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PUBLIC DOCUMENT

May 31, 2017

Via Email: Steel232@bis.doc.gov

Brad Botwin
Director, Industrial Studies
Office of Technology Evaluation
Attention: Bureau of Industry and Security
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, D.C. 20230

Re: Submission of Steel Dynamics, Inc. for the Section 232 Investigation of Steel Imports

Dear Director Botwin:

Steel Dynamics, Inc., or "SDI," one of the largest producers of steel products in the United States, is pleased to have this opportunity to submit a written statement on the U.S. Department of Commerce's investigation on the effects of imported steel on the U.S. national security under Section 232 of the Trade Expansion Act of 1962.[1]

SDI is particularly pleased that the Trump Administration is using this investigation to consider the health of the U.S. steel industry as it affects the long-term security needs of this country. So much of what the United States citizens may take for granted now, they cannot take for granted in the future:

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[1] *Notice of Request for Public Comments and Public Hearing on Section 232 National Security Investigation of Imports of Steel*, 82 Fed. Reg. 19,205 (Dep't Commerce Apr. 26, 2017).

- Military superiority. The United States has the largest military in the world. In the long run, however, this is possible because the United States has the largest, most dynamic economy in the world. U.S. GDP is still far larger than that of the next-largest economy, China, and exceeds that of all 28 nations of the European Union combined. Nevertheless, China overtook the United States as the world's largest manufacturer in 2010 – and it is manufacturing, ultimately, that provides the equipment that helps makes our military strong.
- Global supply chains. The U.S. people and industries have come to depend on the ability to import almost any product in almost any quantity, whether from across the Atlantic or halfway around the world. Yet, a national security review must anticipate situations in which this is no longer possible. As discussed below, we have already encountered situations in which domestic supply of armor plate was not adequate, and we had to import from the Middle East. Military planners are used to preparing for the unpredictable – for situations that may seem unthinkable now, but for which they must be ready. SDI submits that Commerce must do the same here, and consider not just our nation's steel needs today, but in an uncertain tomorrow.
- Steel. The United States also cannot take steel for granted. The overwhelming majority of the goods transported in the United States move on trucks, trains, ships, or barges – all made primarily from steel. Oil, gas, and coal moves in pipelines, by rail, tanker, or truck – again, all made from steel. Commercial buildings, factories, agricultural and mining equipment all require large quantities of rebar, pipe, plate, or sheet – again, steel. But it takes a high level of investment

and training to maintain the steelmaking capacity that maintains this infrastructure, not to mention the additional quantities that would be required in a crisis.

Ultimately, the United States has the number one military because it has the number one economy. But for this purpose, having the number one economy does not mean just a big number for GDP, but includes manufacturing capability, including steel manufacturing and research capability.

Major governments around the world agree. They recognize that a healthy domestic steel industry is essential to their vital strategic interests. For example, China's Sixth Iron and Steel Adjustment and Revitalization Plan in its very first sentence recognized steel as a "pillar industry for {the} national economy," and steel's "positive role in the … national defense."[2] The Chinese steel plan called for "major support" for "the producers for critical materials used in national defense and outer-space flight and aviation." Similarly, a former Chief of the Naval Staff in the United Kingdom recently said it would be "unforgiveable" if that country lost its steel production, and pointed out that "all countries that are members of the UN Security Council had major steel plants to support their defense industry."[3]

As Teddy Roosevelt famously advised, the United States should speak softly and carry a big stick. For the foreseeable future, a large part of that big stick must be made of steel.

I. SDI MAKES THE STEEL THAT KEEPS AMERICA MOVING AND WORKING

SDI employs 7,400 workers and has the capacity to make 11 million tons of steel. In

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2 Guo Fa {2009} No. 6.

3 "Former Navy chief says 'unforgiveable' if UK steel production ends," *BBC News* (March 30, 2016).

2016, it produced 9.3 million tons. Over the last five years, SDI has made approximately two billion dollars in capital investments, including a $1.65 billion investment in an electric arc furnace mill in Mississippi, which is a major supplier of steel used by the oil and gas industry.

SDI makes a range of steel products that allow the U.S. freight system to transport 18 billion tons of freight a year, or 56 tons for every inhabitant. SDI is the largest rail producer in the United States, and one of the largest manufacturers of the steel sheet used in rail cars, trucks, autos, ships and barges, as well as in heavy machinery, machine parts, agricultural and mining equipment, and pipes for oil and gas wells and pipelines.

SDI is also the second-largest producer of structural steels, including the beams and pilings of types that support virtually every factory and office building in the country, as well as reinforcing bar for concrete used in buildings, roads, and bridges, and flat steel for rolling into sprinkler pipes, building components, and construction equipment.

Although SDI does not presently make steel for direct military applications, it is not an exaggeration to say that all economic activity in the United States depends in one way or another on the kinds of steel SDI manufactures. Ultimately, U.S. military strength relies on, and stems from, overall U.S. economic strength and vital manufacturing capability.

II. THE U.S. STEEL INDUSTRY NEEDS IMPORT RESTRICTIONS SO IT CAN SUPPLY THE STEEL THIS COUNTRY REQUIRES FOR LONG-TERM SECURITY

In recent years, steel imports have flooded into the United States, driven by a widely recognized surplus of steel capacity, chiefly in China but in many other countries as well. Many U.S. government investigations have documented the injury that these imports have caused the steel industry in terms of layoffs of skilled workers, sharply reduced return on capital investment, and impairment of research and development efforts. These imports have at times threatened the

U.S. industry's ability to continue to meet the United States' existing needs for steel.

The U.S. steel industry has succeeded in obtaining some relief from unfairly traded steel imports in the form of antidumping and countervailing duty orders on a range of products from a number of different countries. However, steel trade is now so thoroughly globalized that limiting imports from one country simply invites further imports from two more. Thus, only comprehensive import quotas can effectively combat the type of injury the U.S. industry has been sustaining.

Furthermore, as the Pentagon is well aware, wartime industrial mobilization requires the country to have manufacturing resources beyond those it normally uses. The government does not pay manufacturers to sustain capacity for military mobilization, but instead relies on private industry's ability to earn profits in the marketplace to sustain capacity and high levels of research and development. As the Department of Defense's most recent *Annual Industrial Capabilities Report to Congress* stated,

> Gone are the days when the Department relied on dedicated contractors that received most of their investment capital from DoD and produced primarily in the defense market. Firms need to remain profitable to produce for the defense sector and the Department must take into account the way defense trends affect the willingness and ability of commercial firms to sustain defense-related production.[4]

We have already encountered situations in which domestic supplies of essential material were not adequate. For example, in the 2003 Iraq war, the Army suddenly needed to up-armor its Humvees and trucks, and buy mine-resistant vehicles. The U.S. industry had been producing only 35,000 tons of 3/8" armor plate a year; suddenly, the Army demanded 21,000 tons a month.

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[4] Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, *Annual Industrial Capabilities Report to Congress 2015,* at 4 (Sept. 2016).

The Army managed to obtain the needed armor from Israel,[5] but it is all too easy to foresee situations in which the United States cannot obtain reliable armor supplies from Israel, Europe, or any overseas source.

Thus, SDI submits that comprehensive import quotas are necessary to preserve the kind of steel industrial base the United States requires for its national security.

A. The world is awash in excess steel

The worldwide glut of steel-making capacity is well-documented.

From 2000 to 2016, the world more than doubled its steelmaking capacity, from approximately 1.0 billion tons to 2.4 billion tons.[6] Demand grew much more slowly than supply, however, so that by 2014 the world had 0.7 billion tons of excess capacity.[7]

China accounted for most of this growth in steel capacity, and a vast quantity of excess capacity: from 2005 through 2015 China added 716 million tons of net new capacity, or approximately 80 percent of the total growth in world steel capacity in that period.[8] As of 2014, however, China used only 72 percent of this amount, giving it unused factory production capability to make 317 million tons of steel – almost exactly double the total North American steel-making capacity of 160 million tons.[9] In other words, China alone is like having two North

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5 James M. Hasik, *MRAP: Marking Military Innovation*, Univ. Texas Ph.D. dissertation, at 82, 169 (May, 2016), available at <https://repositories.lib.utexas.edu/handle/2152/41606>. Consistent with the Berry Amendment, 10 U.S.C. § 2533b, the Israeli firm produced the armor from U.S.-made steel plate.

6 OECD, *World Crude Steelmaking Capacity* (Dec. 2015), available at http://www.oecd.org/sti/ind/steelcapacity.htm.

7 OECD, *Capacity Developments in the World Steel Industry*, at 8 (April 2016), available at < http://www.oecd.org/sti/ind/Capacity-Developments-Steel-Industry.pdf>.

8 *Id.* at 14-15 & Table 3.

9 *Id.* at 12, 15 & Table 4.

American steel industries, standing completely idle.

Although China's government has claimed it will reduce the excess, China's steel-making capacity is still growing, and is expected to grow even more.[10] Recent, separate studies by both Greenpeace and the German Steel Federation – two organizations not normally associated with each other – both concluded that plant closures in China have been offset by new expansions, so its capacity has actually increased.[11]

China is by no means alone in reckless expansion of its steel industry. Despite closures in a few areas, global capacity is still rising, as developing countries try to make themselves more self-sufficient in steel and improve their steel trade balances – in other words, seek to drive more steel onto international markets.[12] From 2005 through 2014, Middle Eastern countries added capacity at an even faster rate than China, increasing capacity by 38 million tons. India added 56 million tons, more than doubling its capacity. The rest of Asia added 36 million tons, and the former Soviet states added 22 million tons.[13]

These amounts are small only in relation to China. This new capacity far exceeded every one of these regions' production, so they just added to the global glut. Together, the rest of the world added 175 million tons, or more than the entire steelmaking capacity of North America. And, all of these regions will add even more capacity in the near future, especially India.[14]

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10 *Id.* at 9.

11 "Studies: China Steel Overcapacity Hardly Changed in 2016," *Handelsblatt Global* (Feb. 12, 2017), available at < https://global.handelsblatt.com/companies-markets/studies-chinese-steel-overcapacity-hardly-changed-in-2016-703021>.

12 OECD, *Capacity Developments in the World Steel Industry*, at 8 (April 2016).

13 *Id.* at 15.

14 *Id.* at 10 Table 1.

Furthermore, a large majority of global capacity is government-owned or government-funded, used for objectives such as sustaining employment or driving out imports, so it will not shut down in response to market forces the way North American steel producers so often must.[15]

B. The global steel glut has repeatedly injured the U.S. steel industry

As the Secretary and the Commerce Department know well, excess foreign steel capacity has repeatedly and recently injured the U.S. steel industry. In investigation after investigation, Commerce has found foreign steel imports to be subsidized and sold at dumped prices, while the U.S. International Trade Commission has found U.S. producers of competing steel products suffered injury. To briefly summarize just a few of the more recent findings regarding products produced by SDI:

- Hot-rolled steel. The ITC found that U.S. hot-rolled steel producers could not take advantage of three million tons of increased demand from 2013 to 2014 due to escalating imports from seven countries. In 2015, imports continued to increase, while the U.S. industry's production, shipments, revenues, and financial performance "plummeted." U.S. producers' capital expenditures were "substantially lower" in 2015 than they had been in 2013. U.S. producers' profits turned into losses.[16]
- Cold-rolled steel. The ITC found that imports from six countries had underpriced domestic products, cutting the U.S. industry's share of the U.S. market, and causing it to lose money.[17]
- Corrosion-resistant steel. From 2013 through 2015, demand for galvanized steel products was strong and increasing – but imports increased more. Low-priced imports from five countries "led to a substantial erosion of the domestic industry's market share and a decline in its revenues, despite favorable market conditions."

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15 Alan Price *et al.*, "Unsustainable: Government Intervention and Overcapacity in the Global Steel Industry," at 13, 17-20 (April, 2016).

16 *Hot-Rolled Steel Flat Products from Australia, Brazil, Japan, Korea, Netherlands, Turkey, and the United Kingdom*, USITC Publication 4638, at 40-42 (Sept. 2016).

17 *Cold-Rolled Steel Flat Products from China and Japan*, USITC Publication 4619, at 33-34 (Sept. 2016); *Cold-Rolled Steel Flat Products from Brazil, India, Korea, Russia, and the United Kingdom*, USITC Publication 4637, at 21, 29 (Sept. 2016). The ITC made a negative finding regarding imports from Russia.

Its capital expenditures also declined.[18]

Some foreign producers have claimed that the U.S. industry has suffered because it cannot make the products U.S. buyers require. At the hearing, for example, Ms. Suzi Agar of the Air Distribution Institute said that steel duct manufacturers rely mainly on imports of certain light-gauge galvanized products because U.S. producers could not provide adequate supplies. In fact, SDI's Pittsburgh group, The Techs, could supply greater volumes in the sizes the witness identified. She frankly acknowledged that price was a consideration in customers' decision to buy foreign material rather than choosing domestic – exactly the reason import relief is needed.

There do exist certain very specialized products that the U.S. industry does not make and that must therefore be imported. They are easy to identify and could be excluded from any quotas. More fundamentally, however, there is a reason the U.S. industry does not make these products – it is not possible to produce them profitably in the United States in the face of a glut of foreign import competition.

C. The global steel glut is getting worse

China has assured the international community countless times that it is cutting back on steel production and reorienting its economy toward domestic consumption. However, China's steel industry continues to add capacity, and Chinese mills are building new plants in other Asian countries. This overexpansion will inevitably catch up to China's steel producers, and force them once more to try every possible strategy to wipe out foreign capacity by dumping still more steel on world markets. According to analysts at World Steel Dynamics:

> **The Chinese steel industry outlook is increasingly grim the further that we peer into the future.** While steel demand may hold up in 2017, and perhaps even

[18] *Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan*, USITC Publication 4620, at 29-31 (July 2016).

> in 2018 as the government promotes spectacular gains in infrastructure spending, the country's steel intensity at some point is sure to drop sharply.[19]

Even if China's growth has slackened, India's is picking up: India has over 230 million tons of new capacity planned and underway – nearly one and one-half times existing North American capacity.[20] Other developing countries are moving full ahead to develop their own industries as well.[21]

Currently, the steel industry in most industrialized nations is doing fairly well despite global oversupply. However, this is due first and foremost to the import restraints that many countries have used to stem the onslaught of merchant steel on world markets.[22] That has allowed domestic steel producers to set prices high enough to cover costs. For example, after the United States imposed antidumping duties on hot-rolled steel imports from seven countries in spring 2016, the U.S. price of hot-rolled band increased from $405 per ton in December 2015, to $600 per ton in June 2016.[23] It is now $710 per ton.[24]

This situation can only be temporary, however. Higher U.S. prices will inevitably draw in more imports from one place or another. For example, the world export price of hot-rolled band is $480 per ton, and the Chinese domestic price is $384 per ton.[25] High U.S. prices serve only to draw the attention of others.

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19 World Steel Dynamics, "Inside Track #154," at 3 (April 13, 2017) (attached) (emphasis added).

20 OECD, *Capacity Developments in the World Steel Industry*, at 10 Table 1 (April 2016).

21 *Id.*

22 World Steel Dynamics, "Inside Track #154," at 3 (April 13, 2017) (attached).

23 *Id.*

24 *Id.* at 8.

25 *Id.*

SDI has seen this dynamic in operation many times. Most recently, after SDI filed petitions on corrosion resistant sheet and cold-rolled steel in 2015, antidumping duties of over 100 percent eliminated 100,000 tons per month of direct imports from China. However, by April, 2017, 460,000 tons of corrosion-resistant sheet and 230,000 tons of cold-rolled steel were imported from other countries, almost 50 percent more than before SDI filed cases.

Piecemeal resort to antidumping and countervailing duties is helpful, but cannot be much more than a stop-gap. That is why comprehensive quotas are necessary.

III. THE UNITED STATES HAS A STRONG LEGAL BASIS FOR IMPOSING IMPORT QUOTAS ON STEEL GOODS

SDI believes that the Administration has ample legal basis for imposing quotas on a wide range of steel products to preserve the nation's national security. In its most recent Section 232 investigation of *Iron Ore and Semi-Finished Steel,* the Commerce Department "adopted a broader concept of national security, one that also embraces the needs of those industries that the U.S. Government has determined are critical to minimum operations of the economy and government."[26] As the Department explained then:

> In addition to the satisfaction of national defense requirements, the term "national security" can be interpreted more broadly to include the general security and welfare of certain industries, beyond those necessary to satisfy national defense requirements, that are critical to the minimum operations of the economy and government ("critical industries"). . . .
>
> Moreover, the legislative history of Section 232, including the legislative history of predecessor provisions, indicates that some members of Congress intended that "national security" should encompass certain domestic economic concerns, in addition to national defense concerns. *See e.g.* S. Rep. No. 85-1838, at 12 (1958).
>
> Accordingly, . . . we have included in "national security" the requirements of

[26] *The Effect of Imports of Iron Ore and Semi-Finished Steel on the National Security*, at 14 (Oct. 2001).

> certain critical industries for finished steel and based thereon, for iron ore and semi-finished steel as inputs.[27]

Commerce in *Iron Ore and Semi-Finished Steel* correctly concluded that input consumption by 28 critical industries implicated national security. Steel is an input into many of the same products, and more, including crude petroleum and natural gas; commercial, government, and military construction; metal shipping, energy storage, and industrial containers; motor vehicles for commercial, civilian, and military use; aircraft and parts; rail and shipping; pipelines; machine tools and other industrial equipment; and a host of national defense needs.[28]

Today, each regulatory criterion in 15 C.F.R. § 705.4 supports finding that steel imports threaten to impair the national security:

- Quantity of steel and other circumstances related to importation of steel. In recent case after case, the ITC has documented the injury caused to the U.S. steel industry and its downstream steel customers by imported steel. The domestic industry's ability to invest has been seriously impaired. As the CEO of U.S. Steel has recently indicated, his company needs to invest over $1 billion just to make up for a backlog of capital investment from the last five years. The U.S. industry cannot hope to attract capital and skilled workers if, in addition to the normal risk of recessions, it must endure periodic import crises that can strip away its profitability even during the peak of the business cycle.
- Domestic production and productive capacity needed for steel to meet projected national defense requirements. The U.S. has the most powerful military in the

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27 *Id*. at 5.

28 *Id*. at 16, Table 2.

world, but also the widest global commitments. It needs a domestic steel industry that can earn a sufficient return on investment to maintain the capacity to produce steel for both the military's own use and the necessary manufacturing, energy, and transportation infrastructure to support it, even in the event of the unpredictable: major war and disruption of global supply chains. As the story of the U.S. Army's armor plate requirements in the Iraq war indicates, the U.S. is now forced to depend on uncertain foreign supply in a crisis.

- Existing and anticipated availability of human resources, products, raw materials, production equipment, and facilities to produce steel. The U.S. industry cannot hope to attract capital and skilled workers if, in addition to the normal risk of recessions, it must endure periodic import crises that can strip away its profitability even during the peak of the business cycle.
- Growth requirements of the steel industry to meet national defense requirements and/or requirements to assure such growth. Even maintaining existing capacity has been a struggle for the North American steel industry. In comparison to global production it is only a shadow of what it once was.
- The impact of foreign competition on the economic welfare of the steel industry. The ITC has extensively documented the impact of foreign competition on the economic welfare of the steel industry and its workforce, as well as the impact of steel imports on employment and investment.

Finally, imposing quotas would be fully consistent with U.S. obligations under the GATT and WTO Agreements. Article XXI of the GATT, which forms part of the WTO Agreements, provides that nothing in the GATT shall be construed –

> to prevent any contracting party from taking any action **which it considers necessary** for the protection of its essential security interests
>
> (i) relating to fissionable materials or the materials from which they are derived;
>
> (ii) relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment;
>
> (iii) taken in time of war or other emergency in international relations.[29]

As the United States stated during the 1982 GATT discussion of restrictions by the EEC and others on trade from Argentina during the Falklands War, "The General Agreement left to each contracting party the judgment as to what it considered to be necessary to protect its security interests. The CONTRACTING PARTIES had no power to question that judgment."[30]

The WTO Agreements did not alter this conclusion. The United States did not give up any part of its sovereignty under those Agreements. If national sovereignty means anything, it means that the United States retains the unilateral right to decide what "it considers necessary for the protection of its essential interests."

Here, no one can reasonably question that U.S. national security is at stake. It is universally recognized, even in China, that healthy domestic steel manufacturing is necessary for a major power's national security, that is, "directly or indirectly for the purpose of supplying a military establishment." It is obvious, moreover, that the United States is engaged in a global struggle with terrorism that creates both short- and long-term risks. It is also universally

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29 GATT 1947 Art. XXI(b) (emphasis added).

30 C/M/159, p.19; *accord* C/M/157, p.8. *See also* GATT/CP.3/SR.22, Corr. 1 (1949) ("{E}very country must be the judge in the last resort on questions relating to its own security. On the other hand, every contracting party should be cautious not to take any step which might have the effect of undermining the General Agreement.").

recognized, even in China, that the world faces a glut of steel products. This glut endangers the ability of the United States to retain and continue to develop the kind of steel industry necessary for its national security. Under these circumstances, restrictions on imports of steel are amply justified and cannot be questioned within the GATT/WTO framework.

IV. QUOTAS ON ALL PRODUCTS IN HTSUS CHAPTERS 72 AND 73 ARE NEEDED TO ENSURE NATIONAL SECURITY

To ensure realization of the benefits afforded by this Section 232 investigation, the Department should recommend – and the President should authorize – trade relief in the form of quotas on all imported steel products covered by HTSUS Chapters 72 and 73. These quotas should be based on the average import levels for 2010 and 2011, which was a period of significantly lower imports prior to the injurious import surges. Those surges were directly related to the explosion of massive subsidized overcapacity created by the Chinese government and others during this decade.

* * *

Please contact the undersigned should you have any questions regarding this submission.

Respectfully submitted,

/s/ Roger B. Schagrin
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ATTACHMENT

WORLD
STEEL
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Inside Track #154

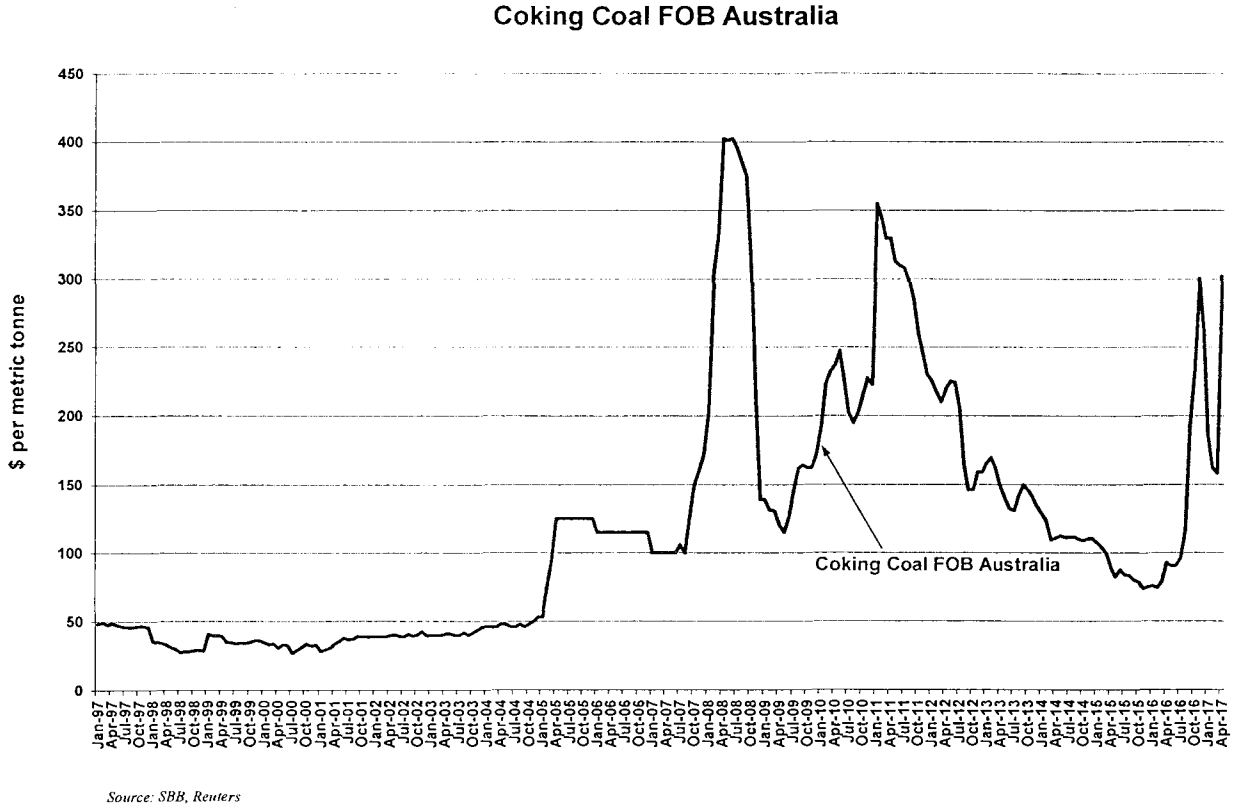
Hot-rolled band export price plummeting.

Nevertheless, 2017 "a good year" for many steel mills.

Early Warning System

Key themes

The decline in the HRB export price to about $400 per tonne, FOB the port of export, versus the current figure of about $480 per tonne (with the Chinese mills' quote at $445 per tonne) **might be delayed a month or two because of the temporary closing of railroads in northeastern Australia that transport coking coal from the mines to the ports** (due to the floods and mud slides caused by Cyclone Debbie). Perhaps a further collapse to $400 per tonne may not happen until June. The second quarter settlement price for coking coal, rather than at about $175 per tonne, FOB Australia (the consensus figure before the Australian cyclone) may now come in at $235-300 per tonne. This settlement price compares to $285 per tonne for the first quarter. The still-high coking coal price will add about $50 per tonne to many of the mills' operating cost versus our prior expectation. *(Note: We still expect the coking coal quarterly settlement price in the fourth quarter to decline to about $160 per tonne.)*



Source: SBB, Reuters

April 13, 2017

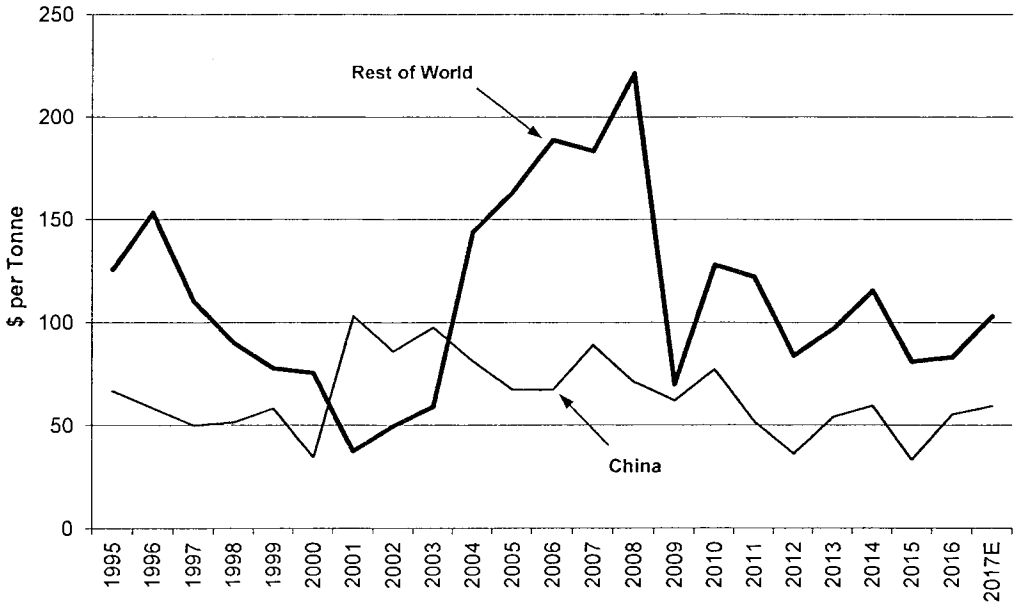
Peter F. Marcus (201) 503-0902
Philipp G. Englin (201) 503-0908

Near term, the steel mills are suffering a significant profit squeeze on their exports of hot-rolled band. For example, the non-Chinese median-cost mill's hot-rolled band operating cost in March this year was $472 per tonne. This summer, it may still be about $425 per tonne before heading down to $355 per tonne this coming October as the iron ore and coking coal prices recede sharply. A pricing anomaly in the months ahead may be a $100 per tonne discount for the steel scrap price on a value-in-use basis versus the international iron ore and coking coal prices. This discount will cause steelmakers in Turkey, for example, to purchase steel scrap rather than billet or slab when producing rebar and hot-rolled band.

By October 2017, the median-cost mill's forecasted operating cost of $355 per tonne excluding the delivery cost to the port of export, will be <u>below</u> the forecast HRB export price at $400 per tonne. Hence, the reduced export price will not add greatly to the mills' financial stress. And, hopefully for the steel mills, the $400 per tonne price will be a low point from which the next rally commences.

Many <u>non</u>-Chinese steel mills will post respectable financial results in 2017, principally because the industry has entered an "Age of Protectionism." *(Note: This new "age" is the consequence of the avalanche of trade suits filed against the Chinese steel mills the past two years).* Mills in protected markets will obtain good prices for their hot-rolled band. Other benefits may include: a) cost reduction efforts the past year; b) an improving balance sheet; c) higher profit margins on non-commodity-grade steel product deliveries; and d) a solid profit contribution from non-steel and steel related operations such as the fabrication of steel products such as joists and roof decks.

WSD's Financial Dynamics Analysis
EBITDA Per Shipped Tonne



Source: WSD's Financial Dynamics System

2018 may be a replication of 2017 when it comes to the industry condition. Steel mills with strong management will still have room to maneuver. M&A activity will still have the potential to be game-changing. In the USA, the steel mills will benefit from President Trump's economic initiatives, including his use of the mercantilistic weapon against the Chinese (who will benefit less from their mercantilistic policies in effect since mid-1990s). Regarding China, its policymakers will likely promote a further sizable rise in infrastructure spending, which is their time-tested economic stimulation mechanism, even though this will add further to municipalities' prodigious debt (that may begin to be refinanced on a longer-term basis than just 1-2 years). We look for Chinese steel demand next year to be down several percent; but, steel demand outside of China to go up perhaps 3%. Non-Chinese demand benefits from rising fixed asset investment in much of the Developing World – a new WSD viewpoint – because local governments and the manufacturers will have good access to foreign financing.

The Chinese steel industry outlook is increasingly grim the further that we peer into the future. While steel demand may hold up in 2017, and perhaps even in 2018 as the government promotes spectacular gains in infrastructure spending, the country's steel intensity at some point is sure to drop sharply. By 2020, WSD expects Chinese steel output to be down to about 700 million tonnes reflecting lower demand and lower exports. Also, the collection of obsolete steel scrap from the Chinese steel scrap reservoir 10-40 years old will be up at least 25 million tonnes per year and BOF steelmakers will be using a higher proportion of steel scrap in furnaces. Hence, by 2020, we expect a huge oversupply of iron ore and coking coal. For 2020, we forecast that iron ore price delivered to China will be about $45 per tonne and coking coal FOB Australia about $110 per tonne.

Chinese Apparent Crude Steel Consumption by Segment

(billion RMB, million tonnes)

	2008		2012		2015		2016		2017e		2018e		2019e		2020e	
	ASC	Share	ASC	Share	ASC	Share	ASC	Share	ASC	Share	ASC	Share	ASC	Share	ASC	Share
Real estate	93	20%	135	20%	138	20%	141	20%	140	20%	135	19%	126	19%	116	18%
Y to Y	*4.5%*		*-1.5%*		*-8.6%*		*2.2%*		*-0.7%*		*-3.6%*		*-6.7%*		*-7.9%*	
Infrastructure	156	34%	246	36%	246	35%	242	34%	238	34%	236	34%	226	33%	220	34%
Y to Y	*6.8%*		*4.2%*		*-7.5%*		*-1.6%*		*-1.7%*		*-0.8%*		*-4.2%*		*-2.7%*	
Manufacturing	176	38%	248	36%	246	35%	252	36%	256	36%	252	36%	246	36%	236	36%
Y to Y	*6.0%*		*3.3%*		*-3.9%*		*2.4%*		*1.6%*		*-1.6%*		*-2.4%*		*-4.1%*	
Household consumption	38	8%	55	8%	64	9%	67	9%	69	10%	70	10%	71	11%	72	11%
Y to Y	*18.8%*		*5.8%*		*3.2%*		*4.7%*		*3.0%*		*1.4%*		*1.4%*		*1.4%*	
Government consumption	2	0%	3	0%	4	1%	5	1%	5	1%	5	1%	6	1%	6	1%
Y to Y	*100.0%*		*0.0%*		*0.0%*		*25.0%*		*0.0%*		*0.0%*		*20.0%*		*0.0%*	
Total ASC *(crude base)*	465		687		698		707		708		698		675		650	
Y to Y	*7.1%*		*2.8%*		*-5.5%*		*1.3%*		*0.1%*		*-1.4%*		*-3.3%*		*-3.7%*	

Source: WSD estimates

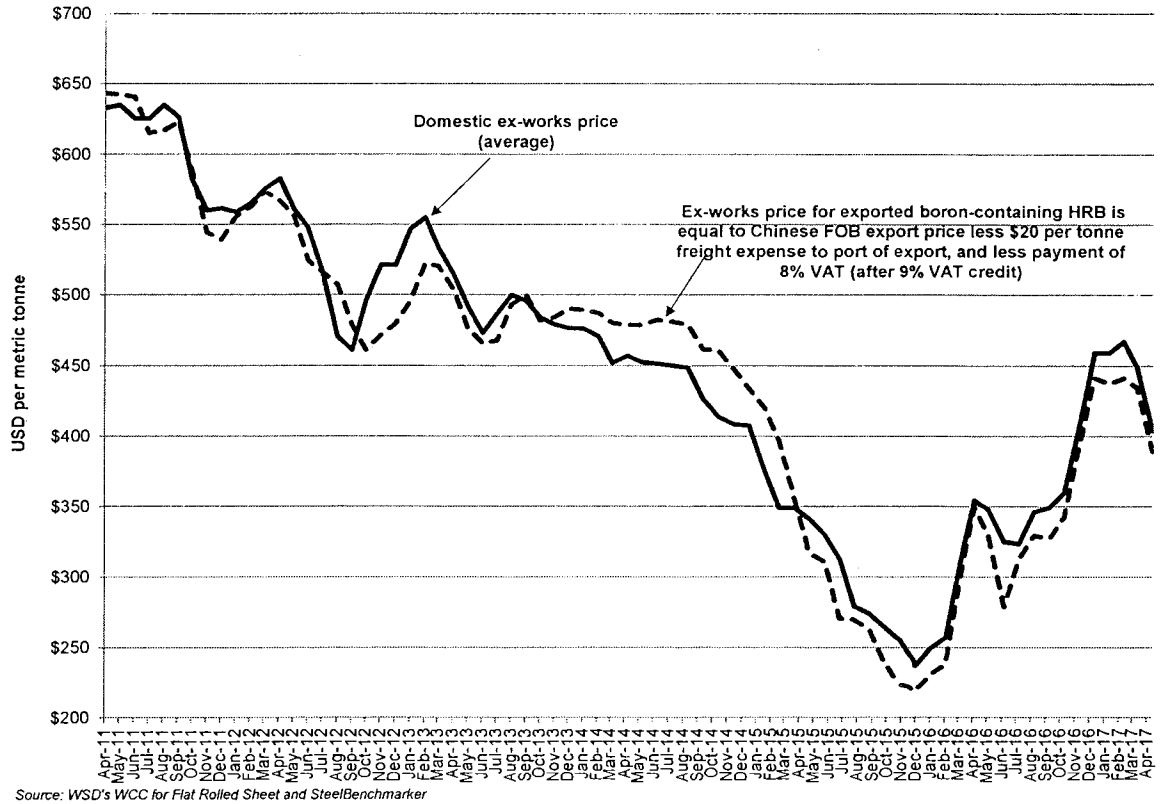
While the **HRB export price has declined recently in the time frame WSD expected, as per our two most recent reports; the price failed to spike up as forecast to about $575 per tonne.** Once the HRB export price rose to about $530 per tonne, FOB the port of export, steel

buyers were reluctant to pay up apparently because: a) the price already was up substantially; b) they believed the international prices of iron ore and coking coal – both of which impact the hot-rolled band export price – were unsustainably high; and c) the price no longer seemed appealing on a Risk/Reward basis.

Current global pricing: More than dynamic. As of April 11, 2017, the Chinese HRB export offering price is about $445 per tonne, FOB China – down from about $515 per tonne in mid-February 2017. On an ex-works basis, this price works out to only about $389 per tonne after a $20 per tonne of expense to ship the product to the port of export (for inland steel mills) and a $36 per tonne expense for the nonrefundable 8% value added tax. The Chinese mills' home-market price on April 13, 2017 has just fallen to $384 per tonne delivered to the marketplace, excluding the 17% VAT. However, when including about $15 per tonne of expense to ship the product to the market, this works out to an ex-works price realization of only about $370 per tonne – which is about $100 per tonne below the HRB operating cost for the Chinese median-cost steel mill in March 2017 based on WSD's monthly ***World Cost Curve*** results. The Chinese mills are getting a better price if they can export at $445 per tonne.

An anomaly in the Chinese steel market is the $46 per tonne price premium of rebar, at $430 per tonne, versus hot-rolled band price at $384 per tonne. The closure of the highly polluting and secretive induction furnace steel mills, that may have been producing 30 million tonnes per year of billet to be rolled into rebar, has tightened up the rebar supply/demand balance. Although, the tighter supply cannot be long-lived since there are 200+ smaller integrated steel mills in China that produce rebar.

Chinese Ex-Works HRB Export Price versus Domestic Ex-Works Price



Source: WSD's WCC for Flat Rolled Sheet and SteelBenchmarker

On the export market, some steel mills are still seeking to obtain $490-500 per tonne for their hot-rolled band, including the Indians, some Middle Eastern, the Koreans, the Japanese and the Turks; but those offering at this price are not getting much business. The Russian mills are apparently offering hot-rolled band at about $480 per tonne, FOB Black Sea ports. The Russian mills, along with those in Turkey, Egypt, Ukraine and Serbia, have had some good news; they've just been notified by the EU commission that, on a preliminary basis, it has decided not to file trade suits against them. Interestingly, the largest flat-rolled steel producer in Serbia, the Smederevo plant on the Danube River, is now owned by Hebei Steel of China (that's no longer China's largest steel producer since that Central-government-owned Baosteel and Wuhan Steel have merged to become BaoWu).

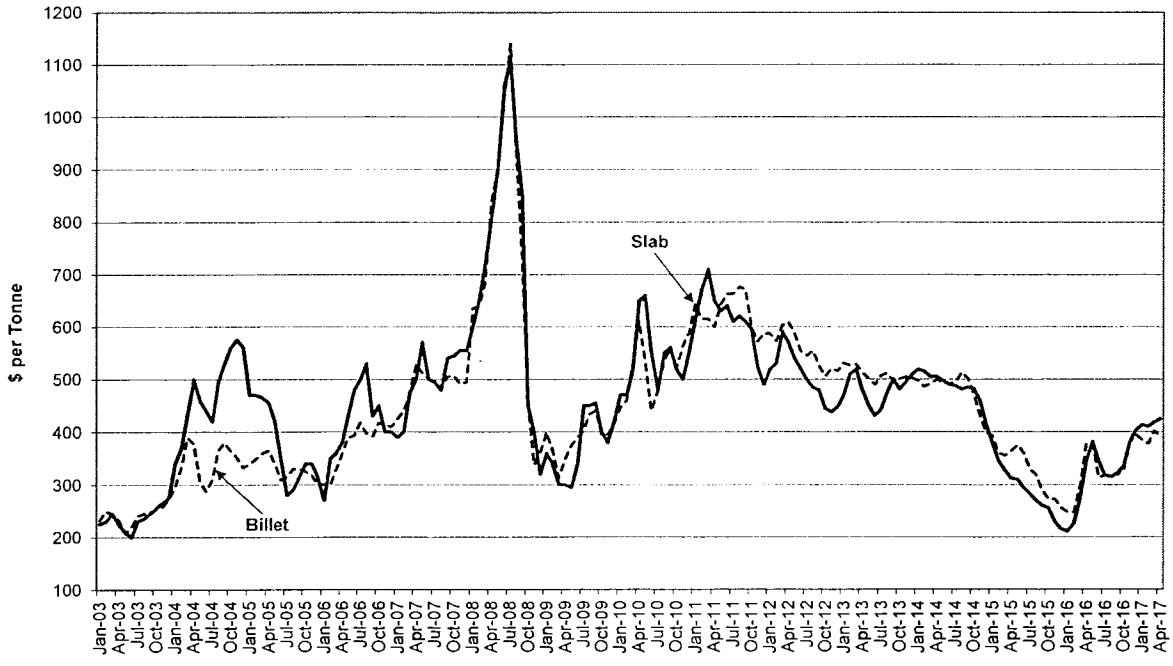
Turkish hot-rolled band is being offered in the United States, says a contact, at about $580 per tonne, which is far below the USA mills' price of about $710 per tonne; but, the tonnage offered is not large, nor is it from steel mills in the few other countries not restrained by trade suits.

Billet is being offered at about $390 per tonne at Black Sea ports, down about $40-50 per tonne from the recent peak. It's probably headed down to $350 per tonne in WSD's opinion.

Steel slab, FOB the port of export, has fallen about $35 per tonne to about $425 per tonne, FOB Black Sea or Brazilian ports, says a contact. It also seems destined to fall well to below $400 per tonne on a temporary basis.

Billet and Slab Export Prices

(Black Sea, FOB port of export)



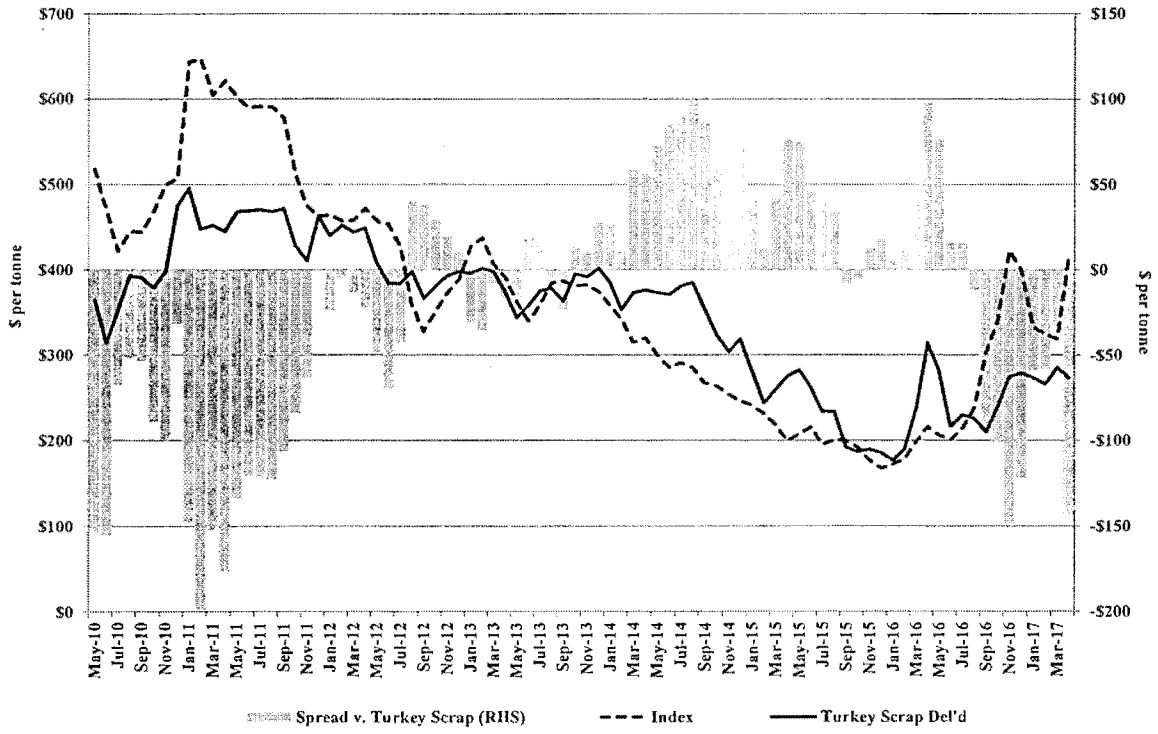
Source: Metal Bulletin, Metal Expert, SBB & WSD estimates

It costs about $25 per tonne to deliver slab from the port of export to the port of import, another $15-30 per tonne to ship it to a plant with a hot strip mill (near the coast in Turkey), plus about $80 per tonne to pay the steel mill to convert the slab to hot-rolled band (versus a production cost of about $50 per tonne).

Steel scrap prices, although down recently about $20 per tonne, are still lofty versus the price earlier this year. The price of 80/20 steel scrap delivered to Turkey is about $275 per tonne; #1 heavy melting scrap in the USA delivered to the steel plant is about $271 per tonne; shredded in the USA is at $295 per tonne; prime "new" scrap in the USA is at $354 per tonne; and, pig iron delivered to New Orleans at about $380 per tonne. The pig iron export price has been boosted by the war in the Ukraine, that's shut down pig production at some plants, and the decision by Brazil's largest exporter, the Queiroz Galvao Group located in the country's north, to sell its renewable eucalyptus tree forest to a paper company.

- **Positives for the HRB export price so far in 2017.** From the steel mills' point of view, these include: a) rising apparent steel demand outside of China; b) the sharp drop in China's steel product export that's providing shipment opportunities for mills located elsewhere to serve this 360 million tonnes per year market; and, c) higher operating costs than expected for most integrated mills if the second quarter coking coal settlement price is close to $225 to $300 per tonne, FOB Australia (versus the prior expectation, as noted earlier, of $160-175 per tonne).

80/20 HM Scrap Delivered to Turkey versus Weighted Iron Ore/Coking Coal Price Index



Source: WSD Estimates, Platts, Steelbenchmarker

- **Negatives for the HRB export price from the mills' viewpoint.** The downside forces are potent, including: a) the possible decline in the international iron ore price delivered to China this summer to $50 per tonne versus the current price of $69 per tonne and the recent peak of $94 per tonne; b) the expected sharp drop in coking coal for prices for third quarter deliver, FOB Australia, to perhaps $190 per tonne and, then, for fourth quarter delivery to perhaps $160 per tonne; c) severe HRB price competition in the export markets for which there are no significant import barriers – including South Korea, Vietnam, the Philippines and Malaysia; d) seasonal factors that normally dampen new orders in the spring; and e) buyers "sitting on their hands" waiting for lower prices.

The HRB export price: Is it random walk? The price seems to change direction every six months no matter what's happening to the global economy. Steel buyers have learned that the HRB export price is a wild card. Hence, whether or not they do it explicitly or intuitively, they've developed a technique to take into account this unpredictability; it's called the Risk/Reward ratio. When it's high – i.e., there's a risk the price may rise sharply and not much downside reward because it's so depressed, it's time to buy. When the R/R is low – i.e., there's less upside risk in the price and a sizable downside reward - they cease buying.

In today's pricing environment, We assume that the HRB export price has a potential peak at $600 per tonne and a potential floor of $380 per tonne, FOB the port of export:

- In March 2017, the export price was $530 per tonne. Hence, the Risk/Reward was +$70/-$150 per tonne, for only **0.5X**. Not an attractive buy.

- In April 2017, the export price is $480 per tonne. Hence, the R/R is +$120/-$100 per tonne, for a more attractive **1.2X**.

- June 2017. Let's assume the price is $400 per tonne. If so, the R/R is +$200/-$20, for a highly attractive R/R/ of **10.0X**.

WSD Odds for Five Steel Industry Scenarios: 2017 to 2019

(based on assessment of the hot-rolled band export price)

	2017		2018		2019*	
	Prior	**New**	**Prior**	**New**	**Prior**	**New**
Shake-out times	15%	5%	15%	5%	20%	15%
Bad times	20%	15%	10%	15%	10%	20%
Fair times	35%	**45%**	30%	**25%**	25%	**30%**
Good times	20%	**30%**	30%	**35%**	30%	20%
Boom times	10%	5%	15%	20%	15%	15%

Source: WSD Estimates

**2019 is assumed to be a year in which Chinese steel demand drops significantly as the governement runs out of ways to keep promoting sizable gains in infrastructure spending.*

WSD Hot-Rolled Band Risk/Reward Calculator

"Weathervane of buyer psychology"

Market	World Export	Chinese Domestic	USA	S. Europe
December 2015				
Current price	$270	$230	$405	$325
Risk price	$440	$380	$550	$440
Reward price	$250	$215	$380	$310
R/R Amounts	+170/-20	+150/-15	+145/-25	+115/-15
R/R (Risk/Reward)	8.5x	10.0x	5.8x	7.7x
June 2016				
Current price	$360	$300	$600	$400
Risk price	$450	$400	$730	$550
Reward price	$320	$290	$550	$370
R/R Amounts	+90/-40	+105/-10	+130/-50	+150/-30
R/R	2.2x	10.5x	2.6x	5.0x
October 2016				
Current price	$400	$345	$550	$584
Risk price	$550	$400	$650	$600
Reward price	$350	$290	$500	$440
R/R Amounts	+150/-50	+55/-55	+150/-50	+120/-40
R/R	3.0x	1.0x	3.0x	3.0x
January 2017				
Current price	$520	$463	$660	$590
Risk price	$600	$500	$750	$725
Reward price	$370	$290	$500	$520
R/R Amounts	+80/-150	+37/-173	+90/-160	+135/-70
R/R	0.5x	0.2x	0.6x	1.9x
March 2017				
Current price	$530	$430	$700	$608
Risk price	$600	$550	$750	$725
Reward price	$380	$290	$570	$520
R/R Amounts	+70/-150	+120/-140	+50/-130	+117/-88
R/R	0.5x	0.9x	0.4x	1.3x
April 2017				
Current price	$480	$384	$710	$620
Risk price	$600	$500	$750	$700
Reward price	$380	$290	$570	$500
R/R Amounts	+120/-100	+116/-94	+40/-140	+80/-120
R/R	1.2x	1.2x	0.3x	0.7x

Source: WSD Estimates based on the viewpoint of the steel buyer.

NOTE: Risk price is how much the price of steel may rise (to the detriment of the steel buyer.)
Reward price is how much it may drop (to the benefit of the steel buyer.)

Daily Benchmark Prices *, China

(dollars per metric tonne)

Ex-works							Apr-17			
	29th	30th	31st	5th	6th	7th	10th	11th	12th	13th
Hot-rolled band (5mm thick x 1200-1500mm wide)	427	426	425	423	418	410	404	399	386	384
Cold-rolled coil (0.7mm x 1200-1500mm wide)	518	515	512	509	504	497	489	487	480	476
Rebar #5 * * (16mm in diameter)	446	446	446	447	445	440	434	430	422	421
Standard plate (24mm x 2400mm x 6000mm)	441	441	440	439	437	433	427	424	418	415
Scrap (incl VAT) (6 - 10mm thickness)	250	248	246	245	245	244	242	240	239	239
Exchange rate (R	6.8915	6.8889	6.8993	6.8906	6.8930	6.8946	6.9042	6.8957	6.8940	6.8651

** Ex-works (the same as FOB mill), $ per metric tonne. Hot-rolled band is the first product off the hot strip mill.*

** * Since Apr.30, 2015, it has been changed to the price of HRB 400 rebar from HRB335 rebor as later will be outoff Chinese domestic market soon.*

Source: www.steelhome.cn

China's ex-works prices are "all over the lot." These prices are impacted by supply/demand factors, steel industry sentiment and futures prices. There are many day-traders in China, further adding to volatility. When the futures price is rising, this may pull up the mills' ex-works prices; and, the opposite occurs when the futures prices are falling. Here what's happened to the prices for five products since mid-February 2017 – as of April 13, 2017.

- **Hot-rolled band**: The price is down $92 per tonne to $384 per tonne from $476 per tonne (February 17th), a 19% decline.

- **Cold-rolled coil**: The price fell $118 per tonne to $476 per tonne from $594 per tonne (February 23rd), a decline of 20%. The spread between cold-rolled coil and hot-rolled band narrowed to $92 per tonne from $118 per tonne. Why the lessened spread? One answer could be diminished demand for cold-rolled coil relative to hot-rolled band. However, WSD thinks the most likely reason is the massive overproduction of hot-rolled band –up 10 to 15% on a year-to-year basis – that's inundated the cold-rolling mills with so much HRB supply that the production of cold-rolled coil became excessive.

- **Discrete plate**: The price fell just $37 per tonne to $415 per tonne from $452 per tonne (February 17th), a drop of 8%. Because the product is produced almost exclusively by integrated steelmakers and the outlook for shipbuilding activity is diminished, perhaps the product is prone to less speculative influence.

- **Rebar**: The price fell $44 per tonne to $421 per tonne from $465 per tonne (February 17th), which was a decline of 9%. Hence, the cessation of billet production by induction furnace steelmakers has helped to better sustain this price than is the case for hot-rolled band and cold-rolled coil.

Source: SteelHome

- **Steel scrap**: The Chinese price fell only $15 per tonne to $239 per tonne from $254 per tonne, for a drop of 6%. Perhaps the relatively high price on the world market helped to sustain the Chinese price even though the country's export duty is 40%. In mid-April 2017, shredded steel scrap in the United States was about $295 per tonne.

Big positive for Non-Chinese steel companies: The financial results reported by many this year to be fairly good despite global oversupply. As WSD sees it, this improved financial performance is due to five factors: a) the relatively limited number of hot-rolled band producers in most home markets, which gives them the "pricing power" to achieve a higher HRB price if HRB imports are restrained; b) sizable cost cutting efforts the past year; c) an improving balance sheet; d) higher profit margins on non-commodity-steel deliveries; and e) perhaps a good profit contribution from non-steel and/or steel-related distribution and manufacturing operations (including for some mills the production of joists and roof decking for the construction industry).

Steelmakers' metallics prices look vulnerable. Swings in the prices of these products are looked upon, for good reason, as valuable leading indicators where the price of steel finished products, such as rebar and hot-rolled band, are headed.

The Steel Index Iron Ore 62% Fe CFR China

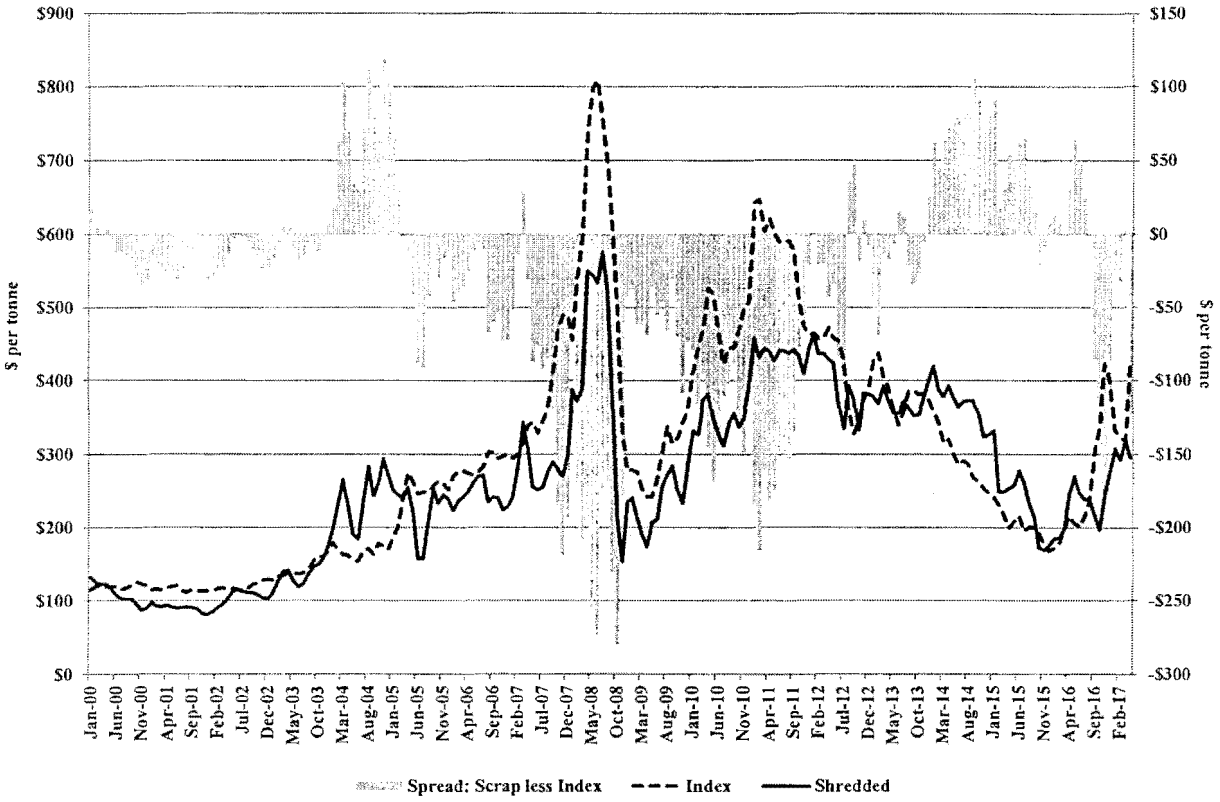
Source: Reuters

- **Iron ore price delivered to China, for 62% Fe product.** The price rose from $78 per tonne in early in 2017 to a peak of $94 per tonne in mid-February. It's recently fallen sharply back to $67 per tonne. Given China's huge iron ore inventories at the ports and the likely stagnation of Chinese steel output in the months ahead, WSD expects the iron ore price by October 2017 to fall to about $50 per tonne.

- **Coking coal price, FOB Australia.** We expect the new "normal" price to be about $105-120 per tonne once deliveries from Australia returns to normal, which should be high enough to sustain coking coal production. The early 2016 price of $80 per tonne caused a shake-out that drove many of the miners out of business. Shipments of coking coal to China from Mongolia are up, as is USA, Canadian and, in theory, Australian production.

- **Steel scrap prices.** The price is driven by the supply/demand balance for the product and its value-in-use for BOF steelmakers as an alternative to pig iron that's charged into their steelmaking furnaces. Relative to the prices of iron ore and coking coal, the price of steel scrap the past year often sold at a major discount. Currently, it's a $144 per tonne discount – based on spot coking coal at $302 per tonne, FOB Australia, and iron ore at $67 per tonne delivered to China. This discount is a strong signal to WSD that the prices of iron ore and coking coal will be coming down.

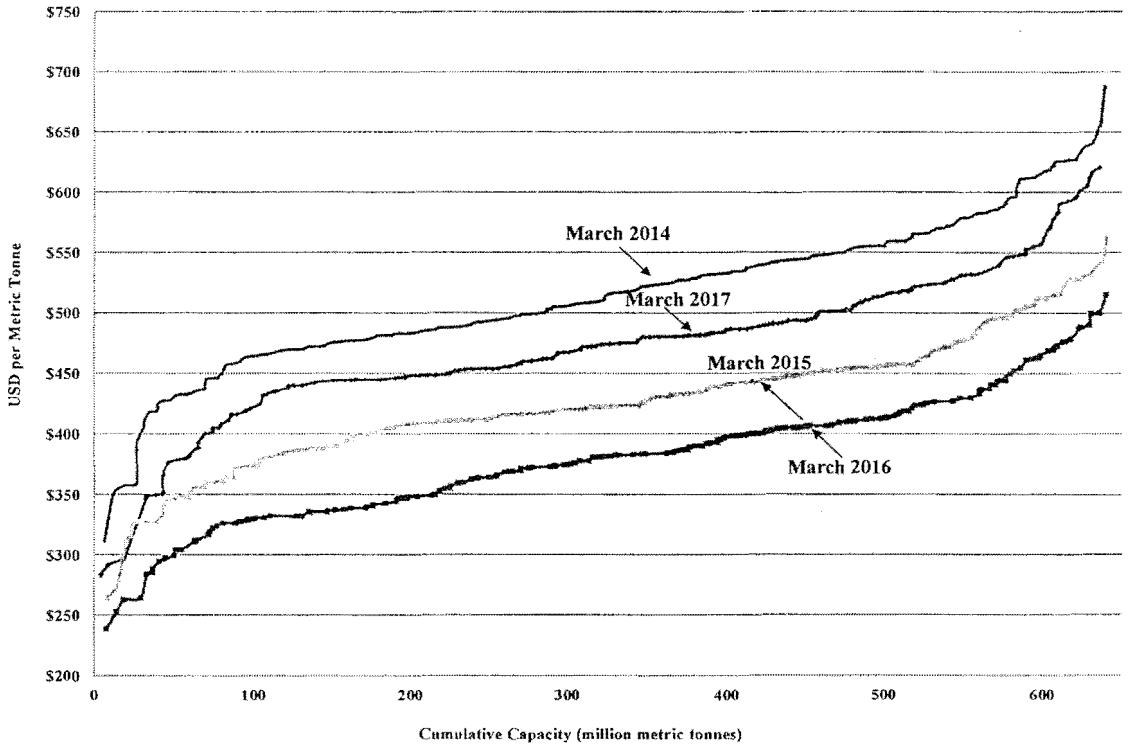
USA Shredded Scrap versus Weighted Iron Ore and Coking Coal Price Index



Source: WSD Estimates, Platts, Steelbenchmarker

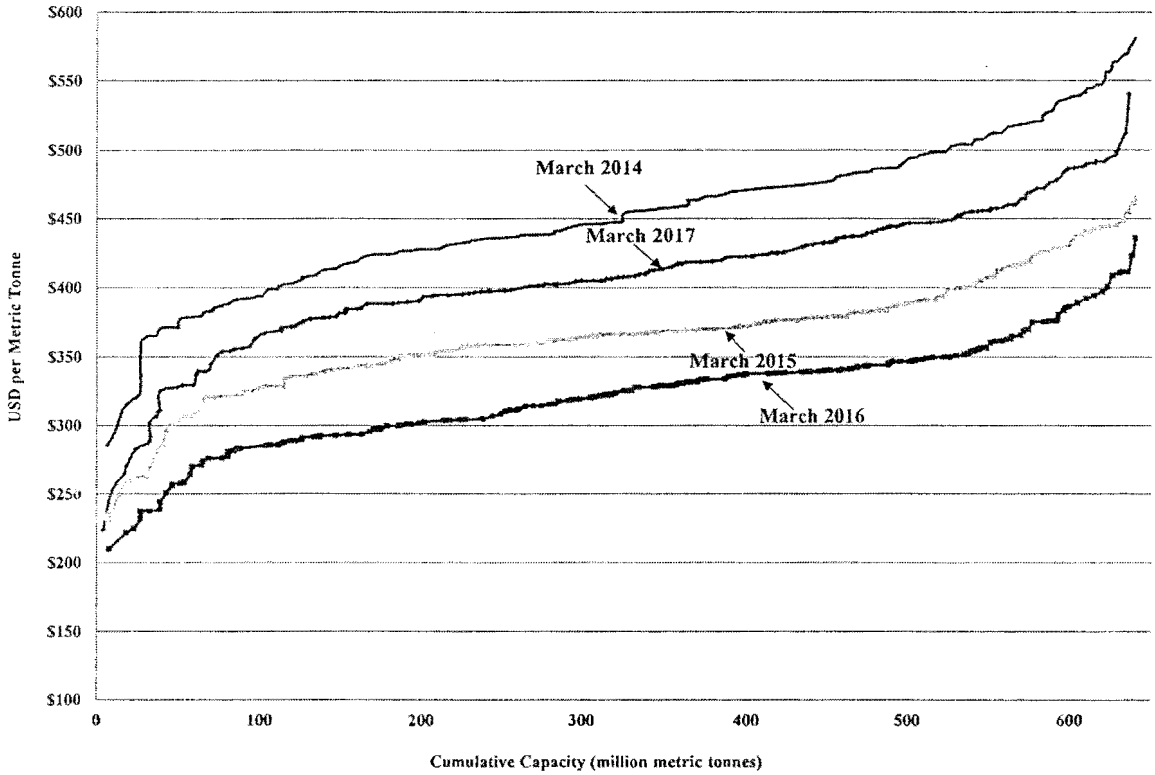
World Cost Curve for Hot-rolled Band

($ per metric tonne, including overhead)



World Cost Curve for Hot-rolled Band

($ per metric tonne, marginal cost)



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