



Unsustainable: Government Intervention and Overcapacity in the Global Steel Industry

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I. INTRODUCTION¹

The global steel industry is confronted with an unprecedented level of overcapacity,² which is severely distorting the world market and threatening the viability of many steel producers worldwide. Since the first edition of this paper was released in July 2013,³ excess capacity has continued to grow. This update is necessary, almost three years later, because the overcapacity crisis has reached alarming new heights. In the United States, the effects of this crisis are being felt most acutely in the form of record import levels, which are having severely injurious effects on the health of the U.S. steel industry. By the end of 2015, U.S. steel producers were utilizing less than 65 percent of their capacity, and they have been forced to lay off 12,000 workers over the past year. The U.S. steel industry cannot withstand these market conditions much longer. Immediate action is required to reduce capacity, particularly in China, and to stem the significant adverse effects on steel producers around the world.

The 2013 version of *Government Intervention and Overcapacity* discussed at length the structural imbalance in the global steel industry during the 1997-2001 import crisis, when enormous steel capacity around the world contributed to a flood of low-priced imports into the United States. “The outlook today is even worse than during [that period], when unfairly traded imports and other factors produced a wave of bankruptcies and layoffs among American steel companies.”⁴ Indeed, despite the clear lessons from that period, many in the global steel industry failed to address the underlying problems and added capacity without regard to actual levels of demand, resulting in the current massive levels of excess capacity in the industry – estimated at about 700 million metric tons⁵ worldwide and growing. Much of this huge capacity growth has not been driven by market forces, as it far exceeds levels of demand growth, and has not been supported by profitability, as the least profitable producers in the world are leading the growth in steelmaking capacity.

Rather, the overcapacity largely results from increasing levels of government ownership and intervention in the steel industry, especially in China, which is home to nearly two-thirds of world steel overcapacity. And despite its disproportionate contribution to the crisis, China appears unlikely to deliver on its recent, inadequate promises to eliminate 100 to 150 million tons of steelmaking capacity. As they have in the past, China’s various government plans and policies, while purportedly intended to reduce capacity, in fact encourage and even subsidize upgrades and continued growth. The continuation of these policies is more likely to result in the maintenance and further expansion of Chinese steel capacity and production.

Excess steel production capacity must be shut down, and soon. The only question is where that restructuring will occur. Will the countries that are causing the crisis – most notably China – finally and

¹ The views expressed in this paper are those of the authors and should not be attributed to Wiley Rein LLP or any of its clients.

² In this paper, “overcapacity” refers to the difference between capacity and production. Overcapacity may also be defined as the difference between capacity and demand; however, in the steel industry production and demand tend to be very close, meaning that there typically are not substantial differences between the two measures.

³ Alan H. Price, Christopher B. Weld and Laura El-Sabaawi, *Government Intervention and Overcapacity: Causes and Consequences for the Global Steel Industry* (July 2013) (*Government Intervention and Overcapacity 2013*), available at <http://www.wileyrein.com/newsroom-articles-2771.html>.

⁴ Thomas J. Gibson and Chuck Schmitt, *Crisis Level*, Recycling Today (Mar. 2016).

⁵ All references to “tons” in this paper are to metric tons, unless otherwise stated.

permanently shutter their vast excess capacity, or will responsible, market-oriented steel producers in the United States and around the world be forced to close facilities, make additional layoffs, or even enter bankruptcy as a result of this crisis?

To effectively address this mounting overcapacity crisis, the world's steel producing countries must take steps to reduce or eliminate the non-market-based factors that serve to increase and/or maintain inefficient capacity. In the case of China, where government support created much of the excess capacity, the Chinese government must take an active role to undo the excesses it created. Unless action is taken now to address these issues on a global basis, especially in China, unfair trade practices and the resulting trade friction will persist and likely worsen, and the very viability of many steel producers – particularly market-oriented steel producers that operate based on commercial considerations – will be threatened.

II. THE EXTENT OF THE CRISIS

A. Continued Growth in Steel Overcapacity

The period since 2000, and even since *Government Intervention and Overcapacity* was first released, has been characterized by unprecedented expansion of steel production capacity. Since 2000, the global steel industry has added more than 1.2 billion tons of crude steel capacity, for an estimated total of more than 2.3 billion tons of capacity worldwide as of 2015.⁶ This capacity growth surpassed demand growth during the same period by nearly 500 million tons,⁷ resulting in the current excess capacity crisis.

These increases in global capacity have been led by the explosive growth of China's steel industry over the past 15 years. China alone, which accounted for about half of the world's steel output last year,⁸ added a massive 990 million tons of steelmaking capacity from 2000 to 2015 (making it responsible for more than three-fourths of the total global increase in capacity during that period).⁹ In Turkey, where huge capacity growth also occurred extremely quickly, steelmaking capacity rose by more than 150 percent from 2000 to 2014.¹⁰ Capacity has also grown substantially in India, increasing by more than 76 million tons from 2000 to 2015.¹¹ Korea, the Middle East, Latin America and the Commonwealth of

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

⁷ Global steel consumption in 2000 was just over 840 million tons. World Steel Association, *Steel Statistical Yearbook 2010* at 90. A recent estimate of global consumption in 2015 was 1.54 billion tons. *Steel Market Forecast 2015-2025: Future Opportunities for Leading Companies* (Feb. 16, 2016). Thus, from 2000 to 2015, global consumption grew by about 700 million tons.

⁸ World Steel Association, *Crude steel production 2015-2014*, available at <https://www.worldsteel.org/statistics/crude-steel-production.html>.

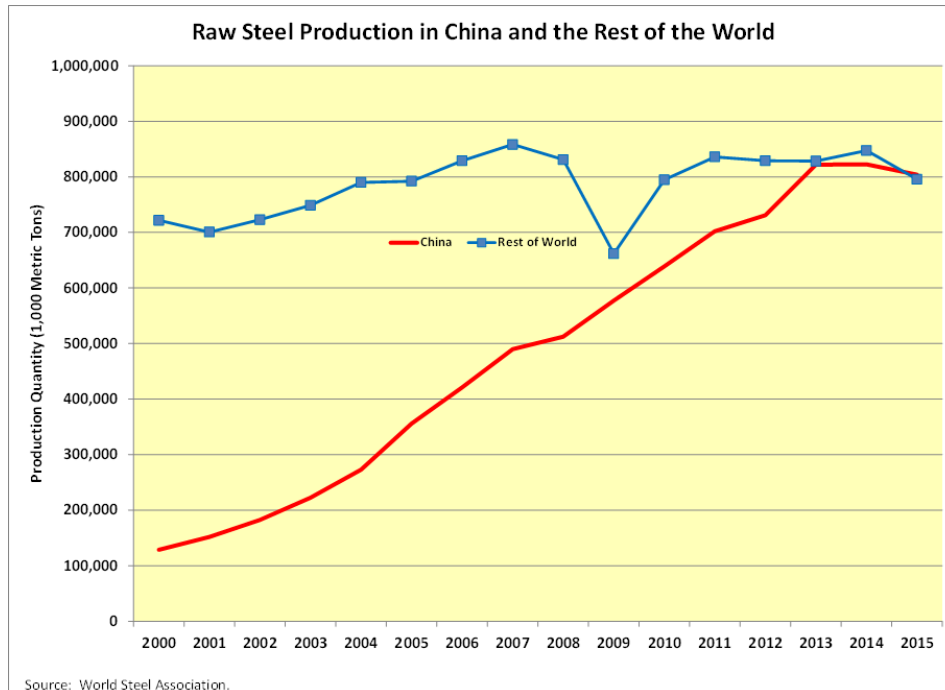
⁹ OECD, *Developments in world steelmaking capacity*, DSTI/SU/SC(2010)14 (Dec. 2010) at 2; Gabriel Wildau, *Losses mount in China's overcrowded steel sector*, Financial Times (Dec. 4, 2015); European Chamber of Commerce in China, *Overcapacity in China: An Impediment to the Party's Reform Agenda* (2016) (European Chamber of Commerce 2016 Report) at 1, 16.

¹⁰ *The Land of Steel*, The Turkish Perspective (Nov. 2, 2015); Turkish Steel Exporters' Association, *Turkish Steel Trade Delegation Dubai* (2015) at 10; Yasin Öcal, Planning Expert, Ministry of Development, Republic of Turkey, *Innovation in the steel sector: Turkish Steel Industry* (Dec. 5, 2015) at 3.

¹¹ OECD, *Regional Capacity*, DSTI/SU/SC(2011)14 (Dec. 5-6, 2011) at 2; Megha Mandavia, *India's ambitious steel production plan thwarted by slow consumption*, The Economic Times (Dec. 17, 2015).

Independent States countries have also seen rapid capacity growth in recent years, with less substantial increases in Africa and the NAFTA member countries.¹²

The growth in steel capacity since 2000 is reflected in increased production, most notably in China, as shown in the chart below. Chinese capacity and production grew steadily even during the global recession. In fact, “from 2004 to 2014, global steel production increased by 57 percent – China contributed a staggering 91 percent to this increase,” leading the European Chamber of Commerce in China to recently conclude that Chinese “steel production has become completely untethered from real market demand.”¹³



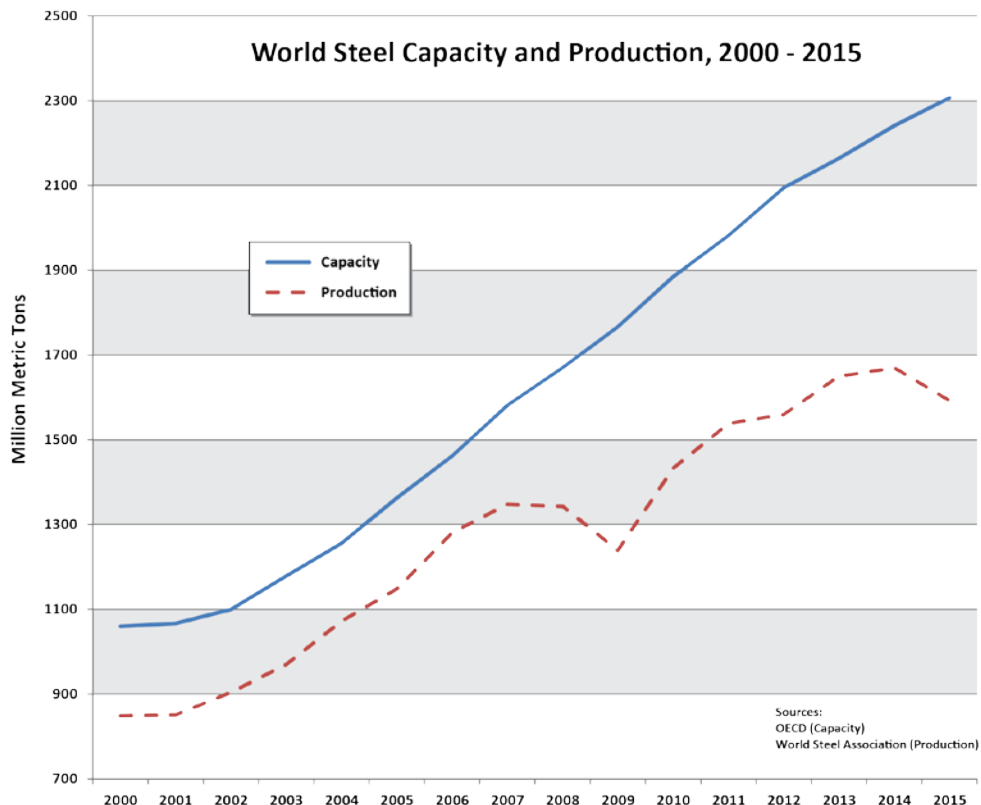
While global steel production declined slightly in 2015, the brunt of this decrease fell on producers in the United States and other NAFTA countries. According to the Organisation for Economic Co-operation and Development (OECD), “North American production... declined the most [in 2015], in relative terms, reflecting a sharp 8.8% steel output decline in the United States as several mills reduced output or idled furnaces in response to the market downturn.”¹⁴

¹² From 2000 to 2013, steel capacity increased by 32 million tons in the Middle East, 24 million tons in Latin America, 21 million tons in CIS countries, 7.8 million tons in Africa, and 3.9 million tons in NAFTA countries, while, according to recent OECD figures, capacity in the EU countries declined by about 7.8 million tons. OECD Regional Capacity Report at 2; OECD, *Excess Capacity in the Global Steel Industry and the Implications of New Investment Projects* (2015) (OECD 2015 Excess Capacity and New Projects Report) at 10-11.

¹³ European Chamber of Commerce 2016 Report at 1, 16.

¹⁴ OECD, *Steel Market Developments: Q4 2015* (2016) at 12.

The capacity increases described above, well in excess of demand, have led to enormous levels of overcapacity,¹⁵ which have continued to grow in recent years. The OECD estimated that there were 542 million tons of excess capacity in the global steel industry in 2012;¹⁶ more recently, the OECD has estimated that there are 700 million tons of global excess capacity.¹⁷ In other words, global overcapacity grew by more than 150 million tons in only four years.



China leads the world not just in capacity increases, but in excess capacity levels, which have continued to grow year after year. While estimates of Chinese overcapacity in 2013 and 2014 ranged from 200 to 300 million tons,¹⁸ more recent estimates put China’s steel overcapacity at a staggering 425 million tons,¹⁹ accounting for nearly two-thirds of global excess capacity. Other global regions also retain

¹⁵ “[T]he supply-demand imbalance has led to a level of overcapacity that will be extremely challenging to remedy.” *Global Steel: Steeling for Oversupply*, Morgan Stanley Blue Paper (May 22, 2013) (Morgan Stanley Global Steel Report) at 4.

¹⁶ OECD Directorate for Science, Technology and Industry, Steel Committee, *Excess Capacity in the Steel Industry: An Examination of the Global and Regional Extent of the Challenge*, DSTI/SU/SC(2012)15 (Nov. 13, 2012) at 2.

¹⁷ See OECD, *The Capacity Outlook for the Global Steel Industry: Preliminary OECD Estimates*, Madrid (Sept. 9, 2015); Thomas J. Gibson & Chuck Schmitt, *The crisis facing the U.S. steel industry*, CNN (Mar. 23, 2016)

¹⁸ Morgan Stanley Global Steel Report at 6; European Chamber of Commerce 2016 Report at 16.

¹⁹ Rafael Rubio, *The Latin American Steel Market in 2015: The New Normal*, OECD Steel Committee Meeting - Paris (May 2015) at 10; Richard A. McCormack, *Steel Industry Issues Stern Warning Over China’s Desire To Be A ‘Market’ Economy*, *Manufacturing & Technology News*, Vol. 22, No. 13 (Nov. 23, 2015). The China Iron and Steel Association recently estimated its country’s steel surplus at more than 420 million tons. Ernest & Young LLP, *Globalize or customize: finding the right balance: Global steel 2015–2016* (2015) at 13.

significant levels of overcapacity, including Europe, the Commonwealth of Independent States countries, Latin America, Korea and Japan.²⁰

B. The Effects of Overcapacity on Steel Industries Worldwide

The OECD has concluded that “[t]he growing gap between global steelmaking capacity and demand has led to deterioration in the financial situation of steelmakers, and has raised concerns about the longer-term economic viability and efficiency of the industry.”²¹ For example, between 2013 and 2015, global capacity utilization dropped from 78 percent to less than 70 percent.²² Globally, the steel industry’s financial situation is weaker than it has been in years, and the industry is faring even worse than during the last steel crisis of the late 1990s.²³

The U.S. steel industry in particular has been drastically affected by the global excess capacity crisis, which has led to record levels of steel imports into the U.S. market.²⁴ According to the U.S. Census Bureau, imports of steel products into the United States increased by 61 percent from 2010 to 2015, from 21.7 million tons to 35.1 million tons.²⁵ Over the same period, imports’ market share rose from 21 percent to a record 29 percent.²⁶ In the NAFTA countries, while steel production in 2015 dipped below 2010 levels, steel imports increased 93 percent from 2010.²⁷

In addition to capturing sales volumes, increased import levels and overcapacity generally have caused prices to collapse. As reported by the *Financial Times*, steel prices late last year were “cheaper than at any time in the past decade,” due largely to the supply glut created by Chinese overcapacity.²⁸ Capacity utilization dropped as well, from just under 80 percent in the NAFTA countries in 2013 to less than 68 percent in 2015.²⁹ In the United States in particular, capacity utilization dropped to an alarming 62.1 percent by the end of last year.³⁰

²⁰ See, e.g., World Steel Association, *Steel Statistical Yearbook 2015* (Steel Statistical Yearbook 2015) at 1; OECD 2015 Excess Capacity and New Projects Report at 11.

²¹ OECD 2015 Excess Capacity and New Projects Report at 6.

²² World Steel Association, *World crude steel output increases by 3.5% in 2013* (Jan. 23, 2014); World Steel Association, *World crude steel output decreases by -2.8% in 2015* (Jan. 25, 2016). By the end of last year, global steel capacity utilization had dropped to 66.6 percent. Scotia Howard Weil, *Coal Weekly* (Apr. 6, 2016) at 10.

²³ OECD, *Evaluating the Financial Health of the Steel Industry*, DSTI/SU/SC(2015)12/FINAL (2016) at 3.

²⁴ See, e.g., *id.* at 25 (“At the global level, the effects of excess capacity are transmitted through trade; excess capacity can lead to export surges, leading to price declines and market share losses for import-competing domestic producers”).

²⁵ *Preliminary: U.S. Imports for Consumption of Steel Products January 2011*, U.S. Census Bureau News (Feb. 23, 2011) at 1; *Preliminary: U.S. Imports for Consumption of Steel Products January 2016*, U.S. Census Bureau News (Feb. 24, 2016) at 1.

²⁶ Joseph S. Pete, *Steel imports grabbed record 29 percent of market in 2015*, *www.nwi.com* (Jan. 29, 2016).

²⁷ As calculated by the American Iron and Steel Institute (AISI), using data from the U.S. Census Bureau, Statistics Canada and Canacero.

²⁸ Michael Pooler, *Global steelmakers face cocktail of challenges*, *Financial Times* (Oct. 27, 2015). See also Yuan Yang, *China’s role in the global steel downturn*, *Financial Times* (Apr. 6, 2016) (“steel prices worldwide [have] slump[ed] to a 10-year low”).

²⁹ As calculated by AISI, using data from Statistics Canada and Canacero.

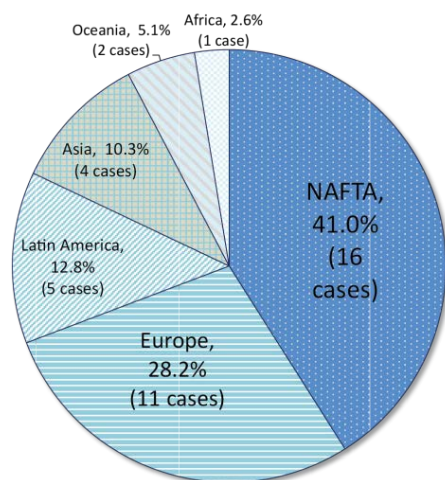
³⁰ Department of Commerce, *Steel Industry Executive Summary: March 2016* at 12.

As a result of the overcapacity crisis, the resulting import surge, and its effects on the U.S. steel market, more than 12,000 American steel jobs were lost in the past year.³¹ Downstream industries also have been affected by steel overcapacity, magnifying the U.S. job losses and wreaking havoc throughout the supply chain. The OECD recently described how excess capacity in countries like China is affecting steel producers worldwide:

Given the global nature of the industry, excess capacity in some regions can displace production in other regions, and create bankruptcies and localised job losses in parts of the industry. Today, an increasing number of workers and communities are feeling the impacts of the unwinding of excess capacity. Over the past six months, the industry has announced a number of temporary and permanent plant closures, cutbacks in production, and layoffs of steel workers, as shown in the figure below. Many of these announcements have occurred in North America and Europe, but they are affecting many other regions as well.³²

In fact, the impacts have been especially acute in the NAFTA countries. From September 2015 through February 2016, a full 41 percent of announced closures, production cutbacks and layoffs in the global steel industry occurred in the NAFTA countries, with another 28 percent in Europe.³³ As shown in the chart below, only 10 percent of closures, cutbacks and layoffs occurred in Asia which, due to China, has the vast majority of the world's steel capacity.³⁴

Announcements of closures, cutbacks and layoffs: September 2015 - February 2016³⁵



In other words, those most responsible for the overcapacity glut are exporting its adverse effects, to the detriment of market-based producers globally.

³¹ Thomas J. Gibson & Chuck Schmitt, *The crisis facing the U.S. steel industry*, CNN (Mar. 23, 2016).

³² OECD, *Background Note No. 2: Capacity Developments in the World Steel Industry*, High-Level Symposium: Excess Capacity and Structural Adjustment in the Steel Sector (Apr. 18, 2016) (OECD Symposium Background Note) at 5-6.

³³ *Id.*

³⁴ *Id.*

³⁵ This chart has been reproduced from the OECD Symposium Background Note at 6.

If, as discussed below, the global steel overcapacity crisis continues to worsen, steel producers worldwide, and particularly in North America, will face substantial additional challenges and, very likely, even more closures and layoffs. If the current imbalance between steel supply and demand is not addressed quickly, “[t]he immediate reaction will likely be further downward pressure on steel prices,”³⁶ which would be unsustainable for many producers.

C. Given Current Trends, Overcapacity Will Only Worsen

Despite the significant excess capacity currently overhanging the steel industry worldwide, many steelmakers plan additional capacity increases in the coming years. As a result, global steel capacity is projected to expand even further. With ongoing and planned capacity increases, capacity will grow by about 103 million tons worldwide from 2016 to 2018.³⁷ Capacity growth will continue to outpace demand,³⁸ which declined in 2015 and is expected to increase by only 0.7 percent this year.³⁹

Once again, China leads in terms of planned capacity increases. While the Chinese government recently announced plans to reduce the country’s steel capacity by 100 to 150 million tons,⁴⁰ this reduction would be inadequate, and there is significant doubt as to whether such capacity closures will even be accomplished. According to Reuters, the China Iron and Steel Association predicts that Chinese steel capacity will increase yet again this year.⁴¹ This is unsurprising, as Beijing’s past efforts to force capacity reductions have largely failed.⁴² For example, when the Chinese government announced a plan in 2013 to cut production by 80 million tons by 2017, there was limited action to implement that plan. In fact, quite the opposite occurred. “Even as the central government called for the industry to slim down, China added at least 58 new steel furnaces in 2013..., adding 80 million tonnes of additional annual capacity.”⁴³

The limited attempts that were made to reduce capacity in accordance with the 2013 plan were largely ineffectual. For example, in late 2013, China’s Hebei province staged an event during which demolition squads blew up blast furnaces owned by 15 mills, all on Chinese state television. According to the *Wall Street Journal*, however, “[a]ll of the furnaces targeted for destruction turned out to be so outmoded that the companies that owned them didn’t consider them spare capacity, steel-industry officials [said], meaning they didn’t help reduce the province’s extra volume.”⁴⁴ In part due to the lack of

³⁶ OECD, *Steel Market Developments: Q4 2015* (2016) at 20.

³⁷ OECD Symposium Background Note at 4.

³⁸ See OECD, *World Crude Steelmaking Capacity* (Mar. 2015), available at <http://www.oecd.org/sti/ind/steelcapacity.htm>.

³⁹ *Worldsteel Short Range Outlook 2015-2016*, World Steel Association (Oct. 12, 2015).

⁴⁰ *RPT-China to cut crude steel production by 100-150 mln tonnes –cabinet*, Reuters (Jan. 24, 2016); *China Steel Plan Seen Spurring 400,000 Job Cuts, Instability*, Bloomberg (Jan. 25, 2016).

⁴¹ David Stanway and Ruby Lian, *Baosteel sees higher 2016 output as world reels from China’s glut*, Reuters (Mar. 31, 2016).

⁴² Gabriel Wildau, *Losses mount in China’s overcrowded steel sector*, Financial Times (Dec. 4, 2015).

⁴³ Gwynn Guilford, *South Korea consumes more steel per capita than both China and Japan. A lot more*, Quartz (May 28, 2014).

⁴⁴ Lingling Wei and Bob Davis, *In China, Beijing Fights Losing Battle to Rein In Factory Production*, Wall Street Journal (July 16, 2014). See also Jefferies Franchise Note, *Metals & Mining* (Jan. 13, 2016) at 36 (“we fear that much of the capacity that is being targeted for closure is ‘zombie’ capacity that does not in reality operate at present”).

progress closing capacity in Hebei, “there is no reason to assume that [the government’s 80-million ton closure] target will be met,”⁴⁵ let alone the larger level of capacity closure envisioned by China’s newly announced plan.

Despite such government plans, and expected declines in domestic demand, including a four percent drop this year,⁴⁶ many Chinese steel producers continue to plan substantial capacity additions. Much of this will be added by large, state-owned or -supported producers.⁴⁷ For example, China’s second-largest steel company, state-owned Baosteel, recently announced that it will increase its steel production by 20 percent this year, as a result of its recent completion of production lines at its new Zhanjiang mill.⁴⁸ State-owned Shandong Iron & Steel group will launch a “new, high-quality steel production plant” in Shandong Province in June 2017, with an annual production capacity of more than 8 million tons.⁴⁹ And Guangxi Steel Group Co. is currently in the process of bringing into operation its new plant in the southern coastal region of China, which will have more than ten million tons of annual capacity.⁵⁰

Even if China were to in fact shutter 100 to 150 million tons of capacity, such closures would be inadequate to stem the adverse effects of the overcapacity crisis. Chinese industry executives acknowledge as much, admitting that “[s]ignificant overcapacity will remain in China’s steel sector even after planned restructuring.”⁵¹ For example, the “capacity creep” effect recognizes that steel producers generally increase their effective capacity by an average of 1.5 to 2 percent per year,⁵² through process improvements, de-bottlenecking and similar measures that do not involve expansion of nameplate capacity. As a result of capacity creep alone – not to mention substantial planned capacity expansions by Chinese producers – China will add roughly 93 to 138 million tons of effective capacity over the next five years. This would largely offset China’s announced capacity reductions.

Other steel industries worldwide are also planning major capacity increases in the near future. Steel producers in Russia plan to add more than nine million tons of crude steel capacity in the coming years,⁵³ despite a “deep recession” in the Russian economy, including a considerable depression in steel

⁴⁵ European Chamber of Commerce 2016 Report at 18. Despite announcing the capacity closure plan in 2013, Chinese steel production increased in 2014. Steel Statistical Yearbook 2015 at 1.

⁴⁶ Jing Zhang, *Chinese consumption to fall 4% in 2016: CISA*.

⁴⁷ See, e.g., OECD 2015 Excess Capacity and New Projects Report at 15 and Annex.

⁴⁸ David Stanway and Ruby Lian, *Baosteel sees higher 2016 output as world reels from China’s glut*, Reuters (Mar. 31, 2016); Andrew Soergel, *Chinese Steelmaker Revs Up Despite Promised Production Cuts*, U.S. News & World Report (Mar. 31, 2016). See also OECD 2015 Excess Capacity and New Projects Report at 32.

⁴⁹ Primetals Technologies, *Shandong Iron & Steel orders two continuous slab casters from Primetals Technologies* (Jan. 12, 2016); OECD 2015 Excess Capacity and New Projects Report at Annex.

⁵⁰ *First hot coil on the continuous annealing line built by Fives at Guangxi Steel*, Fives (Mar. 22, 2016); OECD 2015 Excess Capacity and New Projects Report at 32.

⁵¹ Tom Mitchell and Christian Shepherd, *China says its steel overcapacity will remain*, Financial Times (Apr. 10, 2016).

⁵² See, e.g., Credit Suisse, *Global Steel Equities* (Sept. 6, 2012) at 9; Steel Business Briefing, *Global Market Outlook* (Mar. 2016).

⁵³ See OECD, *Capacity Data: Commonwealth of Independent States* (Feb. 2015), available at <http://www.oecd.org/sti/ind/2.1.4CIS.xlsx> (counting capacity increases planned for 2016 and beyond).

demand,⁵⁴ and even though the Russian steel industry was only operating at about a 61 percent capacity utilization rate in 2015.⁵⁵

Despite 7 and 17 percent declines in steel consumption in 2014 and 2015, respectively,⁵⁶ Brazilian steelmakers are also planning significant capacity increases in the near future.⁵⁷ This includes a new blast furnace mill with three million tons of annual capacity, which is expected to fire up in the second quarter of this year.⁵⁸ The mill, to be operated by a joint venture between Vale, Dongkuk and POSCO, will be located in the state special export zone of Ceará, where it reportedly will benefit from “advantages on shipments abroad.”⁵⁹

In India, which does not currently have high levels of excess capacity, the steel industry is expected to add approximately 60 million tons of new capacity between 2011 and 2017.⁶⁰ These increases will occur despite falling capacity utilization rates in the Indian industry.⁶¹ And the Indian government recently introduced a new policy that would increase steel capacity to 300 million tons by 2025⁶² – an increase of nearly 200 million tons from 2015 levels. If these planned capacity expansions occur, India could become the second largest steel producing country in the world.⁶³ Despite growing demand in India, massive increases in Indian steel capacity will exacerbate the global oversupply situation, in part by lessening India’s availability as an export market.

Unless major changes are made to address the long-term distortions in the global steel industry, excess capacity will only continue to rise, putting increasing downward pressure on steel prices and profitability around the world and causing further harm to the global industry.

III. MUCH OF GLOBAL STEEL CAPACITY GROWTH IS NOT MARKET-BASED

The overcapacity crisis plaguing the global steel industry is largely a result of non-market forces. As the Department of Commerce found in 2000, while legitimate, market-based barriers to exit from the steel industry do exist, “government practices and policies that forestall adjustments mandated by the

⁵⁴ OECD, *Steel Market Developments: Q4 2015* (2016) at 11.

⁵⁵ *Russia Capacity Utilization*, Trading Economics (Mar 18, 2016).

⁵⁶ *World Steel in Figures 2015*, World Steel Association (May 29, 2015) at 16; Alacero, *Latin America: In 2015, annual production of finished steel decreased 5% and consumption contracted 4%* (Feb. 26, 2016). Brazilian steel producers were only operating at 69 percent capacity utilization in 2014, prior to this substantial drop in demand. Brazil Steel Institute, *Figures*, available at <http://www.acobrasil.org.br/site2015/eng/dados.asp>.

⁵⁷ See OECD, *Capacity Data: Latin America* (Feb. 2015), available at <http://www.oecd.org/sti/ind/2.1.6LatinAmerica.xlsx>.

⁵⁸ *Dongkuk Steel’s mammoth steel plant project in Brazil delayed*, Pulse (Nov. 5, 2015).

⁵⁹ See OECD, *Capacity Data: Latin America* (Feb. 2015), available at <http://www.oecd.org/sti/ind/2.1.6LatinAmerica.xlsx>.

⁶⁰ Ernst & Young, *Global Steel 2013: A New World, A New Strategy* (Jan. 1, 2013) at 30. See also OECD Regional Capacity Report at 4.

⁶¹ See Megha Mandavia, *India’s ambitious steel production plan thwarted by slow consumption*, The Economic Times (Dec. 17, 2015).

⁶² Ernst & Young LLP, *Indian steel: Strategy to ambition* (2014) at 9.

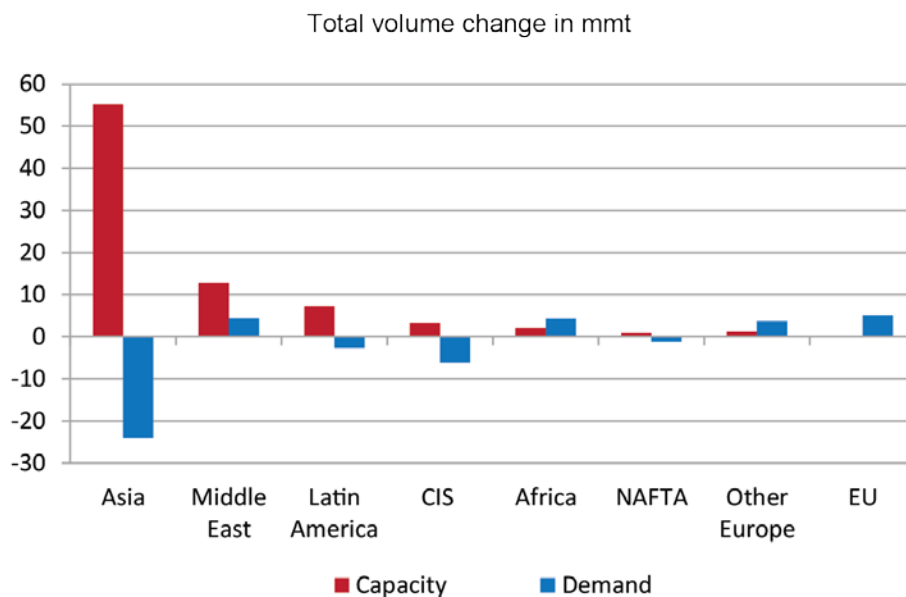
⁶³ See *World Steel in Figures 2015*, World Steel Association (May 29, 2015) at 9.

market” are a major cause of excess capacity in the steel industry.⁶⁴ This remains true today, as many governments continue to subsidize the start-up of additional, unnecessary capacity and prevent obsolete capacity from closure.

A. Steel Capacity Growth Largely Is Not Driven by Demand

As was the case when the 2013 paper was released, growth in global steel capacity has not tracked demand in the market, resulting in the overcapacity crisis facing the industry today. The first decade of this century saw global steel demand grow by approximately five percent per year.⁶⁵ By contrast, the rate of growth in global demand, has slowed significantly over the past few years. Apparent steel usage grew by less than one percent in 2014, actually declined last year, and is expected to grow only 0.7 percent this year.⁶⁶ “In a competitive industry, production and ultimately capacity should respond to market signals,”⁶⁷ such as this marked slowing of demand growth. However, the continued expansion of the steel industry in certain countries and regions, as shown in the chart below, demonstrates just how government intervention can “hinder adjustments that would normally occur in competitive markets.”⁶⁸

Steelmaking capacity and steel consumption changes by region in 2015 and 2016⁶⁹



Source: OECD calculations.

⁶⁴ See U.S. Department of Commerce, International Trade Administration, *Report to the President, Global Steel Trade: Structural Problems and Future Solutions* (July 2000) (Commerce Global Steel Trade Report) at 4.

⁶⁵ *Morgan Stanley Global Steel Report* at 1.

⁶⁶ *Worldsteel Short Range Outlook 2015-2016*, World Steel Association (Oct. 12, 2015).

⁶⁷ *Id.*

⁶⁸ OECD 2015 Excess Capacity and New Projects Report at 6.

⁶⁹ This chart has been reproduced from the OECD, *Steel Market Developments: Q4 2015* (2016) at 12.

Much of China's steel capacity growth, reflected in the chart above, cannot be explained by reference to development cycles associated with market forces. While China's steel demand did increase over the past decade, Chinese steel capacity far surpassed the needs of its market. As with aluminum, where China built the largest industry in the world without any comparative production advantage (indeed, despite a lack of access to inexpensive, clean energy sources typically required for large-scale aluminum production),⁷⁰ China's steel industry was intentionally built up as a result of a series of distortive government policies.

As reflected by the declining capacity utilization rates of Chinese steel producers, rates of demand growth in China have slowed considerably, while capacity continues to increase rapidly. Chinese steel demand peaked in 2013 before dropping by eight percent over the next two years.⁷¹ Because Chinese steel capacity did not decrease accordingly, capacity utilization in China dropped from nearly 77 percent in 2013 to only 71 percent last year.⁷²

Demand in China is expected to decline by another four percent this year, with similar declines expected "at least until 2020."⁷³ These substantial decreases in demand stand in stark contrast to the capacity increases occurring in China, which will far outpace demand in coming years, including any foreseeable demand growth.

As noted above, in Russia, steel producers continue to increase their capacity,⁷⁴ and Russian steel output is expected to increase steadily through 2019.⁷⁵ At the same time, Russian steel consumption is dropping substantially. Steel demand in Russia declined by 11 percent in 2015 and is expected to undergo at least a similar decline this year,⁷⁶ meaning that the already oversupplied Russian market will suffer from additional excess capacity, which may lead to increased exports.

The European steel market suffered substantial declines in recent years, and as of 2014, Europe's apparent steel use remained 27 percent below pre-crisis levels.⁷⁷ The EU market appears to have

⁷⁰ Because primary aluminum production is extremely energy intensive, most production is located in countries with inexpensive and less polluting sources of energy (e.g., hydro, geothermal, nuclear and natural gas-based electricity). See U.S. Energy Information Administration, *Energy needed to produce aluminum* (Aug. 16, 2012). From both a cost and environmental standpoint, the coal-based electricity that is predominantly used in China is one of the least attractive fuel sources. Despite this global pattern and the lack of a development cycle requiring greatly expanded capacity in China, China has built the largest primary aluminum industry in the world, accounting for more than 50 percent of global production, as a direct result of government support policies, like those in the steel sector. See William Pentland, *Lessons From The Aluminum Industry: The Hidden Cost Of China's Cheap Solar*, *Forbes* (Mar. 29, 2016).

⁷¹ Shiv Mehta, *China Steelmakers: Iron Ore Rally Is a Fake (BHP, RIO)*, Investopedia (Mar. 9, 2016); *China's annual steel consumption drops for first time in three decades*, Reuters (Jan. 22, 2015). See also *China steel firms suffered \$8 bln in losses in Jan-Nov 2015 –assn*, Reuters (Jan. 17, 2016).

⁷² OECD, *Steel Market Developments: Q4 2015* (2016) at 12; European Chamber of Commerce 2016 Report at 3, 16.

⁷³ Fan Ruohong, Lu Xiaoxi, Huang Kaixi and Yu Ning, *China cuts push coal, steel sectors into corner*, *Asia Times* (Mar. 17, 2016).

⁷⁴ See, e.g., *NLMK increases its galvanized steel capacity* (Feb. 8, 2016); OECD 2015 Excess Capacity and New Projects Report at 24-25.

⁷⁵ BMI Research, *Europe Steel: Poland and Russia to Defy Regional Slowdown* (Aug. 12, 2015).

⁷⁶ Adrian Leek, *A Summary of the Current State of the Global Steel Industry*, *Corewire* (Feb. 1, 2016); Deloitte, *Iron and Steel Industry Report* (Sept. 2015) at 13-14.

⁷⁷ See *Steel Statistical Yearbook 2015* at 79.

stabilized somewhat, growing by approximately two percent in 2015, with a similar small uptick expected in 2016.⁷⁸ While European steel mills have adjusted their capacity somewhat in response to these market contractions, the capacity adjustments have thus far been insufficient to eliminate the region's substantial overcapacity.

The North American steel market has generally fared better than the European market. For NAFTA as a whole, apparent steel use grew by approximately 13 percent in 2014.⁷⁹ While U.S. steel demand declined by about ten percent in 2015,⁸⁰ it is expected to increase by approximately two percent this year.⁸¹ The U.S. steel industry also took approximately nine million tons of capacity out of production in 2014 and 2015. Thus, as demand in many steel markets around the world declines or stagnates, and global capacity continues to climb far in excess of demand, the United States will remain an extremely attractive target for world steel exports, further threatening the U.S. steel industry.

B. Steel Capacity Growth Is Not Supported by Profitability

The relatively low profits earned by many steel producers worldwide further demonstrate the disconnect between steel capacity growth and market forces. The Chinese steel industry exemplifies this, as China's dramatic increase in steel capacity has occurred despite financial returns in the Chinese industry that are well below those achieved by other steel industries,⁸² and even other industries in China. "China's steel industry has one of the lowest operating margins compared not only to the steel industries of many other economies but also relative to other domestic industries. China's steel industry is ranked 85th out of 94 Chinese service and manufacturing sectors, but is last amongst all domestic manufacturing industries."⁸³ As one example, Sinosteel, China's largest state-owned steel trader, defaulted on a bond repayment in October 2015.⁸⁴ The country's major steel firms reportedly lost more than RMB 100 billion (US \$15.5 billion) last year alone,⁸⁵ and the actual figures are believed to be much greater. One recent report estimates that the debt ratio of China's major steel mills rose 1.6 percentage points in 2015 to 70.1 percent, bringing the total debt of only the country's "big mills" to RMB 3.27 trillion (US \$499 billion),⁸⁶ while another estimates that "the Chinese steel industry has roughly [US] \$520 [billion] in total debt held largely by Chinese [state-owned] banks."⁸⁷

Indeed, much of Chinese excess steel capacity is connected to a broader problem in China – the country's massive, growing and unsustainable debt bubble. Often at the direction of the Chinese government, debt is continually refinanced, expanded and ultimately swept off the books and into "asset

⁷⁸ EUROFER, *Economic and Steel Market Outlook 2016-2017* (Jan. 27, 2016) at 6.

⁷⁹ See Steel Statistical Yearbook 2015 at 80.

⁸⁰ Data obtained from AISI.

⁸¹ Arcelor Mittal USA, *Steel Market Outlook: Federal Reserve Bank Economic Outlook Symposium* (Dec. 4, 2015) at 16.

⁸² *Id.* at 24 ("With their profitability remaining the lowest globally, it is possible that Chinese companies will continue to operate even after posting losses, flooding the steel export markets with low-cost steel.")

⁸³ OECD, *Steel Market Developments: Q4 2015* (2016) at 17.

⁸⁴ Gabriel Wildau, *Losses mount in China's overcrowded steel sector*, Financial Times (Dec. 4, 2015).

⁸⁵ *Steeling for a struggle: China workers face turmoil*, Breitbart (Apr. 10, 2016).

⁸⁶ *Debts rise at China's big steel mills, consumption falls*, Business Insider (Mar. 2, 2016).

⁸⁷ Jefferies Franchise Note, *Metals & Mining* (Jan. 13, 2016) at 4.

management companies” or other state-created financial firms designed exclusively to absorb bad corporate debts and cover losses in Chinese enterprises.⁸⁸ It is essential that steps be implemented in China to promote the exit of capacity and to deflate the country’s debt bubble, before the world economy becomes even more vulnerable to a massive Chinese debt crisis.

Chinese overcapacity and resulting massive exports have already tanked the world steel market, severely hindering the ability of steel producers around the world to operate profitably. While it may be unnecessary for Chinese producers, earning profits and a decent return on capital is essential for market-oriented steel producers that make decisions based on commercial considerations.

In short, the overwhelming majority of global capacity increases since 2000 have occurred in what has become the least profitable steel industry in the world, highlighting the disconnect between profitability and growing capacity. Despite increasingly nonexistent profits, Chinese steel producers continue to boost production and add capacity largely as a result of governmental control over and intervention in the industry.

C. Current Steel Overcapacity Is Largely the Result of Government Intervention

Rather than market-based growth, capacity continues to grow largely as a result of intervention by governments, many of which have significantly subsidized their steel industries, including through low-interest loans, grants and the provision of low-priced inputs. Such intervention has resulted in enormous capacity increases over short periods of time in many countries, causing oversupply globally and otherwise distorting the world market. Political intervention has also acted as a key barrier to permanent capacity closures in the industry, as governments prevent mill closures for other non-commercial purposes.⁸⁹ While in a purely market-based system “the power of the market alleviates excess capacity, by forcing inefficient producers that incur profit losses to eventually exit the market,”⁹⁰ government intervention artificially prevents the market from self-correcting. Thus, in the steel industry, government impediments to capacity closure, combined with barriers to exit associated with long-lived assets, have led to the accumulation of persistent and growing excess capacity.

1. Massive Government Intervention in China’s Steel Industry

China provides the most striking example of government intervention in the steel industry. The unprecedented growth in Chinese capacity is largely a result of massive government ownership and control, which has come at the expense of market-oriented steel producers around the globe.⁹¹ The

⁸⁸ See, e.g., Lingling Wei and Bob Davis, *In China, Beijing Fights Losing Battle to Rein In Factory Production*, Wall Street Journal (July 16, 2014) (“[Steel] companies stay afloat by borrowing, adding to China’s rapidly-growing debt levels”); Fayen Wong, *Steel industry on subsidy life-support as China economy slows*, Reuters (Sept. 18, 2014).

⁸⁹ See *Morgan Stanley Global Steel Report* at 15.

⁹⁰ OECD Excess Capacity Report at 2. See, e.g., Bruce Vail, *An Ominous Quiet Descends On RG Steel’s Troubled Mills*, inthesetimes.com (June 7, 2012).

⁹¹ See, e.g., European Chamber of Commerce 2016 Report at 16 (“China’s steel industry now accounts for more than half of global output, or more than twice the combined output of the next four biggest steel makers: Japan, India, the US and Russia. It enjoys this massive capacity largely thanks to supportive industrial policies spanning decades whose sole aim was to help this ‘strategic’ industry flourish”); *Perverse advantage: A new book lays out the scale of China’s industrial subsidies*, The Economist (Apr. 27, 2013) (“On their conservative calculations, China spent over \$300 billion, in nominal terms, on the biggest SOEs between 1985 and 2005. This help often came in the form of cheap capital and underpriced

Chinese government has ownership interests in nine of the ten largest steel producers in China – the top two of which alone produced more steel in 2014 than the entire U.S. steel industry shipped that year.⁹² In addition to owning majority shares in most of its major steel producers, the Chinese government maintains a high degree of decision-making authority over the industry and continues to intervene extensively in the operations of individual steel companies. For example, recent reports indicate that local governments in China have instructed steel mills in their localities to increase their exports and foreign exchange earnings.⁹³

The Chinese government's significant involvement in its steel industry has both contributed to the enormous increases in new capacity and prevented the closure of inefficient capacity. Through various laws, policies and industrial plans, the Chinese government for decades has directly subsidized its steel producers with grants, preferential loans, debt-for-equity swaps, tax refunds and other preferential policies, as well as various forms of indirect support, such as restrictions on foreign investment.⁹⁴ Using such policies, as well as its significant ownership stakes, the Chinese government has created the world's largest steel industry.

Even Chinese government policies purportedly intended to decrease China's excess steel capacity have had the opposite effect. Since as early as 2003, a series of top-down government plans claiming to address overcapacity and the extensive environmental degradation that it has caused have instead operated as disguised industrial subsidy programs.⁹⁵ Rather than encouraging inefficient, unprofitable and highly polluting capacity to exit the market permanently, these policies have encouraged the construction of massive industrial parks and the large-scale installation of new capacity under the auspices of

inputs unavailable to international rivals ... Such distortions breed indiscipline and overcapacity... A similar problem looms in the steel industry").

⁹² China's two largest steel producers, Hebei Steel Group and Baosteel Group, are both state-owned and produced 47.1 and 43.3 million tons of steel in 2014, respectively, while the entire U.S. steel industry shipped in 89.1 million tons that year.

⁹³ Della Fu, *No common export strategy for major Chinese mills in 2016*, Steel First (Mar. 24, 2016).

⁹⁴ See generally Wiley Rein LLP, *Money for Metal: A Detailed Examination of Chinese Government Subsidies to the Steel Industry* (July 2007); Wiley Rein LLP, *The Reform Myth: How China Is Using State Power to Create the World's Dominant Steel Industry* (Oct. 2010); Fayen Wong, *Steel industry on subsidy life-support as China economy slows*, Reuters (Sept. 18, 2014) ("Subsidies accounted for four-fifths of the profits reported by Chinese steel companies in the first half of this year").

⁹⁵ See, e.g., *Notice of the General Office of the State Council Issuing the Several Opinions of the National Development and Reform Commission and Other Agencies Regarding Checking Blind Investment in the Steel, Aluminum, and Cement Sectors* (国务院办公厅转发国家发展改革委员会等部门关于制止钢铁电解铝水泥行业盲目投资若干意见的通知), Guo Ban Fa [2003] No. 103 (Dec. 23, 2003); *Notice of the State Council Regarding Hastening and Promoting Structural Adjustment of Industries with Overcapacity* (国务院关于进一步加快推进产能过剩行业结构调整的通知), Guo Fa [2006] No. 11 (Mar. 12, 2006); *Notice of the State Council Regarding Promulgating the Several Opinions of the NDRC and Other Departments Regarding Suppressing Overcapacity and Redundant Construction in Certain Sectors and Guiding Healthy Industrial Development* (国务院批转发展改革委等部门关于抑制部分行业产能过剩和重复建设引导产业健康发展若干意见的通知), Guo Fa [2009] No. 38 (Sept. 26, 2009); *Notice of the State Council Regarding Further Strengthening Work on Eliminating Outdated Capacity* (国务院关于进一步加大淘汰落后产能工作的通知), Guo Fa [2010] No. 7 (Feb. 6, 2010); *Guiding Opinion of the State Council Regarding Resolving the Contradiction of Serious Overcapacity* (国务院关于进一步化解产能严重过剩矛盾的指导意见), Guo Fa [2013] No. 41 (Oct. 6, 2013).

“eliminating outdated capacity,” developing a “circular economy,”⁹⁶ encouraging “comprehensive resource utilization” and other alleged environmental and capacity reduction initiatives. These policies have provided for government grants, the provision of land and inputs, and pervasive state intervention in the allocation of credit and financing, all in pursuit of upgrading, modernizing and even expanding, rather than reducing, steel capacity. As a result, steel producers that should have gone out of business have remained in the market and expanded and upgraded their facilities, further fueling China’s capacity expansions.⁹⁷

Indeed, the very plans and policies that the Chinese government claims, with much fanfare, will resolve the overcapacity crisis, are in fact primary drivers of the problem. Despite repeated failures to accomplish any net capacity reductions, each subsequent iteration of these plans relies on the same state-driven policy levers that are little more than massive industrial subsidy schemes. In 2003, for example, Chinese central authorities instituted one of the country’s first alleged efforts to address overcapacity. The policy acknowledged that various levels of government “for many reasons have built new iron and steel smelting projects on a large scale, providing low-price and tax-free land use rights and giving enterprises all types of unreasonably preferential policies and tax breaks...”⁹⁸ A decade later, in 2013, China’s State Council was still identifying the very same problem, noting that various levels of government “have too excessively pursued fast growth and have relied too heavily on investment as the driver. Through commercial recruiting methods like supplying discounted land, tax breaks, and low-price resource allocation, they have spurred redundant investment and capacity expansion.”⁹⁹

While repeatedly appearing to identify the problem, the Chinese government’s various plans and policies, over nearly 15 years of their implementation, have failed to stop the extensive subsidization and state intervention at the heart of the issue. To the contrary, they have exacerbated the overcapacity problem. While they may create the appearance of serious action, the Chinese government’s overcapacity plans actually permit and even encourage the same state intervention and subsidization that created the problem in the first place.

Specifically, Chinese government plans claim to rely on heightened environmental and industry entry standards, along with more stringent regulatory enforcement. To the extent that any capacity is actually eliminated pursuant to these plans, it is limited to a subset of state-selected “outdated capacity.” For example, as noted above, when Hebei province destroyed some blast furnaces a few years ago, it was reported that “[a]ll of the furnaces targeted for destruction turned out to be so outmoded that the companies that owned them didn’t consider them spare capacity..., meaning they didn’t help reduce the province’s extra volume.”¹⁰⁰ This is consistent with a recent report’s concern that “much of the capacity

⁹⁶ “Circular economy” is a term utilized by the Chinese government to refer to a policy of reducing per-unit emissions and resource consumption through means including technological upgrades, vertical and horizontal integration of related industries and enterprises, and creation of geographically concentrated, top-to-bottom industrial chains in pollution-heavy industries.

⁹⁷ See, e.g., European Chamber of Commerce Report at 17.

⁹⁸ Guo Ban Fa [2003] No. 103 at 3.

⁹⁹ Guo Fa [2013] No. 41 at 1.

¹⁰⁰ Lingling Wei and Bob Davis, *In China, Beijing Fights Losing Battle to Rein In Factory Production*, Wall Street Journal (July 16, 2014).

that is being targeted for closure [by the Chinese government] is ‘zombie’ capacity that does not in reality operate at present.”¹⁰¹

Moreover, under the various Chinese government policies issued over the past 15 years, any capacity actually eliminated is extremely outdated. And it is often replaced by new or upgraded, more efficient, and often larger capacity. As one report recently noted, “many [Chinese] steelmakers while closing high cost urban mills are replacing this capacity with new low cost and energy efficient mills located further from population centres.”¹⁰² These policies are therefore not only ineffective – they actually lead to increases in total capacity (and often total pollution).

Often, on their face, these plans and policies have purported environmental goals. Under the guise of environmental protection, China’s overcapacity initiatives provide substantial subsidies for technological renovations that result in replacing outdated capacity with upgraded and expanded capacity – a net negative for the overcapacity crisis and the environment. For example, a 2005 Chinese government policy focused on developing the “circular economy,” while couched in terms of environmental objectives, instructed authorities to provide a variety of state support that resulted in capacity increases. The 2005 policy sought to “strenuously develop high-technology industries, hasten the use of high technology and advanced application technologies to transform traditional industries; eliminate outdated industrial processes, technology, and equipment; [and] bring about the upgrading of traditional industries.”¹⁰³

In 2006, China’s State Council launched a second major overcapacity initiative that has become the blueprint for China’s overcapacity policies to date. The policy sought to “promote adjustment of the industrial structure in overcapacity industries” by (i) introducing higher environmental, safety and industrial standards,¹⁰⁴ and (ii) identifying and eliminating facilities that do not meet those standards.¹⁰⁵ Notably, the 2006 plan defined “outdated capacity” largely in terms of size and made clear that “eliminate” did not actually mean to remove from the market entirely. It explained that only blast furnaces smaller than 300 cubic meters and rotary and electric furnaces smaller than 20 tons should be eliminated.¹⁰⁶ It provided further that the government would “support the technological renovation projects of large enterprises that are consistent with industrial policy, technologically advanced, and significant to industrial upgrading.”¹⁰⁷ In other words, the policy provided government support – subsidies – for large enterprises to upgrade and expand their facilities.

¹⁰¹ Jefferies Franchise Note, *Metals & Mining* (Jan. 13, 2016) at 36

¹⁰² *Id.*

¹⁰³ *Several Opinions of the State Council Regarding Hastening the Development of the Circular Economy* (国务院关于加强发展循环经济的若干意见), Guo Fa [2005] No. 22 (July 2, 2005) at 3

¹⁰⁴ Guo Fa [2006] No. 11 at 3. The policy sought to “...increase entry barriers by drafting stricter standards such as environmental, safety, energy consumption, water consumption, comprehensive resource utilization, and quality, technology, and scale.”

¹⁰⁵ *Id.* The policy stated a goal to “...close a group of small enterprises that destroy resources, pollute the environment, and do not maintain safe production conditions. Eliminate a set of outdated production capacity in phases and groups. Undertake demolition procedures for outdated production facilities.”

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

The plan called for strict implementation of the State Council's 2005 *Provisional Rules for Promoting Adjustment of the Industrial Structure*, which established an *Industrial Structure Adjustment Guiding Catalogue* that classified industrial projects as "encouraged," "restricted" or "eliminate."¹⁰⁸ Projects and technologies in the "encouraged" category, which were to receive continued state support, included 17 iron and steel items, such as "non-blast-furnace smelting technology"¹⁰⁹ (e.g., the electric arc furnace technology used in the majority of steel production in the United States and a number of other countries¹¹⁰). Even capacity falling under the "restricted" category was allowed to "adopt measures to renovate and upgrade in a set period of time," with government support for doing so.¹¹¹ As a result, China's 2006 overcapacity plan did not lead to reduced capacity. Instead, in only the three years following its issuance, China's annual steel capacity increased by nearly 250 million tons.¹¹²

Subsequent iterations of Chinese government plans purporting to address industrial overcapacity in steel and other industries have retained this ineffectual structure of implementing heightened environmental and industrial standards targeted only at eliminating so-called "outdated capacity," while simultaneously encouraging state support for enterprises to upgrade in accordance with those standards. As another example, the Chinese State Council's 2010 *Notice Regarding Further Strengthening Work on Eliminating Outdated Capacity* explained that governments should:

- "Strengthen budgetary funding guidance... [U]tilize existing funding channels and generally support all localities in undertaking work of eliminating outdated capacity... All localities should also actively allocate funding to support enterprises in eliminating outdated capacity."¹¹³
- "Support enterprise upgrades and renovations. Fully realize the use of science and technology in supporting industrial upgrading... [A]llocate technology renovation funds, implement and perfect relevant preferential income tax and financing support policies. Support enterprises consistent with national industrial policy and planning in using high technology and advanced applications technology. Emphasizing product quality, energy conservation, environmental protection, equipment improvements, and safe production, undertake renovation of outdated capacity... Prioritize technology renovation funds, energy conservation and emissions reduction funds, project approvals, land development and utilization, and financing support for localities and enterprises with significant burdens and good records in eliminating outdated capacity."¹¹⁴

Most recently, in 2013, China's State Council issued the *Guiding Opinion of the State Council Regarding Resolving the Contradictions of Serious Overcapacity*. Once again, despite the policy's stated concern with overcapacity in steel and other industries, the central government reiterated its support for industrial upgrading in accordance with the very standards that it claimed should force excess capacity

¹⁰⁸ *Decision of the State Council Regarding Publication and Implementation of the Provisional Rules for Promoting Adjustment of the Industrial Structure* (国务院关于发布实施《促进产业结构调整暂行规定》的决定), Guo Fa [2005] No. 40 (Dec. 2, 2005) at Art. 12.

¹⁰⁹ *Id.* at Art. 17; *Industrial Structure Adjustment Guiding Catalogue (2011 Edition)* (earlier editions are no longer available) at 11.

¹¹⁰ See, e.g., *World Steel in Figures 2015*, World Steel Association (May 29, 2015) at 10.

¹¹¹ Guo Fa [2005] No. 40 at Art. 18.

¹¹² OECD, *Developments in Steelmaking Capacity of Non-OECD Economies 2013* (Aug. 13, 2014) at 8.

¹¹³ Guo Fa [2010] No. 7 at 4.

¹¹⁴ *Id.* (emphasis added).

from the market. The *Guiding Opinion* explained that “[t]he central budget should expand support for overcapacity sectors to implement structural adjustments and industrial upgrades, and each local budget should allocate special funds to provide support as practical.”¹¹⁵ It also directed financial institutions to “expand credit support for technological renovations.”¹¹⁶

A steel-specific plan to implement the 2013 *Guiding Opinion* imposed minimum capacity requirements for Chinese steel producers, identifying for closure blast furnaces smaller than 400 cubic meters and rotary or electric furnaces smaller than 30 tons.¹¹⁷ As the European Chamber of Commerce in China recently explained, such measures have “spurred a number of producers to expand their capacity above these thresholds in order to avoid closure,” citing an example in which a Chinese steel producer received compensation for “dismantling four small blast furnaces [and] spent the funds it received on building a larger one.”¹¹⁸ In this way, such minimum capacity standards drive a “survival of the largest” approach in which, perversely, smaller steel mills are forced to expand capacity to comply with central industrial policies and are subsidized for doing so. It is more difficult for these super-sized facilities to adjust their output in accordance with market conditions, so their output remains high, even when smaller, more nimble producers could more easily cut production to align with actual demand.

China’s 2013 *Guiding Opinion* introduced another particularly harmful approach to the country’s domestic overcapacity crisis. It explicitly encourages the use of foreign markets as a release valve for China’s excess steel capacity, through both exports of domestically produced steel and the state-supported relocation of Chinese mills to foreign countries. The *Guiding Opinion* calls for “implementing overseas investments and reorganizations to transfer excess domestic capacity” and directs financial institutions to “expand the level of support for enterprises ‘going out’ ...to support the transfer of capacity abroad.”¹¹⁹ The steel-specific implementation plan reiterates this policy by “encourag[ing] qualifying enterprises to link with ‘One Belt, One Road’ construction to transfer some capacity through international capacity cooperation and realize win-win and mutual benefit.”¹²⁰ Such initiatives demonstrate the Chinese government’s intention to maintain a China-centric approach that shifts the economic burdens of its own harmful domestic policies onto the markets of its trading partners.

In short, Chinese central government policies permit and in fact support the replacement of outdated capacity with state-of-the-art facilities, driving capacity expansions rather than promoting the exit of capacity from the market. As a result of these policy initiatives, even as some “outdated capacity” has been eliminated, it has been replaced by greater volumes of upgraded and expanded capacity. Under the latest plan, additional capacity is even being moved overseas, with generous state support and at the direction of central government initiatives.

In addition to actively promoting and subsidizing the upgrading and expansion of steel capacity, the Chinese government has continued to demonstrate that it will intervene directly to prevent capacity

¹¹⁵ Guo [2013] No. 41 at 7-8.

¹¹⁶ *Id.*

¹¹⁷ *Opinion of the State Council Regarding Resolving Overcapacity in the Steel Industry and Realizing Development that Relieves Hardship* (国务院关于钢铁行业化解过剩产能实现脱困发展的意见), Guo Fa [2016] No. 6 (Feb 1, 2016).

¹¹⁸ European Chamber of Commerce 2016 Report at 17.

¹¹⁹ Guo Fa [2013] No. 41 at 7-8 (emphasis added).

¹²⁰ Guo Fa [2016] No. 6 at 2.

closures that would otherwise occur. For example, four Chinese steelmaking companies that halted operations last year due to staggering financial losses, now plan to re-start production after major investments by a Chinese state-owned company, indicating that “the government is not ready for massive closures of steel mills.”¹²¹ And reports persist that “local governments simply [will not] allow steel mills to be closed down for the sake of local employment and fiscal income,”¹²² despite recent promises for capacity closures. For example, despite 192 billion yuan of debt that Bohai Steel cannot repay, the Tianjin government, which owns Bohai, has reportedly “‘asked banks to continue lending’ to Bohai,” promising that “the government will pay the interest.”¹²³

2. Government Intervention in Other Global Steel Industries

Turkey is another prime example of a steel industry built with government support. The Turkish steel industry has grown rapidly, jumping from the 17th largest crude steel-producing country in the world in 2000 to the 9th largest last year.¹²⁴ Such dramatic growth has been facilitated by significant subsidies from the Turkish government, including low-interest development bank loans,¹²⁵ export credits and insurance,¹²⁶ tax benefits,¹²⁷ and the provision of low-cost inputs to suppliers.¹²⁸ In addition, Turkish steel producers that generate power with their own coal-fired or natural gas power plants benefit from state-controlled pricing schemes, resulting in artificially low energy costs for such producers.¹²⁹

Similarly, the Indian government has fostered the rapid expansion of its steel industry through intervention and subsidies. There, the government owns 86 percent of the Steel Authority of India Ltd. (SAIL), India’s largest steel producer.¹³⁰ Outside of ownership, the Indian government has historically intervened in its steel market by promoting investments and propping up struggling enterprises with

¹²¹ China’s big state-owned investor to help private loss-making steel companies, Metal Expert Daily News (Feb. 4, 2016).

¹²² Tracy Alloway, *Why China’s Steel Mills Won’t Cut Back Production*, Bloomberg (Nov. 24, 2015).

¹²³ Wu Hongyuran and Yang Qiaoling, *Intense Jostling over an Indebted Steelmaker*, Caixin Online (Apr. 7, 2016).

¹²⁴ Turkish Steel Exporters’ Association, *Turkish Steel Trade Delegation Dubai* (2015) at 10; World Steel Association, *Crude steel production 2015-2014*, available at <https://www.worldsteel.org/statistics/crude-steel-production.html>.

¹²⁵ See, e.g., Kalkinma Development Bank of Turkey, *2014 Annual Report*, http://english.kalkinma.com.tr/userfiles/pagefiles/annual-reports/annual_report_2014.pdf (last visited Apr. 8, 2016).

¹²⁶ See Report by the Secretariat, *Trade Policy Review: Turkey*, WT/TPR/S/331 (Feb. 9, 2016) at 88 (noting that 19 percent of the short-term export credits granted by Turk Eximbank in 2014 were in the iron and steel sector); *New and Full Notification Pursuant to Article XVI:1 of the GATT 1994 and Article 25 of the Agreement on Subsidies and Countervailing Measures: Turkey*, G/SCM/N/284/TUR (Sept. 18, 2015) (Turkey 2015 WTO Subsidies Notification) at 9-23.

¹²⁷ See Turkey 2015 WTO Subsidies Notification at 1-5.

¹²⁸ Issues and Decision Memorandum accompanying *Welded Carbon Steel Standard Pipe from Turkey*, 70 Fed. Reg. 62,097 (Dep’t Commerce Oct. 28, 2005) (final results of expedited sunset review); Issues and Decision Memorandum accompanying *Heavy Walled Rectangular Welded Carbon Steel Pipes and Tubes From the Republic of Turkey*, 80 Fed. Reg. 80,749 (Dep’t Commerce Dec. 28, 2015) (prelim. affirmative countervailing duty deter. and alignment of final deter. with final antidumping duty deter.).

¹²⁹ See Report by the Secretariat, *Trade Policy Review: Turkey*, WT/TPR/S/259 (Jan. 17, 2012) at 91-92.

¹³⁰ OECD 2015 Excess Capacity and New Projects Report at 36.

“cheap loans, tax incentives [and] subsidized land,”¹³¹ in addition to imposing import duties, licensing requirements and raw material export restrictions to protect domestic producers.¹³²

Governments in countries with smaller steel outputs are also learning from the Chinese example and intervening to protect and expand their steel industries. For example, state-owned steel companies in Indonesia, Iran, Libya, Nigeria, Qatar, South Africa, Tunisia, Venezuela and Vietnam each have recently expanded capacity or plan to do so in the near future,¹³³ which will contribute to the excess capacity plaguing the global steel industry. In addition to those discussed above, the following governments own significant shares of the large (if not the largest) steel companies in their countries, thereby playing a role in increased production in these countries: Pakistan (which recently delayed plans to privatize its Pakistan Steel Mills Corporation¹³⁴), Saudi Arabia (which owns 70 percent of Saudi Basic Industries Corporation¹³⁵), and the United Arab Emirates (whose Emirate Steel Industries PJSC is wholly owned by Senaat, the Abu Dhabi government’s industrial investment holding company¹³⁶).

Even in countries with historically market-based economies, governments are intervening in the steel sector. In Europe, there are several ongoing investigations of government interference to prevent capacity closures. For example, the European Commission recently concluded that a public authority controlled by the government in the Walloon region of Belgium “repeatedly granted support measures amounting to €211 million in state aid to companies of the Duferco group between 2006 and 2011,” which “artificially boosted the companies’ revenues and postponed the difficult yet necessary capacity adjustments in the Walloon steel industry.”¹³⁷

As discussed in the 2013 paper, the Italian government took steps in recent years to prevent the closure of steelmaker Ilva SpA’s plant in Taranto, Italy, the largest steelmaking facility in Europe.¹³⁸ The European Commission is now investigating the consistency with European state aid rules of the Italian government’s actions, which reportedly totaled approximately €2 billion and included “state guarantees on loans, a law exceptionally giving loans granted to Ilva an absolute payment priority in case of bankruptcy, including over debt to public entities, a law allowing Ilva access to funds seized during ongoing criminal proceedings against Ilva’s shareholders and former management before those proceedings have established who owns these funds, and the settlement by payments to Ilva of a long standing dispute between State-owned Fintecna and Ilva.”¹³⁹

¹³¹ Ernst & Young LLP, *Indian steel: Strategy to ambition* (2014) at 6.

¹³² See, e.g., U.S. Trade Representative, *2015 National Trade Estimate Report on Foreign Trade Barriers* (Apr. 1, 2015) at 183.

¹³³ OECD 2015 Excess Capacity Report at Annex.

¹³⁴ Shahbaz Rana, *IMF agrees to delay PIA sell-off for six months*, *The Express Tribune* (Feb. 4, 2016).

¹³⁵ Gulf Petrochemicals and Chemicals Association, *Saudi Basic Industries Corporation (SABIC)*, <http://gpca.org.ae/congulf/blog/saudi-basic-industries-corporation-sabic/> (last visited Mar. 30, 2016).

¹³⁶ *Emirates Steel*, <http://www.senaat.co/emirates-steel> (last visited Mar. 30, 2016).

¹³⁷ European Commission, *State aid: Commission orders Belgium to recover €211 million from several steel companies within the Duferco group* (Jan. 20, 2016).

¹³⁸ *Government Intervention and Overcapacity 2013* at 19.

¹³⁹ European Commission, *State aid: Commission opens in-depth investigation into Italian support for steel producer Ilva in Taranto, Italy* (Jan. 20, 2016).

Government interference in the global steel market has been exacerbated by the activities of multilateral development banks and national export promotion agencies. These organizations have loaned steelmakers around the world billions of dollars, often ostensibly to increase energy efficiency and to reduce pollution. In other cases, the goal is to promote the export of steelmaking machinery. In either case, the end result is the same – lending at below-market rates leads to the creation and maintenance of capacity that would not otherwise occur. For example, last year, the Brazilian National Development Bank (BNDES) announced that it would provide steel company Companhia Siderúrgica do Pecém (CSP) with up to USD 1 billion to build a plant at the Pecém Industrial Port Complex with a three million ton annual production capacity.¹⁴⁰ As CSP is partially owned by POSCO and Dongkuk Steel, the Korean Export-Import Bank is also reportedly lending significant support to the construction of the new mill.¹⁴¹

Even here in the United States, export banks have played a role in expanding steel capacity. New Arkansas steel producer Big River Steel received an \$800 million loan from the German government-owned KfW IPEX Bank GmbH, with export credit insurance provided by Germany's export promotion agency Euler Hermes, in return for its purchase of German steelmaking equipment.¹⁴² This loan accounts for a majority of the capital used to build Big River Steel. When completed this year, Big River Steel's mill will add about 1.6 million tons of capacity to the U.S. steel market.¹⁴³

These examples demonstrate that, just as the Department of Commerce found in its 2000 report, growing overcapacity in the global steel market continues to be due in large part to government subsidies to and intervention in steel industries around the world, most notably in countries outside of North America.¹⁴⁴ Government subsidies continue to help create massive steel capacity worldwide and to prevent much-needed capacity closures and reductions in response to oversupply and weakening demand conditions.

IV. SOLUTIONS TO THE GLOBAL OVERCAPACITY CRISIS

Previous efforts to remedy global steel overcapacity – and to eliminate government intervention and other market-distorting practices contributing to overcapacity – have not achieved long-term results. Indeed, since the first issue of this paper was released, the excess capacity crisis has only worsened. Unless immediate action is taken to reduce global overcapacity, the very viability of many steel industries around the world will be threatened.

Notably, China must take action. Given China's overwhelming contribution to the overcapacity crisis, any real solution simply must include meaningful and effective action by the Chinese government to

¹⁴⁰ Brazil: BNDES to grant Vale, Dongkuk and Posco USD 800 million to build steel mill, Global Trade Alert (Oct. 2, 2015); White & Case, *White & Case Named Best Infrastructure Law Firm in Latin America by LatinFinance* (Oct. 8, 2015) (BNDES is involved in "a US\$3.1 billion loan to Companhia Siderugica do Pecem (CSP). CSP is building a steel mill in the northeastern Brazilian State of Ceará and once operational will produce three million tons of steel products. CSP is owned by Vale (50 percent), Dongkuk Steel (30 percent) and Posco (20 percent). BNDES is providing US\$1 billion in funding and KEXIM, K-Sure and certain commercial lenders have agreed to provide \$2.1 billion in funding").

¹⁴¹ White & Case, *White & Case Named Best Infrastructure Law Firm in Latin America by LatinFinance* (Oct. 8, 2015).

¹⁴² Joe Nocera, *Corporate Welfare for the Kochs*, The New York Times (Oct. 10, 2015); Jonathan Bell, *KfW IPEX arranges major export finance for Siemens equipment to US*, Trade & Export Finance (July 9, 2014).

¹⁴³ *KfW and Euler fund huge US steel mill*, Global Trade Review (July 14, 2015).

¹⁴⁴ Commerce Global Steel Trade Report at 4.

shutter a substantial portion of its massive, state-sponsored steel capacity. China's current plan to reduce steel capacity by 100 to 150 million tons is insufficient. To make an appreciable improvement in the global overcapacity crisis, Chinese steel producers must close 300 to 400 million tons of steelmaking capacity. Currently, it appears unlikely that even the planned 100 to 150 million tons of closures will occur, given China's track record and the plethora of existing plans and policies that may purport to lead to capacity closures but instead have consistently encouraged the upgrading and expanding of steel capacity, including with government support, as discussed above.

To achieve the much-needed, permanent closure of global capacity, government policy makers, particularly those in China, must reduce or eliminate the underlying market-distorting practices that serve to increase and/or maintain inefficient capacity. Governments may need to provide limited assistance to facilitate the permanent closure of excess steel capacity, as "policies that promote the efficient restructuring of the industry or provide assistance to workers who may be displaced by the closure of uneconomic mills can be useful tools to address the problem and promote greater stability in global steel markets."¹⁴⁵ Otherwise, countries should agree to remove government ownership and control over the industry, as well as any other government involvement, direct or indirect, in the industry. This includes:

- Eliminating government subsidies and other assistance to the steel industry, including assistance to prop up loss-making capacity. This assistance also includes loans and grants ostensibly for environmental and efficiency purposes, which in effect are highly distortive subsidies that maintain and increase net steel capacity worldwide;
- Eliminating government practices and policies that prevent or forestall adjustments mandated by the market. For example, companies must be permitted to lower production levels and cease production when demand, profitability or other market conditions warrant;
- Removing government industrial planning and decision-making from the steel industry, specifically including China's minimum standards, which act perversely to promote the creation of ever-larger steelmaking plants that, by their very nature, cannot easily respond to demand fluctuations;
- Imposing a strict prohibition on multilateral and export bank lending on steel projects, which has been a significant source of funding for unnecessary capacity survival and expansions;
- Removing export restrictions on critical raw materials and other government intervention in raw materials markets, so that raw materials trade is based on market principles; and
- Removing import tariffs and trade-distorting non-tariff barriers on steel products.

Governments must also recognize that a ton of excess steel capacity is equally harmful regardless of where it is produced, and agree that foreign markets should not be used as tools for relieving the harmful domestic impact of a country's own overcapacity, whether through encouraging exports or supporting the relocation of mills to third countries.

As always, vigorous enforcement of the antidumping and countervailing duty laws is necessary to ensure that imports compete on a fair basis. These World Trade Organization rules are pro-competition, as they address unfair trade practices. In particular, China must continue to be treated as a non-market

¹⁴⁵ OECD 2015 Excess Capacity Report at 6.

economy for trade remedy purposes, given the Chinese government's continued, substantial and disruptive intervention in its steel industry and overall economy.

Major steel-producing countries should also remove other practices that cause market distortions and take measures to ensure a market-based, competitive home market. For example, countries should ensure the proper enforcement of antitrust and competition rules to prevent "cooperative systems" among domestic producers, and remove import barriers that insulate domestic producers from competition. As stated in *Government Intervention and Overcapacity* in 2013, there is simply no reason for countries that have developed steel industries, such as India, Brazil, Russia and Turkey, to maintain tariffs and other import barriers on steel products or to impose export restrictions on raw materials – yet these countries continue to do so. Each of these practices can artificially reduce costs and inflate the export competitiveness of domestic producers, leading to surplus capacity and trade distortions.

Moreover, industries that currently have significant excess capacity should commit to market-based restructuring and consolidation, with the goal of eliminating inefficient and uneconomic capacity. Given the severity of the current crisis, efforts to restructure and eliminate excess capacity can no longer be postponed. It is important to note, however, that consolidation and restructuring alone do not provide an adequate solution. Any such consolidation/ restructuring must be market-based, not driven by government policies intended to promote their domestic manufacturing bases. The primary aluminum industry, for example, is far more consolidated worldwide than the steel industry. Yet severe overcapacity persists, and market-based producers are struggling to compete with massive Chinese producers who can count on government support for their production, reinvestment and survival.¹⁴⁶ Consolidation of market-oriented producers will not enable them to compete against such companies, which can rely on subsidies instead of their own profits and do not have to generate a return on investments to expand, reinvest and survive.

To be effective, consolidation cannot simply be a cover for the government to transfer assets and provide subsidies to its failing enterprises. Instead, restructuring should enable companies to adjust production levels commensurate with demand and other market conditions, eliminating the need for companies to produce their way out of a downturn. The restructuring process should also include the implementation and utilization of viable, market-based bankruptcy procedures to ensure a well-functioning exit process. Such procedures will help ensure that uneconomic capacity is removed, keeping non-market based capacity expansion in check. As the Department of Commerce concluded in 2000, "[t]he longer that normal market restructuring is postponed, the more painful the process will be."¹⁴⁷

If the long-term issues associated with overcapacity and other market-distortions are not addressed in a comprehensive manner, the adverse effects stemming from these imbalances, including unfair trade practices and the resulting trade friction, will persist and worsen. It has already taken far too long to address these problems facing the global steel industry. Action is critically needed now to address the long-term supply-demand imbalance plaguing the global steel industry and to ensure the continued viability of American steel producers.

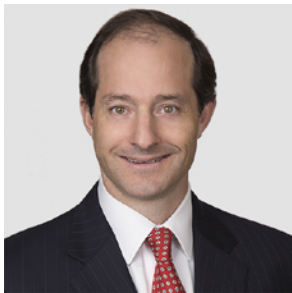
¹⁴⁶ In China, 75 percent of aluminum is produced by 14 major aluminum producers. Biman Mukherji, *Aluminum Rises as Chinese Producers Vow to Cut Production*, Wall Street Journal (Dec. 11, 2015).

¹⁴⁷ Commerce Global Steel Trade Report at 124.

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