steel products was 66 percent higher in 2004 than 2003.<sup>82</sup> As seen in **Tables 14A and 14B**, the 2004 price increases topped 100 percent for some products. The three sets of products in the upcoming Sunset Reviews also saw price increases in 2004. See **Tables 15A-15C** and below.

### Price Changes for Imported Steel Since Termination of the 201 Safeguards<sup>83</sup>

Steel Category	December 2003 Price/Kilogram	November 2004 Price/Kilogram	Percentage Increase in Price
Certain Hot-Rolled Flat-Rolled Carbon-Quality Steel Products	\$0.37	\$0.56	51.3 percent
Certain Stainless Steel Plate	\$2.14	\$2.78	30.0 percent
Certain Stainless Steel Sheet and Strip	\$2.04	\$2.52	18.9 percent

This trend is reflected in the revenues of steel manufacturers. For example, U.S. Steel reported revenue increases of 47 percent in the fourth quarter of 2004 (compared to fourth quarter 2003) despite similar volumes of sales.<sup>84</sup> In the same quarter, Nucor saw revenues increase by more than 82 percent with only a 10 percent gain in volume.<sup>85</sup>

## 2. Domestic Steel Prices

Steel sells at a premium price in the United States compared to the rest of the world. In the fourth quarter 2004, hot-rolled band (“HRB”) world export steel prices were selling at only 83 percent of the U.S. HRB home market price. In fact, the price for HRB steel was higher in the United States than any other global market. See **Tables 8A and 8B**.

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<sup>82</sup> Glader, Paul, “Nucor Reports Strong Earnings, Plans for Technology Expansions,” The Wall Street Journal, January 28, 2005, p. B4.

<sup>83</sup> This represents a weighted average of all HTS and all importing countries.

<sup>84</sup> Glader, Paul, “U.S. Steel Swings To Profit as Sales Surge Some 47%,” The Wall Street Journal, January 25, 2005, p. A2.

<sup>85</sup> Retrieved from <http://finance.yahoo.com>, February 2, 2005.

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### **IV. Conclusions**

Our research into the steel industry has reached two main findings regarding the health of the two industries since the removal of the 201 safeguards at the end of 2003. The steel manufacturing industry has become much healthier financially, and is forecasted to remain so in the near future. The automotive supplier industry has experienced declines, which are expected to continue.

Our research has consistently found over a variety of metrics that the steel manufacturing industry improved its financial health from December 2003 through February 2005. As reflected in its near-full capacity utilization, the steel manufacturing industry has seen record profits, and forecasts of continued prosperity.

The fourteen month period from December 2003 through February 2005 was not a period of financial well being for the auto supplier industry. In addition to the numerous bankruptcies it has seen recently, many of its publicly traded firms have witnessed profitability declines. As a result, current forecasts in this industry have become pessimistic.

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Brian C. Becker

Brian Becker is the President of Precision Economics. Prior to founding Precision Economics in 2001, Dr. Becker worked as a consulting economist for nine years. His experience has focused on international economics—transfer pricing and international trade—and other valuation matters. He has given deposition or trial testimony in a number of venues, including: The U.S. International Trade Commission, The Canadian International Trade Tribunal, U.S. Tax Court, U.S. Bankruptcy Court, Federal District Court, and Delaware Chancery Court.

In addition to economic consulting, he has been active in research and teaching. Dr. Becker has published more than two dozen papers/book chapters. He has served as a Visiting Professor at Johns Hopkins University, The George Washington University, and Marymount University. He earned a Ph.D. and M.A. in Applied Economics from the Wharton School. Dr. Becker earned a B.A. in Applied Mathematics and Economics at The Johns Hopkins University.

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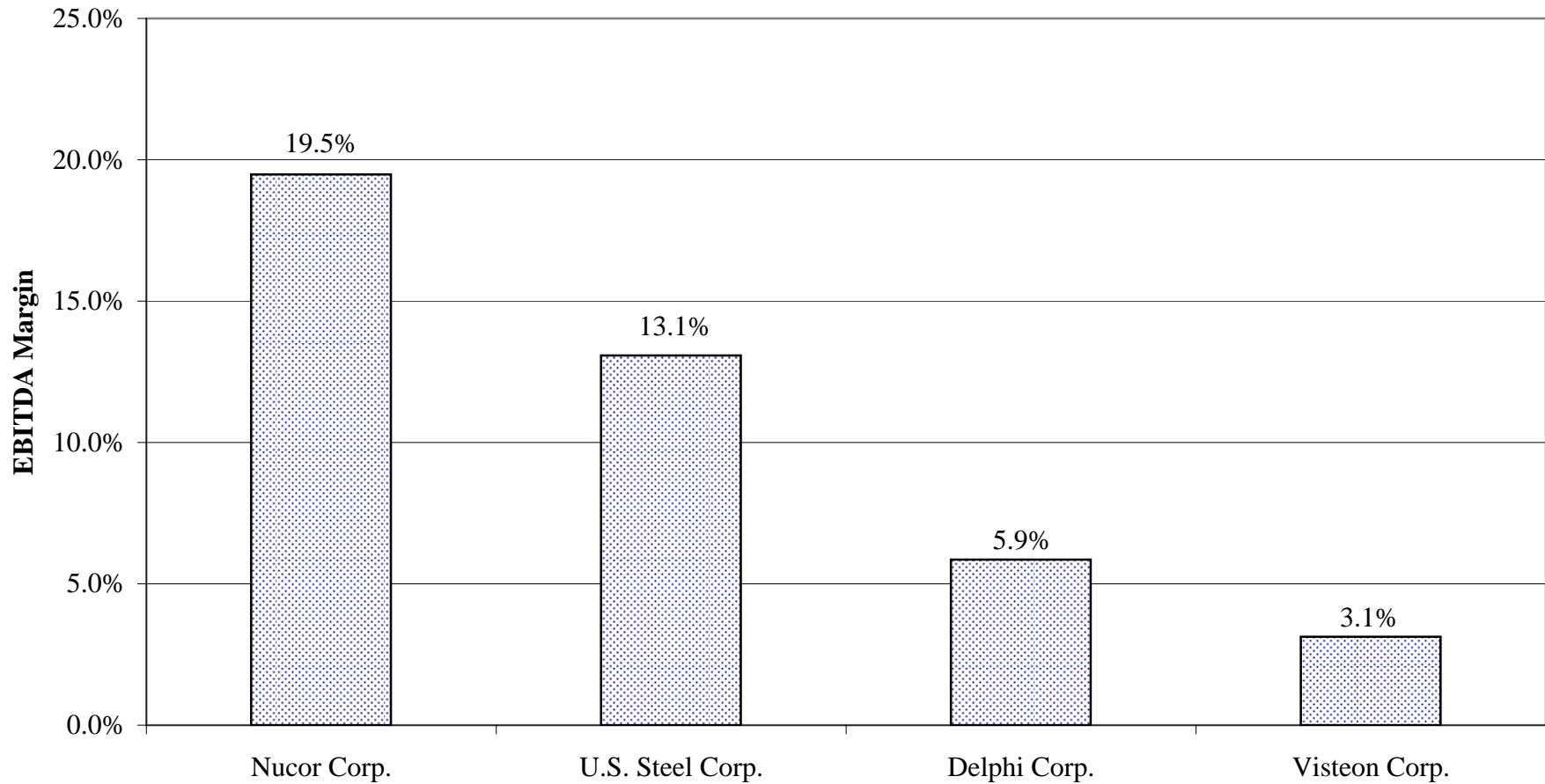
### Kevin A. Hassett

Kevin A. Hassett is Director of Economic Policy Studies and Resident Scholar at the American Enterprise Institute. Before joining AEI, Dr. Hassett was a senior economist at the Board of Governors of the Federal Reserve System and an associate professor of economics and finance at the Graduate School of Business of Columbia University. He was the chief economic advisor to John McCain during the 2000 primaries. He has also served as a policy consultant to the U.S. Department of the Treasury during both the former Bush and Clinton administrations. He holds a B.A. from Swarthmore College and a Ph.D. from the University of Pennsylvania.

Dr. Hassett is a member of the Joint Committee on Taxation's Dynamic Scoring Advisory Panel. He is the author, coauthor or editor of six books on economics and economic policy. He has published scholarly articles in the *American Economic Review*, the *Economic Journal*, the *Quarterly Journal of Economics*, the *Review of Economics and Statistics*, the *Journal of Public Economics*, and many other professional journals. His popular writings have been published in the *Wall Street Journal*, the *Atlantic Monthly*, *USA Today*, the *Washington Post*, and numerous other outlets. His economic commentaries are regularly aired on radio and television including recent appearances on the Today Show, the CBS Morning Show, Newshour with Jim Lehrer, Hardball, Moneyline and Power Lunch.

**Table 1A:**

**Comparison of Nucor's, U.S. Steel's, Delphi's and Visteon's EBITDA Margin for Last Available Twelve Months**

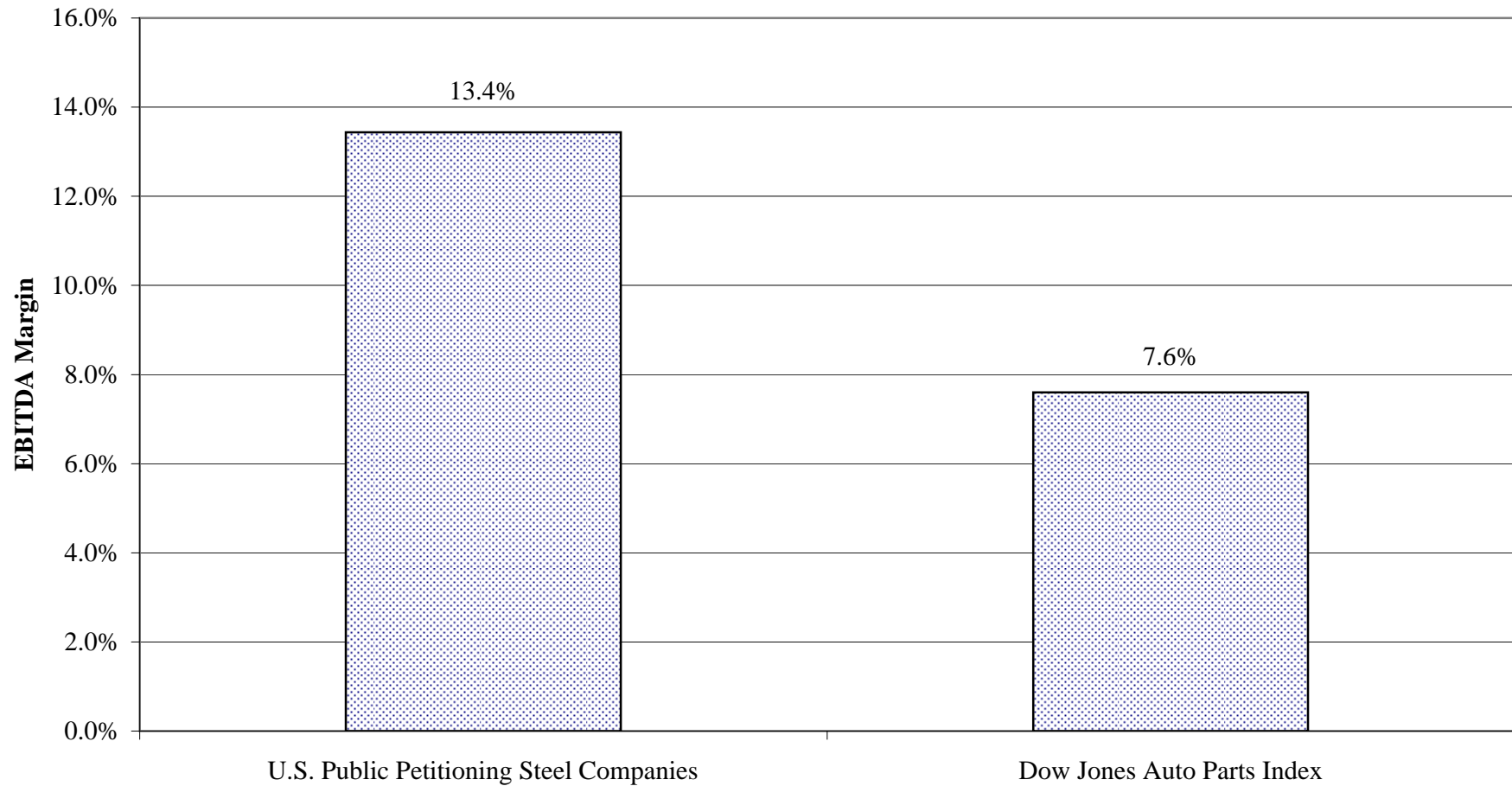


Note: Nucor Corp. and U.S. Steel Corp. data are through fourth quarter 2004. Delphi Corp. and Visteon Corp. data are through third quarter 2004.

Sources: Compustat database, Standard & Poor's Research Insight, November 20, 2004; "Nucor Corporation," Form 8-K, January 27, 2005; and "United States Steel Corporation," Form 8-K, January 24, 2005.

**Table 1B:**

**Comparison of U.S. Public Petitioning Steel Companies, Dow Jones Steel Index and Dow Jones Auto Parts Index for Last Twelve Months**

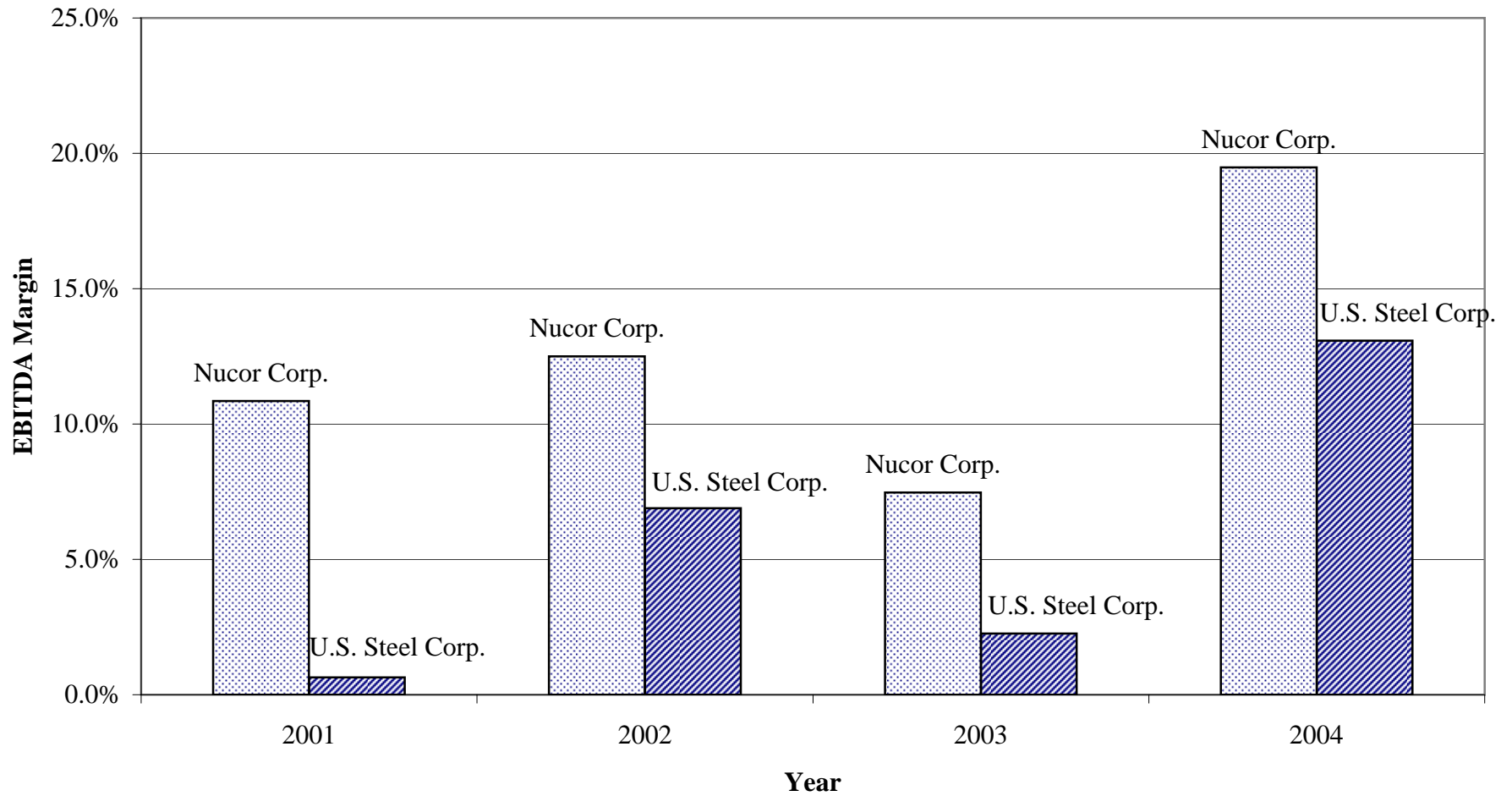


Notes: U.S. public petitioning steel companies are U.S. publicly-held steel companies that are petitioners in one of the three upcoming Sunset Review cases. Data are through third quarter 2004.

Sources: Compustat database, Standard & Poor's Research Insight, November 20, 2004; and retrieved from <http://moneycentral.msn.com/home.asp>, February 3, 2005.

**Table 1C:**

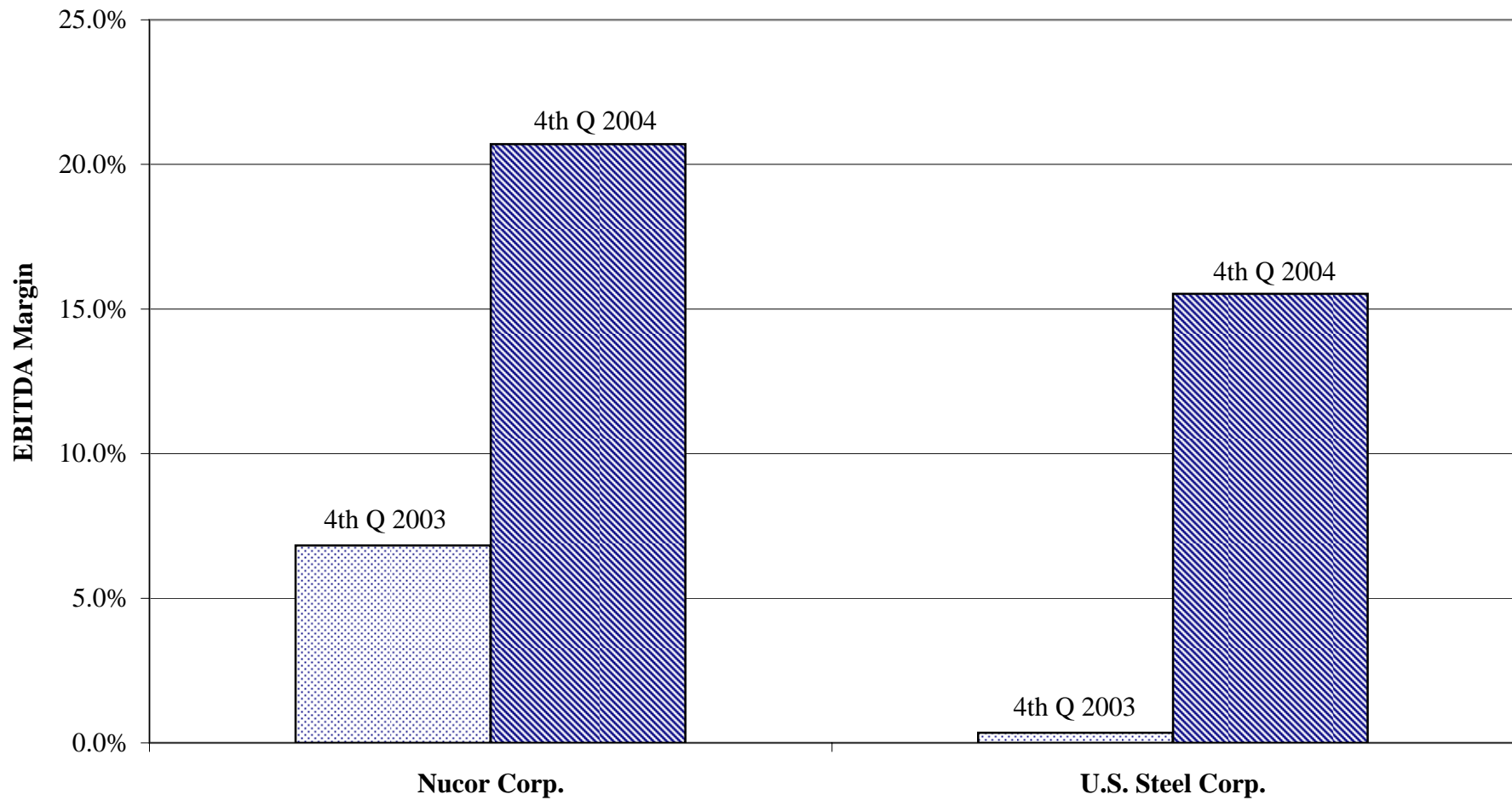
**U.S. Steel's and Nucor's EBITDA Margins 2001-2004**



Sources: Compustat database, Standard & Poor's Research Insight, November 20, 2004; "Nucor Corporation," Form 8-K, January 27, 2005; and "United States Steel Corporation," Form 8-K, January 24, 2005.

**Table 1D:**

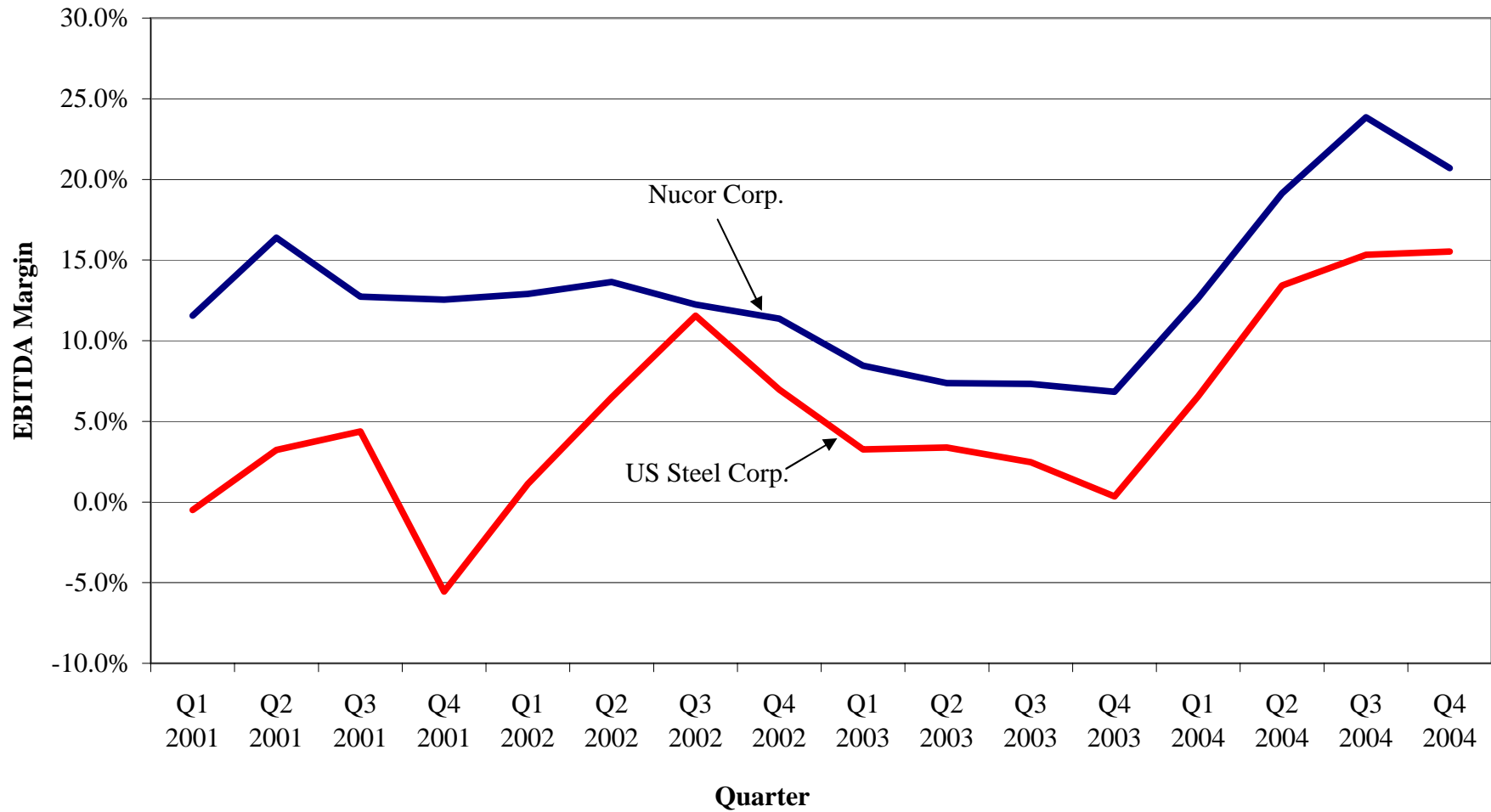
**U.S. Steel's and Nucor's EBITDA Margins for Fourth Quarter 2003 and 2004**



Sources: Compustat database, Standard & Poor's Research Insight, November 20, 2004; "Nucor Corporation," Form 8-K, January 27, 2005; and "United States Steel Corporation," Form 8-K, January 24, 2005.

**Table 1E:**

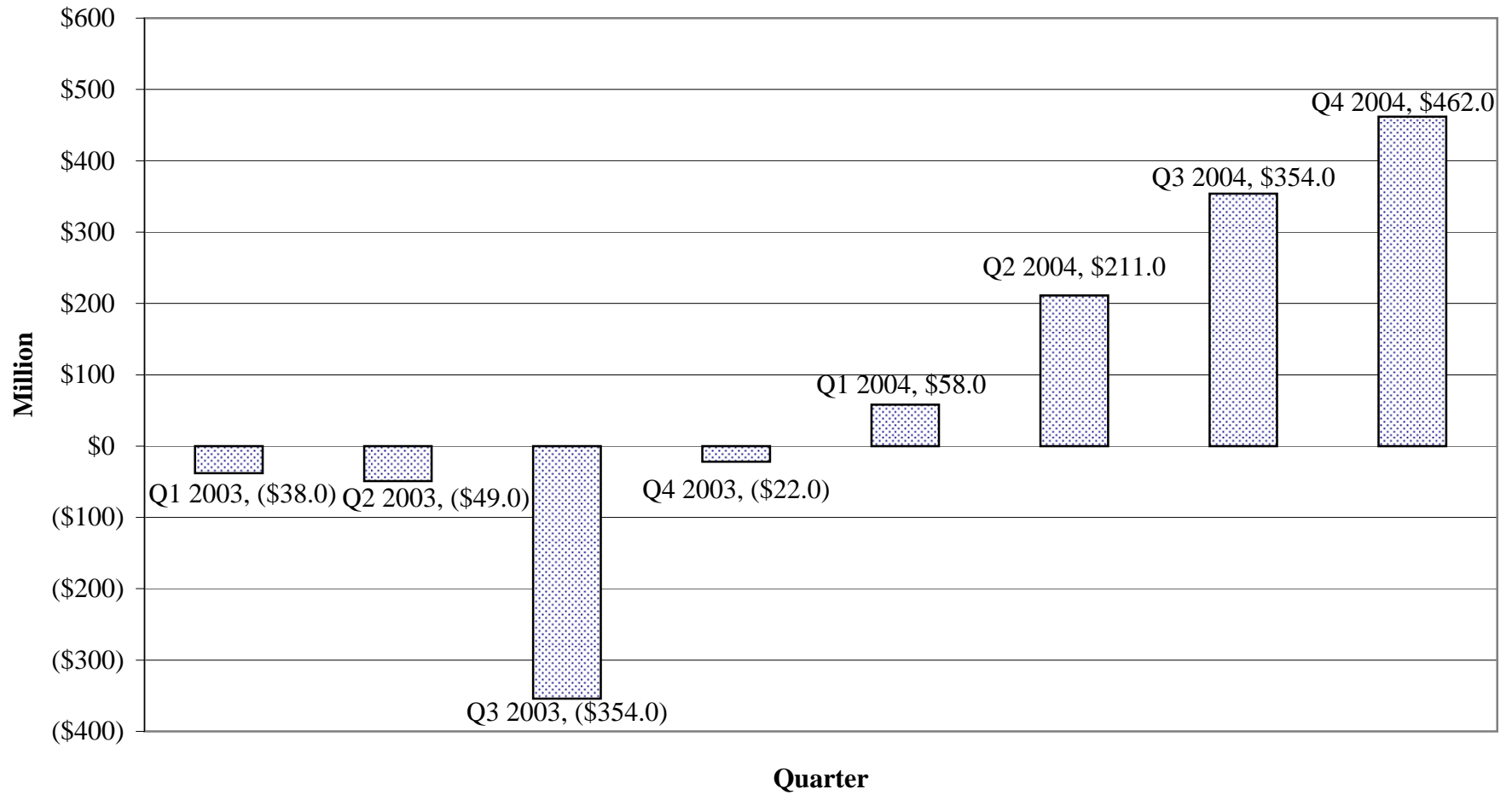
**US Steel's and Nucor's Quarterly EBITDA Margins Q1 2001 - Q4 2004**



Sources: Compustat database, Standard & Poor's Research Insight, November 20, 2004; "Nucor Corporation," Form 8-K, January 27, 2005; and "United States Steel Corporation," Form 8-K, January 24, 2005.

**Table 1F:**

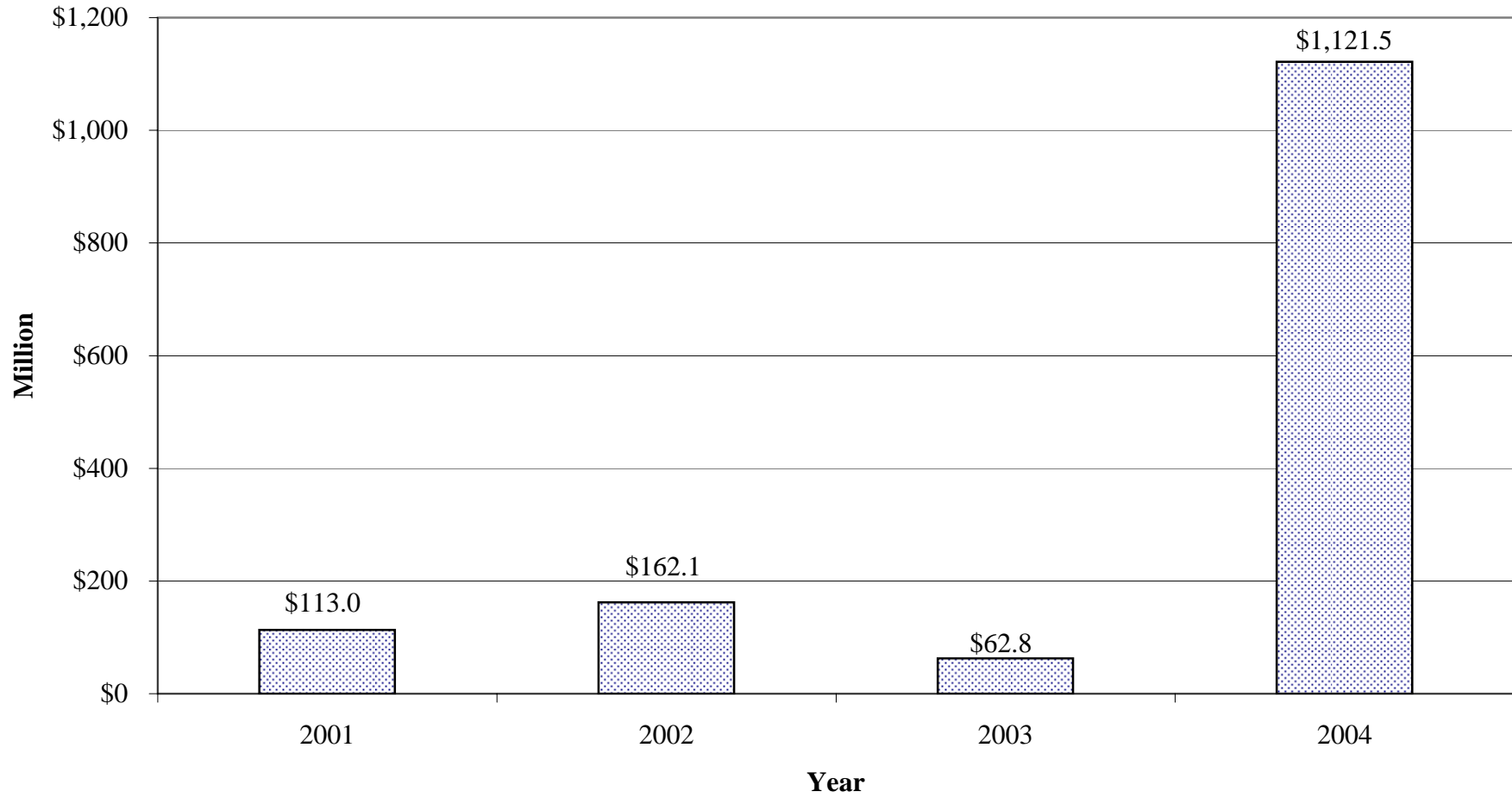
**U.S. Steel's Net Income for the Last Eight Quarters**



Sources: Compustat database, Standard & Poor's Research Insight, November 20, 2004; and "United States Steel Corporation," Form 8-K, January 24, 2005.

**Table 1G:**

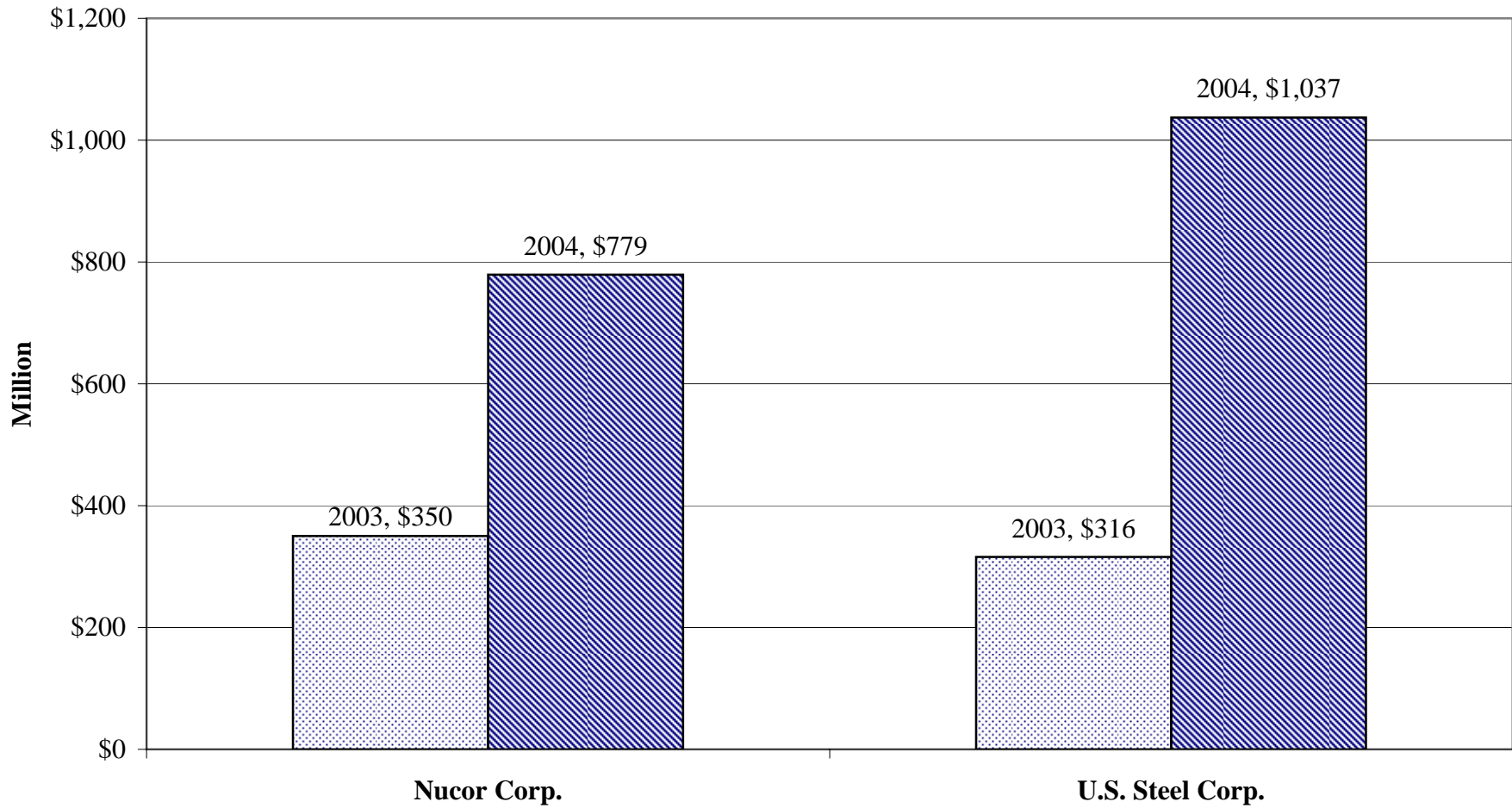
**Nucor's Net Income for the Last Four Years**



Sources: Compustat database, Standard & Poor's Research Insight, November 20, 2004; and "Nucor Corporation," Form 8-K, January 27, 2005.

**Table 1H:**

**US Steel's and Nucor's Cash and Cash Equivalents for 2003 and 2004**



Sources: "Nucor Corporation," Form 8-K, January 27, 2005; and "United States Steel Corporation," Form 8-K, January 24, 2005.

**Table 2A:**

**Market Value of Nucor Corp., U.S. Steel Corp., Dow Jones Steel Index and U.S. Public Petitioning Steel Companies  
(\$ million)**

<b>Financial Item</b>	<b>Nucor Corp.</b>	<b>U.S. Steel Corp.</b>	<b>Dow Jones Steel Index</b>	<b>U.S. Public Petitioning Steel Companies</b>
Current/Most Recently Reported Market Capitalization /1/	9,026	6,050	169.5	21,552
Fourth Quarter 2003 Market Capitalization	4,384	3,617	96.3	11,061
Percentage Increase Market Capitalization	105.9%	67.3%	76.1%	94.8%

Note:

/1/: Market capitalization data are as of February 3, 2005.

Sources:

- (1) Compustat database, Standard & Poor's Research Insight, November 20, 2004.
- (2) Retrieved from <http://moneycentral.msn.com/investor/home.asp>, February 4, 2005.
- (3) "Nucor Corporation," Form 8-K, January 27, 2005.
- (4) "United States Steel Corporation," Form 8-K, January 24, 2005.

**Table 2B:**

**Market Value of Delphi, Visteon and Dow Jones Auto Parts Index (\$ million)**

<b>Financial Item</b>	<b>Delphi Corp.</b>	<b>Visteon Corp.</b>	<b>Dow Jones Auto Parts Index</b>
Current/Most Recently Reported Market Capitalization /1/	4,181	930	228.5
Fourth Quarter 2003 Market Capitalization	5,721	1,364	241.4
Percentage Increase Market Capitalization	-26.9%	-31.8%	-5.4%

Note:

/1/: Market capitalization data are as of February 3, 2005.

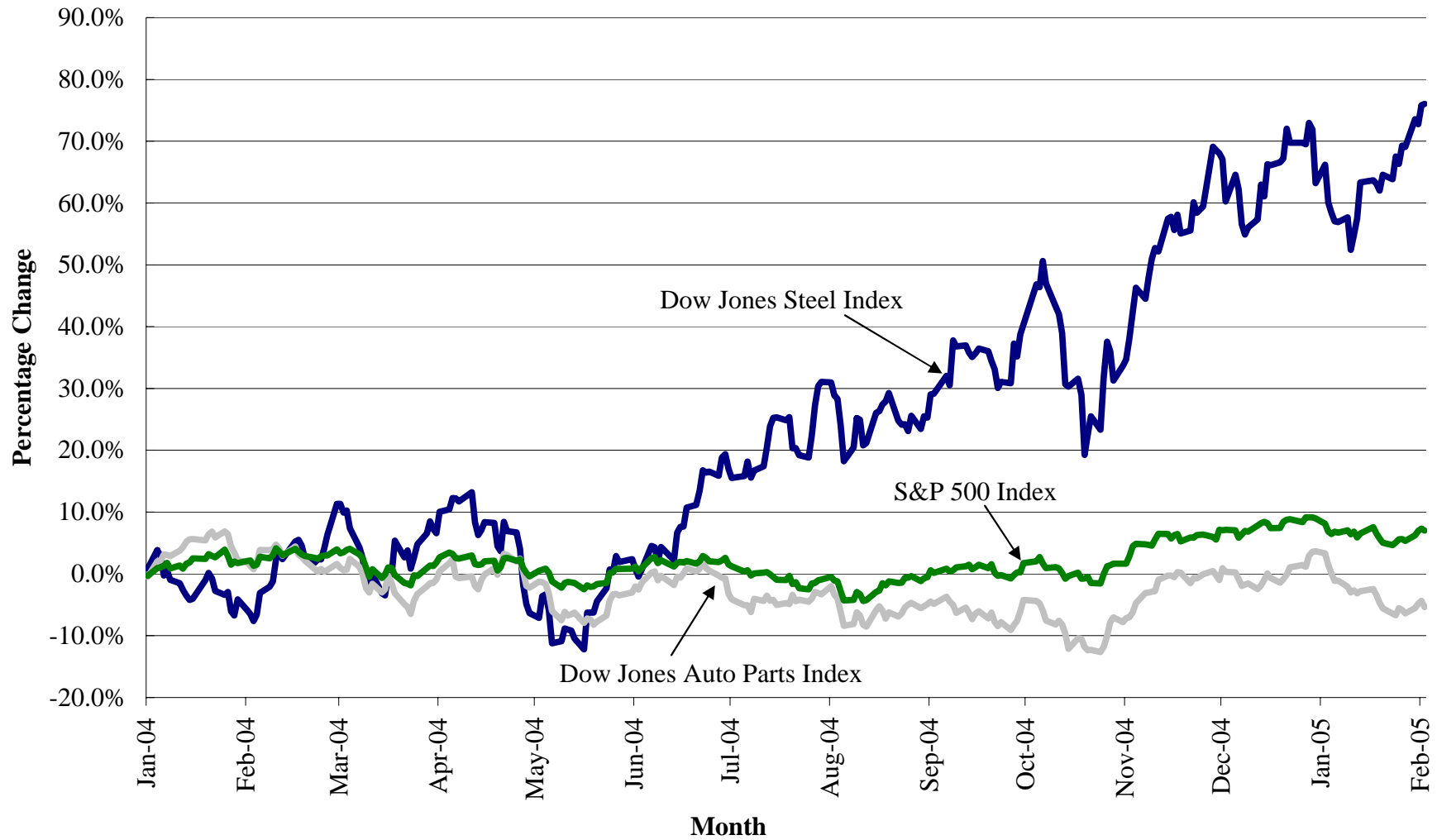
Sources:

(1) Compustat database, Standard & Poor's Research Insight, November 20, 2004.

(2) Retrieved from <http://moneycentral.msn.com/investor/home.asp>, February 3, 2005.

**Table 2C:**

**Comparison of Dow Jones Steel Index, Dow Jones Auto Parts Index and S&P 500 Index  
from December 31, 2003 to February 3, 2005**



Source: Retrieved from <http://finance.yahoo.com>, February 4, 2005.

**Table 3A:****U.S. Finished Steel Consumption (thousand net tons)**

<b>Year</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002 /1/</b>	<b>2003</b>	<b>2004P /2/</b>
U.S. Shipments	97,494	100,878	105,858	102,420	106,201	109,050	98,940	100,000	105,974	113,718
Percentage Growth		3.5%	4.9%	-3.2%	3.7%	2.7%	-9.3%	1.1%	6.0%	7.3%
Plus: U.S. Imports	19,206	21,634	24,799	34,744	27,151	29,401	23,640	23,842	18,309	27,979
Percentage Growth		12.6%	14.6%	40.1%	-21.9%	8.3%	-19.6%	0.9%	-23.2%	52.8%
Less: U.S. Exports	7,080	5,031	6,036	5,520	5,426	6,529	6,144	6,009	8,220	7,878
Percentage Growth		-28.9%	20.0%	-8.5%	-1.7%	20.3%	-5.9%	-2.2%	36.8%	-4.2%
U.S. Apparent Steel Demand	109,620	117,481	124,621	131,644	127,925	131,922	116,436	117,833	116,063	133,819
Percentage Growth		7.2%	6.1%	5.6%	-2.8%	3.1%	-11.7%	1.2%	-1.5%	15.3%
Less: Estimated User/Buyer Inventory Build	-2,000	2,000	2,500	3,500	-2,000	-2,000	-4,400	0	500	-500
U.S. Actual Steel Consumption	111,620	115,481	122,121	128,144	129,925	133,922	120,836	117,833	115,563	134,319
Percentage Growth		3.5%	5.7%	4.9%	1.4%	3.1%	-9.8%	-2.5%	-1.9%	16.2%
Finished Imports as a Percentage of Actual U.S. Demand	17.2%	18.7%	20.3%	27.1%	20.9%	22.0%	19.6%	20.2%	15.8%	20.8%

## Notes:

/1/: Adjustments to 2002 data have been made based on interviews with American Iron and Steel Institute staff.

/2/: 2004 predicted data has been annualized based off results through October of 2004.

## Sources:

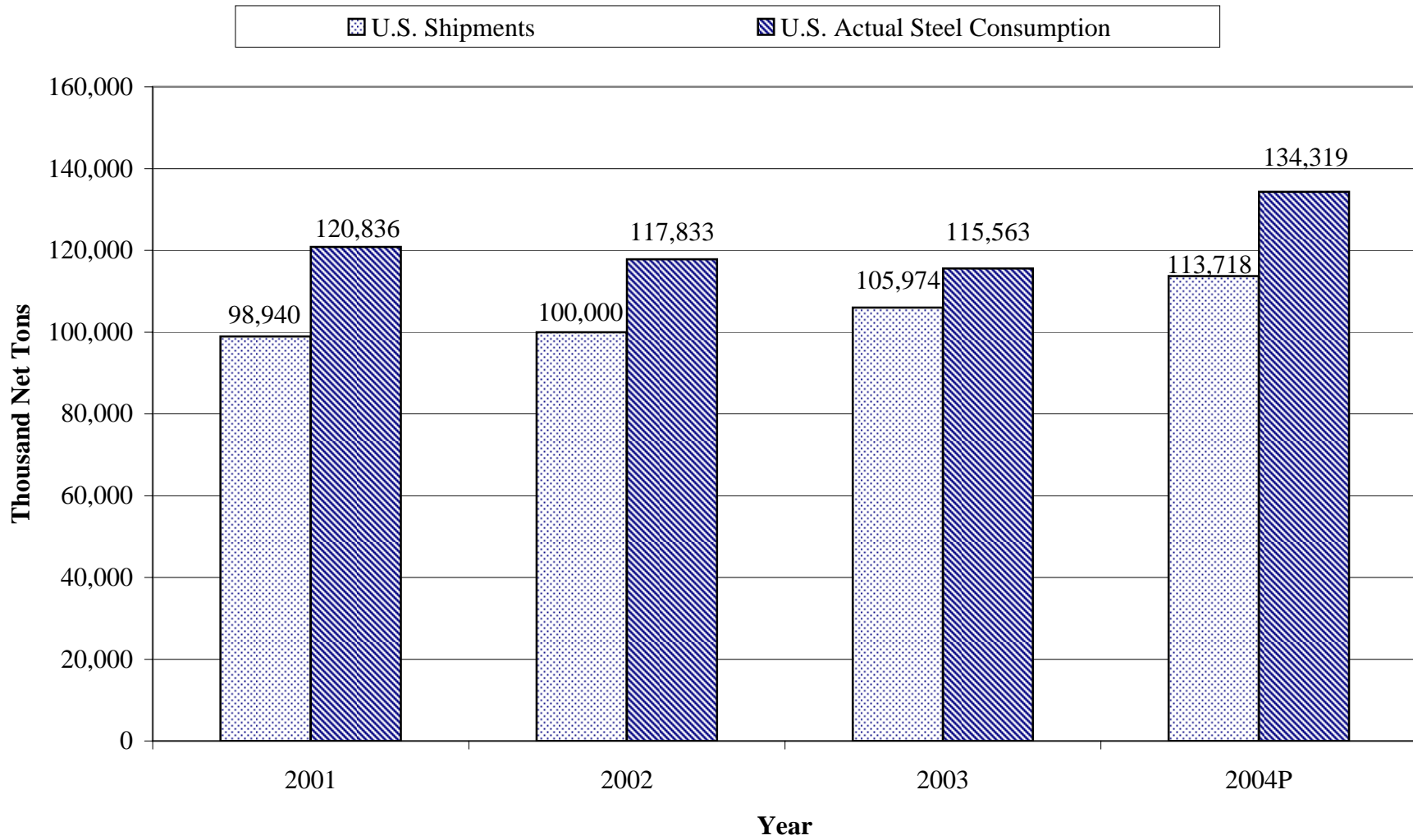
(1) 2003 Annual Statistical Report, American Iron and Steel Institute, 2003, Table 1A.

(2) American Iron and Steel Institute, telephone interview with Precision Economics, January 2005.

(3) Marcus, Peter F., Kirsis, Karlis M., and Barnett, Donald, F., "The New Age: China, Globalization, Consolidation and Metallics," World Steel Dynamics, Steel Strategist #30, August 2004, p. 64.

**Table 3B:**

**U.S. Steel Shipments Versus U.S. Actual Steel Consumption 2001-2004**



Source: Table 3A.

**Table 3C:**

**Apparent Consumption and Net Semis Trade for Crude Steel, LPEQ and HRBEQ (million net tons)**

Year /1/	World excl.					S. America	CIS	Europe	Other Major Asia	Rest of World
	World	China	China	N. America	Japan					
2000										
Crude Steel	935.83	794.19	141.65	130.51	117.33	61.76	109.13	231.48	103.62	40.37
HRBEQ ASC	457.77	405.73	52.04	99.56	43.38	22.30	15.12	116.08	58.76	50.52
Net Semis Import	0.00	-0.45	0.45	8.58	-1.63	-6.66	-23.23	0.60	13.15	8.74
LPEQ ASC	386.81	299.64	87.16	55.64	40.82	24.64	25.09	75.92	39.63	37.91
Total EQ ASC	844.58	705.37	139.21	155.20	84.20	46.95	40.21	192.01	98.39	88.43
2001										
Crude Steel	938.08	770.94	167.14	116.16	113.39	57.15	110.38	225.55	105.20	43.09
HRBEQ ASC	443.09	384.70	58.38	87.20	42.38	21.65	17.31	109.56	55.86	50.75
Net Semis Import	0.00	-6.03	6.03	6.50	-3.35	-6.86	-23.31	0.49	9.28	11.23
LPEQ ASC	405.94	293.49	112.46	44.69	38.68	22.00	25.06	77.43	40.97	44.67
Total EQ ASC	849.02	678.19	170.83	131.89	81.06	43.64	42.36	186.98	96.84	95.42
2002										
Crude Steel	996.18	795.29	200.89	118.60	118.77	62.02	112.00	228.03	110.19	45.69
HRBEQ ASC	474.66	398.13	76.53	89.34	40.45	22.19	21.57	114.29	62.13	48.16
Net Semis Import	0.00	-3.60	3.60	9.56	-5.79	-8.71	-24.57	0.75	15.96	12.97
LPEQ ASC	434.56	304.95	129.61	48.79	37.94	22.48	23.17	74.11	49.53	48.94
Total EQ ASC	909.22	703.08	206.14	138.14	78.40	44.68	44.74	188.38	111.66	97.10
2003										
Crude Steel	1,066.95	824.32	242.64	120.78	121.82	65.71	119.05	233.71	115.25	48.02
HRBEQ ASC	508.25	406.05	102.19	85.44	45.06	24.58	25.52	122.50	65.32	37.63
Net Semis Import	0.00	-4.88	4.88	9.56	-5.79	-8.71	-22.60	0.75	15.96	12.97
LPEQ ASC	476.07	316.59	159.47	56.80	35.88	22.18	27.84	78.88	49.58	45.44
Total EQ ASC	984.31	722.65	261.66	142.23	80.94	46.75	53.36	201.39	114.90	83.07
2004 (Predicted)										
Crude Steel	1,154.14	857.83	296.32	126.36	123.92	70.34	123.10	245.00	117.77	51.33
HRBEQ ASC	546.59	437.87	108.72	96.19	46.44	27.31	30.07	131.48	68.22	38.15
Net Semis Import	0.00	-2.18	2.18	9.56	-5.79	-8.71	-22.60	0.75	15.96	12.97
LPEQ ASC	518.82	339.10	179.72	57.75	39.02	23.71	30.61	83.47	50.44	54.09
Total EQ ASC	1,065.42	776.98	288.44	153.94	85.46	51.04	60.69	214.95	118.66	92.24
2005 (Forecasted)										
Crude Steel	1,236.73	885.31	351.41	132.31	126.40	74.33	124.33	250.23	124.10	53.62
HRBEQ ASC	585.84	462.99	123.33	98.25	47.74	27.84	30.72	134.47	70.58	52.91
Net Semis Import	0.00	9.56	4.41	-5.79	-8.71	-22.60	0.75	15.96	12.97	0.00
LPEQ ASC	544.96	352.05	196.57	60.12	40.12	24.95	31.53	84.76	52.80	54.09
Total EQ ASC	1,130.79	810.88	319.91	158.38	87.86	52.79	62.24	219.23	123.38	107.00

Notes:

/1/: Data have been converted from metric tons to net tons using a ratio of 1.1023.

/2/: HRBEQ category includes deliveries of hot-rolled sheet strip, cold-rolled sheet and strip, galvanized steel, tinplate, coated products and welded pipe. LPEQ category includes all long products, plus plate and seamless pipe.

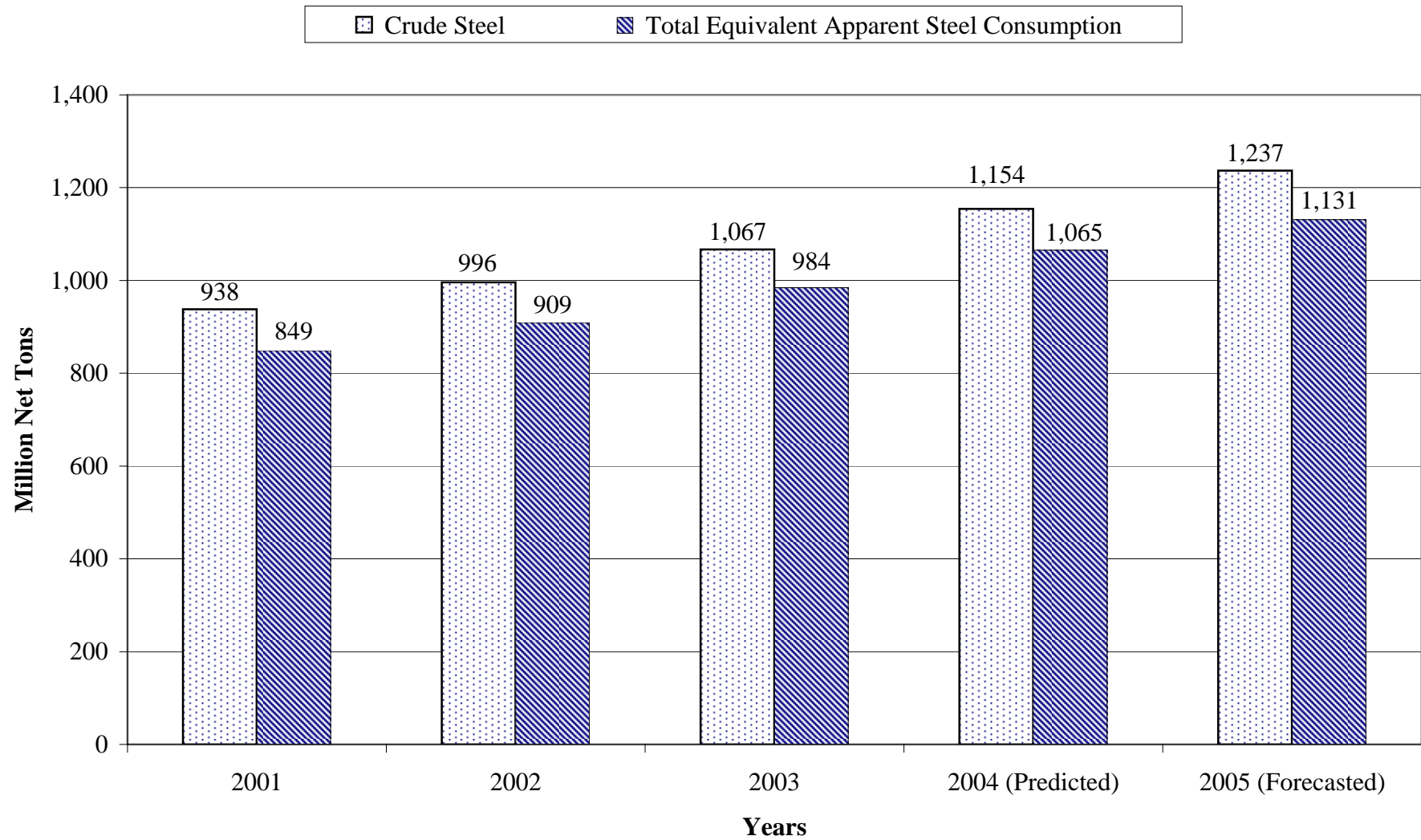
/3/: World Steel Dynamic's "equivalent" steel shipments approach, which grosses up all deliveries to the first product stage after semis, overstates actual total deliveries by about 4 percent.

Source:

(1) "Global Steel Alert," World Steel Dynamics, January 6, 2005, p. 7.

**Table 3D:**

**World Consumption for Crude Steel and Total Equivalent Steel**



Source: Table 3C.

**Table 4:****World Imports, Exports and Trade Balance of the U.S. Automotive Supplier Industry**

<b>Industry (\$ million)</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2003 YTD</b>	<b>2004 YTD /1/</b>
Automotive Supplier Exports	46,807	49,901	53,720	49,794	50,087	48,501	44,952	48,801
Percentage Growth		6.6%	7.7%	-7.3%	0.6%	-3.2%		8.6%
Automotive Supplier Imports	54,365	61,619	66,959	62,726	69,089	74,469	68,465	76,774
Percentage Growth		13.3%	8.7%	-6.3%	10.1%	7.8%		12.1%
Automotive Supplier Trade Balance	-7,558	-11,719	-13,239	-12,932	-19,002	-25,968	-23,513	-27,973
Percentage Growth		55.1%	13.0%	-2.3%	46.9%	36.7%		19.0%

Note:

/1/: Data are through November 2004.

Source:

(1) Retrieved from <http://ita.doc.gov/td/auto/update04.pdf>, February 7, 2005.

**Table 5A:****Raw Steel Production and Utilization Data (thousand net tons)**

<b>Year</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004P /1/</b>
World Production	799,573	829,218	826,886	880,558	856,780	868,295	932,712	931,883	994,575	1,060,553	NA
Percentage Growth		3.7%	-0.3%	6.5%	-2.7%	1.3%	7.4%	-0.1%	6.7%	6.6%	
U.S. Production	100,579	104,930	105,309	108,561	108,752	107,395	112,242	99,320	100,958	103,261	109,318
Percentage of World	12.6%	12.7%	12.8%	12.3%	12.7%	12.4%	12.0%	10.7%	10.3%	9.7%	NA
U.S. Capacity	108,200	112,400	116,100	121,400	125,300	128,200	130,300	125,500	113,800	121,600	116,500
U.S. Utilization Rate	93.0%	93.3%	90.7%	89.4%	86.8%	83.8%	86.1%	79.2%	88.8%	84.9%	93.8%

Note:

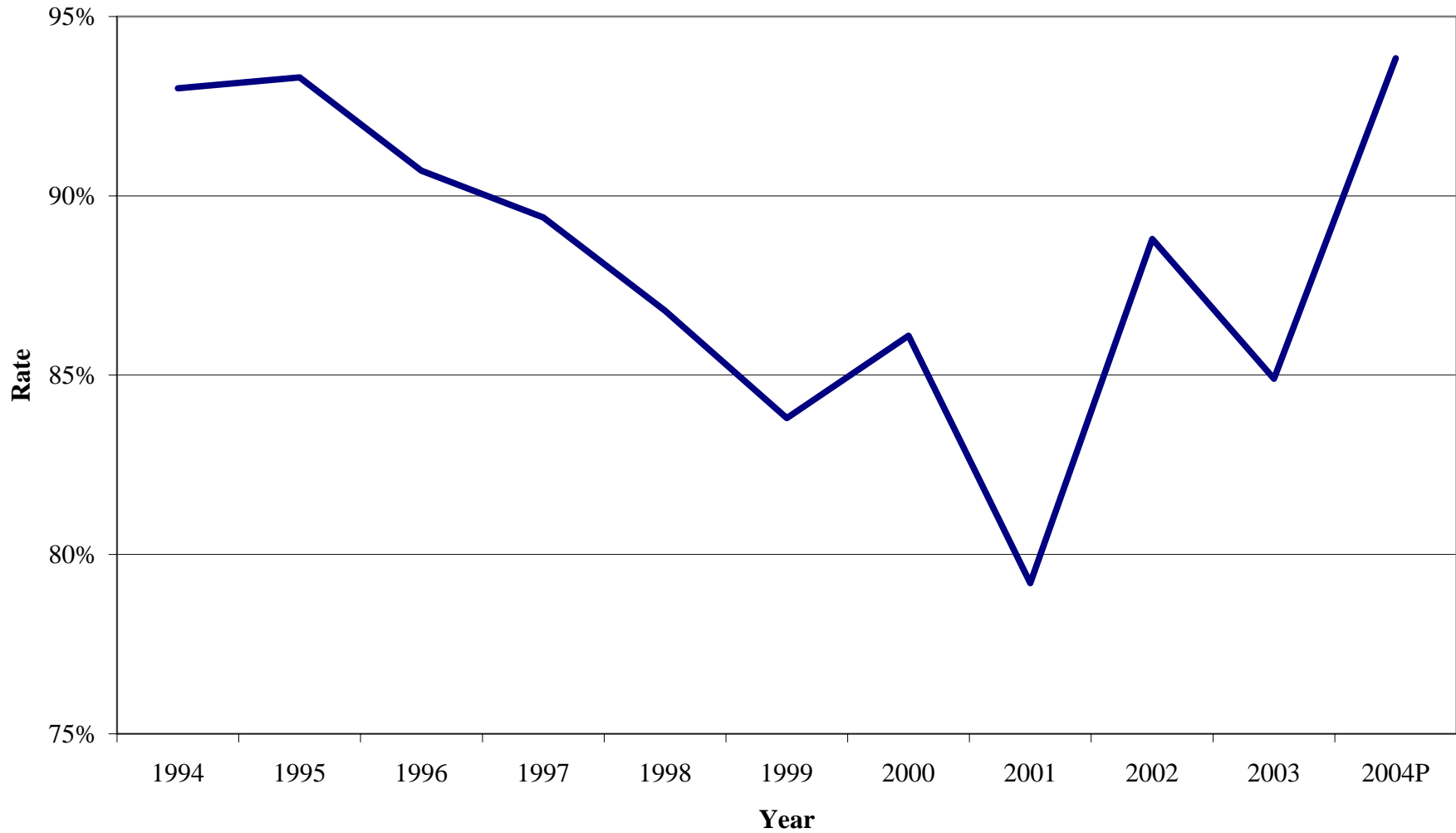
/1/: 2004 predicted data has been annualized from results through October of 2004.

Sources:

- (1) 2003 Annual Statistical Report, American Iron and Steel Institute, 2003, Table 1B.
- (2) American Iron and Steel Institute, telephone interview with Precision Economics, January 2005.

**Table 5B:**

**U.S. Steel Manufacturing Utilization Rates 1994-2004**



Source: Table 5A.

**Table 5C:**

**WSD World Seasonally Adjusted Crude Steel Production Trends (thousand net tons)**

<b>Year /1/</b>	<b>Effective Capacity</b>			<b>Annual Adjusted Production</b>			<b>Utilization Rate</b>		
	<b>China</b>	<b>ROW</b>	<b>Total</b>	<b>China</b>	<b>ROW</b>	<b>Total</b>	<b>China</b>	<b>ROW</b>	<b>Total</b>
2000	156.5	863.9	1,020.4	141.6	794.3	936.0	90.5%	91.9%	91.7%
2001	181.0	862.9	1,043.9	167.1	771.1	938.2	92.4%	89.3%	89.9%
2002	204.7	854.6	1,059.3	200.8	795.6	996.5	98.1%	93.1%	94.0%
2003	250.6	874.5	1,125.1	242.6	824.5	1,067.1	96.8%	94.3%	94.8%
2004 (Predicted)	303.1	886.1	1,189.3	296.3	858.3	1,154.5	97.7%	96.8%	97.1%
2005 (Forecasted)	342.8	904.2	1,247.0	351.6	885.7	1,237.3	102.5%	97.9%	99.2%

Note:

/1/: Data have been converted from metric tons to net tons using a ratio of 1.1023.

Source:

(1) "Global Steel Alert," World Steel Dynamics, January 6, 2005, p. 4.

**Table 5D:**

**Comparison of Utilization Rates Between 1998 and 2004**

<b>Year</b>	<b>Capacity Utilization</b>
1998 Certain Hot-Rolled Flat-Rolled Carbon Quality Steel Products	87.5%
1998 Certain Stainless Steel Plate	45.9%
1998 Certain Stainless Steel Sheet and Strip	68.3%
2004 U.S. Steel Industry	93.8%

Sources:

- (1) American Iron and Steel Institute, telephone interview with Precision Economics, January 2005.
- (2) U.S. International Trade Commission, Certain Hot-Rolled Steel Products From Japan, Investigation No. 731-TA-807 (Final), Pub. No. 3202.
- (3) U.S. International Trade Commission, Certain Stainless Steel Plate From Belgium, Canada, Italy, Korea, South Africa and Taiwan, Investigation No. 701-TA-376,377 and 379 (Final) and Investigations Nos. 731-TA-788-793 (Final), Pub. No. 3188, May 1999.
- (4) U.S. International Trade Commission, Certain Stainless Steel Sheet and Strip From France, Germany, Italy, Japan, The Republic of Korea, Mexico, Taiwan and The United Kingdom, Investigation No. 701-TA-380-382 and 731-TA-797-804 (Final), Pub. No. 3208, July 1999.

**Table 6A:**

**Steel Manufacturers' Shares of U.S. Market in 2005**

<b>Steel Mills (Million Short Tons) /1/</b>	<b>2003</b>	<b>2004E</b>	<b>2005E</b>	<b>Domestic Market Share 2005</b>	<b>Total Market Share 2005 /2/</b>	<b>HHI Index 2005</b>
<b>Integrated Mills</b>						
U.S. Steel	11.0	17.2	17.9	16.3%	12.9%	165.7
National (merged May 2003)	5.8					
Mittal /3/			24.6	22.3%	17.7%	312.9
ISG (announced buyout October 2004)	5.0	16.5	18.6			
Acme Metals (merged August 2002)	0.5					
Bethlehem (merged May 2003)	6.9					
Weirton (merged May 2004)		2.1				
Georgetown (merged July 2004)		0.3				
Ispat-Inland (announced merger October 2004)	5.9	5.9	6.0			
AK Steel	5.8	5.9	6.0	5.4%	4.3%	18.6
Subtotal	40.9	47.9	48.5	44.1%	34.9%	497.2
<b>Mini-mills &amp; Others</b>						
Delta	1.6	1.6	1.6	1.5%	1.2%	1.3
Gallatin	1.4	1.4	1.4	1.3%	1.0%	1.0
IPSCO /4/	2.0	2.2	2.3	2.1%	1.7%	2.7
Steel Dynamics	2.6	2.8	2.9	2.6%	2.1%	4.3
Nucor /5/	15.7	16.4	17.6	16.0%	12.7%	160.2
Wheeling-Pittsburgh	2.2	2.3	2.3	2.1%	1.7%	2.7
All Others (WCI, Geneva, Beta, Mini-mills)	39.6	32.4	33.5	30.4%	24.1%	NA
Subtotal	65.1	59.1	61.6	55.9%	44.3%	172.3
<b>Total</b>	<b>106.0</b>	<b>107.0</b>	<b>110.1</b>	<b>100.0%</b>		<b>669.5</b>

Notes:

/1/: 2004 and 2005 data are World Steel Dynamic estimates.

/2/: Total market share based on 2004 prediction of U.S. imports being 20.8 percent of U.S. demand.

/3/: In October 2004, Ispat International and LNM Holding group announced they will buyout International Steel Group, creating the largest steel maker in the world worth nearly \$18 billion at the time of the announcement.

/4/: IPSCO U.S. shipments are a combination of IPSCO Montpelier (plate) and IPSCO Mobile (plate).

/5/: Nucor U.S. shipments are a combination of Nucor-flat and Nucor-long.

Sources:

(1) Marcus, Peter F., Kirsis, Karlis M., and Barnett, Donald, F., "The New Age: China, Globalization, Consolidation and Metallica," World Steel Dynamics Steel Strategist #30, August 2004, p. 64.

(2) Wines, Leslie, "Deal Creates Largest Steel Company," October 25, 2004, retrieved from <http://www.cbsmarketwatch.com>, January 10, 2005.

**Table 6B:**

**Steel Manufacturers' Shares of World Market**

<b>Year</b>	<b>Share of World Production of Top Ten Firms</b>	
	<b>Individual firms</b>	<b>Total (of Top Ten)</b>
1970	1-5%	29%
1990	2-4%	20%
2003	2-4%	27%

Source:

(1) "OECD Special Meeting at High-Level on Steel Issues: THE OUTLOOK FOR STEEL," Organization for Economic Co-operation and Development, November 3, 2004, retrieved from <http://www.oecd.org/dataoecd/20/49/33951169.pdf>, February 2, 2005.

**Table 7A:**

**PBGC Claims by Industry (1975-2003)  
Single-Employer Program**

<b>Industry</b>		<b>Total Claims</b>	<b>Percent</b>
Manufacturing	\$	12,922,817,492	73.5%
Chemical and Allied Products	\$	84,013,613	0.5%
Fabricated Metal Products	\$	696,525,561	4.0%
Food and Tobacco Products	\$	128,356,295	0.7%
Machinery and Computer Equipment	\$	762,963,795	4.3%
<b>Motor Vehicle Equipment</b>	<b>\$</b>	<b>219,604,135</b>	<b>1.2%</b>
Paper and Allied Products	\$	118,843,072	0.7%
<b>Primary Metals</b>	<b>\$</b>	<b>9,414,745,719</b>	<b>53.5%</b>
Rubber and Miscellaneous Plastics	\$	230,735,365	1.3%
Other Manufacturing	\$	1,267,029,937	7.2%
Transportation and Public Utilities	\$	3,380,405,521	19.2%
Air Transportation	\$	2,932,611,144	16.7%
Other Transportation and Utilities	\$	447,794,377	2.5%
TOTAL	\$	17,588,198,953	100.0%

Source:

(1) Pension Insurance Data Book 2003, Pension Benefit Guaranty Corporation, p. 43, retrieved from <http://www.pbgc.gov/publications/databook/databook03.pdf>, January 20, 2005.

**Table 7B:**

**Top Ten Firms Presenting Claims (1975-2003)  
Single-Employer Program**

<b>Top Ten Firms</b>		<b>Claims</b>	<b>Percent of Total Claims (1975-2003)</b>	<b>Steel Industry</b>	<b>Automotive Supplier Industry</b>
1. Bethlehem Steel	\$	3,650,276,601	20.8%	x	
2. LTV Steel /1/	\$	1,849,498,808	10.5%	x	
3. National Steel	\$	1,216,107,871	6.9%	x	
4. Pan American Air	\$	841,082,434	4.8%		
5. US Airlines Pilots	\$	753,687,525	4.3%		
6. Trans World Airlines	\$	710,513,624	4.0%		
7. Eastern Air Lines	\$	552,730,569	3.1%		
8. Wheeling Pitt Steel	\$	495,235,029	2.8%	x	
9. Polaroid	\$	357,019,849	2.0%		
10. Sharon Steel	\$	290,787,636	1.7%	x	
Top 10 Total	\$	10,716,939,946	60.9%		
All Other Total	\$	6,871,259,007	39.1%		
TOTAL	\$	17,588,198,953	100.0%		

Note:

/1/: Does not include 1986 termination of a Republic Steel plan sponsored by LTV.

Source:

(1) Pension Insurance Data Book 2003, Pension Benefit Guaranty Corporation, p. 29, retrieved from <http://www.pbgc.gov/publications/databook/databook03.pdf>, January 20, 2005.

**Table 8A:****Quarterly Global Steel Alert Spot Pricing HRB prices (FOB, mill)**

<b>HRB prices (FOB, mill)</b>	<b>2002</b>				<b>2003</b>				<b>2004</b>			
	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
World export (Tier I mills)	220	280	295	306	323	251	275	316	451	532	596	592
Brazil home market	254	210	210	263	284	210	210	330	400	460	485	558
China home market	247	265	292	306	322	269	278	316	469	415	457	484
EU home market	250	245	280	295	327	350	322	365	450	549	582	679
India home market	256	275	298	317	324	270	357	375	450	441	464	491
Japan home market	244	282	277	270	377	371	408	443	495	582	613	707
Russia home market	175	199	222	215	260	230	246	265	435	488	543	548
South Korea home market	227	266	276	286	303	303	316	308	347	416	452	495
Taiwan home market	230	270	280	306	315	323	337	345	368	421	444	480
USA home market	308	377	396	338	316	288	321	397	520	604	767	711

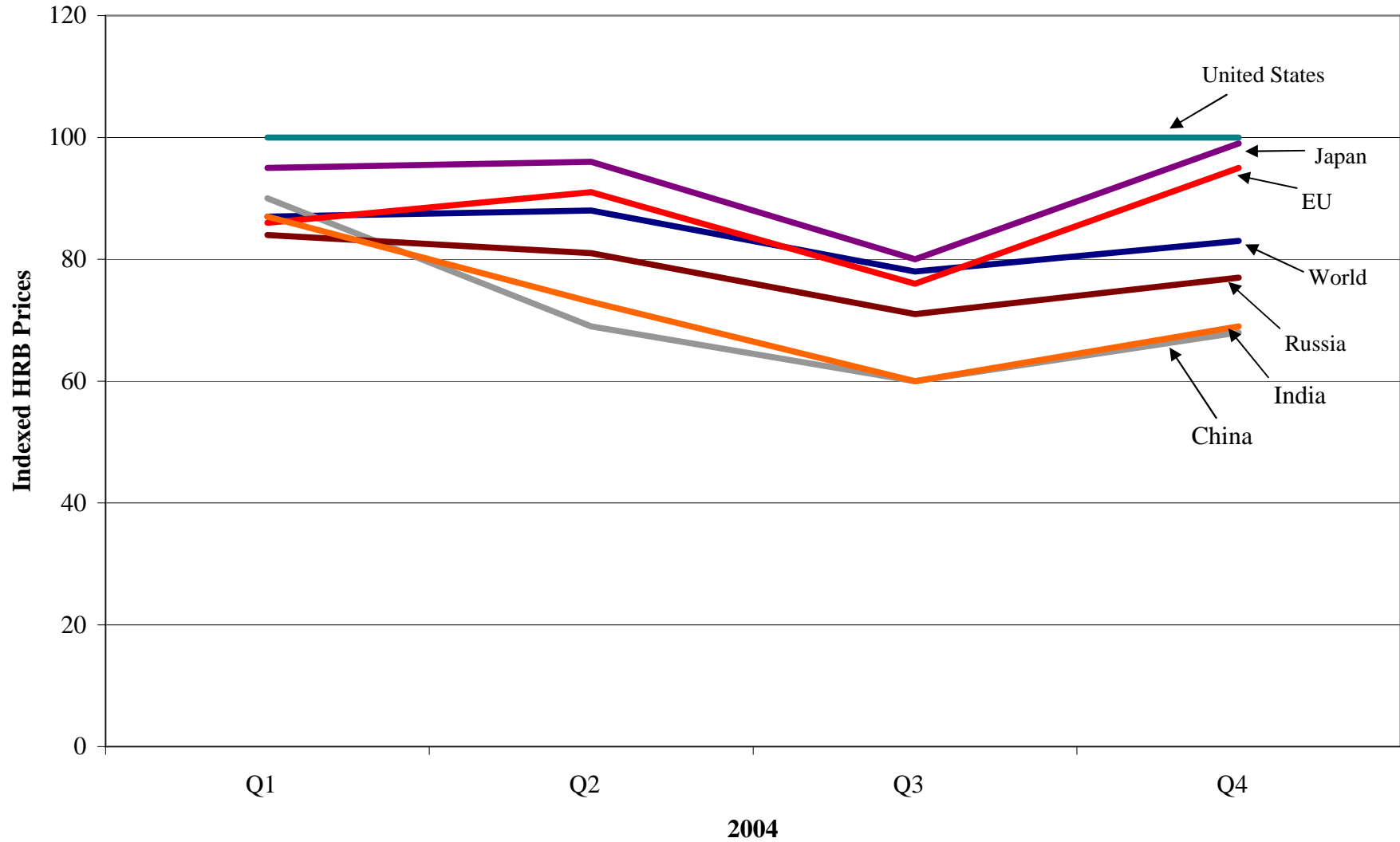
<b>Indexed HRB prices</b>	<b>2002</b>				<b>2003</b>				<b>2004</b>			
	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
World export (Tier I mills)	72	74	75	91	102	87	86	80	87	88	78	83
Brazil home market	82	56	53	78	90	73	65	83	77	76	63	78
China home market	80	70	74	91	102	93	87	80	90	69	60	68
EU home market	81	65	71	87	104	122	100	92	86	91	76	95
India home market	83	73	75	94	103	94	111	94	87	73	60	69
Japan home market	79	75	70	80	119	129	127	112	95	96	80	99
Russia home market	57	53	56	64	82	80	77	67	84	81	71	77
South Korea home market	74	71	70	85	96	105	98	77	67	69	59	70
Taiwan home market	75	71	71	91	100	112	105	87	71	70	58	67
USA home market = 100	100	100	100	100	100	100	100	100	100	100	100	100

Source:

(1) "Global Steel Alert," World Steel Dynamics, January 6, 2005, p. 2.

**Table 8B:**

**Global Home Market Steel Prices Relative to the United States**



Source: Table 8A.

**Table 9A:**

**Steel Companies Filing for Bankruptcy and Liquidations: 1997-2004**

<b>Year</b>	<b>Steel Manufacturing Bankruptcies</b>	<b>Steel Manufacturing Liquidations</b>
1997	1	0
1998	2	0
1999	4	0
2000	6	1
2001	17	16
2002	5	4
2003	9	3
2004	1	0

**Note:**

/1/: Above list does not include Canadian Steelmaker Algoma, which sought protection from its creditors in April 2001 or Slater Steel which sought protection from its creditors in June 2003.

**Source:**

(1) United Steelworkers of America, "Steel Companies Filing for Bankruptcy 1997-2004," March 8, 2004, retrieved from <http://www.uswa.org/uswa/program/adminlinks/docs/Bankruptcies%202004%206-11-04.pdf>, January 16, 2004.

**Table 9B:****Employment in the Steel Manufacturing and Automotive Supplier Industries**

<b>Occupation (Number of Employees) /1/</b>	<b>Steel Manufacturing Industry /2/</b>	<b>Automotive Supplier Industry /3/</b>
All Occupations	100,210	702,200
Management Occupations	3,410	23,420
Business and Financial Operations Occupations	1,610	21,630
Computer and Mathematical Science Occupations	860	4,370
Architecture and Engineering Occupations	4,060	51,900
Life, Physical and Social Science Occupations	530	1,060
Arts, Design, Entertainment, Sports and Media Occupations	50	1,360
Healthcare Practitioner and Technical Occupations	120	680
Protective Service Occupations	250	670
Building Grounds Cleaning and Maintenance Occupations	380	3,930
Sales and Related Occupations	1,220	5,380
Office and Administrative Support Occupations	8,720	38,400
Construction and Extraction Occupations	6,860	16,960
Installation, Maintenance and Repair Occupations	15,760	44,380
Production Occupations	41,050	438,920
Transportation and Material Moving Occupations	15,320	48,880

## Notes:

/1/: Job data are from November 2003.

/2/: NAICS code 3311.

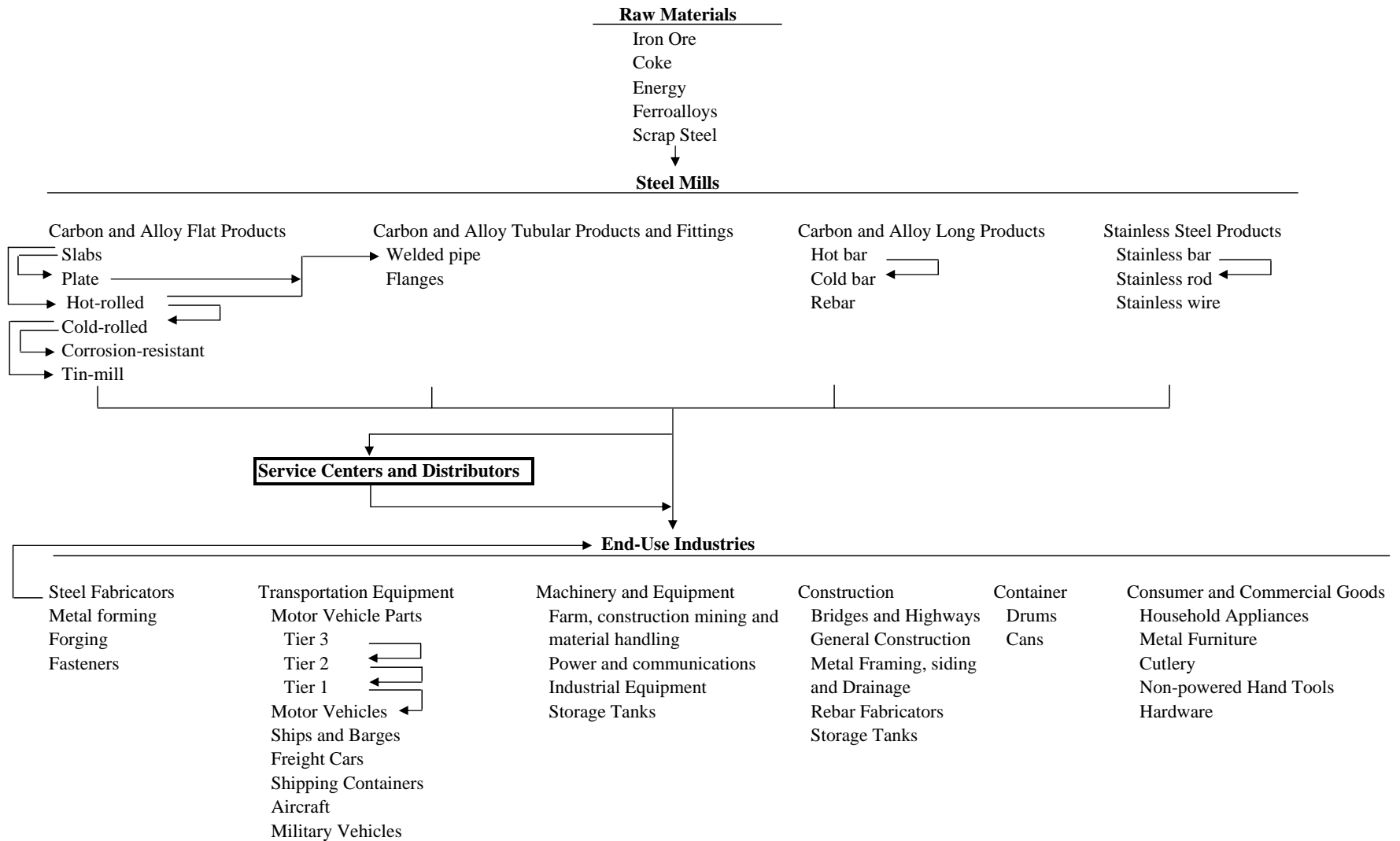
/3/: NAICS code 3363.

## Source:

(1) Bureau of Labor Statistics, Occupational Employment Statistics, retrieved from <http://www.bls.gov/oes>, February 2, 2005.

**Table 9C:**

**Flow Diagram of Steel Products**



Source:

(1) U.S. International Trade Commission, Steel: Monitoring Developments in the Domestic Industry Publication 3632, September 2003.

**Table 10:****Safeguard Duties Established Under Section 201**

<b>Type of Steel</b>	<b>Type of Measure</b>	<b>First Year</b>	<b>Second Year</b>	<b>Third Year</b>
Certain carbon and alloy flat-rolled steel				
Slab	Tariff-Rate Quota (TRQ)	TRQ of 4.90 million metric tons with no increase in duties for imports below the within-quota level and an increase of 30 percent ad valorem for imports above within-quota level.	TRQ of 5.35 million metric tons with no increase in duties for imports below the within-quota level and an increase of 24 percent ad valorem for imports above within-quota level.	TRQ of 5.81 million metric tons with no increase in duties for imports below the within-quota level and an increase of 18 percent ad valorem for imports above within-quota level.
Plate /1/	Increase in duty	30 percent	24 percent	18 percent
Hot-rolled	Increase in duty	30 percent	24 percent	18 percent
Cold-rolled /2/	Increase in duty	30 percent	24 percent	18 percent
Coated	Increase in duty	30 percent	24 percent	18 percent
Tin	Increase in duty	30 percent	24 percent	18 percent
Hot bar	Increase in duty	30 percent	24 percent	18 percent
Cold bar	Increase in duty	30 percent	24 percent	18 percent
Rebar	Increase in duty	15 percent	12 percent	9 percent
Welded Products /3/	Increase in duty	15 percent	12 percent	9 percent
Fittings	Increase in duty	13 percent	10 percent	7 percent
Stainless bar	Increase in duty	15 percent	12 percent	9 percent
Stainless rod	Increase in duty	15 percent	12 percent	9 percent
Stainless wire	Increase in duty	8 percent	7 percent	6 percent

## Notes:

/1/: Cut-to-length (CTL) and clad plates.

/2/: Other than grain-oriented electrical steel ("GOES").

/3/: Other than oil country tubular goods ("OCTG").

## Source:

(1) U.S. International Trade Commission, Steel: Monitoring Developments in the Domestic Industry, Publication 3632, September 2003.

**Table 11:****Imports of Certain Hot-Rolled Flat-Rolled Carbon-Quality Steel Products, Certain Stainless Steel Plate and Certain Stainless Steel Sheet and Strip 1998 - 2004 (metric tons)**

<b>Product</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>Certain Hot-Rolled Steel Products</b>							
Total Subject Imports	6,405,399	220,830	446,226	116,738	217,693	123,390	964,962
Percentage of 1998 Subject Imports	100.0%	3.4%	7.0%	1.8%	3.4%	1.9%	15.1%
Estimated Subject Market Share /1/	9.3%	0.3%	0.6%	0.2%	0.3%	0.2%	1.4%
<b>Certain Stainless Steel Plate</b>							
Total Subject Imports	64,440	45,689	53,284	23,464	24,976	23,930	29,480
Percentage of 1998 Subject Imports	100.0%	70.9%	82.7%	36.4%	38.8%	37.1%	45.7%
Estimated Subject Market Share	17.7%	12.5%	14.6%	6.4%	6.9%	6.6%	8.1%
<b>Certain Stainless Steel Sheet and Strip</b>							
Total Subject Imports	297,201	183,725	175,594	109,259	114,328	128,304	159,433
Percentage of 1998 Subject Imports	100.0%	61.8%	59.1%	36.8%	38.5%	43.2%	53.6%
Estimated Subject Market Share	15.9%	9.8%	9.4%	5.8%	6.1%	6.9%	8.5%

**Notes:**

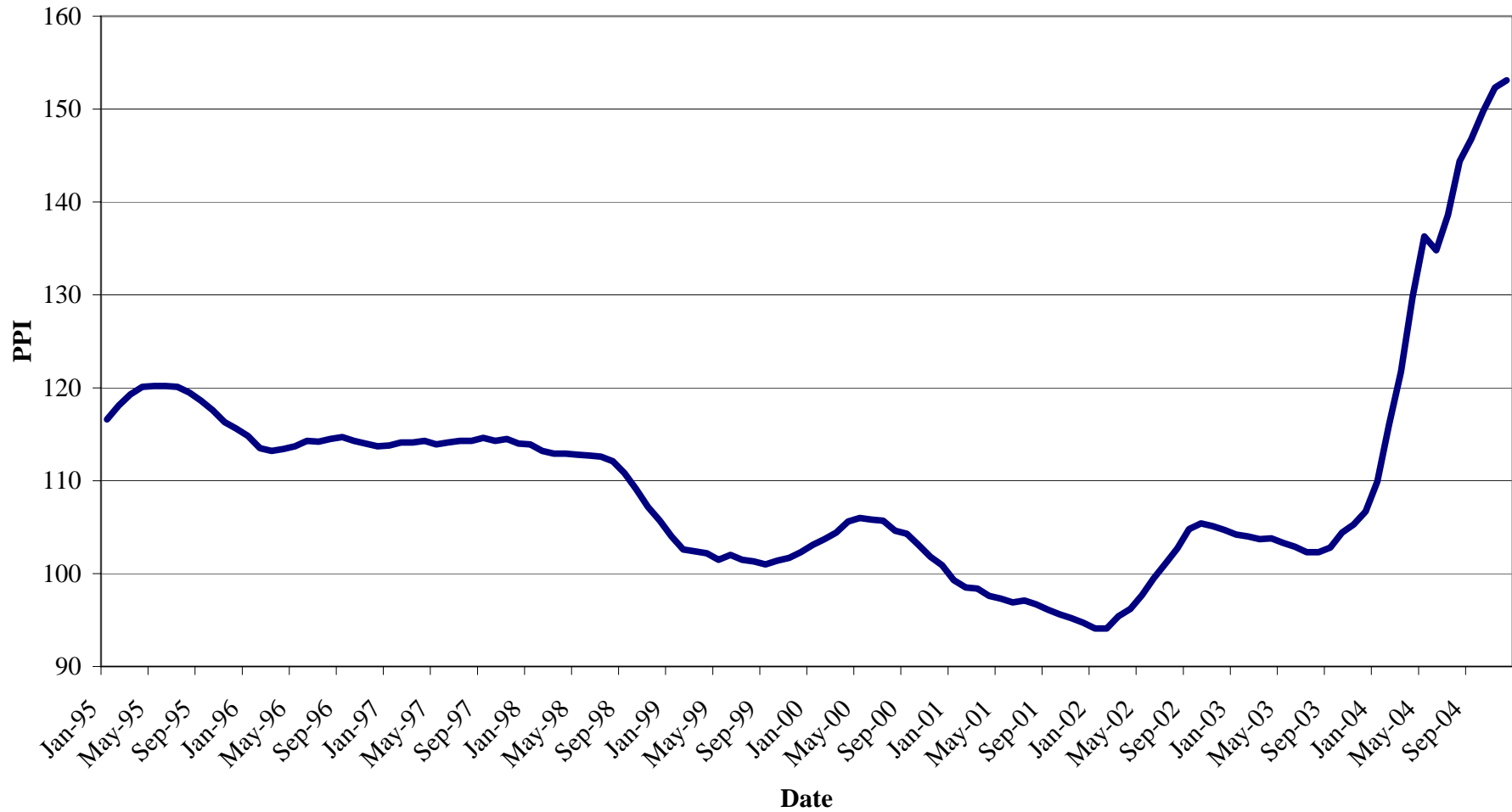
/1/: 1998 market shares reflect ITC calculations. 1999-2004 market share estimates are proportionate.

**Sources:**

- (1) Retrieved from <http://dataweb.usitc.gov/scripts/report.asp>, February 10, 2005.
- (2) U.S. International Trade Commission, Certain Hot-Rolled Steel Products From Japan, Investigation No. 731-TA-807 (Final), Pub. No. 3202.
- (3) U.S. International Trade Commission, Certain Stainless Steel Plate From Belgium, Canada, Italy, Korea, South Africa and Taiwan, Investigation No. 701-TA-376,377 and 379 (Final) and Investigations Nos. 731-TA-788-793 (Final), Pub. No. 3188, May 1999.
- (4) U.S. International Trade Commission, Certain Stainless Steel Sheet and Strip From France, Germany, Italy, Japan, The Republic of Korea, Mexico, Taiwan and The United Kingdom, Investigation No. 701-TA-380-382 and 731-TA-797-804 (Final), Pub. No. 3208, July 1999.

**Table 12:**

**Producer Price Index for Iron & Steel Mill Industry: Jan 1995 - Nov 2004**

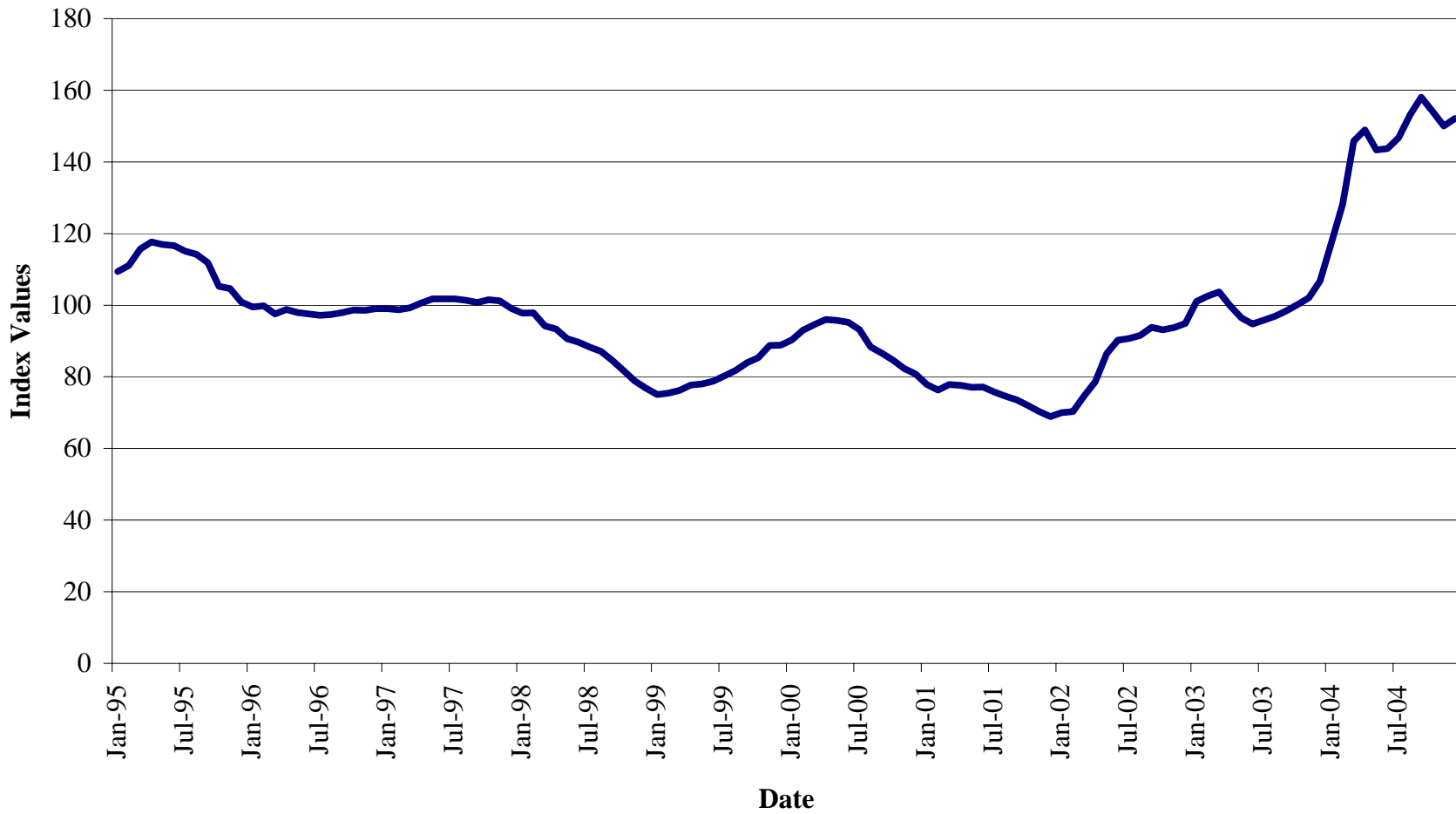


Note: BLS sets the average index level (representing the average price level)--for the 36-month period covering the years 1982, 1983, and 1984--equal to 100.

Source: Bureau of Labor Statistics, Producer Price Index for NAICS 331111.

**Table 13:**

**Global Steel Prices Index January 1995 - December 2004**



Note: CRU Global benchmark indexed at 100 as of April 1994.

Source: CRU International.

**Table 14A:****2004 Average Monthly Spot-Market Steel Prices**

<b>Items /1/</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sept</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Price Growth</b>
Hot-rolled steel sheet (Midwest, \$/net ton)	350	420	500	580	595	627	646	709	756	714	704	660	88.6%
Cold-rolled steel sheet (Midwest, \$/net ton)	420	480	580	680	695	737	754	795	814	795	780	755	79.8%
HD galvanized steel sheet (Midwest, \$/net ton)	445	500	600	700	715	763	805	853	860	833	822	775	74.2%
Electrogalvanized steel sheet (Midwest, \$/net ton)	460	601	655	670	835	834	836	868	872	881	839	839	82.4%
Coiled steel plate (Midwest, \$/net ton)	370	420	450	640	650	653	669	727	761	744	757	760	105.4%
Hot-rolled plate, cut to length (Midwest, \$/net ton)	385	440	480	650	675	700	703	766	773	773	789	792	105.7%
Structural beams (A36 W8 wide-flange, \$/net ton)	385	435	510	558	562	539	547	556	581	574	580	578	50.1%
Merchant steel bar (2x2x1/4-inch carbon, \$/net ton)	371	393	431	464	467	489	497	516	551	520	527	531	43.1%
CF steel bar (grade 1018 carbon, \$/net ton)	550	590	629	650	667	697	715	755	802	875	887	887	61.3%
Concrete reinforcing bar (#6, Midwest, \$/net ton)	360	375	394	420	509	482	468	510	522	520	540	532	47.8%
Low-carbon wire rod (Midwest, \$/net ton)	360	395	426	495	526	543	541	584	574	597	582	579	60.8%
Stainless steel sheet (CR, Type 304, \$/ton)	2,423	2,282	2,473	2,454	2,460	2,328	2,260	2,353	2,430	2,473	2,490	2,526	4.3%
Steel scrap (auto bundles, \$/gross ton)	217	255	300	260	240	247	307	390	385	423	443	408	88.0%
Steel scrap (#1 heavy melt, Chicago, \$/gross ton)	174	216	255	225	200	180	235	250	215	240	250	220	26.4%

Note:

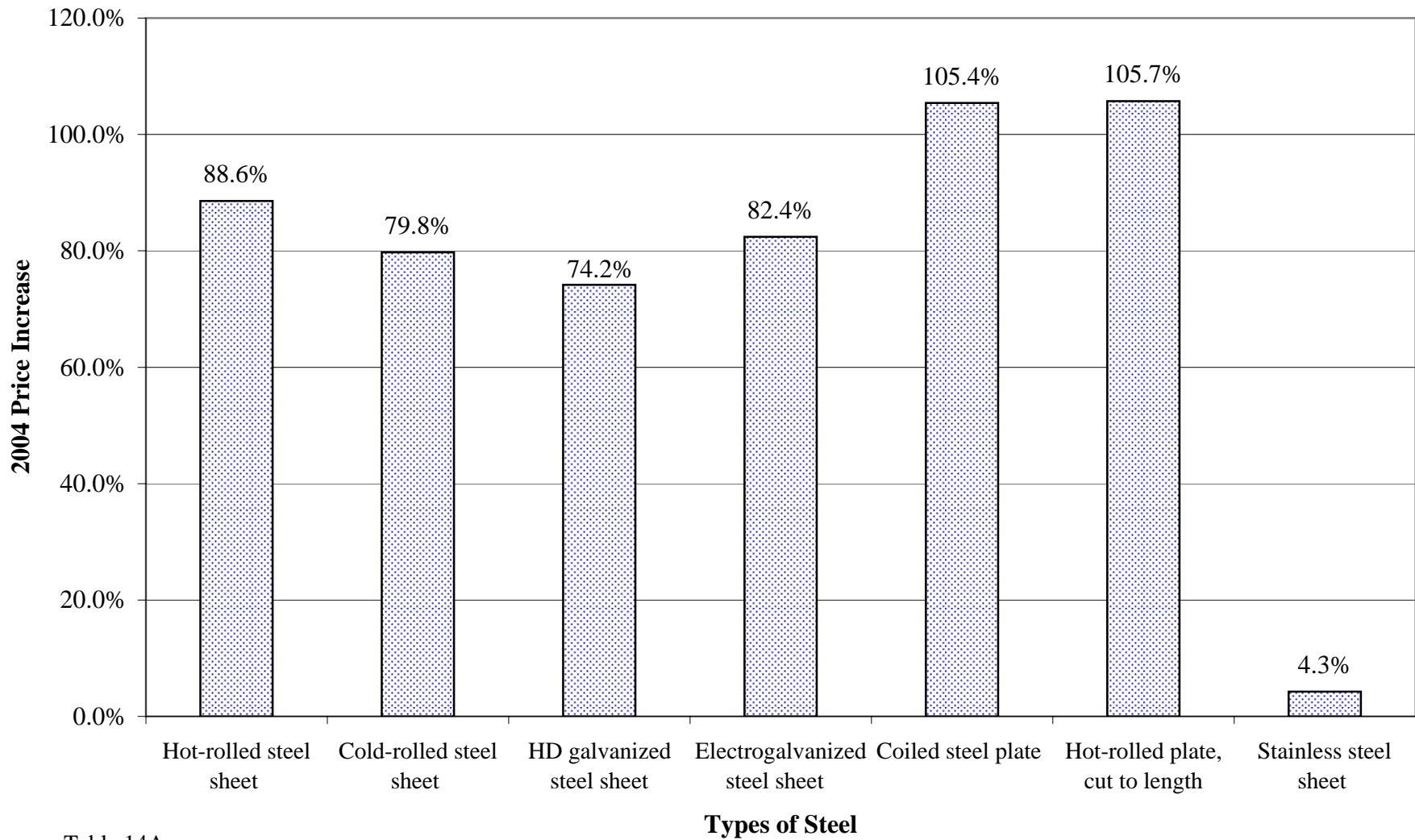
/1/: Purchasing magazine determines its spot prices from average transaction prices discovered from electronics surveys and personal interviews.

Source:

(1) Stundza, Tom, "Steel Flash Report," Purchasing Magazine, December 31, 2004, p. 1.

**Table 14B:**

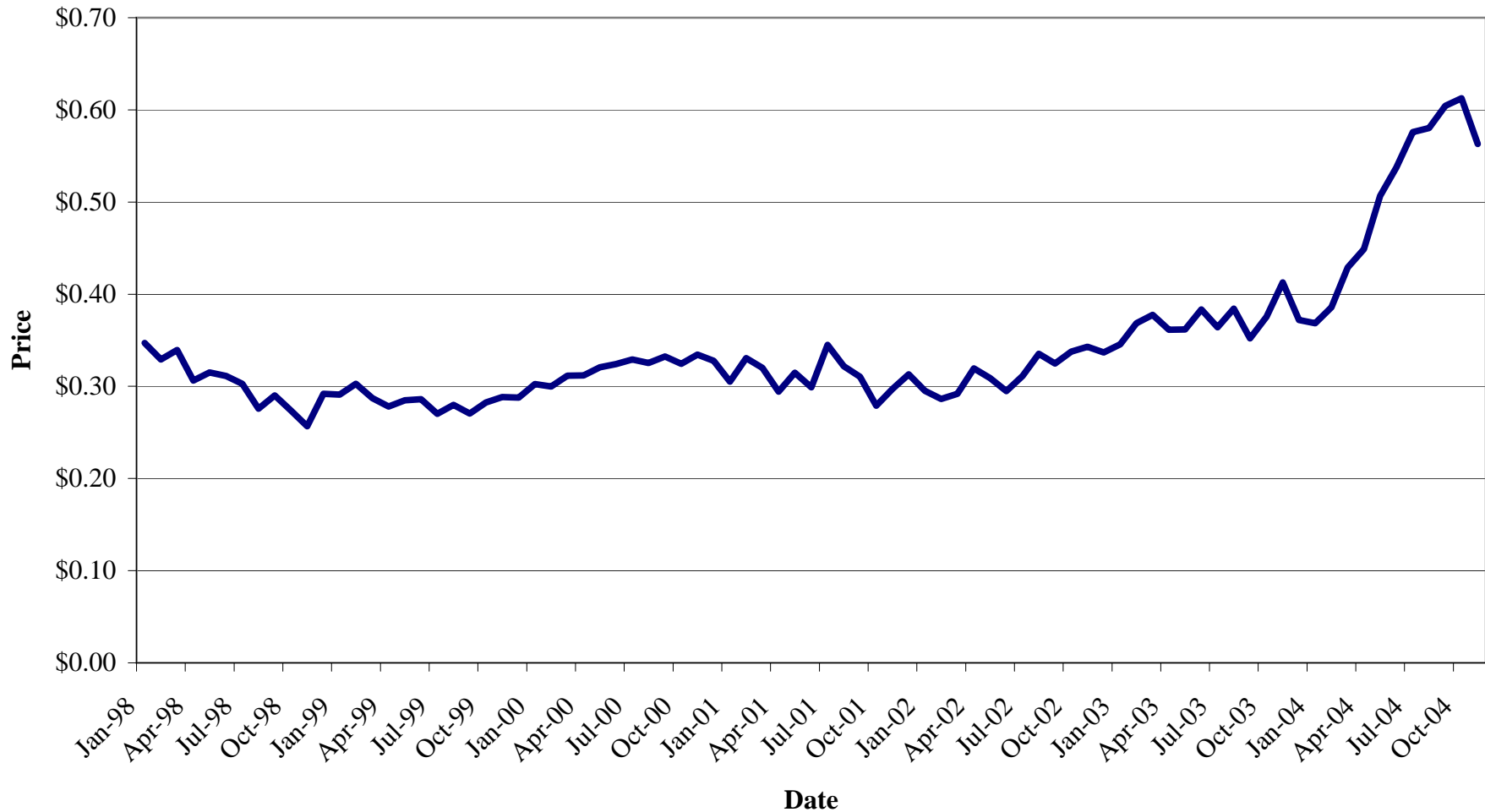
**2004 Annual Price Increases for Select Steel Categories**



Source: Table 14A.

**Table 15A:**

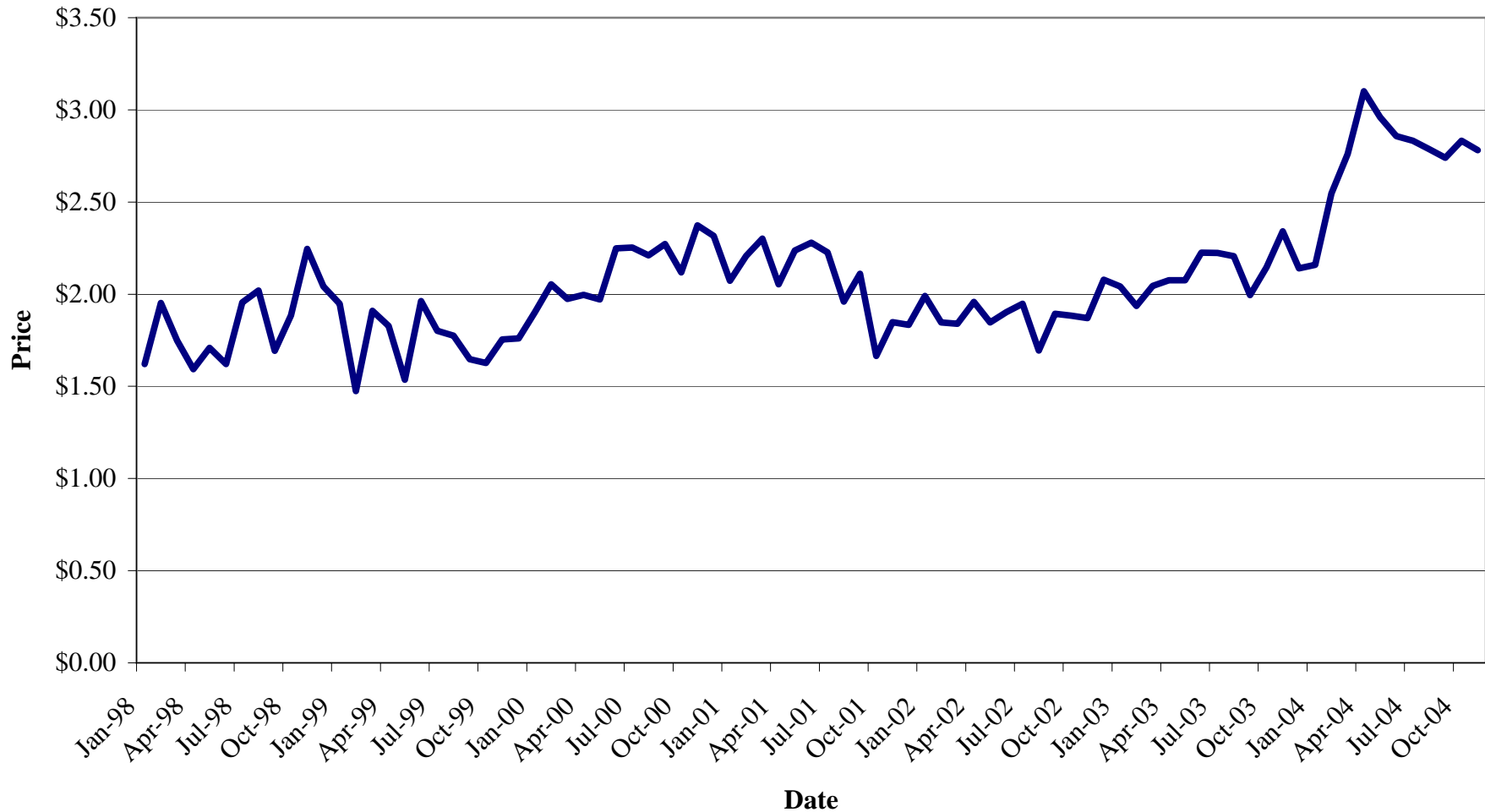
**Certain Hot-Rolled Flat-Rolled Carbon-Quality Steel Products' Import Prices 1998 - November 2004 (Actual Dollar per Kilogram)**



Source: Retrieved from <http://dataweb.usitc.gov/scripts/report.asp>, January 31, 2005.

**Table 15B:**

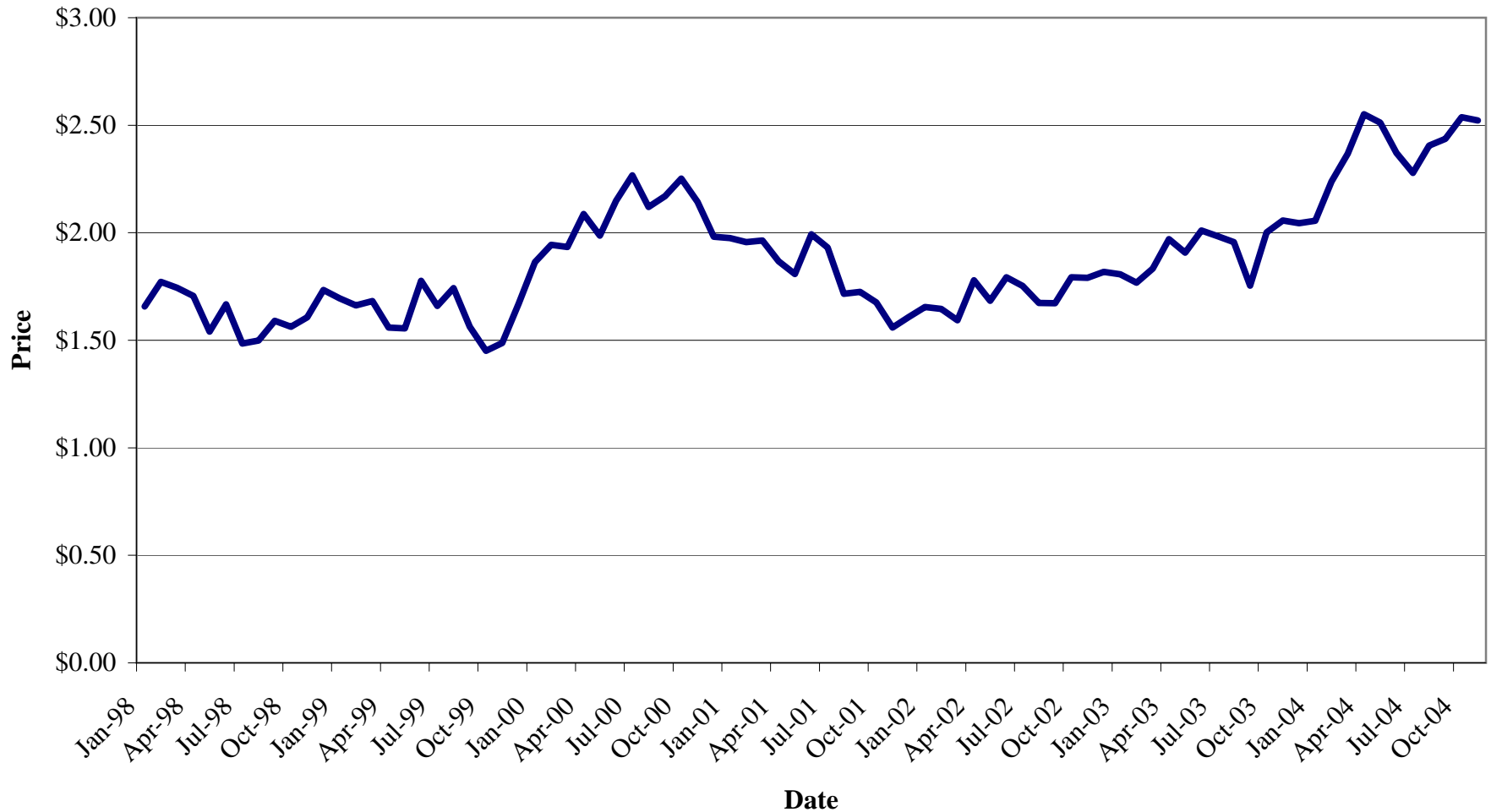
**Certain Stainless Steel Plate's Import Prices 1998 - November 2004  
(Actual Dollar per Kilogram)**



Source: Retrieved from <http://dataweb.usitc.gov/scripts/report.asp>, January 31, 2005.

**Table 15C:**

**Certain Stainless Steel Sheet and Strip's Import Prices 1998 - November 2004  
(Actual Dollar per Kilogram)**



Source: Retrieved from <http://dataweb.usitc.gov/scripts/report.asp>, January 31, 2005.