

**STEEL-INSIGHTS, LLC**  
*Metals, Mining & Manufacturing Strategic Consulting*

# *Running Against the Wind: Economy & the Steel Industry Push Forward in the Face of Strong Headwinds*



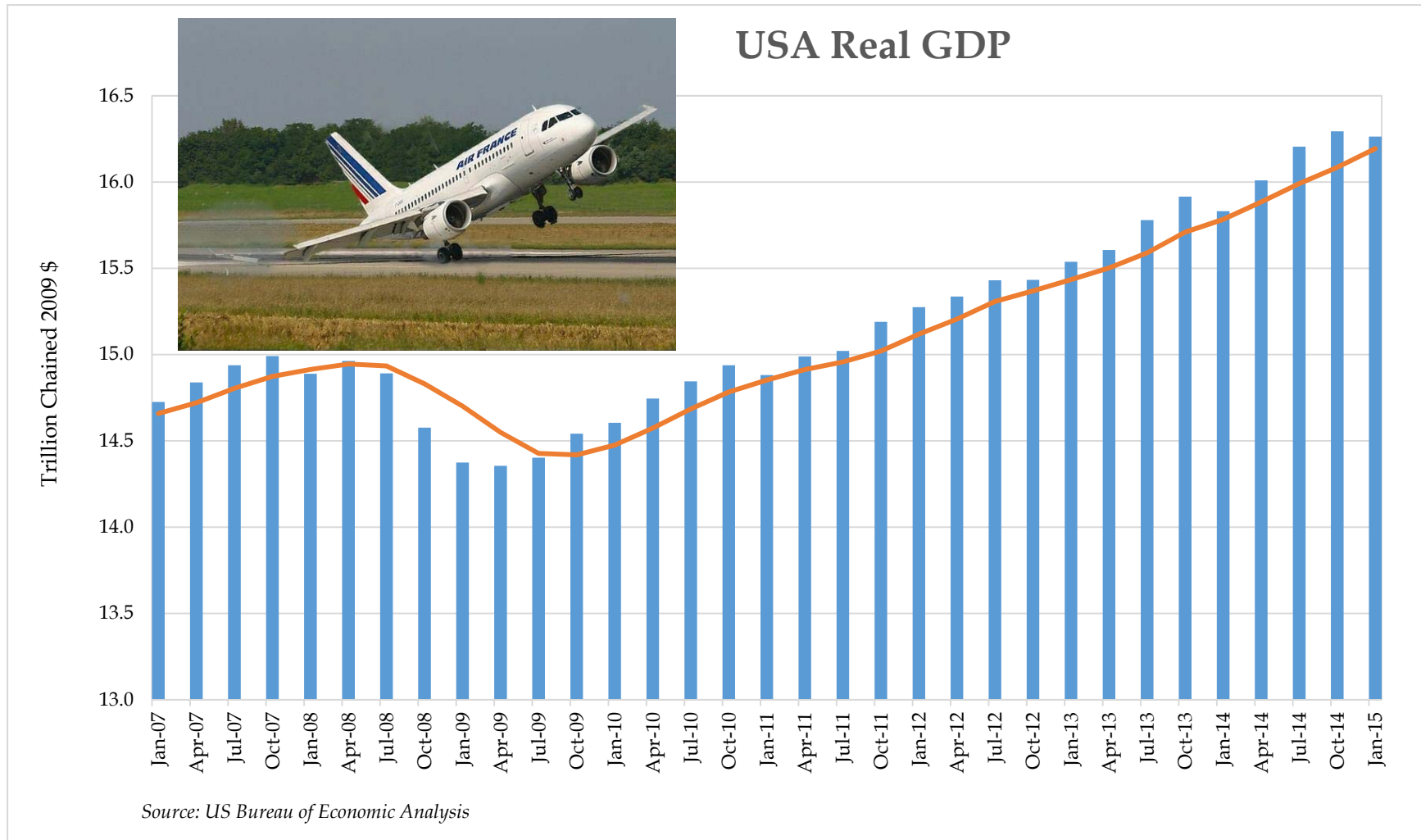
Presentation to:  
**A Private Client**  
Chicago, IL



by: Becky E. Hites, President  
June 24, 2015

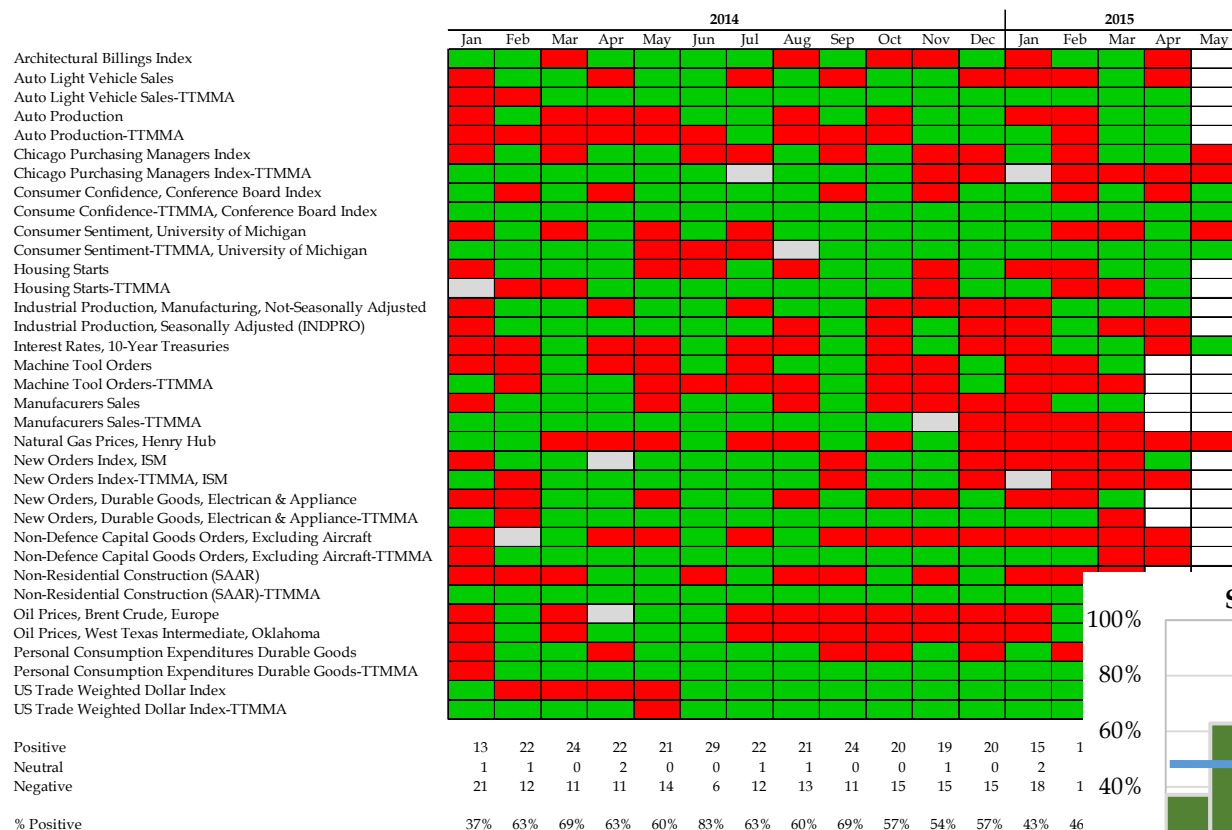


# A Strong Dollar, the West Coast Port Strike and Persistently Disruptive Weather Short-Sheeted Q1 Economic Growth



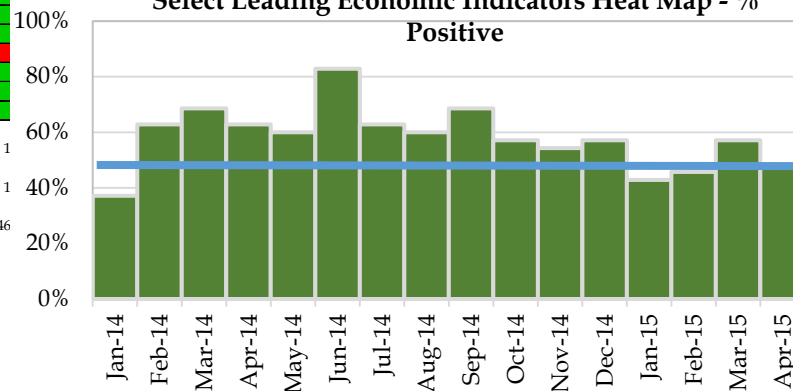
# Select Leading Indicators Heat Map Continues to Signal Economic Vulnerability – Only Half the Indicators Are Positive

Select Leading & Other Economic Indicators Heat Map-Month to Month Change



Code: red=down; green=up; grey=sideways; white=no new data yet  
 Source: Steel-Insights, LLC analysis

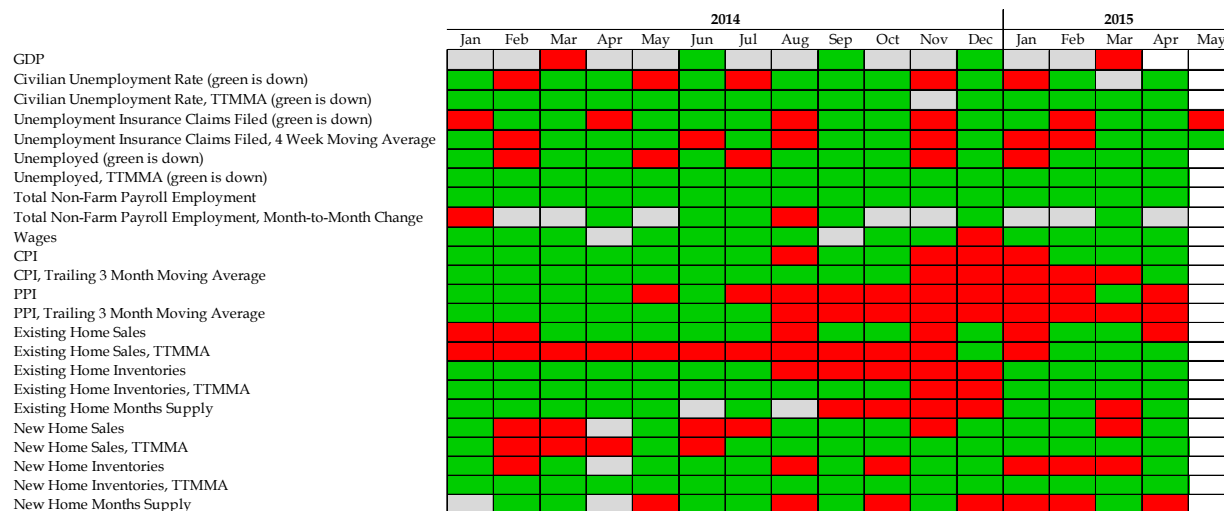
Select Leading Economic Indicators Heat Map - % Positive



Source: Steel-Insights, LLC analysis

# Select Macro Indicator Heat Map Pretty Positive Overall - Weighted to Employment, Wages, Inflation and Housing

Select USA Macro Economic Indicators Heat Map-Month to Month Change



Positive  
Neutral  
Negative

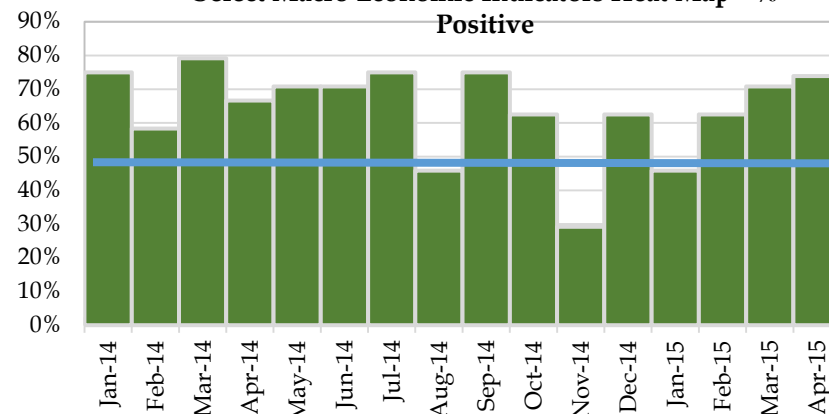
% Positive

Code: red=down; green=up; grey=sideways; white=no new data yet

Source: Steel-Insights, LLC analysis

18	14	19	16	17	17	18	11	18	15	7	15	11	15	17	17	17
2	2	1	5	2	1	1	2	1	2	3	0					
4	8	4	3	5	6	5	11	5	7	14	9					

Select Macro Economic Indicators Heat Map - %  
Positive



Source: Steel-Insights, LLC analysis



# Macro Economic Policy Events

## The Fed, Greece & FIFA

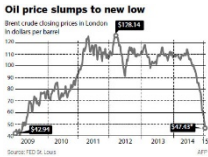


- The Federal Reserve Bank continues to signal its intention to shift away from quantitative easing and back to a more “normal” stance by raising rates to add a time value to money. It will be gradual, including several small moves, and has been delayed more than once due to global and Wall Street pushback. Could come as early as September.
- Grexit – Greece’s next debt hurdle date is July 30. Has created instability in the EU and brings Euro questions to the table. Will Greece be the only country to withdraw? Will Russia or China step up to provide a financial bridge to Greece?
- FIFA corruption could derail next two World Cups. Soccer is big business globally.



FIFA WORLD CUP  
RUSSIA 2018

# Energy Highlights – Could be Low Cost, But We're Opting for a Cleaner Environment



- Oil has now been in global oversupply for 5 quarters – the longest period in my adult lifetime. *Bloomberg, June 16, 2015*



- Pope Francis has entered the clean environment fray with an “encyclical” calling for more action to halt climate change.



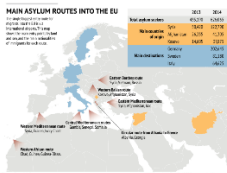
- Renewable energy generation could overtake coal in 15 year. *Financial Times, June 14, 2015*







- Between now and 2040, expecting \$3.7 trillion in solar energy capital investments. *Bloomberg Business, June 23, 2015*

# Global Dislocation Disrupting Economics

- Russia Ukrainian border – Has seriously impacted steel production from Ukraine, which was low cost production, and has somewhat impacted raw material costs into Russia. Russia has rattled its saber about restricting scrap outflows due to shortages in the country.
- Asylum seekers are creating an immigration crisis in Europe. Italy has threatened action and Hungary plans to erect a fence to block displaced migrants.
- USA has approval from Germany to station heavy military equipment on NATO's eastern border.
- Yemen – KSA led coalition air offensive in support of the contested president put in place after the Arab Spring of 2011. The current president has fled the country.
- ISIS – USA has begun training forces in the region and sent Delta Force on targeted attacks after the conflict began to migrate to US soil.



# Labor Shortage Could Be Developing; Challenging Contract Negotiations in Steel

-  Goldman Sachs is forcing its 2,900 summer interns to leave the office at midnight, and not work Saturdays, as it competes to attract labor from other more appealing markets.
-  20 states have enacted minimum wage increases for 2015.
-  Wal-Mart and McDonalds raising hourly wages.
-  ArcelorMittal and US Steel union contracts are up in September. Negotiations have already started. It's likely to be a drawn out process with both sides in difficult positions. ATI is also in a contentious contract renegotiation.

ArcelorMittal

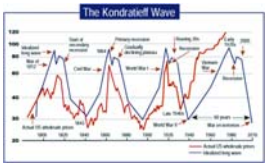
USS  
USW

ATI

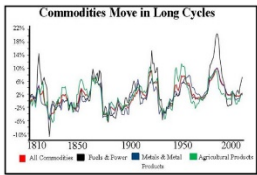


# Long Economic Cycle In a Downtrend

- Soviet economist Nikolai Kondratiev published work in 1925 (previously observed by Dutch economists van Gelderen and de Wolff in 1913) postulating 50-60 year cycles – now known as K-Waves.



- This industry cyclical downturn is likely to be extended due to global overcapacity not only of steelmaking, but raw material supply as well.



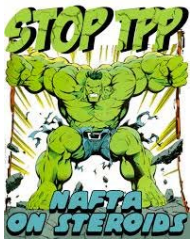
- The “normal” corrective forces in the USA have arguably been offset by the house financing bubble, followed by quantitative easing.



# Global Trade Highlights



- Export-Import Bank charter up for renewal. Jeff Immelt warned GE would withhold business from states where politicians block international trade and export credit support.



- Trans-Pacific Partnership (TPP) – In negotiations since 2009. From the Trade Department website: “The United States is negotiating the TPP with 11 other like-minded countries (Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam) that share a commitment to concluding a high-standard, ambitious agreement and to expanding the initial group to include additional countries throughout the Asia-Pacific region. We are in the endgame of negotiations, making TPP the most promising platform for Asia-Pacific regional trade integration.” There’s worry that the President won’t adequately protect USA manufacturers interests.



- Trade Promotion Authority (TPA) – Would authorize the president to negotiate on behalf of the USA for a straight up or down Congressional vote on the final agreement. Term would be 6 years into the next presidency. The hope is that the new TPP would reboot Regan’s 3Rs – Rules, Reciprocity and Results – on trade.

# USA Trade Legislation Overview

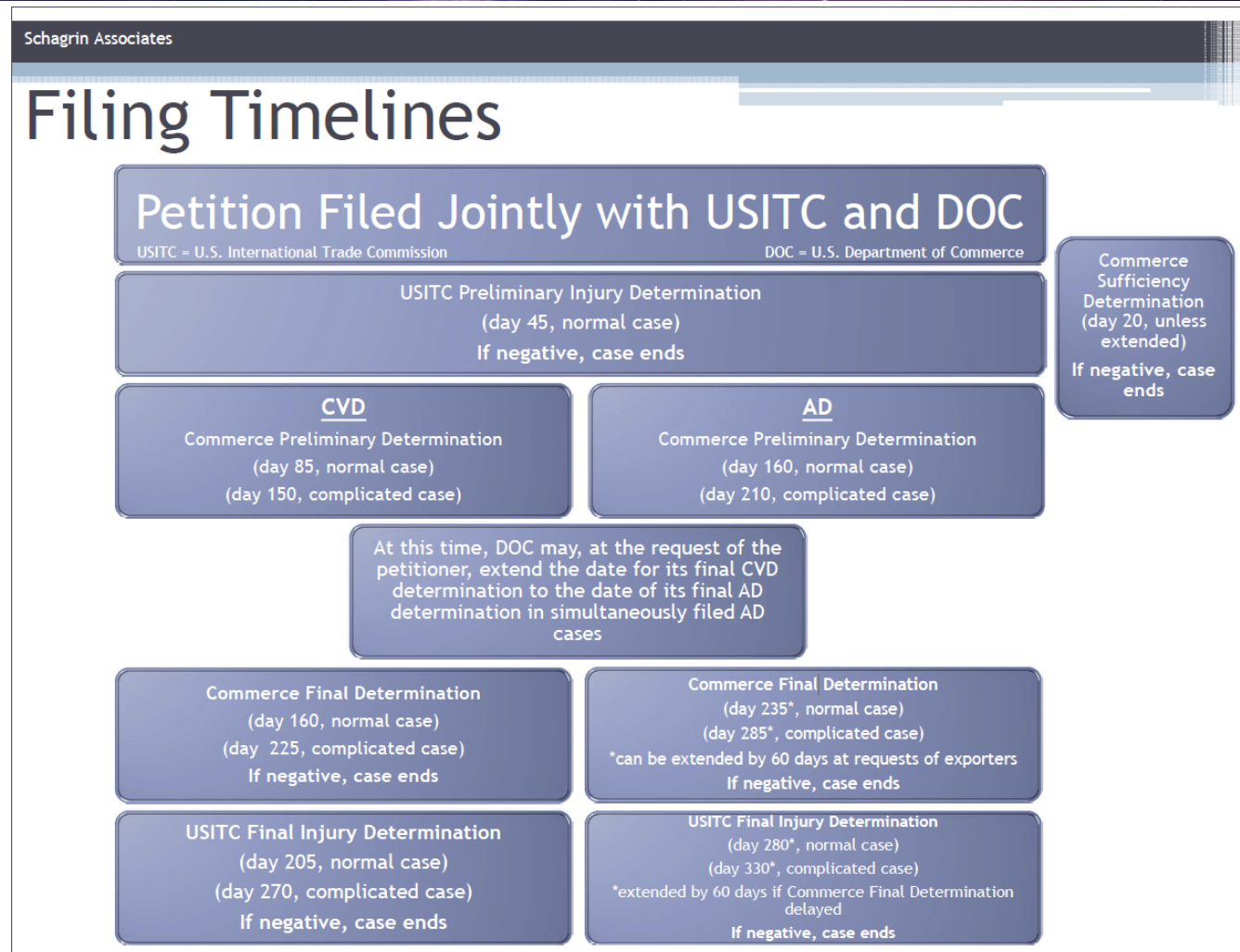
- TPA and TAA (Trade Adjustment Assistance) are now separate bills
- TPA has passed the house and has a good chance passing in the Senate again
- TAA (this is the one voted down week before last) could still be a challenge in the House and Senate, but with trade remedy and enforcement being used as a "sweetener" and with the traditional Democratic support that TAA has had, it appears to be in better standing than it was last week.
- Week before last the house passed the Custom's Bill, which included trade remedy and enforcement provisions.
- Trade remedy and enforcement provisions are in good shape with the custom's bill but they need to be implemented in a timely manner. Making them part of the TAA bill could help do this.
- President Obama is ready to sign both bills into law.

*Source: Steel Manufacturers Association*



# USA Trade Case Timing Overview

Trade case filed June 4 alleging unfair trade of corrosion resistant products by China, India, Italy, South Korea & Taiwan. DOC makes determination up to day 160 and backdates 90 days, so products landing within 70 days from filing (by Aug 13) safe from penalty.



Source: Steel Market Update & Schagrin Associates, used with permission



# The Trade Department's Definition of "Injury"

- Increased imports don't automatically imply injury.
- There are lots of discussions currently about what determines injury including the earlier mentioned customs bill.
- USA mills raised prices in Dec and again in June.
- Only the integrated mills are losing money.
- Minis are arguing that significantly underutilized capacity indicates injury.

# USA & Mexico Capacity Additions



- Big River Steel – 1.1 mm tpy sheet mill, planning to be in trials 1H 2016.



- GerdaU – Monroe, MI engineered bar mill new 300K tpy line started-up Q4 2014. New reheat furnace to increase capacity started-up Q1 2015.



- GerdaU Corsa, Mexico – New 700K tpy structural shape mill (1 mm tpy crude steel). Rolling mill started up May 2015.



- New micro-bar mill rumored to be announced this summer for a location in TX north of Dallas.



- Commercial Metals rumored to be considering a second micro-bar mill to be constructed in Oklahoma.



- US Steel EAF in Fairfield, AL planned Q2 2016 start.

# NAFTA Currently Has 14 Million Tons of Idled Steelmaking Capacity

- Canada – Hamilton mill – 2.0 mm tons, since Oct 2010
- Canada – Essar – 1.0 mm tons
- Mexico – AHMSA – 1.0 mm tons
- ArcelorMittal – Indiana Harbor – 5.0 mm tons
- US Steel – Gary Works – 1.4 mm tons
- US Steel – Granite City – 1.3 mm tons down for capital project
- US Steel – Great Lakes – 1.4 mm tons down intermittently

# Global & USA Steel Production Heat Map

## More Red Than Green in 2015

Steel Production Heat Map-Month to Month Change

	2014												2015					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
WSA Monthly Crude Steel Production-World																		
WSA Monthly Crude Steel Production-China																		
WSA Monthly Crude Steel Production-World ex China																		
WSA Monthly Crude Steel Production-EU (27)																		
WSD Monthly Crude Steel Production-USA																		
WSA Monthly Crude Steel Production-World-Annualized																		
WSA Monthly Crude Steel Production-China-Annualized																		
WSA Monthly Crude Steel Production-World ex China-Annualized																		
WSA Monthly Crude Steel Production-EU (27)-Annualized																		
WSD Monthly Crude Steel Production-USA-Annualized																		
WSA Monthly Crude Steel Production-World-TTMMA																		
WSA Monthly Crude Steel Production-China-TTMMA																		
WSA Monthly Crude Steel Production-World ex China-TTMMA																		
WSA Monthly Crude Steel Production-EU (27)-TTMMA																		
WSD Monthly Crude Steel Production-USA-TTMMA																		
AISI Weekly Crude Steel Production																		
AISI Weekly Crude Steel Production-Monthly Annualized TTMMA																		
AISI Steel Production Utilization Rate																		
AISI Steel Production Utilization Rate-Monthly TTMMA																		
AISI Monthly Steel Shipments																		
AISI Monthly Steel Shipments Year-Over-Year Change																		
AISI Monthly Imports																		
AISI Monthly Exports																		
AISI Imports as a Percent of Apparent Steel Consumption																		

Positive  
Neutral  
Negative

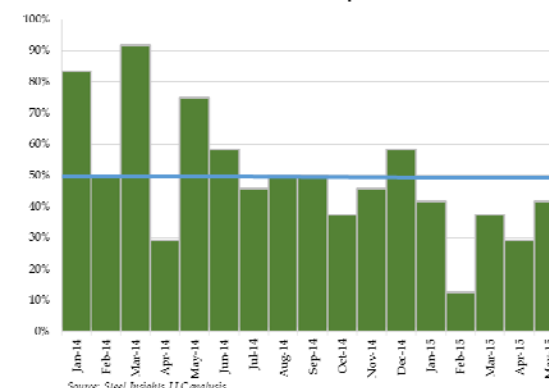
20 12 22 7 18 14 11 12 12 9 11 14 10 3  
1 4 0 2 0 1 2 3 3 3 1 1 2 2  
3 8 2 15 6 9 11 9 9 12 12 9 12 19

% Positive

83% 50% 92% 29% 75% 58% 46% 50% 50% 38% 46% 58% 42% 13%

Code: red=down; green=up; grey=sideways; white=no new data yet

Steel Production Heat Map - % Positive





# World Crude Production Sideways at 1.6 Billion Tonnes; China Sideways; USA Down

## WSA Crude Steel Production

(million metric tonnes)

	Annualized Run Rate					Annualized Run Rate TTMMA				
	World	China	World x China	USA	EU 27	World	China	World x China	USA	EU 27
Jan 14	1,625	820	805	86	172	1,586	781	805	87	167
Feb 14	1,654	820	834	89	181	1,588	782	807	87	167
Mar 14	1,670	828	842	88	182	1,595	786	809	87	169
Apr 14	1,676	844	832	87	175	1,600	789	811	87	169
May 14	1,667	829	838	88	176	1,605	793	813	87	169
Jun 14	1,682	843	839	89	175	1,612	797	815	87	170
Jul 14	1,616	804	812	91	163	1,617	800	817	88	170
Aug 14	1,596	811	785	91	143	1,621	803	818	88	170
Sep 14	1,639	822	818	89	173	1,623	805	818	88	170
Oct 14	1,610	795	815	87	174	1,626	807	818	88	170
Nov 14	1,590	770	820	88	173	1,628	810	819	88	170
Dec 14	1,578	763	814	86	154	1,633	812	821	88	170
Jan 15	1,614	807	806	85	171	1,632	811	821	88	170
Feb 15	1,628	807	821	81	182	1,630	810	820	88	170
Mar 15	1,626	818	808	76	182	1,627	810	817	87	170
Apr 15	1,642	838	804	78	173	1,624	809	815	86	170
May 15	1,640	824	817	81	178	1,622	809	813	85	170

Source: World Steel Association

# USA Domestic Shipments Are Down 11.3% and Consumption is Down 6.5% on Annualized Data Through April

## Total Steel Mill Product - Shipments, Imports, Exports and Apparent Steel Consumption (million tons)

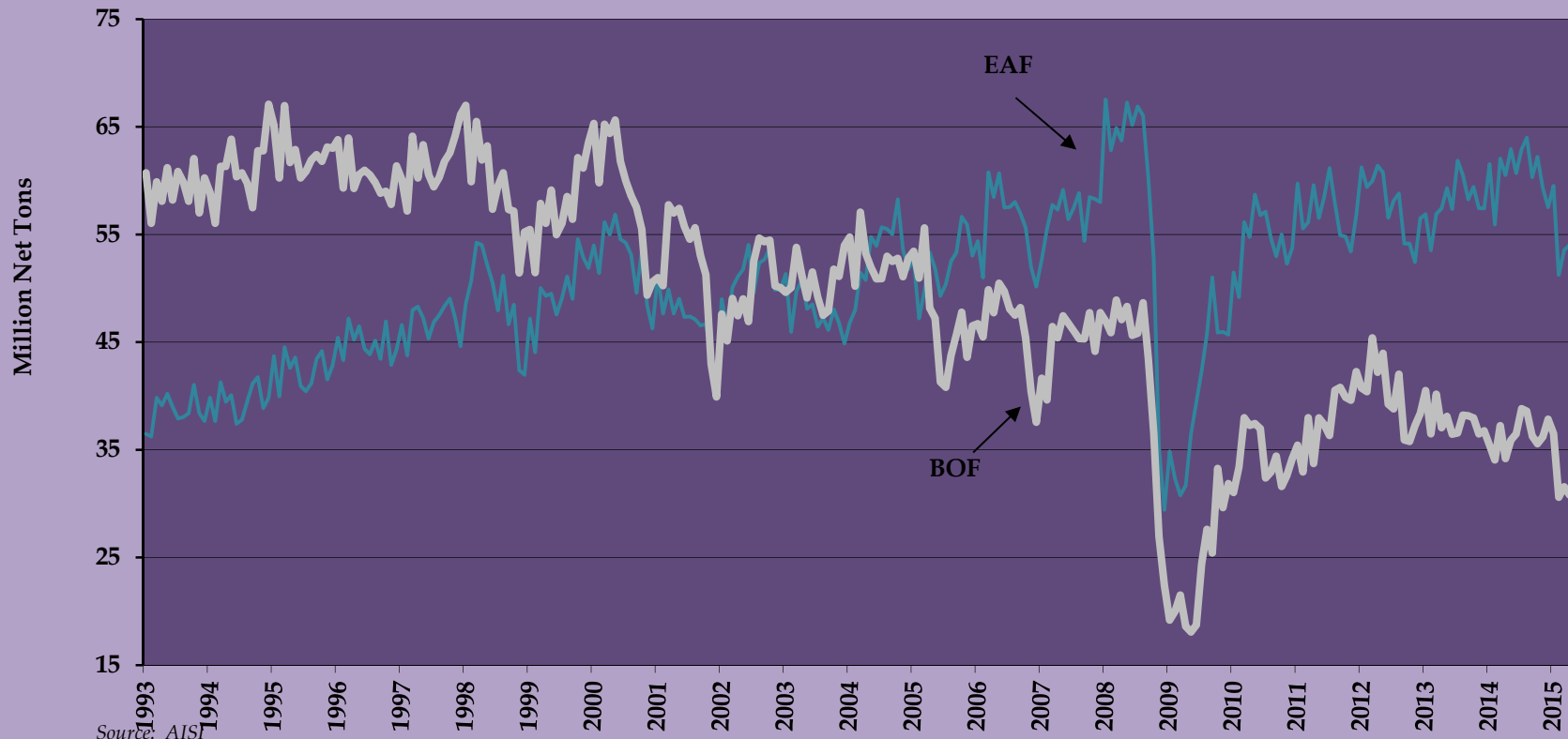
						Year To Year % Change					
	<u>Total Shipments</u>	<u>- Exports</u>	<u>= Domestic Shipments</u>	<u>+ Imports</u>	<u>= Apparent Consumption</u>	<u>Import Penetration</u>	<u>Total Shipments</u>	<u>Exports</u>	<u>Domestic Shipments</u>	<u>Imports</u>	<u>Apparent Consumption</u>
2005	103,223	9,393	93,830	31,844	125,674	25.3%	-7.0%	19.0%	-9.0%	-11.1%	-9.5%
2006	108,609	9,727	98,882	45,273	144,155	31.4%	5.2%	3.6%	5.4%	42.2%	14.7%
2007	106,112	11,082	95,030	33,244	128,273	25.9%	-2.3%	13.9%	-3.9%	-26.6%	-11.0%
2008	97,956	13,476	84,480	31,927	116,407	27.4%	-7.7%	21.6%	-11.1%	-4.0%	-9.3%
2009	60,346	9,271	51,076	15,778	66,853	23.6%	-38.4%	-31.2%	-39.5%	-50.6%	-42.6%
2010	83,369	11,904	71,465	23,929	95,394	25.1%	38.2%	28.4%	39.9%	51.7%	42.7%
2011	91,865	13,454	78,412	28,515	106,927	26.7%	10.2%	13.0%	9.7%	19.2%	12.1%
2012	95,949	13,745	82,204	33,475	115,679	28.9%	4.4%	2.2%	4.8%	17.4%	8.2%
2013	95,423	12,682	82,741	32,151	114,892	28.0%	-0.5%	-7.7%	0.7%	-4.0%	-0.7%
2014	98,249	12,044	86,204	44,338	130,542	34.0%	3.0%	-5.0%	4.2%	37.9%	13.6%
2015e	87,141	10,633	76,508	45,667	122,175	37.4%	-11.3%	-11.7%	-11.2%	3.0%	-6.4%

(Note: 2015 annualized on data through April.)

Source: AISI

# Lower Shipment Pain is Being Felt by EAF Mills as Well as Integrated Mills

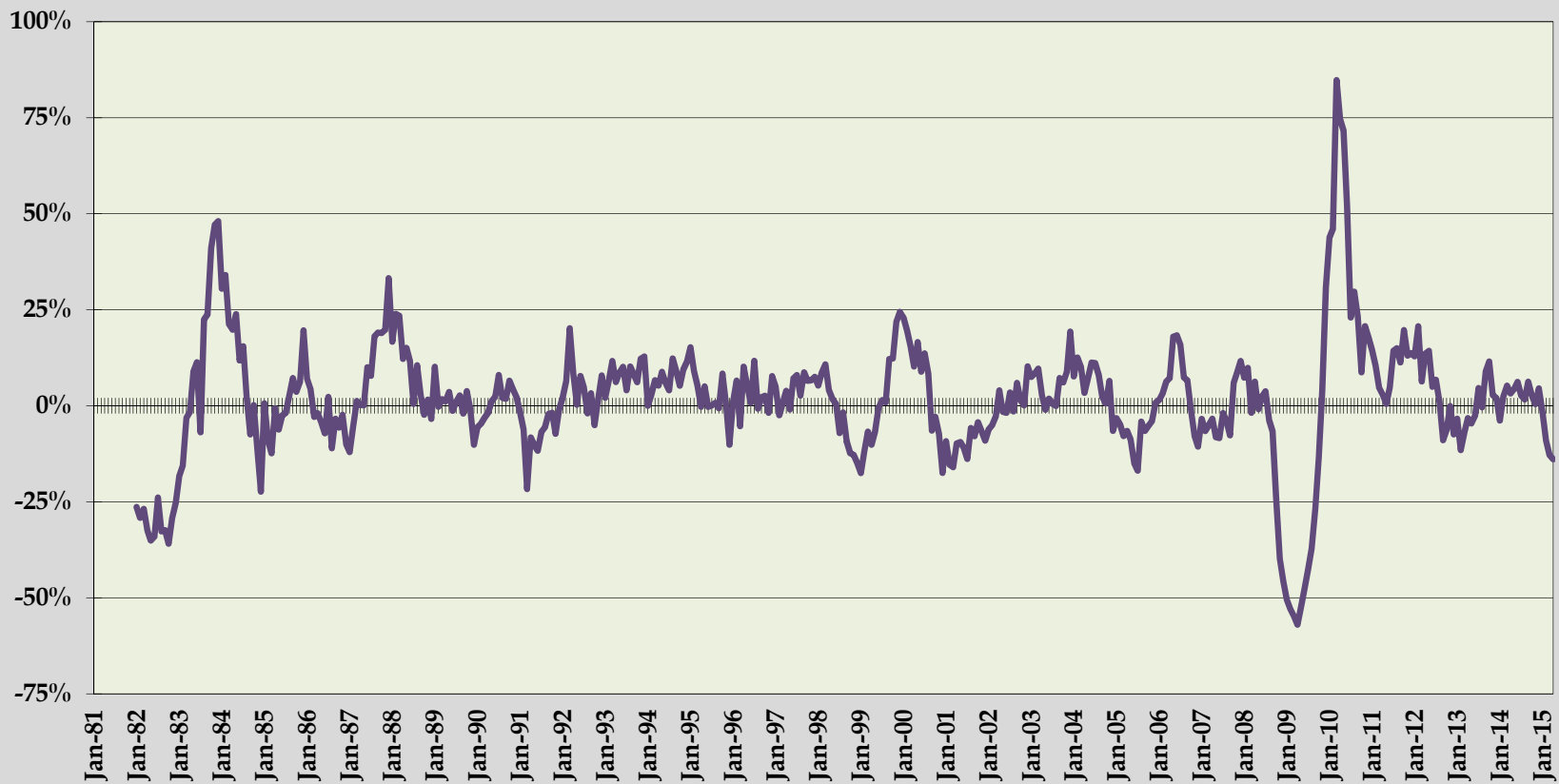
**USA BOF and EAF Annualized Monthly Crude Steel Production**



Source: AISI

# Weakness Started in Pipe & Tube, But Now Other Product Trends Are Flat to Down As Well

**US Steel Monthly Shipments  
Year-Over-Year Percent Change**

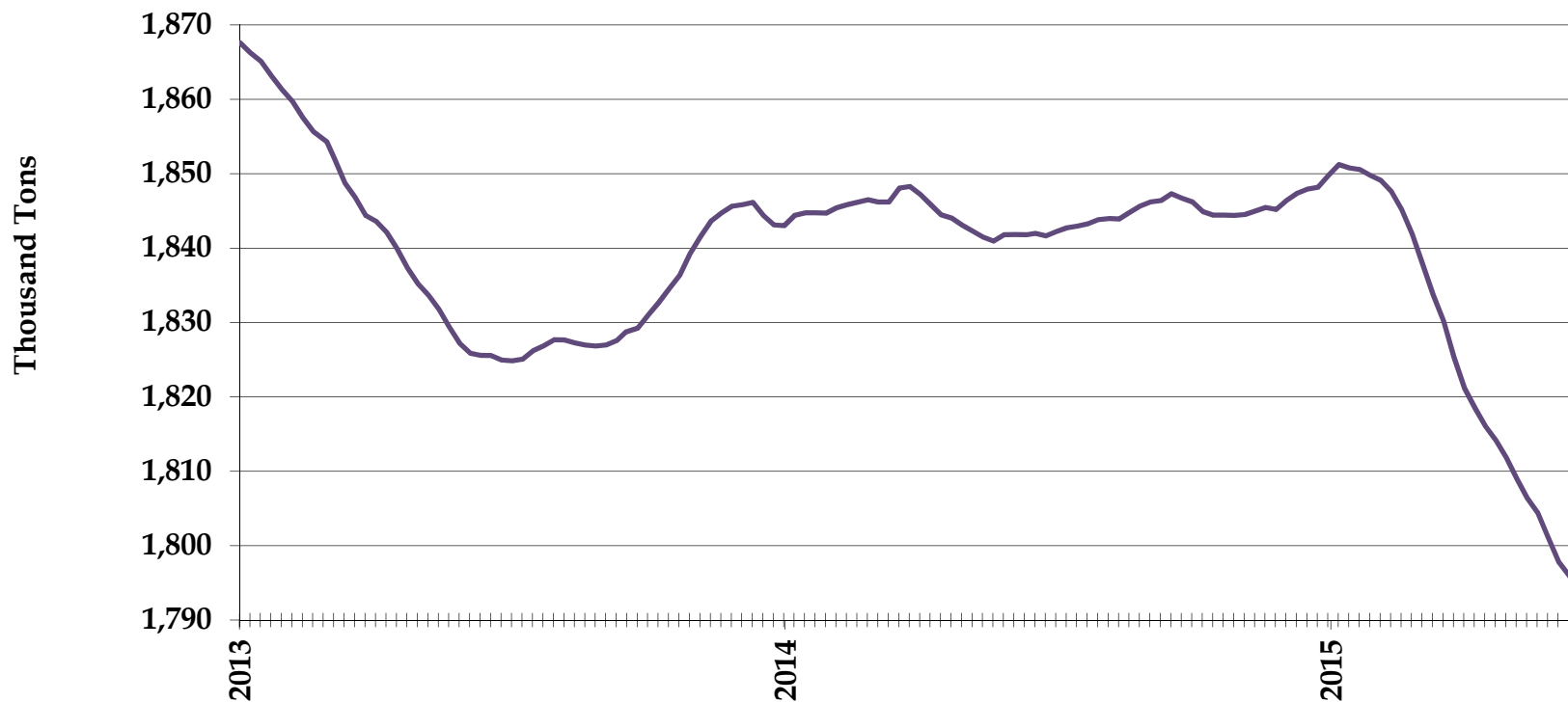


Source: AISI



# Weekly Production Decline Has Stopped, But Not Yet on a TTMAA Basis

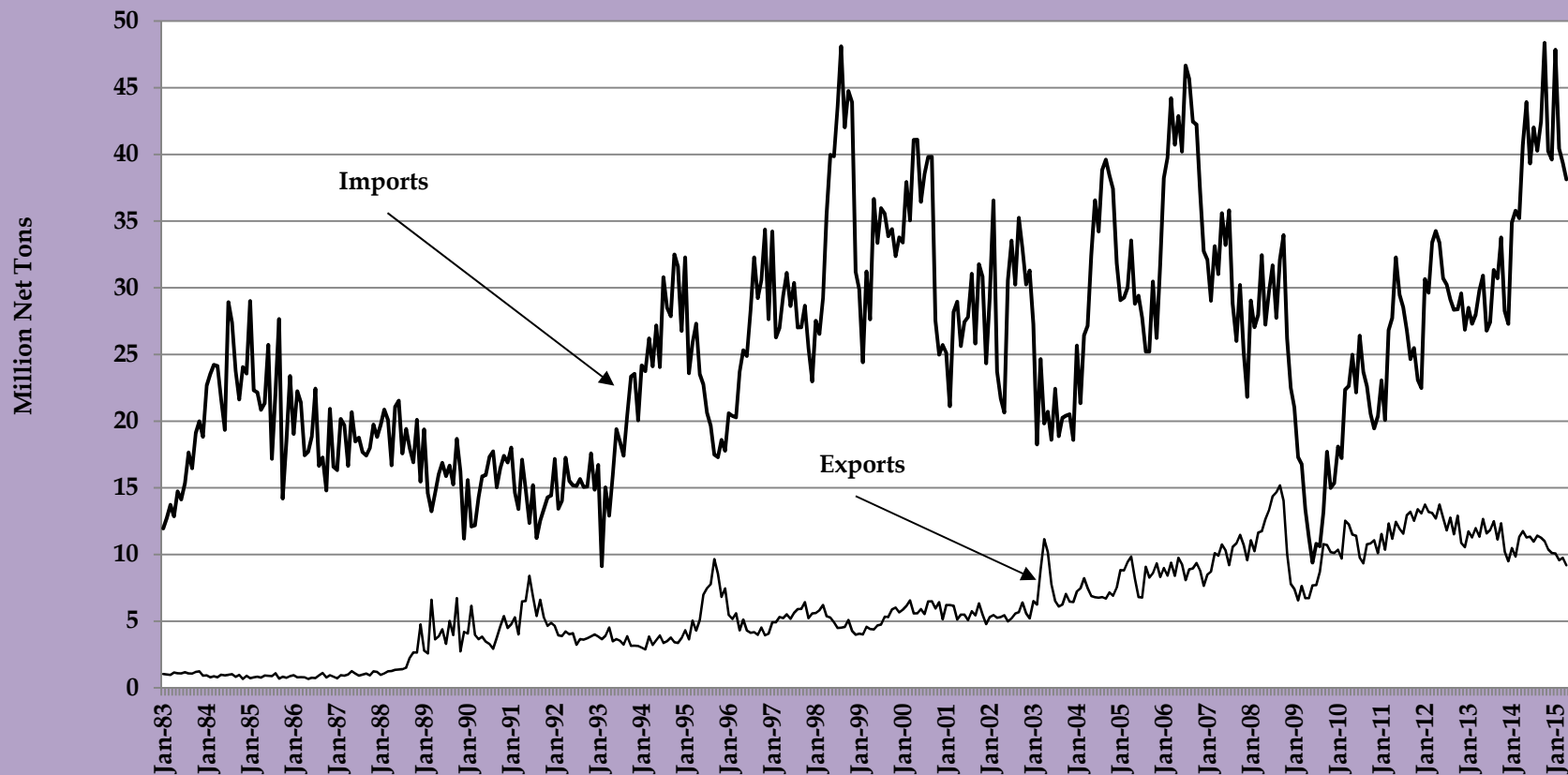
Weekly Estimated USA Crude Steel Production  
Trailing Twelve Month Moving Average



Source: AISI

# April Imports Were 36% of Consumption, Down From 39% in January

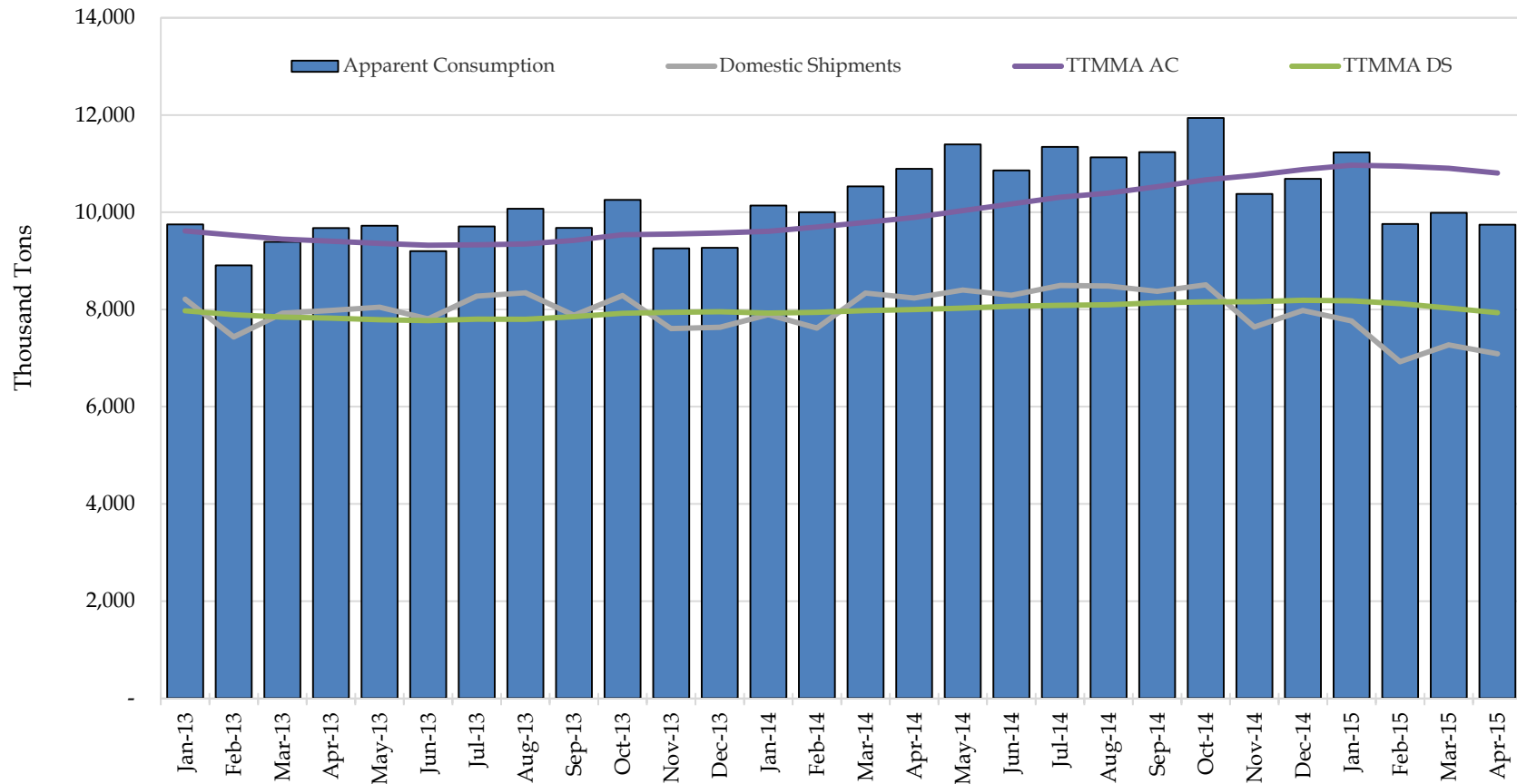
USA Monthly Steel Imports and Exports Annualized Rate



Source: AISI

# Total Steel Consumption Trend Showing Signs Of A Downtrend; So It's Not Just An Import Problem Anymore – The Market Has Softened

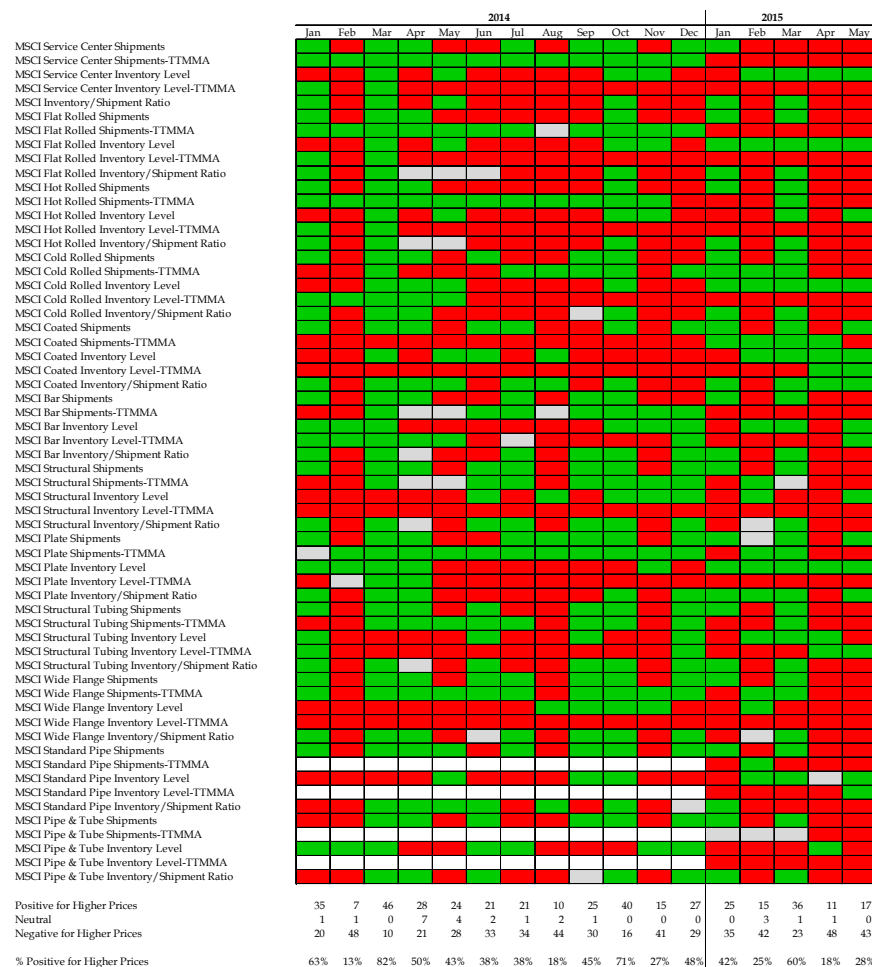
USA Steel Products Apparent Consumption Monthly



Source: AISI

# USA Service Center Carbon Inventories Are Still Too High Relative to Current Domestic Market Demand

USA Service Center Carbon Steel Shipments & Inventory Data Heat Map-Month to Month Change

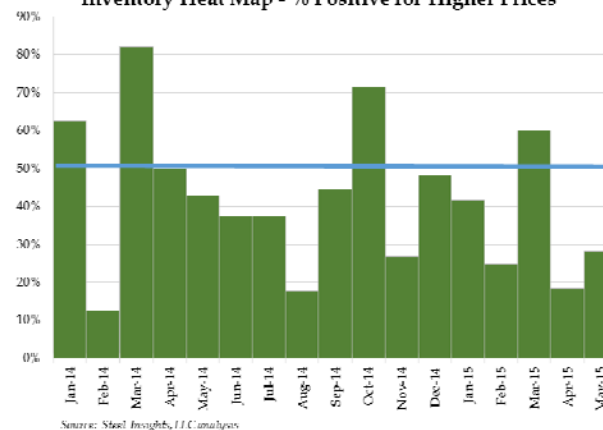


Shipments Code: red=down; green=up; grey=sideways; white=no new data yet

Inventory Code: red=up; green=down; grey=sideways; white=no new data yet

Inventory/Shipments Ratio Code: red=up; green=down; grey=sideways; white=no new data yet

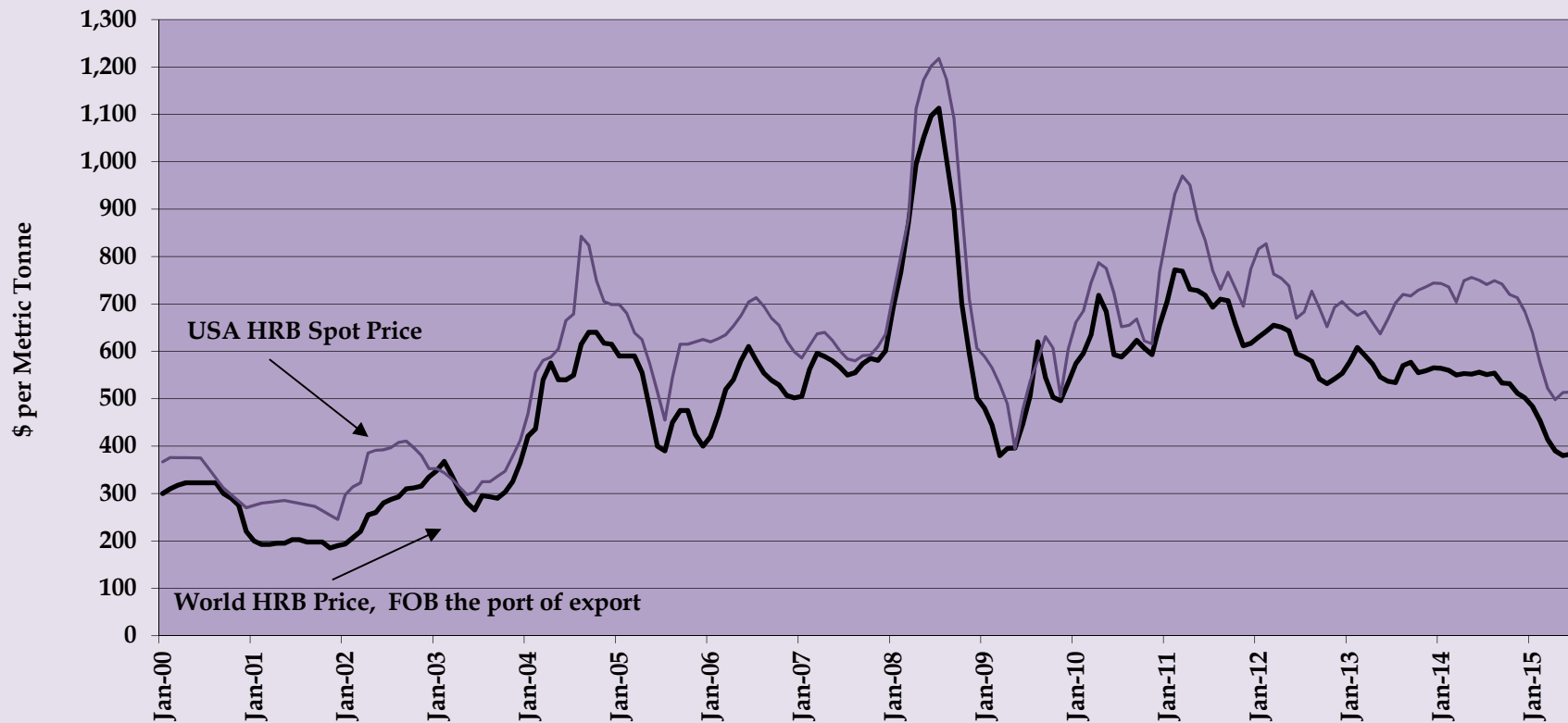
USA Service Center Carbon Steel Shipment & Inventory Heat Map - % Positive for Higher Prices





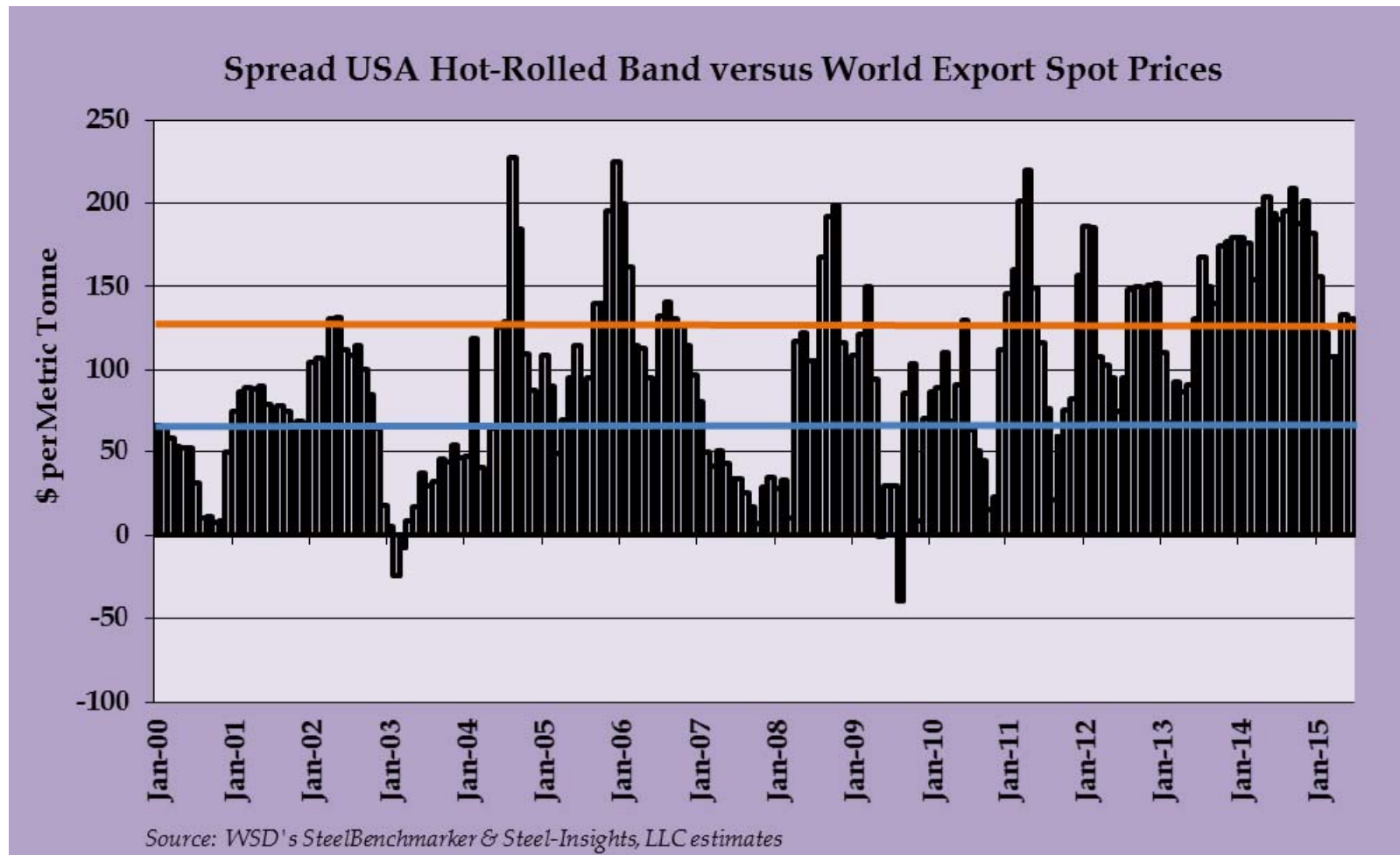
# USA Hot-Rolled Band Prices Have Bottomed (Plus \$20 Per Ton) While Global Prices Remain Under \$400 Per Metric Tonne

World Export and USA Hot-Rolled Band Spot Prices

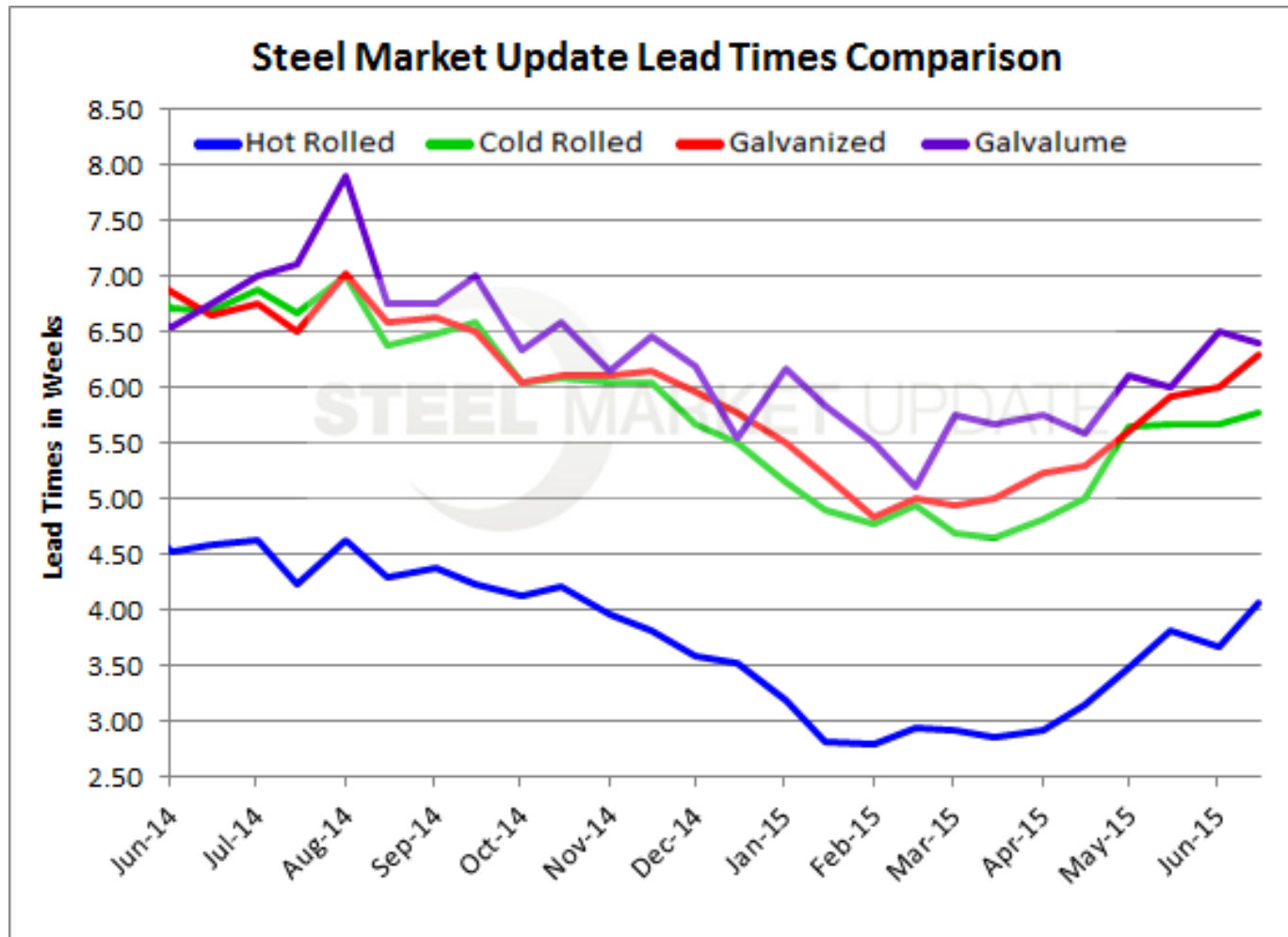


Source: WSD's SteelBenchmarker & Steel-Insights, LLC estimates

Ocean Shipping Generally Estimated at \$50 Per Tonne. At Spreads Over \$100 Per Tonne, Many Customers Will Take the 6 Week Delivery Period Price Risk

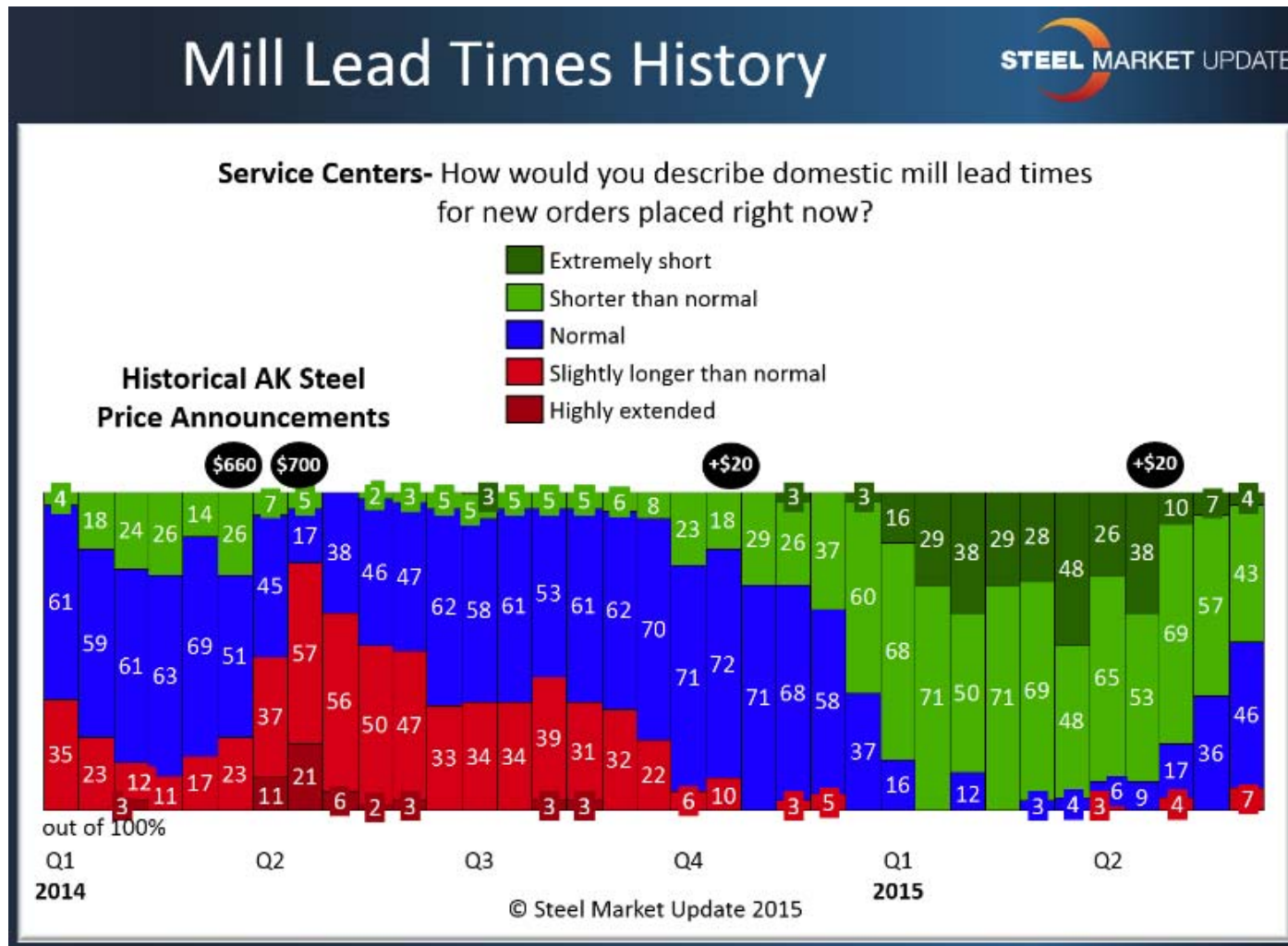


# USA Mill Lead Times Are Extending



Source: Steel Market Update, used with permission

# SMU Service Center Lead Time Survey Indicates a Trend Back Toward Normal



Source: Steel Market Update, used with permission



# USA Prices Overall Starting to Improve; But Are Still Declining Globally

Raw Material Cost & Finished Steel Prices Heat Map-Month to Month Change

	2014												2015					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
USA #1 Heavy Melt Scrap Spot Price																		
USA Shredded Scrap Spot Price																		
USA Busheling Scrap Spot Price																		
USA Spread Shredded to #1HM Scrap Spot Price																		
Iron Ore Spot Iodex 62% Fe Price, CFR Tianjin Port																		
Coking Coal Spot Price, FOB Australia																		
Met Coke Spot Price, FOB China																		
Scrap Metallic Comp - BF/BOF Raw Material Cost																		
Ratio Scrap to BF/BOF Metallics																		
HBI Spot Price, FOB South America																		
Pig Iron Spot Price, FOB N. Brazil																		
Slab Spot Price, FOB Port of Export																		
Billet Spot Price, FOB Port of Export																		
World Export Price, Hot-Rolled Band																		
USA Price, Hot-Rolled Band																		
Spread USA Price to World Export Price, Hot-Rolled Band																		
Spread USA HRB to #1 HM																		
China Price, Hot-Rolled Band																		
Spread World Export HRB to China HRB Price																		
USA Plate Price																		
USA Rebar Price																		

Code: red=down; green=up; grey=sideways; white=no new data yet

# Raw Material Prices Have Firmed in the USA, But Are Still Dropping Globally

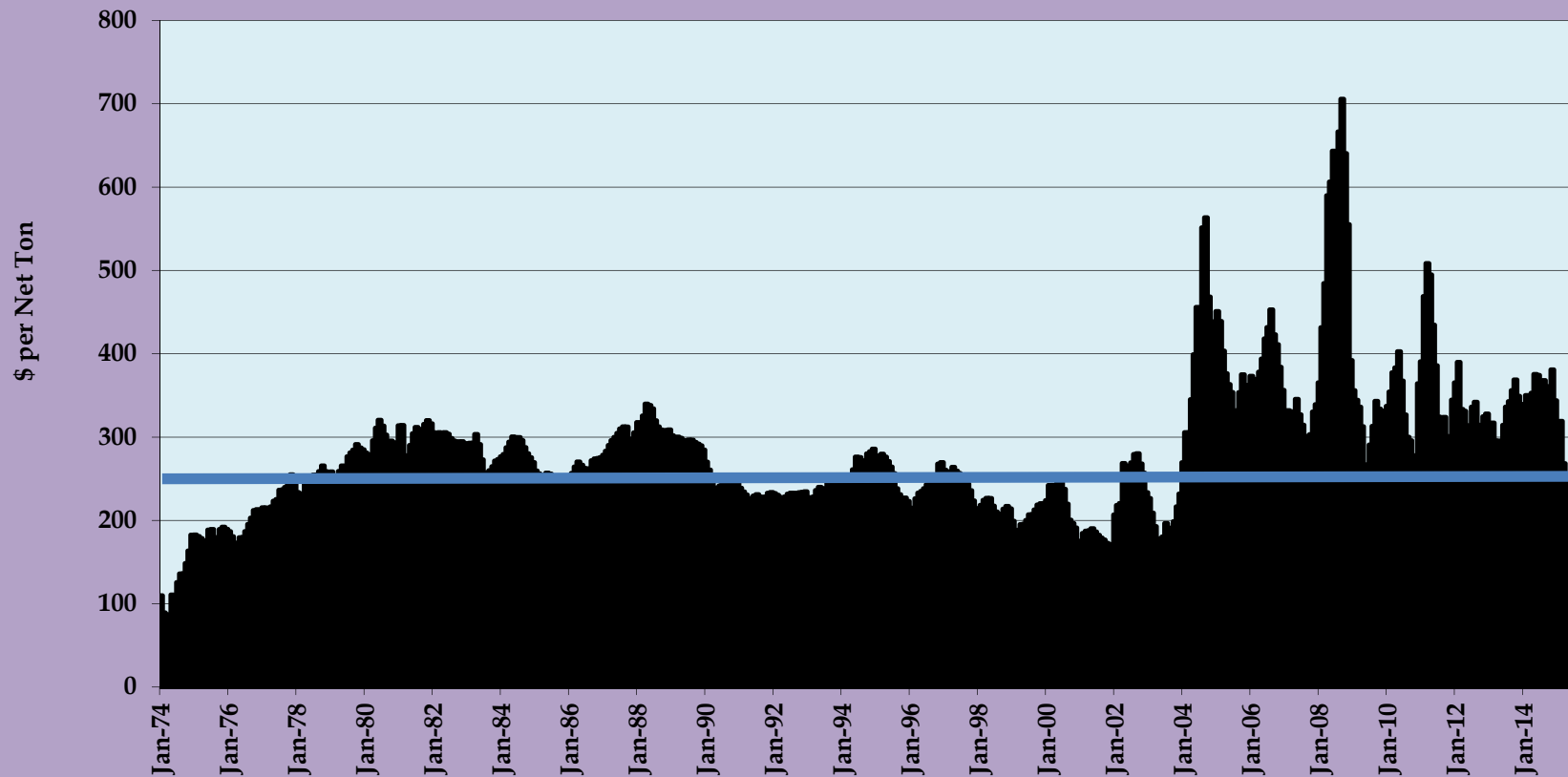
Raw Material Cost & Finished Steel Prices Monthly Data

	2014												2015					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
USA #1 Heavy Melt Scrap Spot Price	392	356	348	366	348	343	347	349	350	333	298	310	315	227	230	230	235	252
USA Shredded Scrap Spot Price	421	383	374	394	377	363	373	376	371	352	321	328	336	241	232	260	275	285
USA Busheling Scrap Spot Price	429	396	386	399	392	400	396	399	400	384	356	353	355	256	247	250	255	280
USA Spread Shredded to #1HM Scrap Spot Price	29	27	26	28	29	20	26	27	21	19	23	18	21	14	2	30	40	33
Iron Ore Spot Index 62% Fe Price, CFR Tianjin Port	128	121	112	112	101	93	96	92	78	83	69	71	62	65	51	47	61	61
Coking Coal Spot Price, FOB Australia	133	127	118	118	116	115	114	114	113	113	113	114	114	112	108	92	90	87
Met Coke Spot Price, FOB China	248	234	208	208	196	191	181	176	175	175	180	189	185	175	170	165	150	146
Scrap Metallic Comp - BF/BOF Raw Material Cost	356	341	319	319	299	286	290	284	261	268	246	250	236	239	214	194	217	214
Ratio Scrap to BF/BOF Metallics	1.10	1.04	1.09	1.09	1.16	1.20	1.20	1.23	1.34	1.24	1.21	1.24	1.34	0.95	1.07	1.18	1.09	1.18
HBI Spot Price, FOB South America	335	330	325	325	330	325	320	315	320	320	315	310	305	270	255	250	245	235
Pig Iron Spot Price, FOB N. Brazil	402	397	392	392	403	398	395	395	401	400	375	350	355	290	275	260	270	285
Slab Spot Price, FOB Port of Export	500	515	520	520	520	515	516	510	500	490	485	445	432	405	365	345	325	305
Billet Spot Price, FOB Port of Export	525	535	530	530	515	520	510	500	510	505	470	445	425	410	385	350	300	265
Hot-Rolled Band Prices																		
World Export	564	560	550	553	552	556	551	554	533	532	512	502	484	453	414	390	380	383
USA	743	736	704	749	756	750	741	749	742	720	713	684	640	575	522	498	513	514
Spread USA to World Export	179	176	154	196	204	194	190	195	209	188	201	182	156	122	108	108	133	131
USA-\$ per net ton	674	668	639	679	686	680	672	679	673	653	647	621	581	522	474	452	465	466
USA #1 HM-\$ per net ton	350	318	311	327	311	306	310	312	313	297	266	277	281	203	205	205	210	225
Spread USA to #1 HM	324	350	328	353	375	374	362	368	361	356	381	344	299	319	268	246	256	241
China	475	474	448	459	454	452	450	452	436	414	407	405	361	350	352	330	325	321
Spread World Export to China	89	86	102	94	98	104	101	102	97	118	105	97	123	103	62	60	55	62
USA Plate Price-\$ per net ton	796	797	820	814	837	858	863	873	860	842	808	800	731	685	672	584	567	576
USA Rebar Prices-\$ per net ton	643	640	635	635	635	633	632	632	649	644	640	635	631	613	576	563	572	585

Source: Market Sources & Steel-Insights, LLC estimates

# Metal Margin of Hot-Rolled Band to Scrap Remains Rich at \$250 Per Ton

Metal Margin: Spread USA Hot-Rolled Band versus  
#1 Heavy Melt Scrap Prices



Source: WSD's SteelBenchmarker

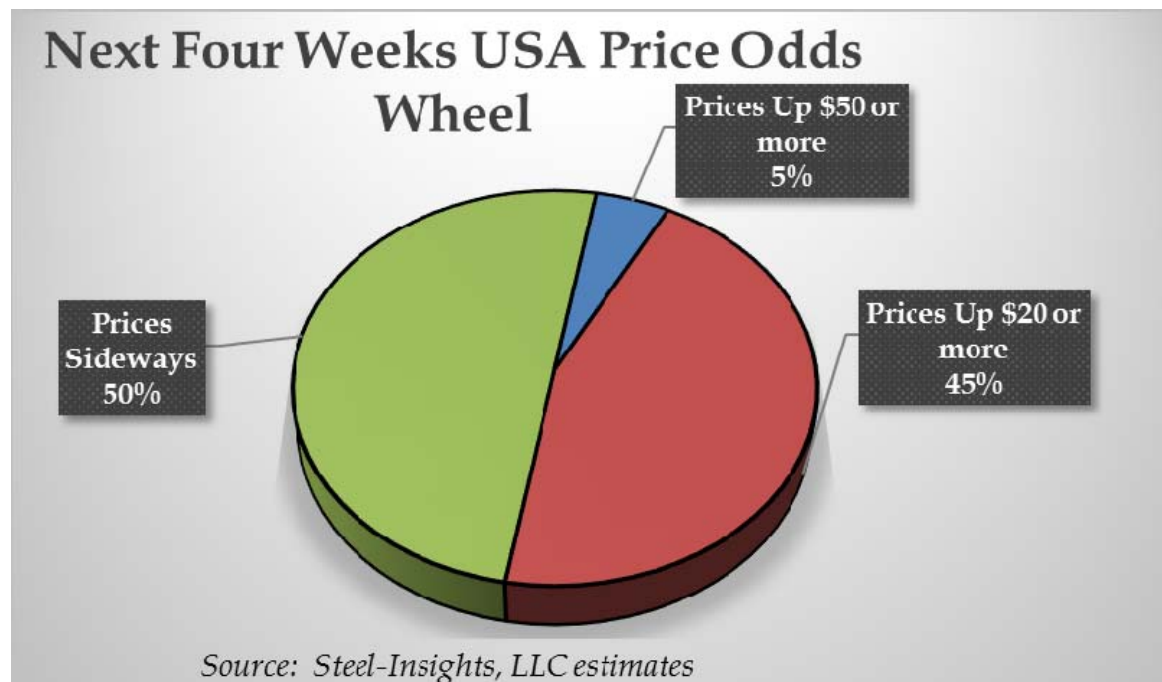
# USA Prices SHOULD Come Down to Protect the Market Against Imports, But it Doesn't Seem Like the Mills Are On That Page

Of the \$40 per ton price increases announced in the USA, about \$15 per ton has stuck. The USA mill quotes have firmed and no one has broken ranks yet. That being said, the end market prices haven't improved substantially, and the margins are really thin.

~~~~~

Despite extending mill lead times, there's plenty of steel available. In Houston for \$20 per pound plus Russian steel for \$19.50. In Tulsa. While import quotes are down, the big traders are still soliciting business and there's a lot of steel on the water for September/October delivery.

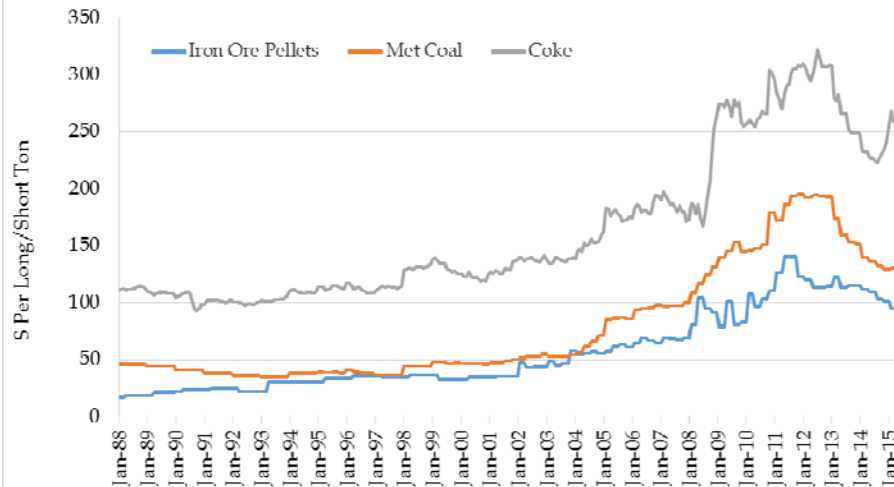
We've likely seen the bottom, but we're very unlikely to see a big increase in the next few months.





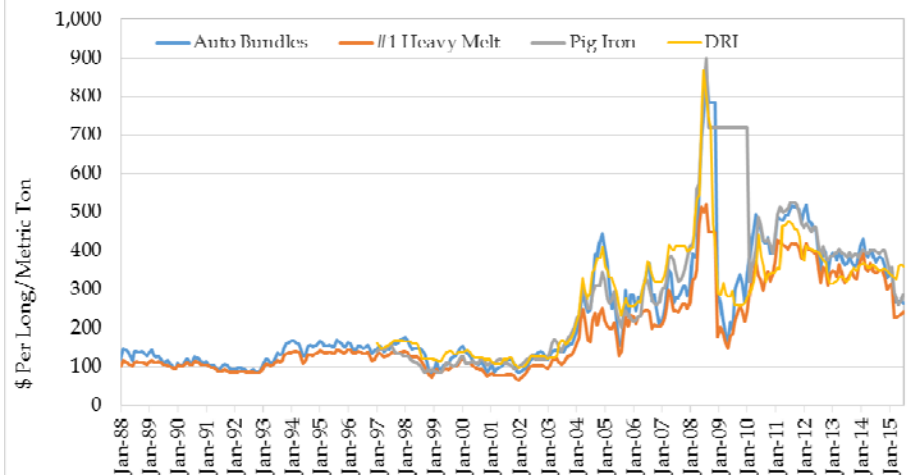
# USA Steel Producer Costs Have Dropped Through Both Steelmaking Processes

**Integrated Steelmaking Raw Materials,  
At The Plant**



Source: Cliffs Company Reports, FIA Coal Quarterly & Steel-Insights, I.I.C. estimates

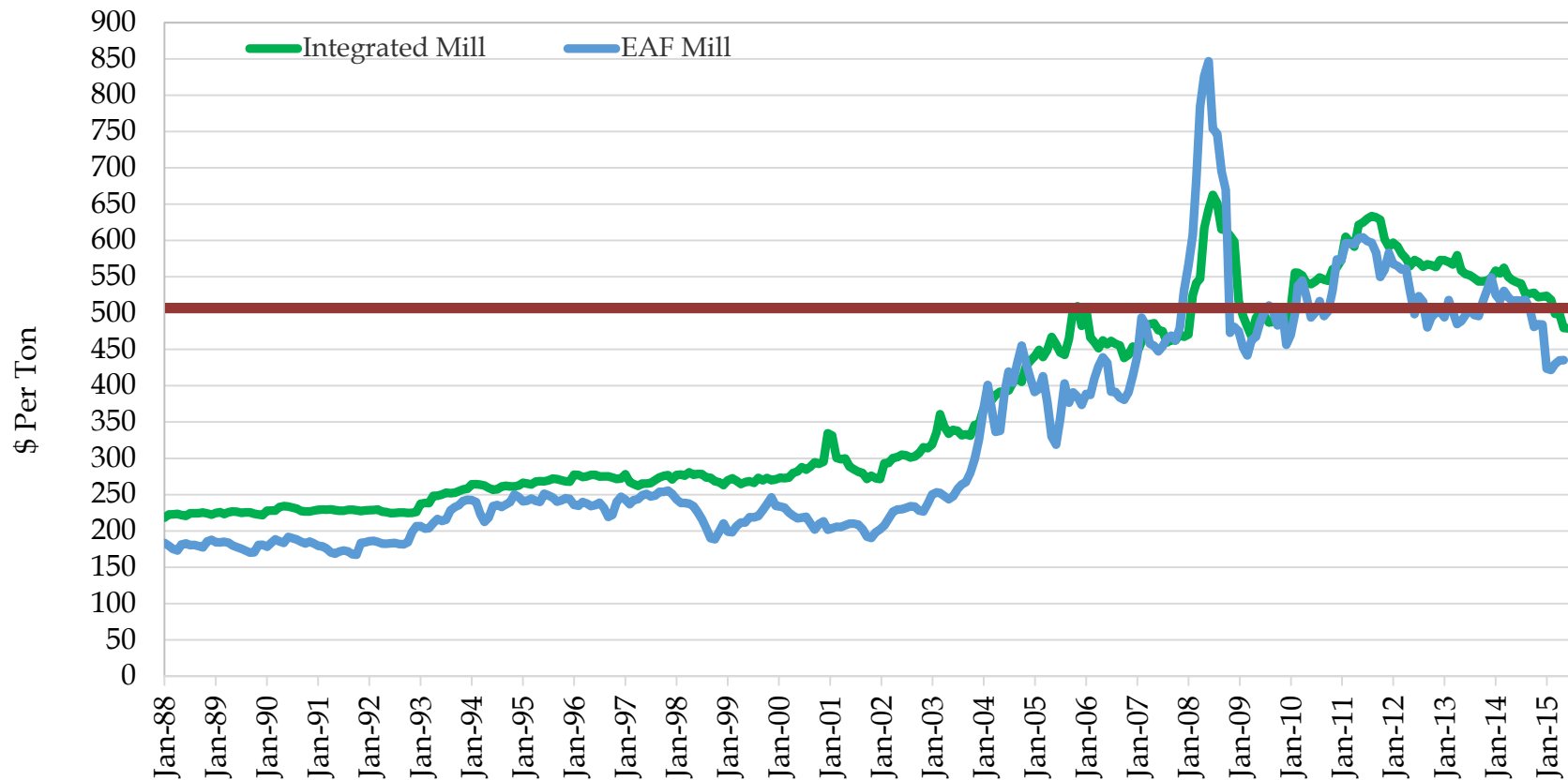
**EAF Steelmaking Raw Materials,  
At The Plant**



Source: American Metal Market, World SteelDynamics, Trading Companies & Steel-Insights, I.I.C. estimates

# EAF Mills Have An 8% Cost Advantage Assuming 100% Spot Raw Material Costs

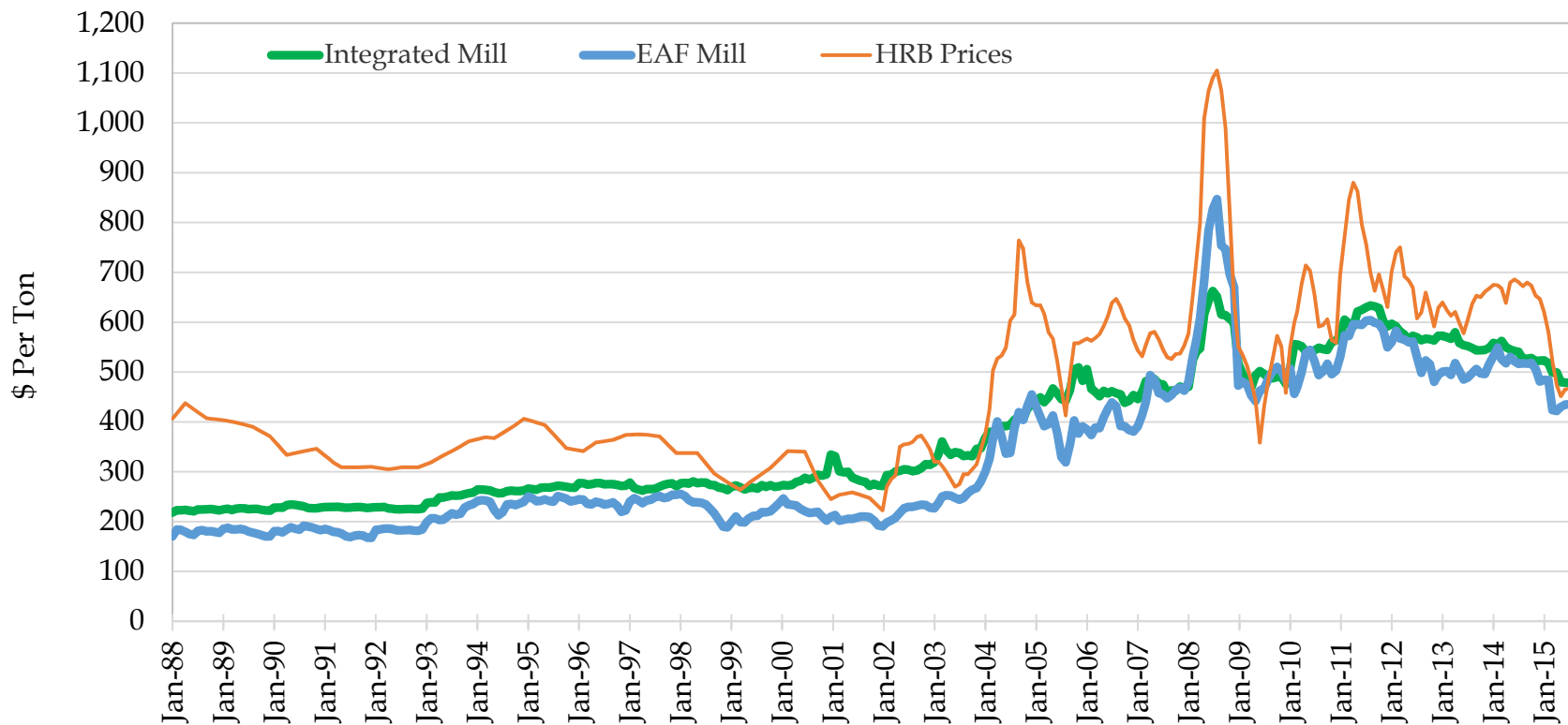
## Hot-Rolled Band Production Costs



Source: Steel-Insights, LLC estimates

# USA Market Prices for HRB Have Dropped Below Integrated Makers Cost to Produce

## USA Hot-Rolled Band Production Costs Versus USA HRB Spot Price



Source: Steel-Insights, LLC estimates

# USA Service Center Stainless Steel Shipment & Inventory Trends Turned Decidedly Negative in April

## USA Service Center Stainless Steel Shipments & Inventory Data Heat Map-Month to Month Change

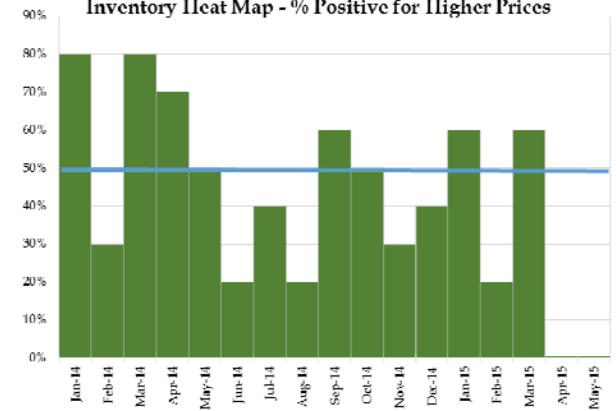
|                                                      | 2014 |     |     |     |     |     |     |     |     |     |     |     | 2015 |     |     |     |     |
|------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
|                                                      | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May |
| MSCI Stainless Shipments                             |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Shipments-TTMMA                       |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Inventory Level                       |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Inventory Level-TTMMA                 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Inventory/Shipment Ratio              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Sheet & Coil Shipments                |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Sheet & Coil Shipments-TTMMA          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Sheet & Coil Inventory Level          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Sheet & Coil Inventory Level-TTMMA    |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Stainless Sheet & Coil Inventory/Shipment Ratio |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| Positive for Higher Prices                           | 8    | 3   | 8   | 7   | 5   | 2   | 4   | 2   | 6   | 5   | 3   | 4   | 6    | 2   | 6   | 0   | 0   |
| Neutral                                              | 0    | 1   | 0   | 0   | 2   | 0   | 0   | 1   | 0   | 2   | 0   | 0   | 0    | 1   | 0   | 0   | 0   |
| Negative for Higher Prices                           | 2    | 6   | 2   | 3   | 3   | 8   | 6   | 7   | 4   | 3   | 7   | 6   | 4    | 7   | 4   | 10  | 10  |
| % Positive for Higher Prices                         | 80%  | 30% | 80% | 70% | 50% | 20% | 40% | 20% | 60% | 50% | 30% | 40% | 60%  | 20% | 60% | 0%  | 0%  |

Shipments Code: red=down; green=up; grey=sideways; white=no new data yet

Inventory Code: red=up; green=down; grey=sideways; white=no new data yet

Inventory/Shipments Ratio Code: red=up; green=down; grey=sideways; white=no new data yet

USA Service Center Stainless Steel Shipment & Inventory Heat Map - % Positive for Higher Prices



Source: Steel-Insights, LLC analysis



# MSCI Stainless Steel Shipments Annualized Through May 2015

## Tracking down 0.8% Compared to a 7.3% Gain in 2014.

### Sheet & Coil Shipments up 0.3% in 2015.

## USA Service Center Stainless Steel Shipments & Inventory

(thousand tons)

|                        | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015e |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total Stainless        |       |       |       |       |       |       |       |       |
| Shipments              | 1,808 | 1,354 | 1,581 | 1,786 | 1,753 | 1,766 | 1,895 | 1,880 |
| Ending Inventory       | 359   | 287   | 423   | 400   | 446   | 476   | 541   | 546   |
| Months Supply          | 2.38  | 2.54  | 3.21  | 2.69  | 3.05  | 3.23  | 3.42  | 3.49  |
| Stainless Sheet & Coil |       |       |       |       |       |       |       |       |
| Shipments              | 1,109 | 791   | 1,074 | 1,184 | 1,125 | 1,132 | 1,224 | 1,228 |
| Ending Inventory       | 190   | 159   | 307   | 261   | 303   | 326   | 368   | 366   |
| Months Supply          | 2.06  | 2.41  | 3.43  | 2.65  | 3.24  | 3.46  | 3.60  | 3.58  |

*Note: 2015e annualized based on data through May 2015.*

*Source: MSCI*

# USA Stainless Consumption off 0.6% in 2014; Sheet & Strip was down 0.8%

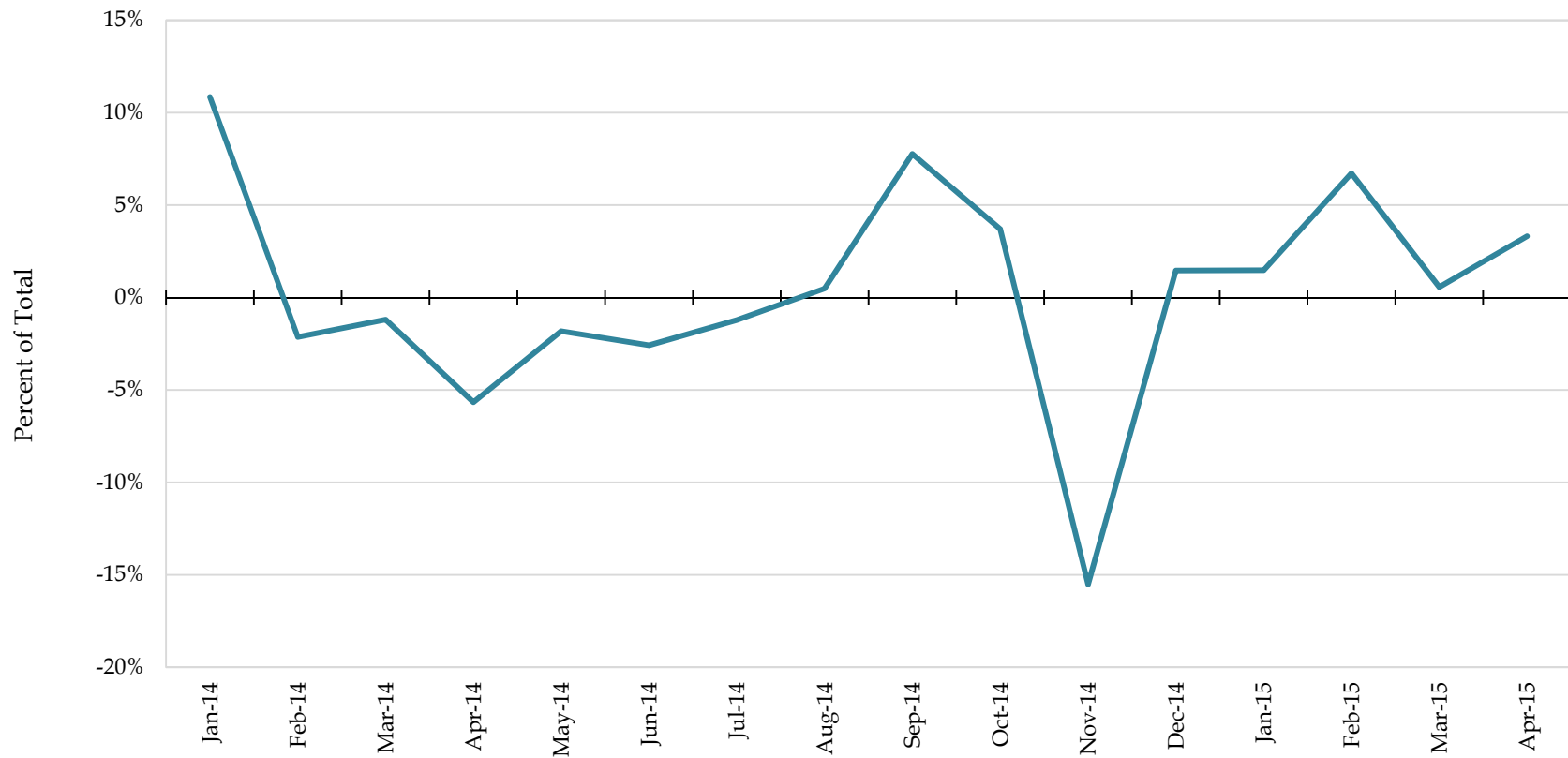
## USA Stainless Shipments, Imports, Exports and Apparent Consumption (thousand tons)

|                                  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Sheet & Strip                    | 1,455 | 1,568 | 1,414 | 1,108 | 1,326 | 1,219 | 1,526 | 1,610 | 1,944 | 1,928 |
| Shapes & Plates                  | 264   | 299   | 264   | 212   | 206   | 221   | 262   | 261   | 265   | 315   |
| Bar                              | 136   | 144   | 142   | 152   | 100   | 141   | 156   | 157   | 166   | 191   |
| Wire Rod                         | 31    | 53    | 41    | 36    | 30    | 53    | 62    | 51    | 53    | 54    |
| Pipe & Tubing                    | 15    | 16    | 14    | 14    | 10    | 11    | 8     | 12    | 13    | 13    |
| Semi-Finished                    | 1     | 2     | 1     | 3     | 1     | 17    | 69    | 2     | 2     | 3     |
| Net Shipments                    | 1,903 | 2,081 | 1,877 | 1,525 | 1,672 | 1,662 | 2,082 | 2,093 | 2,443 | 2,505 |
| Shipments to Reporting Companies | 422   | 443   | 399   | 352   | 294   | 338   | 3     | 0     | 0     | 0     |
| Total Gross Shipments            | 2,325 | 2,524 | 2,276 | 1,877 | 1,966 | 2,000 | 2,085 | 2,093 | 2,443 | 2,505 |
| Imports                          | 976   | 1,143 | 1,214 | 1,093 | 617   | 939   | 1,114 | 1,266 | 1,073 | 1,221 |
| Exports                          | 409   | 452   | 596   | 629   | 526   | 615   | 675   | 715   | 698   | 925   |
| Apparent Steel Consumption       | 2,892 | 3,215 | 2,894 | 2,340 | 2,058 | 2,324 | 2,521 | 2,644 | 2,818 | 2,801 |

Source: AISI

# Stainless Consumption Up Slightly in 2015

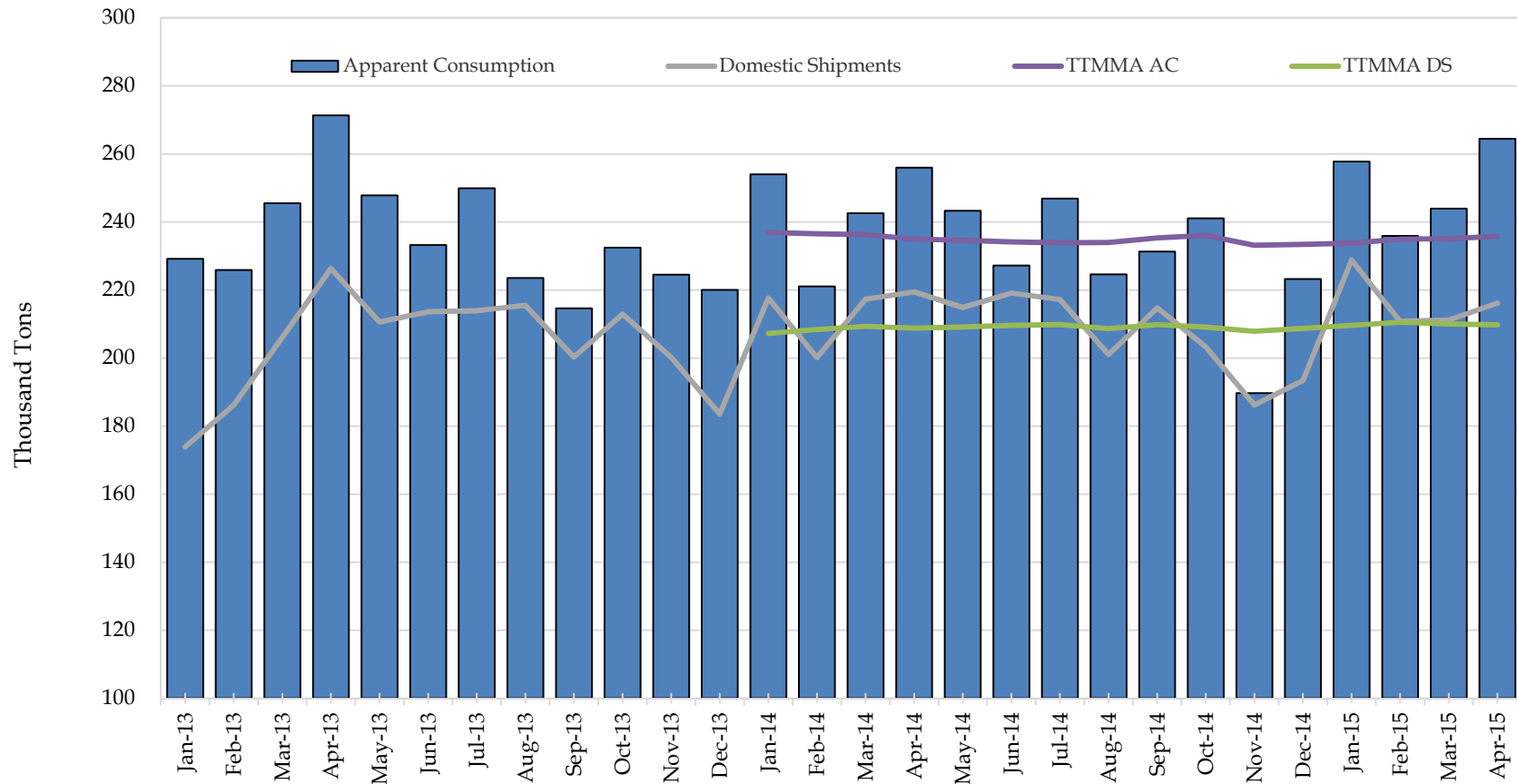
**USA Stainless Products Apparent Consumption Monthly  
Year-Over-Year Growth**



Source: AISI

# AISI Monthly Stainless Shipments & Consumption Trend Looks Pretty Flat

USA Stainless Products Apparent Consumption Monthly

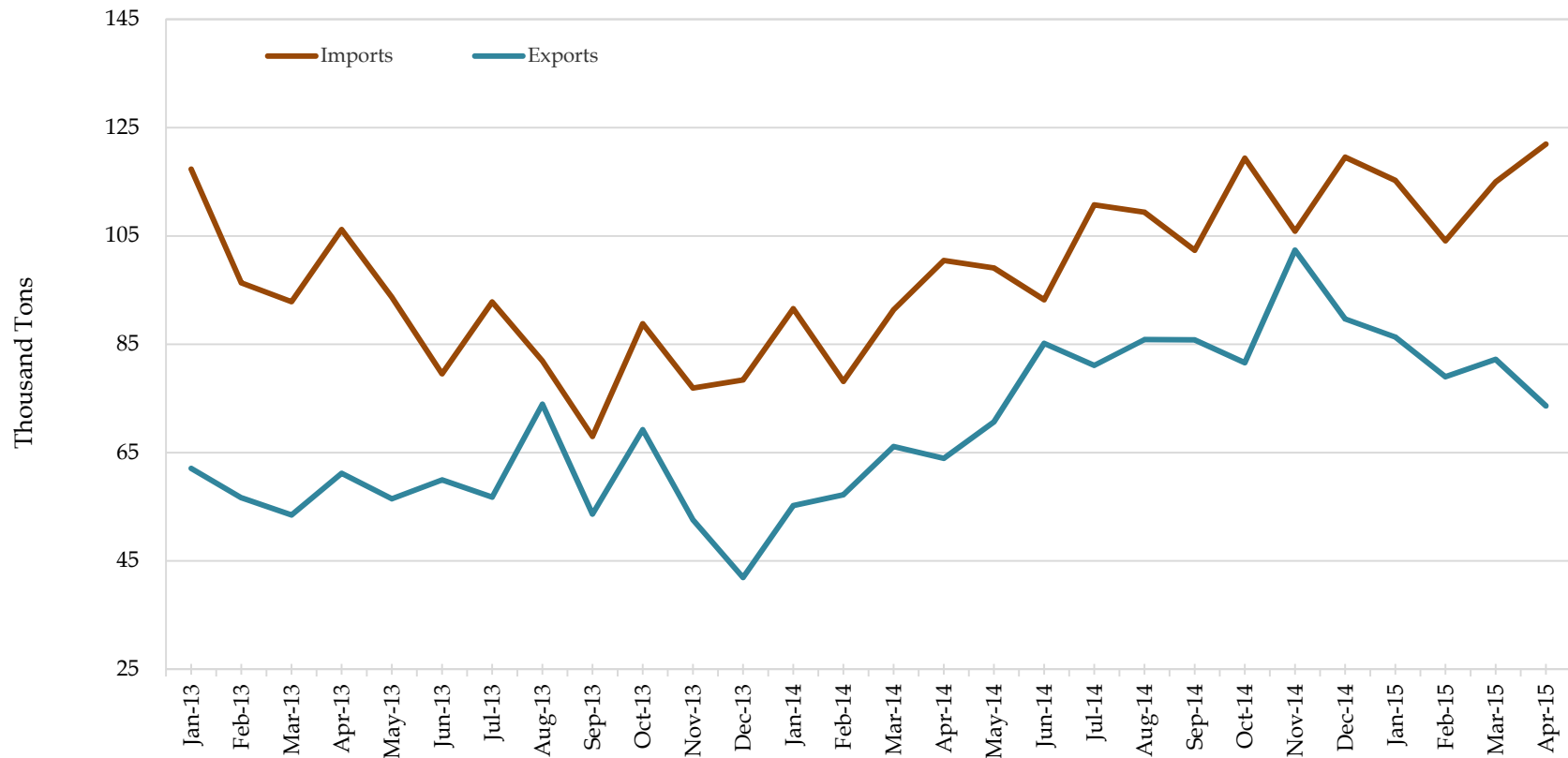


Source: AISI



# Imports as a Percent of Consumption Were a Peak 56% in Nov 2014; Running Mid-40% Now

USA Stainless Products Imports & Exports Monthly



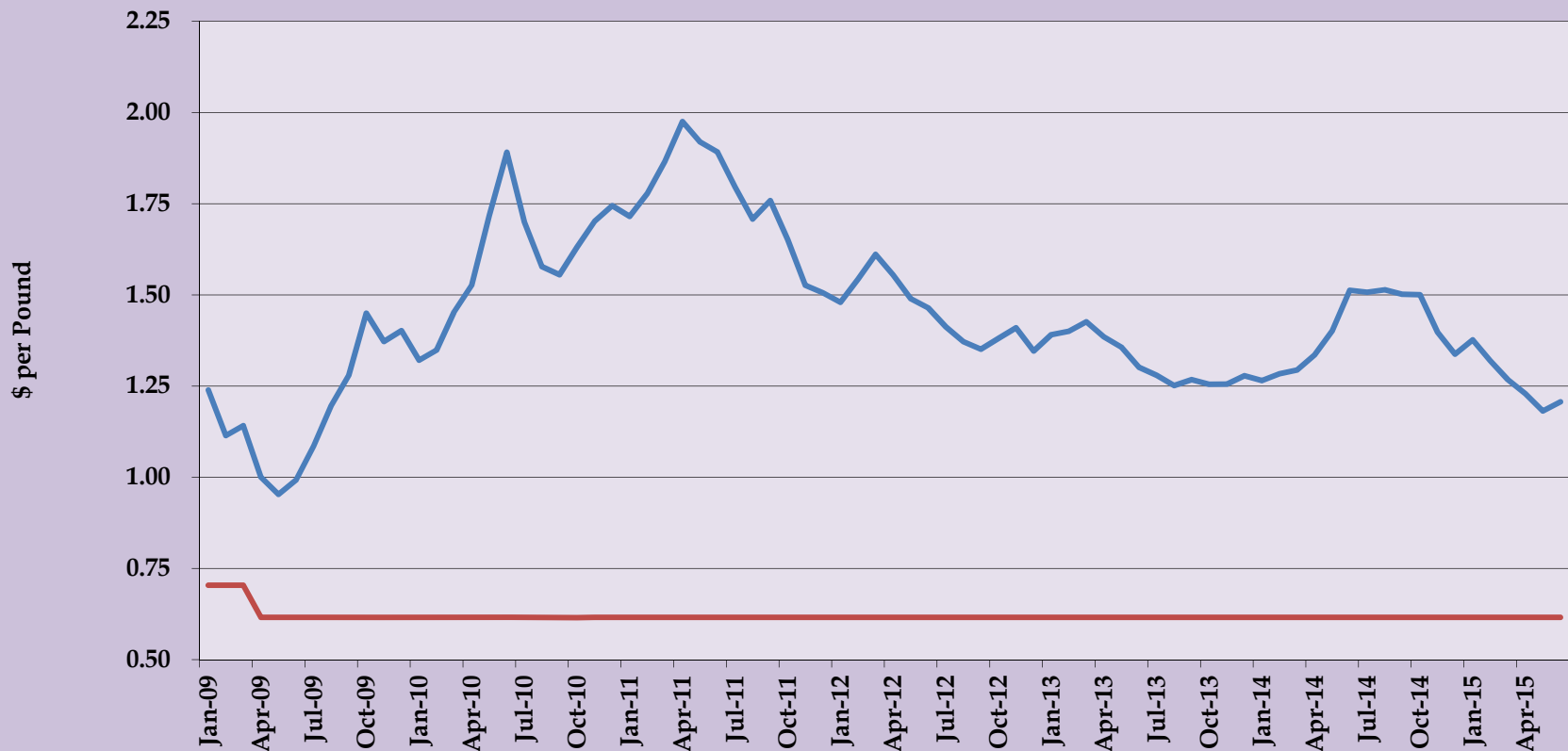
Source: AISI

# USA Stainless Steel Trends

- Demand for austenitic is not great; ferritic hasn't collapsed due to strong auto demand.
- Imports are running at a historically high level and will continue to threaten.
- NAS is doing well; installing a new bright anneal line.
- ATI limping along after losing a drum on the new mill rotary shear. It will be October before a new one can be installed. Restarted old mill to produce heavy gauges. Restarted Houston, PA steckel mill for thinner gauges. In potentially contentious contract negotiations over desire to close Brackenridge plant. Training management to step into operating roles.
- Outokumpu mill has changed management and indicates that it's back on the road to ramp-up, but that it stopped accepting orders in December with mill operating challenges and a 4 month backlog. Now that the mill's been fixed, their customers are adequately supplied by imports and others. They indicated it could be another 18 months to get to full production, and that they weren't going to buy their way back into the market – mostly because it wouldn't do any good as import tonnage was already on the water. Cutting people globally.

# Stainless Sheet Prices Improved Through 2014, But Under Pressure At the End of the Year

USA Stainless 304 Flat Rolled Spot Price, Base Plus Surcharge



Source: MetalPrices.com

# Nickel Prices Continuing to Fall Due to Overcapacity One Bank Forecasting a Drop to \$4.50 Per Pound

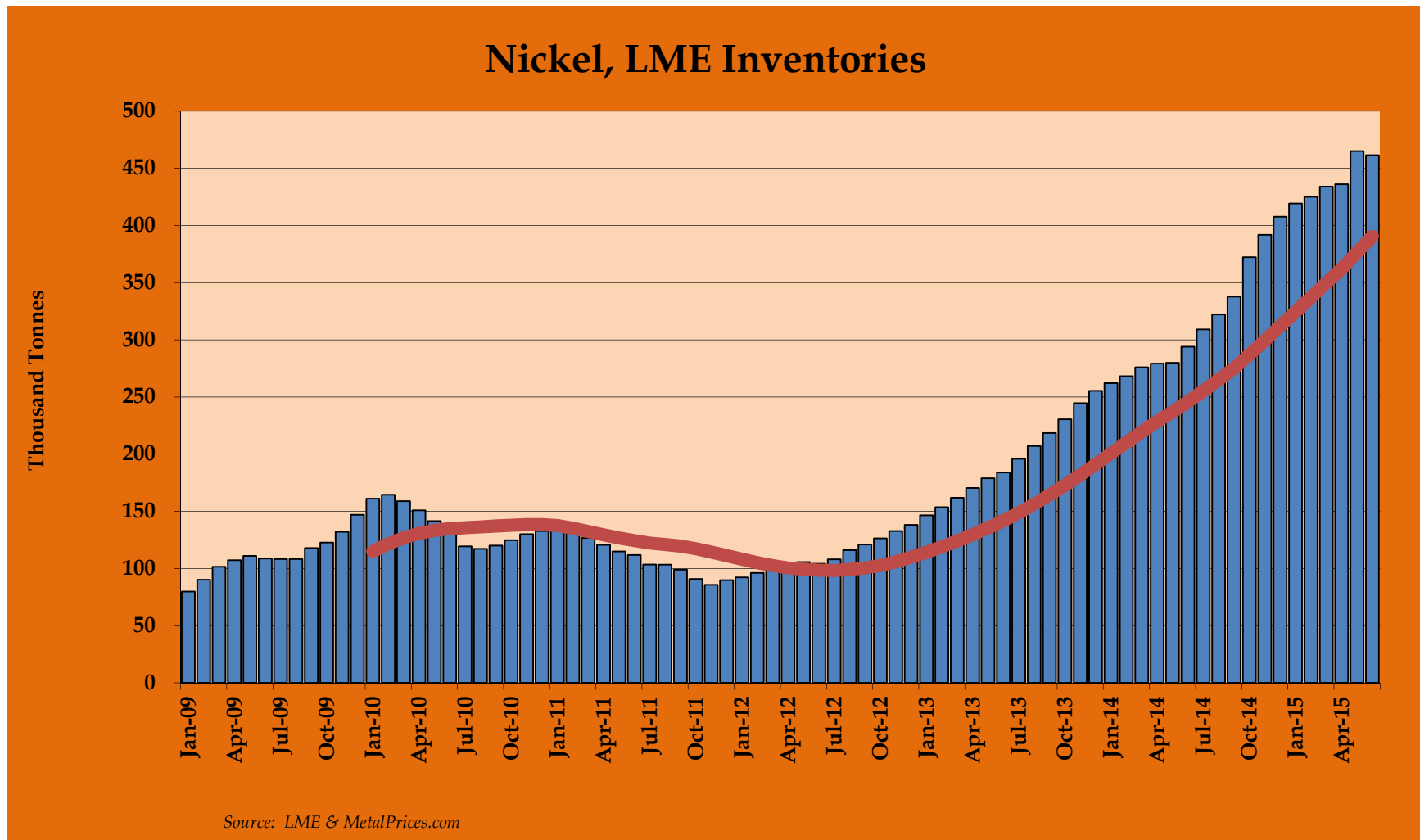
Nickel, LME Cash, Official Price



Source: LME & MetalPrices.com



# LME Inventories Much Higher as Chinese Banks Required Material Previously Held Privately – and Double Financed – to Move into LME Warehouses Where It Could Be Tracked



# USA Service Center Aluminum Shipments & Inventory Trends Deteriorated in April and Worsened in May

## USA Service Center Aluminum Shipments & Inventory Data Heat Map-Month to Month Change

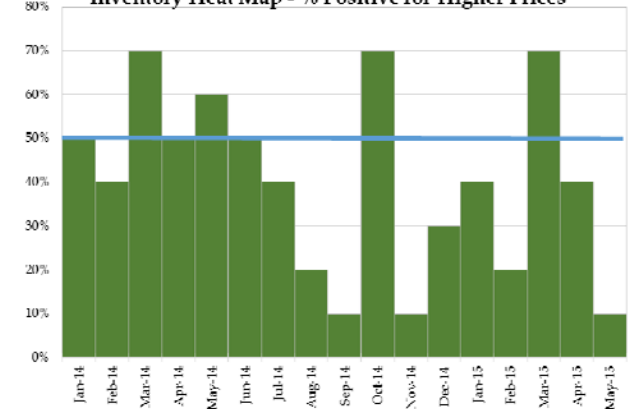
|                                                      | 2014 |     |     |     |     |     |     |     |     |     |     |     | 2015 |     |     |     |     |
|------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
|                                                      | Jan  | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May |
| MSCI Aluminum Shipments                              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Shipments-TTMMA                        |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Inventory Level                        |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Inventory Level-TTMMA                  |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Inventory/Shipments Ratio              |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Sheet & Coil Shipments                 |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Sheet & Coil Shipments-TTMMA           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Sheet & Coil Inventory Level           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Sheet & Coil Inventory Level-TTMMA     |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| MSCI Aluminum Sheet & Coil Inventory/Shipments Ratio |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |
| Positive for Higher Prices                           | 5    | 4   | 7   | 5   | 6   | 5   | 4   | 2   | 1   | 7   | 1   | 3   | 4    | 2   | 7   | 4   | 1   |
| Neutral                                              | 0    | 0   | 0   | 1   | 1   | 1   | 2   | 1   | 2   | 1   | 1   | 1   | 1    | 0   | 1   | 1   | 0   |
| Negative for Higher Prices                           | 5    | 6   | 3   | 4   | 3   | 4   | 4   | 7   | 7   | 2   | 8   | 6   | 5    | 8   | 2   | 5   | 9   |
| % Positive for Higher Prices                         | 50%  | 40% | 70% | 50% | 60% | 50% | 40% | 20% | 10% | 70% | 10% | 30% | 40%  | 20% | 70% | 40% | 10% |

Shipments Code: red=down; green=up; grey=sideways; white=no new data yet

Inventory Code: red=up; green=down; grey=sideways; white=no new data yet

Inventory/Shipments Ratio Code: red=up; green=down; grey=sideways; white=no new data yet

USA Service Center Aluminum Shipment & Inventory Heat Map - % Positive for Higher Prices



Source: Steel-Insights, LLC analysis

# MSCI Aluminum Shipments Annualized Through May 2015 Tracking up 1% Compared to 8% Gain in 2014

## USA Service Center Aluminum Shipments & Inventory (thousand tons)

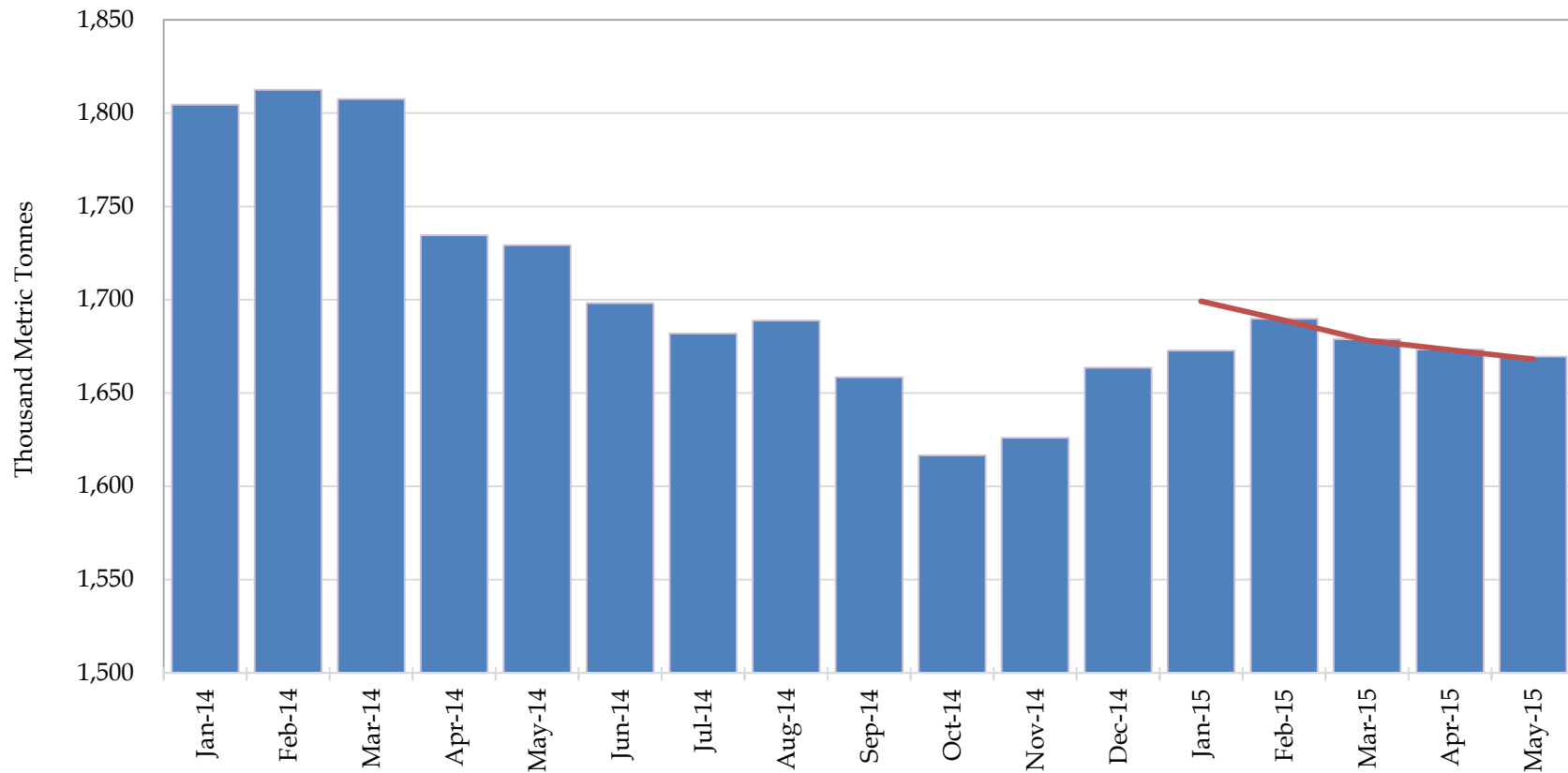
|                       | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015e |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total Aluminum        |       |       |       |       |       |       |       |       |
| Shipments             | 1,686 | 1,038 | 1,306 | 1,501 | 1,487 | 1,477 | 1,598 | 1,612 |
| Ending Inventory      | 357   | 279   | 348   | 357   | 366   | 378   | 408   | 398   |
| Months Supply         | 2.54  | 3.23  | 3.20  | 2.85  | 2.95  | 3.07  | 3.07  | 2.96  |
| Aluminum Sheet & Coil |       |       |       |       |       |       |       |       |
| Shipments             | 644   | 455   | 577   | 668   | 657   | 653   | 719   | 726   |
| Ending Inventory      | 150   | 111   | 162   | 168   | 173   | 180   | 198   | 188   |
| Months Supply         | 2.79  | 2.92  | 3.36  | 3.02  | 3.16  | 3.30  | 3.29  | 3.11  |

*Note: 2015e annualized based on data through May 2015.*

*Source: MSCI*

# While USA Primary Aluminum Production Has Dropped 7% to the 1.67 Million Metric Tonne Level

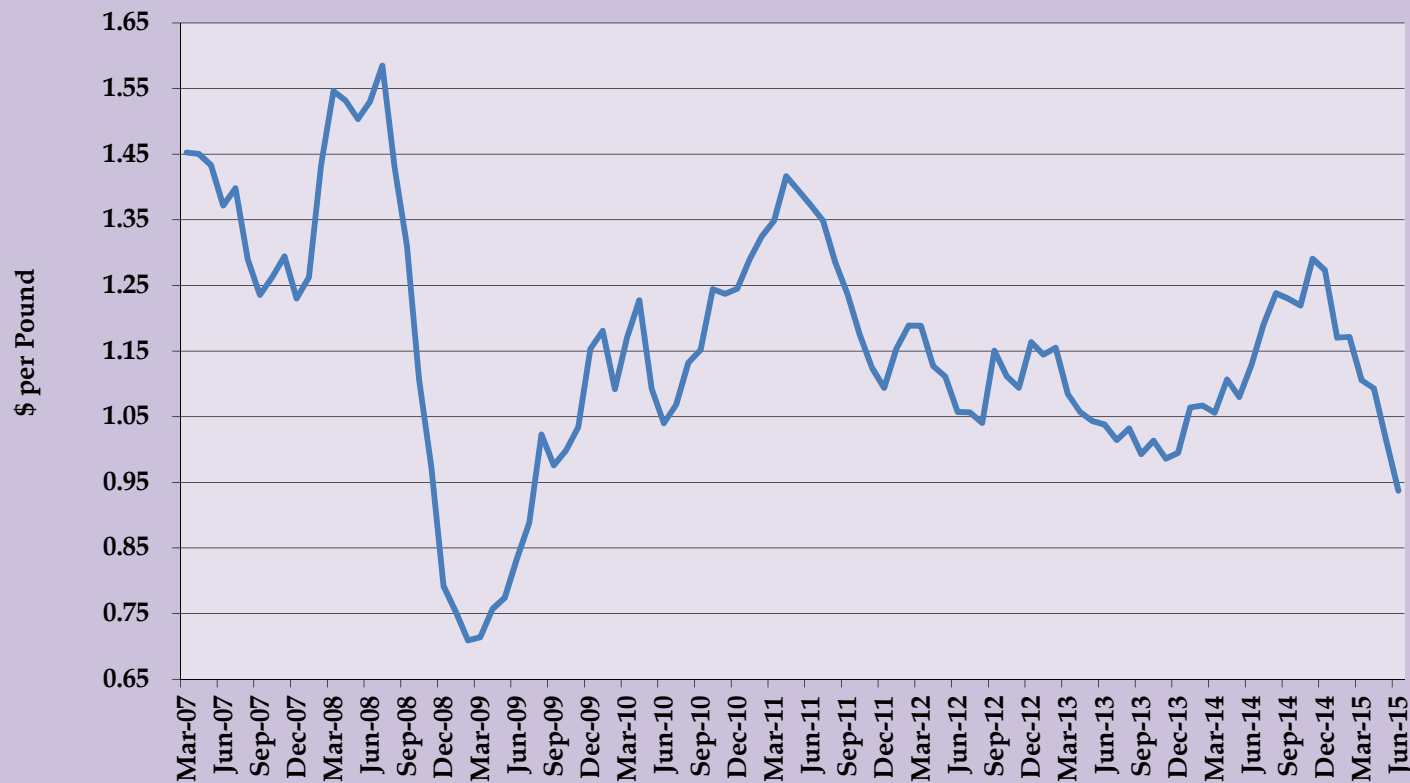
USA Monthly Primary Aluminum Annual Production Rate



Source: The Aluminum Association

# Prices Have Cratered on Global Aluminum "Glut"; Chinese Production Up 22% in May at 2.67 Million Tonnes

Aluminum Spot Price, P1020 Ingot,  
USA Midwest



Source: MetalPrices.com

Lower alumina costs and positive currency impacts have kept smelters in the black. Russia's Rusal contemplating idling 200K tonnes of capacity as is Alcoa 500K tonnes.



# Steel-Insights, LLC – “Seeing” What Others Don’t

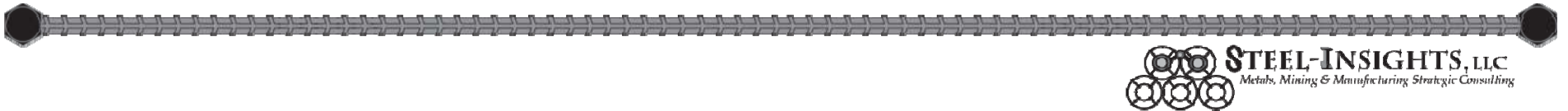
In WWII, American submarine commanders endured despite being outclassed by superior equipment and outgunned (fully functioning torpedoes weren’t available to them for the first 21 months of the Pacific War). In the fog of war, as often is the case in business, decisions with long impacting outcomes have to be made without the luxury of complete or definitive information.

Steel-Insights was formed to assist executive management teams navigate the “noise of battle” by more effectively managing the abundant resources available today and harnessing those resources to explore thought provoking and penetrating issues in order to magnify the pivotal decisions required for the long-term success of their companies in arguably tough industries that must survive challenging cycles, i.e. training and empowering submarine commanders.



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# CONGRATULATIONS to the Blackhawks!

## Conclusion & Questions



[becky.hites@steel-insights.com](mailto:becky.hites@steel-insights.com)

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