



# Applied Value Quarterly Steel Report

Q3 2019 Report

August, 2019

**Applied Value**  
Empire State Building  
350 Fifth Ave. Suite 5400  
New York, NY 10118  
Phone: +1 646 336 4971

[www.appliedvaluegroup.com](http://www.appliedvaluegroup.com)

# Applied Value is a management consulting & investment firm founded on the principles of lean growth and entrepreneurship.

1997 Background as an internal consultancy and change agent within the Swedish **Stenbeck Group...**

2019 ...today, a hands-on consultancy supporting clients **across industries**



## Industries of Expertise

- Telecom & Media
- Chemicals & Process
- Industrials & Engineering
- Consumer Goods
- Automotive



## Lean Growth Principles



Investments



Management Consulting



Social Responsibility

## Selected portfolio companies



APPLIED VALUE



ROI driven



Fact-based



Practical over theoretical



Hands-On



Global perspectives



# Applied Value challenges and supports repeat global clients across industries from three offices.



## New York

Empire State Building  
350 Fifth Ave. Suite 5400  
New York, NY 10118  
USA

Phone: +1 646 336 4971  
newyork@appliedvalue.com

## Stockholm

World Trade Center  
Kungsbron 1 (G2), PO Box 5047  
111 22 Stockholm  
Sweden

Phone: +46 8 562 787 00  
stockholm@appliedvalue.com

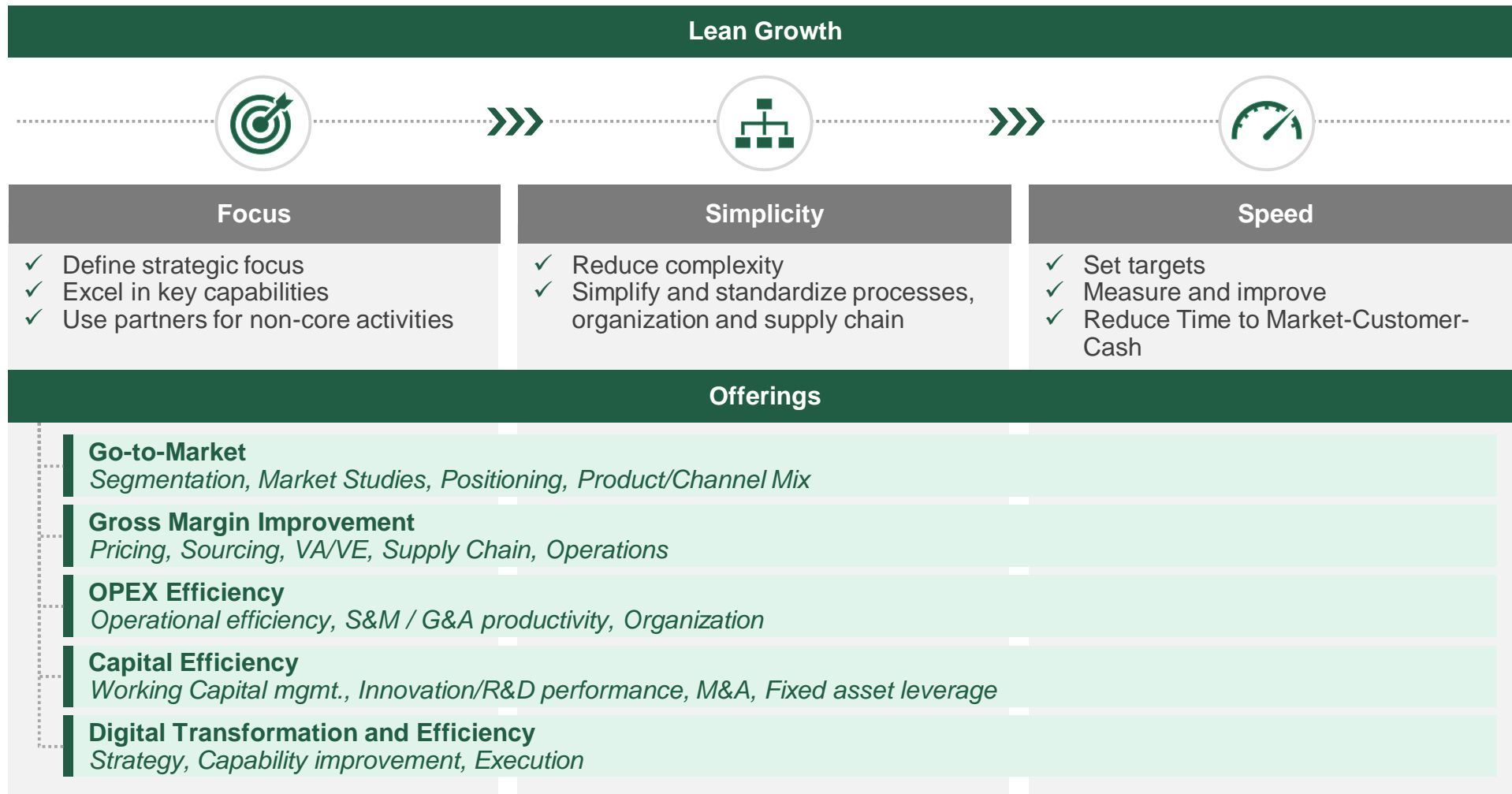
## Shanghai

Room 1504, Tower A, NA Plaza  
No. 518 Kunming Road,  
Shanghai, 200082  
P.R. China

Phone: +86 21 5213 6393  
shanghai@appliedvalue.com



# Our Lean Growth framework is based on Focus, Simplicity, Speed – guiding principles to raise client performance.

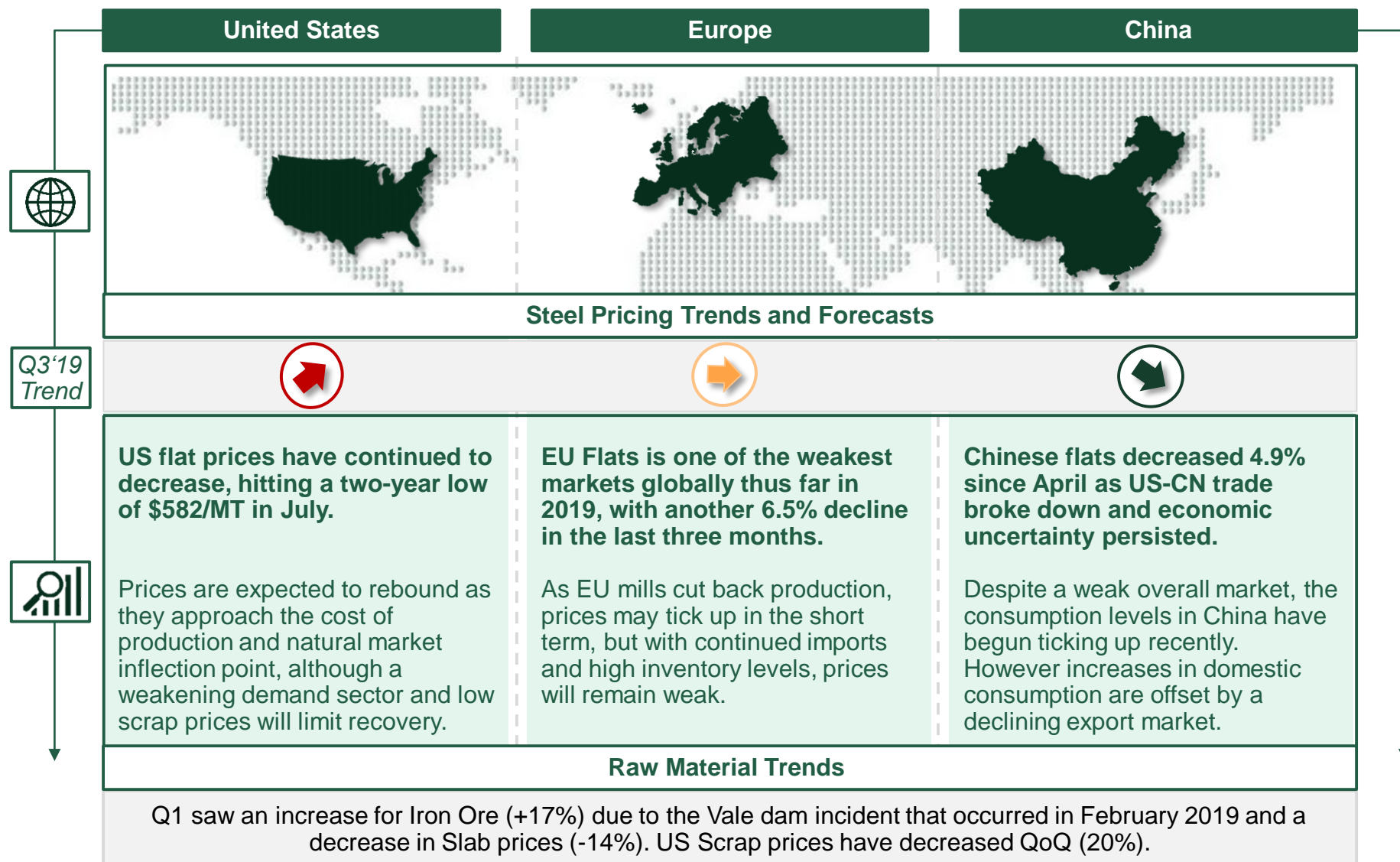


# Applied Value has 15+ years of experience working with clients in numerous industries involved in various facets of steel purchasing.

















Client Annual Consumption, tons		Data Control	Fact-based Negotiations	Leverage Creation	Manage Steel Component Costs	Risk Management	Macroeconomic Factors on Global Steel Trade	Game Changers
10M	Automotive OEM	✓	✓	✓	✓	✓	✓	✓
	White Goods OEM	✓	✓	✓		✓		✓
	Automotive OEM		✓	✓		✓		
	Global Engineering		✓	✓				
1M	Global Construction	✓				✓		✓
	Industrial Products		✓			✓		
	4 Food Producers		✓				✓	✓
	Heavy Truck OEM		✓	✓	✓			
	Defense/Heavy Truck	✓	✓	✓	✓			
	Security Solutions	✓	✓	✓			✓	
	Heavy Truck OEM	✓	✓	✓	✓	✓		
	Truck Tier 1	✓	✓	✓		✓		
0.1M	Lifting OEM	✓	✓	✓	✓	✓		✓
	Global Engineering	✓	✓	✓		✓		
	Consumer Goods OEM		✓	✓				✓
	EU Turbine Manufacturer	✓	✓	✓	✓	✓		
0.01M	Automotive Tier 1	✓	✓		✓	✓		
	Scand. Engineering	✓	✓	✓			✓	
	Scand. Construction	✓	✓	✓				



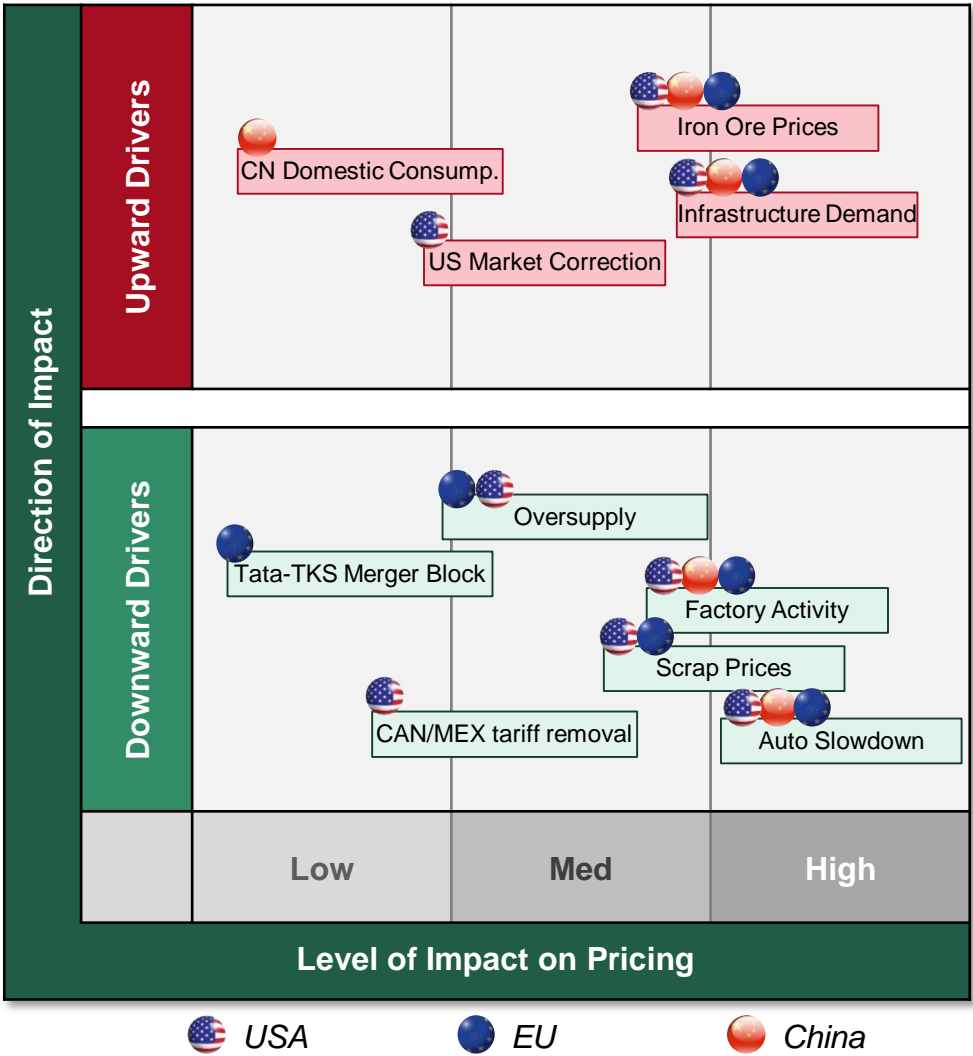
# Global steel prices decreased in Q2 given weakening demand and a continuing correction in the US from the tariff-induced speculation rally.



# Global Steel Price & Trend Summary.

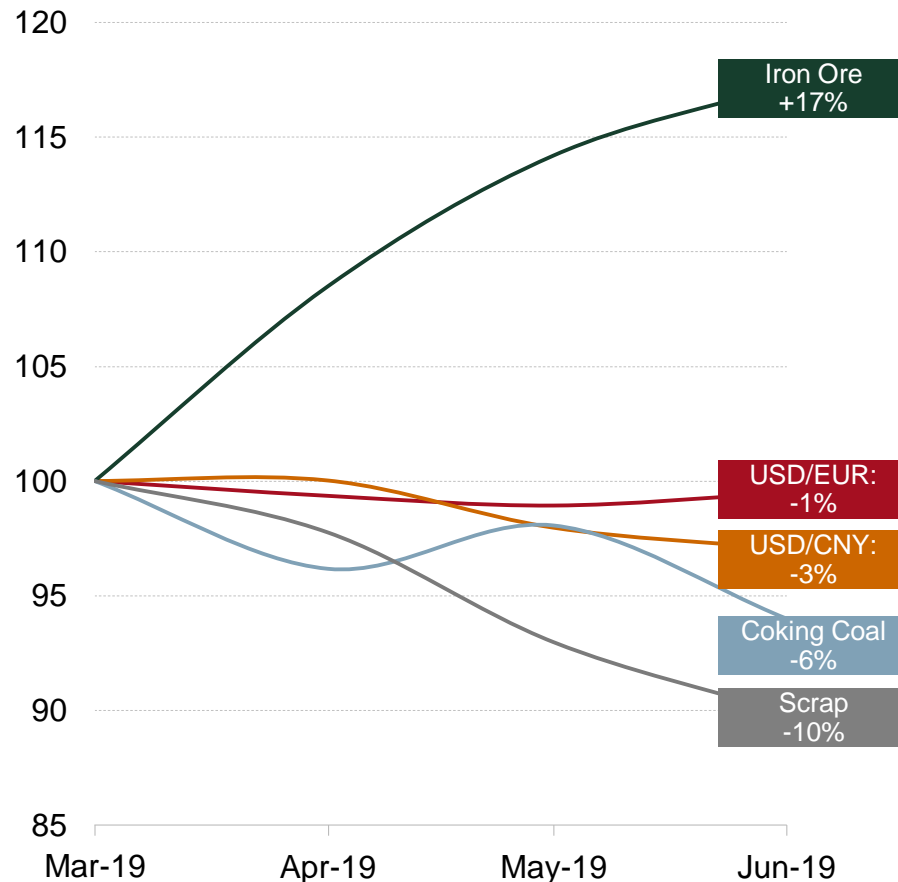
Commodity		Latest Price (Jul)	Last 3 Months	Trend (Forward)
	<b>Flat</b>			
	US	\$582/MT	-24%	
	EU	€478/MT	-7%	
	CN	\$564/MT	-4.9%	
	<b>SS</b>			
	US	\$2,337/MT	-3%	
	EU	\$2,490/MT	3%	
	CN	\$2,050/MT	-8%	
	<b>Plate</b>			
	US	\$819/MT	-21%	
	EU	\$629/MT	-6%	
	CN	\$565/MT	-4%	
	<b>Bar</b>			
	US	\$755/MT	-9%	
	EU	\$535/MT	-3%	
	CN	\$565/MT	-14	

## Major Market Drivers

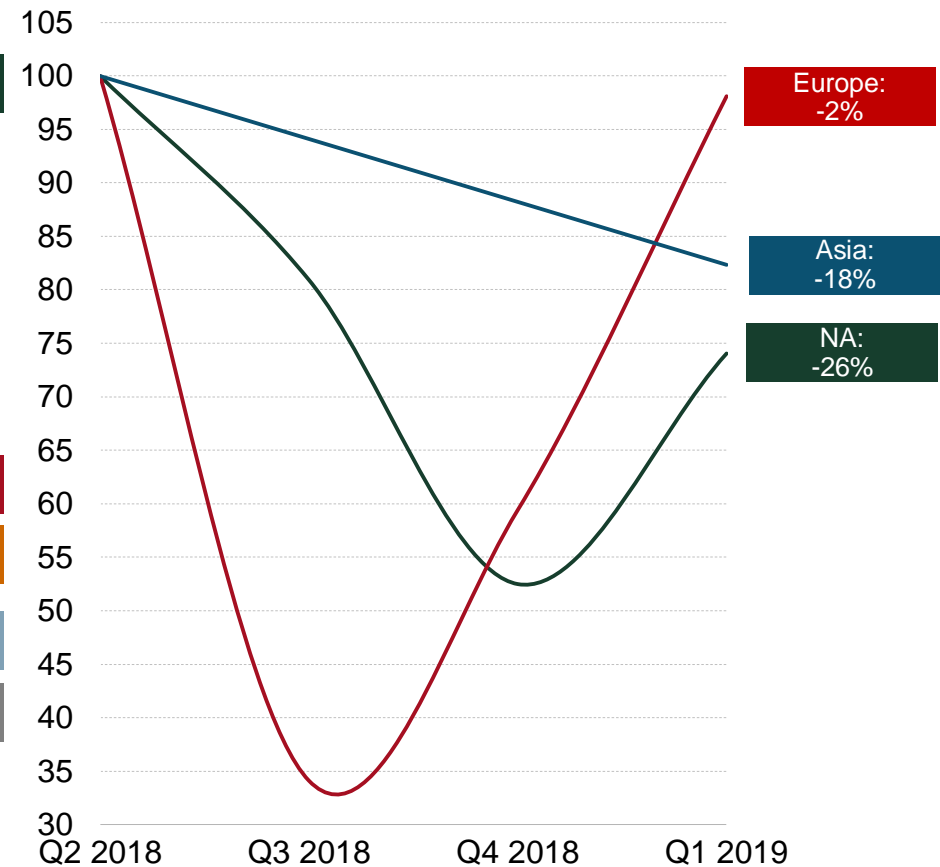


# The Q2 2019 continued increase in Iron Ore prices (+17%) for steel input costs was offset by declines in Coking Coal and Scrap.

**Indexed Input Costs**  
December 2018 – March 2019



**Indexed GDP Growth Rate**  
Jan 2018 – December 2018





## Applied Value Quarterly Steel Report

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Q3 2019

### Market Conditions by Region

Steel Production Costs

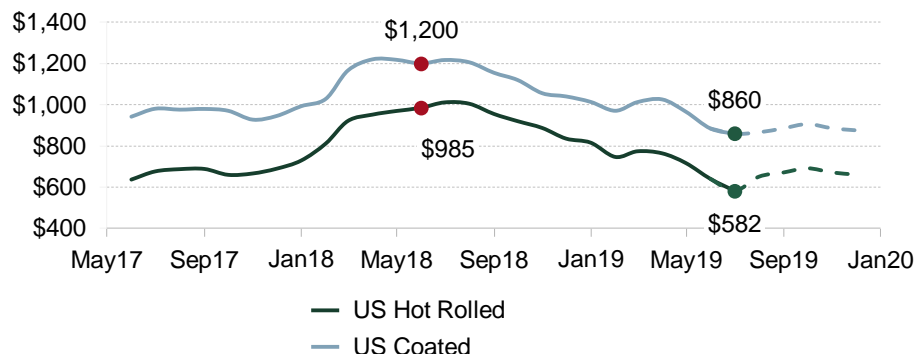
Special Section: Mill Capacity Increases

Stock Price Development of Major Steel Companies



# Although many believed US HRC had bottomed in February, prices have continued to fall recording a 23.8% decline in the last three months alone.

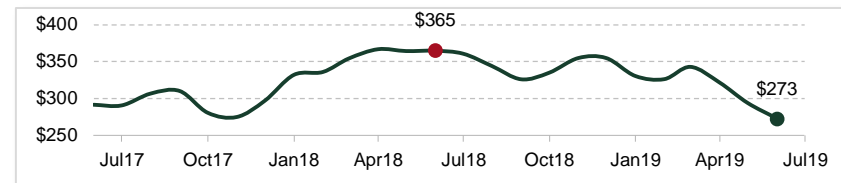
## US Flat Prices (USD/MT)



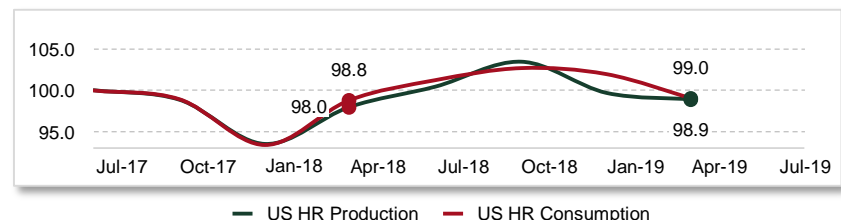
- › In the last three months, US HRC has plummeted 23.8% while coated fell 16.2%. US Hot Rolled Coil prices have continued falling off their peak in Q3 2018 as low automotive demand and industrial output push down prices. July's HRC pricing of \$582/MT is the low since June 2017.
- › Scrap prices decreased by 20.5% in Q2 as weakening end-user demand and coil prices continue to fall.
- › Production & Consumption both trended downwards in Q1 2019, although both remain above the average observed in 2018.
- › US Mill Capacity utilization has decreased after its March peak of 83%, a level not seen in more than a decade. However, as the market cools and additional volume is imported from Canada and Mexico, which were recently relieved of the 232 tariff, it is likely that this number will trend downwards into Q3.
- › The spread between Chinese prices and US prices has continued to approach zero, with a QoQ decrease of 58.6%. June saw the lowest spread since January 2018 at \$80/t as Chinese HRC prices decreased 3.7% due to overall declining industrial outputs.

## US Scrap Steel Price

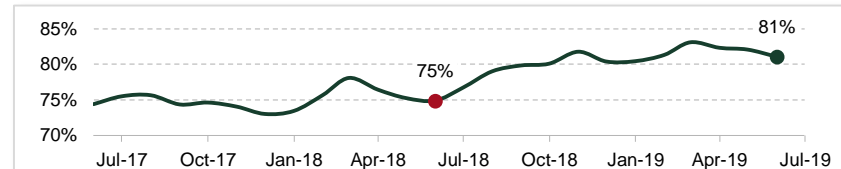
USD/MT



## Indexed Production & Consumption Volume

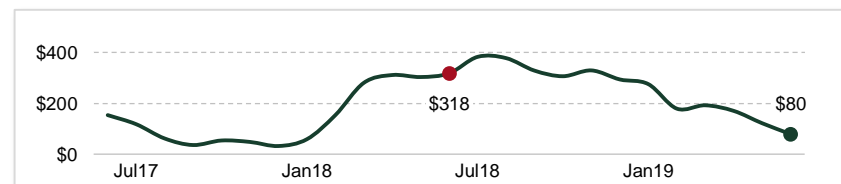


## US Mill Capacity Utilization



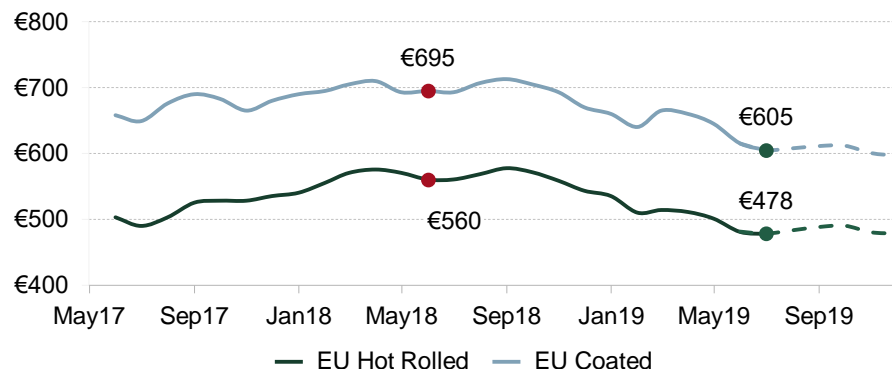
## US vs China Price

USD/MT



# EU Flats is the weakest market globally in 2019, with another 6.5% decline in the last three months and strong downward pressure from rising imports.

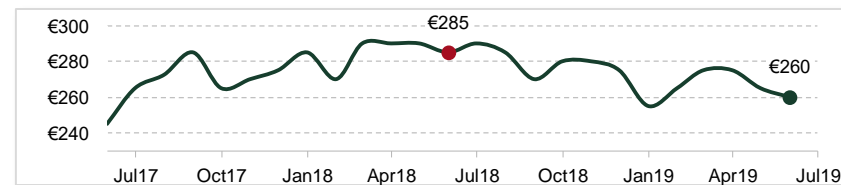
## European Flat Prices (EUR/MT)



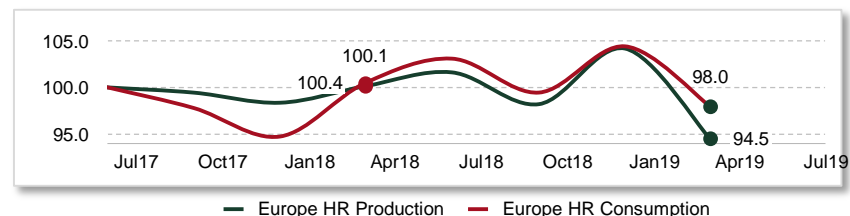
- › HRC prices dropped 33 EUR/MT or 6.5% in the last three months with mills, ArcelorMittal and US Steel, announcing subsequent capacity reductions in hope of pushing prices back up. The mills have cited increased imports and tight margins from rising iron ore prices as the cause for recent capacity reductions.
- › EU Scrap prices are approaching an all time low at 260 EUR/MT, a 5.5% drop QoQ. The decline in scrap was similar to the decline observed in the coil market and will likely trend further downwards as Arcelor and USS take capacity offline.
- › EU consumption levels dropped sharply in Q1 2019, at a time when sheet inventory approaches a two-year high. EU oversupply is exacerbated by swiftly rising imports, despite safeguard tariffs implemented in February. The annualized import rate of steel products rose 8% in LTM.
- › The EU Steel market is proving to be the weakest market globally, with the spread between EU and Chinese steel remaining in negative territory for the majority of 2019 thus far. The spread improved slightly over the quarter to -17EUR/MT, but implies that CN steel remains more expensive than EU. The EUR has appreciated slightly against the CNY recently, but overall volatility in the exchange rate has been low for the year.

## European Scrap Prices

USD/MT

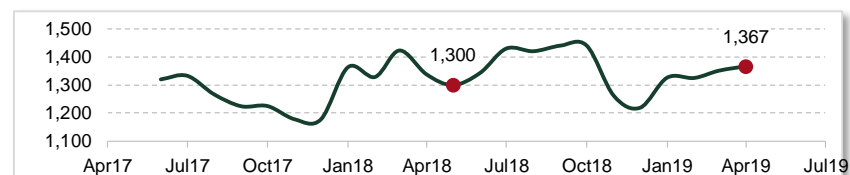


## German Indexed Production & Consumption



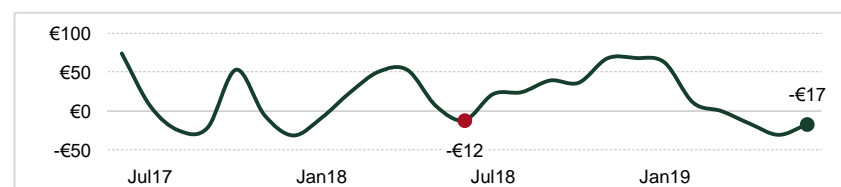
## German Sheet Inventory

kMT



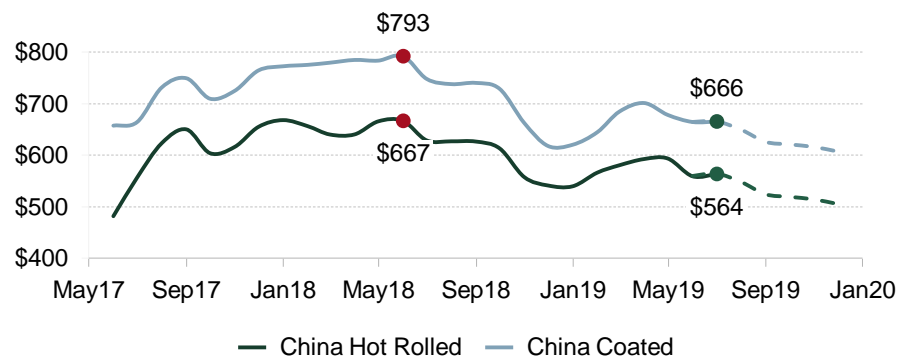
## EU vs. China Price

EUR/MT



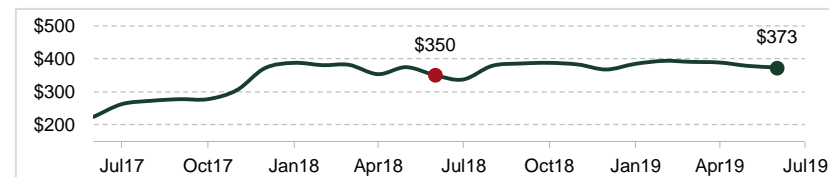
# Chinese flats decreased 4.9% since April as US-CN trade broke down and economic uncertainty persisted.

## China Flat Prices (USD/MT)



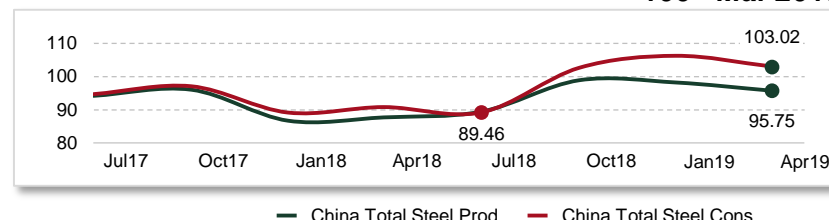
## China Scrap Steel Price

USD/MT



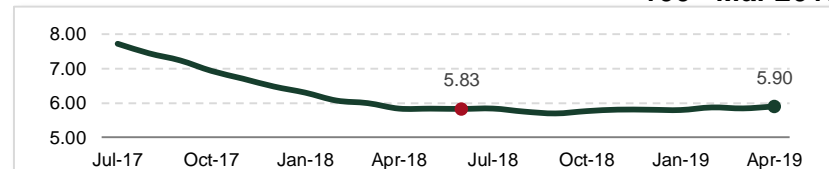
## Indexed Production and Consumption

100= Mar 2017



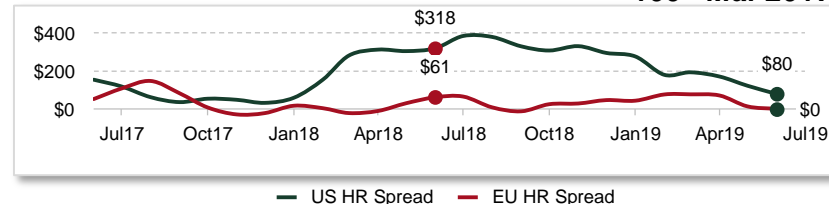
## China Exports

100= Mar 2017



## Spread between US & EU

100= Mar 2017



● Previous Year's Data ● Latest Data + - Correlation to Market Price

- Chinese HRC prices declined by 4.9% while Chinese coated declined by 5.1% since April as US-China trade negotiation broke down and further uncertainties regarding global economic development arose.
- Chinese scrap price has declined by 3.6% since the high in April in tandem with the decline of flat prices. China's ongoing effort to switch to cleaner electric arc furnaces has caused increase in demand of steel scrap which supported scrap price despite a general market decline.
- China's steel export has steadily declined since 2017 stabilizing at an average of around 5.9 million tons per month since mid 2018.
- Consumption levels in China remain elevated compared to 2017 and 2018 despite low industrial activity and reportedly weak end-user demand. Production levels deviated from consumption in Q3 2018 and Q1-Q2 2019 helping relieve some pressure from the oversupply.
- Spread between US-China and Europe-China steel price has narrowed significantly with near equivalent price compared to European flat steel and a \$80 price difference compared to US flat.



# Raw material price changes and Turkish tariff shifts have placed upward pressure on steel prices.

## Upward Market Drivers

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### Raw Material Price Increases

- › Global: The Vale dam incident from early February 2019 has had long-lasting effects on iron ore, with a QoQ increase of 17%. These price increases have hurt EU steel producers' profit margins. High input costs and weakened demand have prompted ArcelorMittal to cut back on production for the second time this year. In addition to the Vale dam incident, ongoing tightness in seaborne supply has also driven prices up.



### Infrastructure Demand

- › US: In May US Congressional leaders agreed to a \$2 Trillion plan to revamp America's "D+" rated (according to the American Society for Civic Engineers) highways, railroads, bridges, and broadband. The duration of the plan would be 25 years, with emphasis on United States' roads (they would account for 50% of the spend). Congressional leaders are now discussing the exacting funding of this plan, with more details to come as the year progresses.
- › EU: According to Tata Steel Europe, Construction in the EU is expected to grow 2.2% in 2019, owed to increased demand across the continent; construction is currently the market's stronghold. Engineering is also predicted to grow 0.9%.
- › EC recently invested 4BEUR in infrastructure across 10 member states. Funds will go to projects including transport links, affordable energy, drinking water improvements and healthcare. The current EC infrastructure budget is 32 Billion Euros across 258 projects.
- › CN: Higher infrastructure funding: Beijing has announced in early June that the borrowing requirements for infrastructure projects will be eased significantly, covering commercial real estate, railways, highways, and power projects. This new mandate will likely increase capital projects spending by \$100 to \$200 billion per year, which will result in higher demand for steel.



### Market Correction

- › US: The market is approaching a floor where price meets production costs, indicating a near-term inflection point where prices must rebound.



### Economic Improvements

- › CN: Value added industrial outputs in May slowed to 5% (from 5.4% in April), and was short of the forecasted 5.5% due to increased headwinds from trade tensions with the United States.
- › The Baltic Dry Index, a global economic indicator, recovered this past quarter from its 51% decline and is now back to average levels at 1,180.



# Global downturn in overall industrial activity and weakened automotive demand have placed downward pressure on steel prices.

## Downward Market Drivers



### Scrap Price Decreases

- › EU: European scrap prices are down by 5.5% QoQ as export prices from Europe to Turkey and to India have fallen, around \$30/t and \$18/t, respectively. The scrap price decreases are also affected by soft rebar demand in the region due to a QoQ construction output decline of 33%.
- › US: Scrap prices decreased by 20.5% in Q2 as weakening end-user demand and coil prices continue to fall. Turkey's scrap imports from the US have decreased 36% QoQ due to retaliatory tariffs placed by Turkey on the US.



### Automotive Industry Slowdown

- › US: Auto demand has continued to decline with a 14% decrease in light vehicle production between January and April. April production totaled 203,400 units, a low not seen since January 2011.
- › CN: The automotive industry has continued its downward dive with a consecutive 11-month decrease in sales. May sales were down 16% YoY due to an array of factors, including: a previously over-saturated auto market and a limited amount of drivers' licenses being allotted by the Chinese government in an attempt to lower emissions.
- › EU: The automotive industry has experienced a continued slowdown in the EU region with a 0.5 ppt decrease in May registrations YoY. Auto OEMs have seen sales decline in the region YoY such as Nissan's 23% sales plunge across the EU along with Audi at 4%, and Ford at 15%.



### Purchasing Managers' Index

- › US: Factory growth rate is at its lowest in 10 years, hitting a PMI of 50.5 in May, an 11% YoY decrease.
- › EU: There has been continued contraction in the EU's manufacturing activity with a QoQ decrease of 5.7% as new work, new export orders, production, and employment rates fell this past quarter.



### Tata – Thyssenkrupp Merger Prohibited

- › EU: The European steel market expected a rise in prices from the merger of Tata and Thyssenkrupp. With the European Commission blocking that transaction under the EU Merger Regulation, this is likely to add downward pressure as the previously built in price increases caused by the merger dissipate.



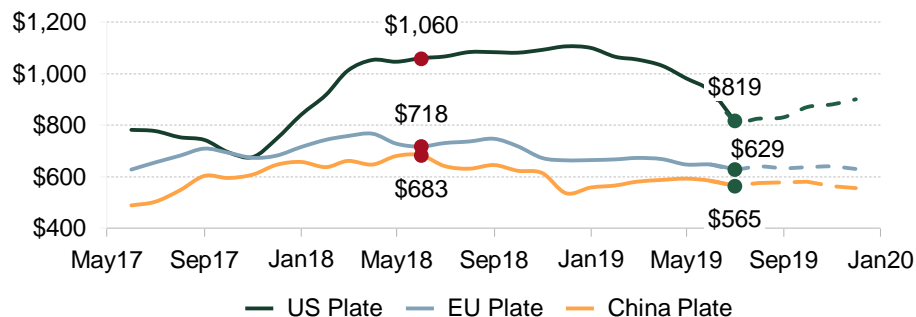
### Tariffs

- › EU: Even with safeguard tariffs in place, the EU remains the rerouted destination for material not making it into the states. Imports have increased 8% LTM, with significant 24% increase in imports from other European countries and a 19% increase in Russian imports.
- › US: In May, president Trump lifted the 25% steel tariff on Mexico and Canada in an attempt to ease concerns about his trade agenda at large.



# Plate Prices in the US continue to plummet, while European and Chinese prices have remained steady.

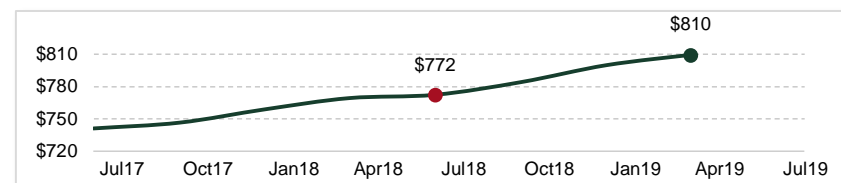
Plate Prices – US / Europe / China (USD/MT)



- US plate prices have decreased 20.5% in the last three months as a result of a wide range of offer prices from mills and concerned buyers. This led to a decrease in lead time from 5.5 weeks to 4.2 weeks over the same period.
- EU Plate prices have decreased 5.9% in the last three months, which is slightly less than the European HRC prices, which have decreased 6.5% over the same period.
- Chinese Plate prices have fallen 3.8% QoQ, less than the 4.9% seen in Chinese HRC market. This is likely due to consistent plate demand throughout the first four months in China.
- US demand for plate material is support by high Defense Spending, which continues to rise and is up 5% YoY in Q1 2019 vs the same period last year. US Crude Oil production also continues to trend upward, despite significant reductions made by OPEC. Crude oil production is up 14% YTD compared with the same period last year.
- The Baltic Dry Index has rebounded by a whopping 82%, at least partially driven by a spike in capesize shipping, bulk carriers usually transporting coal, ore and other raw materials.

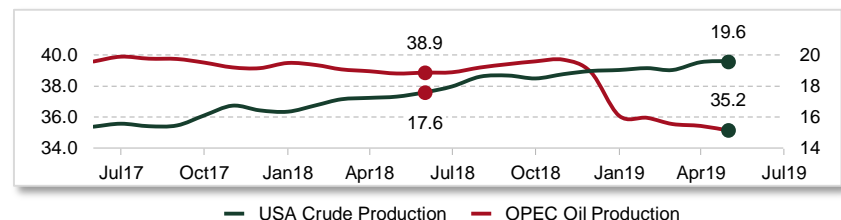
US Defense Spending

BUSD



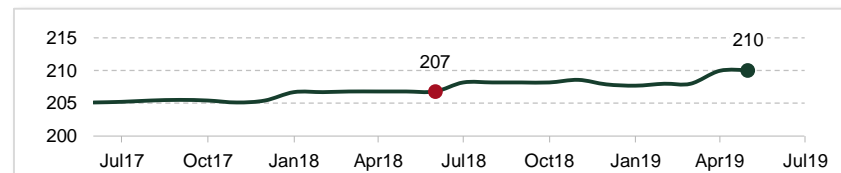
Crude Oil Production

MBPD

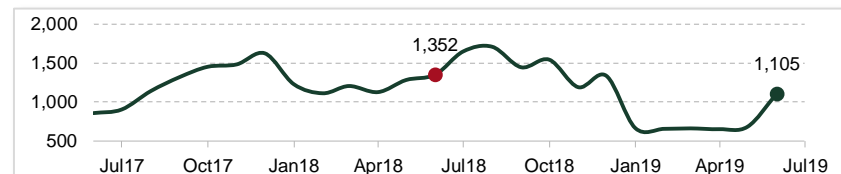


US Ship Building and Repairs

Index: 1985 = 100



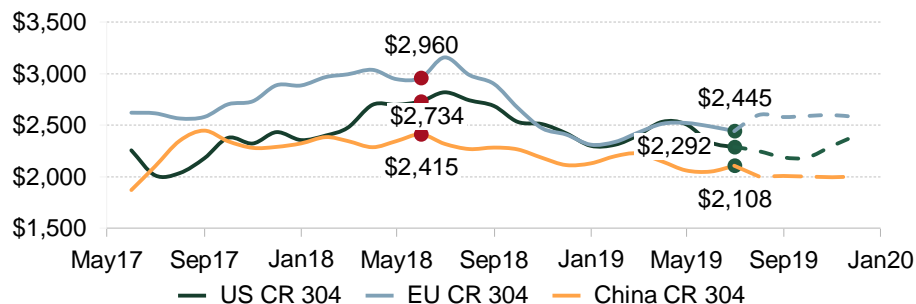
Baltic Dry Index





# Stainless prices fell in all regions globally with the largest decline seen in the US market, which fell 9.6% in the last three months.

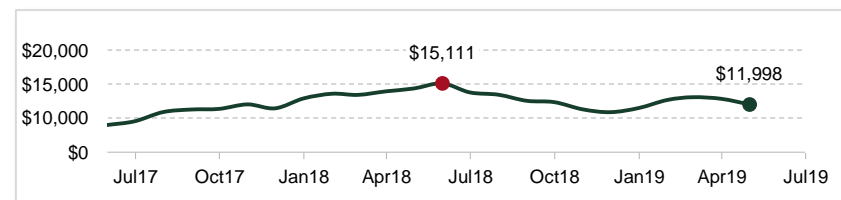
## Stainless Steel Prices – US / Europe / China (USD/MT)



- US stainless prices have dropped by 9.6% in the last three months to \$2,292/MT, marking the end of a short-lived rally in Q1, when prices had managed to reach \$2,535/MT by the end of March
- EU stainless prices rode an upward trend similar to the US in Q1 2019 but have also turned downwards, falling 2.8% in the last three months. The EU decline was much more mild compared to the 9.6% drop in the US market and this is attributed to successful campaign by mills to increase alloy costs on the back of rising nickel costs and tariff quotas approaching maximum
- In the last three months, CN Stainless prices have fallen 1.9%. Prices rallied \$48/MT in July, reversing the trend for 2019 thus far. Prior to the rally, CN prices had reached a 2-year low of \$2,050
- Natural gas has continued to decrease due to increased production; there was a 15% decrease, resulting in a 52 week low of \$2.59/mmBtu
- Iron Ore has seen increasing values QoQ at 17%, due to ongoing tightness in seaborne supply and the Vale Dam incident. At \$99/MT, Iron Ore is at its peak since Feb 2017 and is likely to remain high due to the expected continuation of tightness in seaborne supply.

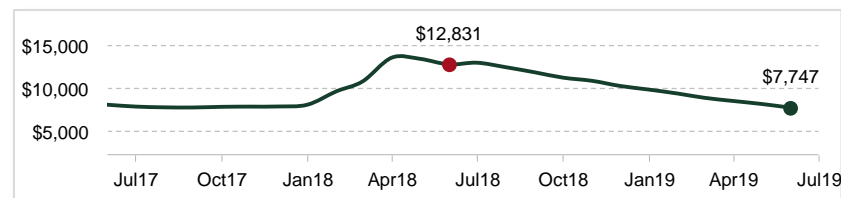
## Nickel

USD/MT



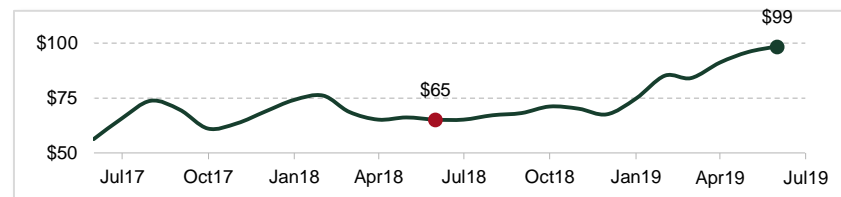
## Chromium

USD/MT



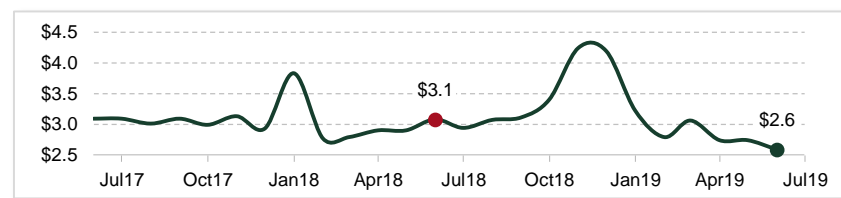
## Iron Ore

USD/MT



## Natural Gas

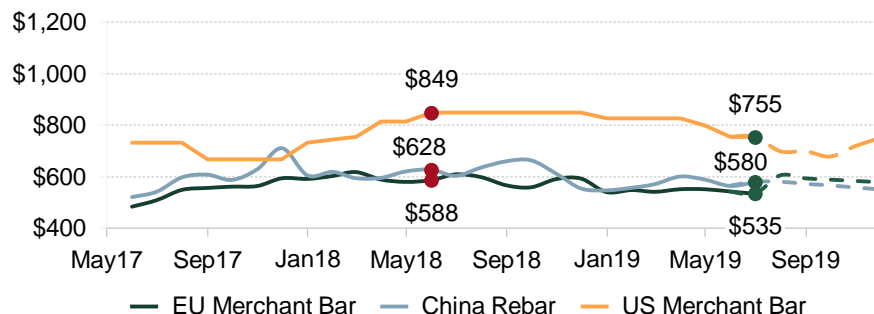
USD/mmBtu





# US bar prices fell a further 8.7% in the last three months, but still retain more of the 232-driven price increases than other domestic commodities.

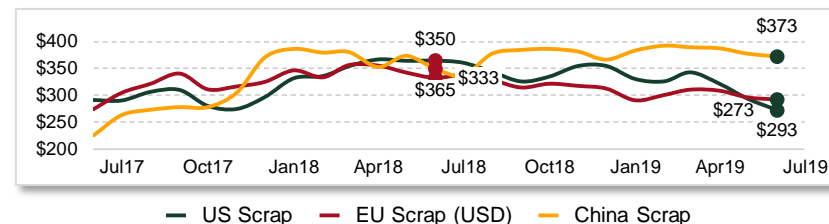
## Long Steel Prices (USD/MT)



- US merchant bar prices fell precipitously in the last three months, down 8.7%. This continues a downward trend from Q1 and is supported by a decline in the US scrap market, which is down 21% in Q2 and 23% YTD.
- EU merchant bar saw back to back declines in June and July, recording an overall decline of 3.2% in the last three months. Merchant bar demand is typically soft during the summer months, but low prices are also supported by buyer expectations of further declines, resulting in slower “day by day” buying activity.
- China Rebar prices slipped 3.6% in the last three months after a short-lived 3.0% recovery in Q1. The decrease comes even as scrap prices remain near their two-year peak at \$373/MT and is likely due to a slow down in construction. However, Beijing has recently announced an easing of borrowing requirements that is expected to increase the annualized rate of capital spending by \$100 - \$200Bn and push rebar prices higher in Q3.
- Nickel prices are down 5% in Q2 after a strong 12% rally in Q1, settling at \$11,998/MT in June. With relatively flat movements in both Ferrochrome and Molybdenum in Q2, the net impact of alloy surcharges has been downward driving.

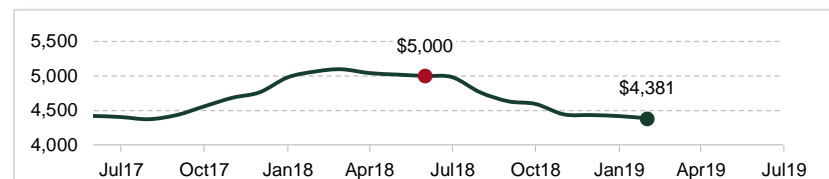
## Scrap Steel Price

USD/MT



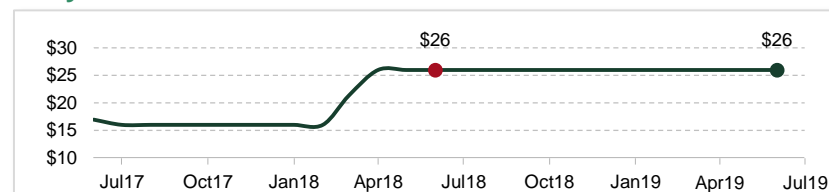
## Ferrochrome

USD/MT



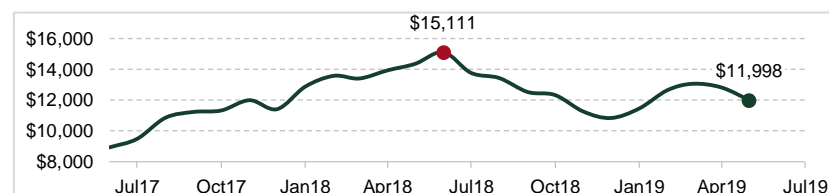
## Molybdenum

KUSD/MT



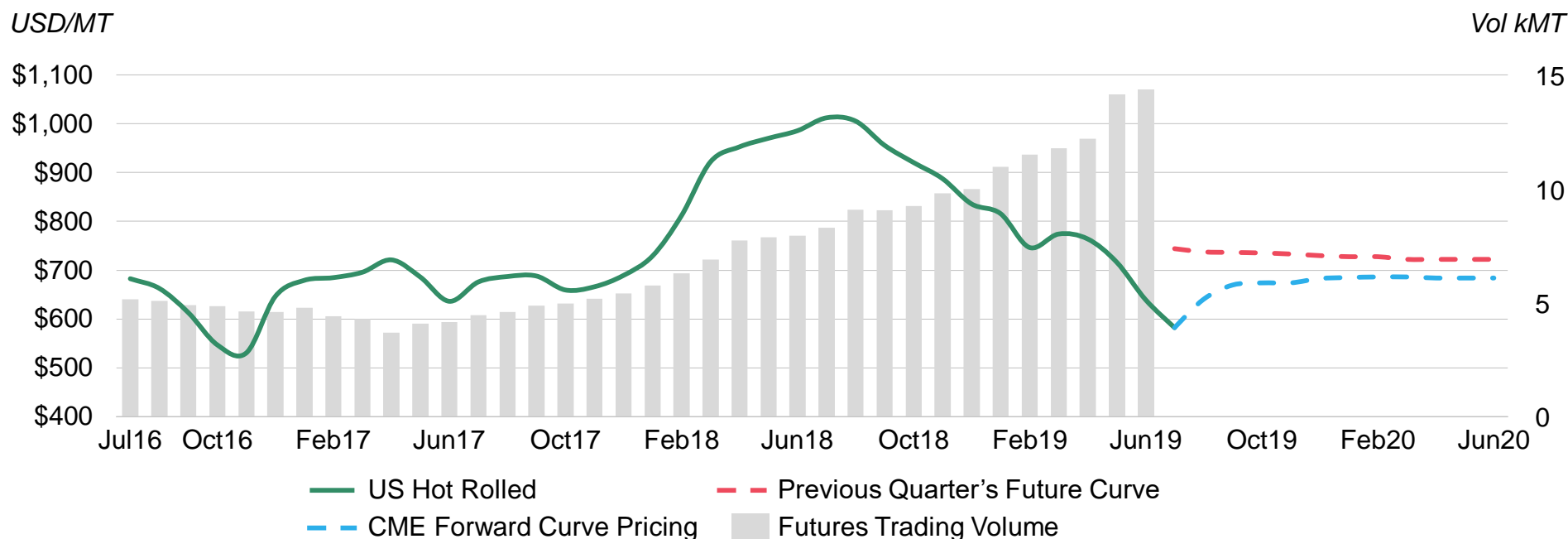
## Nickel

USD/MT



# US Hot Rolled steel futures currently indicate that prices are expected to rise back up into the \$680/MT range by the end of 2019.

## Hot Rolled Historical Pricing and Contract Volume & Futures CME Pricing



- › The CME HRC Futures Curve implies that HR prices will sharply recover to \$670/MT by September 2019 and gradually rise through the end of the year to settle at \$683/MT, or 17% above current spot. Last quarter the average price of futures contracts between July and December 2019 was \$736/MT. In the current month, those same contracts are trading at \$621/MT, more than \$110/MT below last quarter, reflecting deteriorating market sentiment.
- › Participation in exchange activity is reaching unprecedented levels, with the rolling 12 month average volume traded nearly double YoY. Volume traded in May 2019 saw a 16% jump from the previous month, and June 2019's volume sustained this sharp increase.

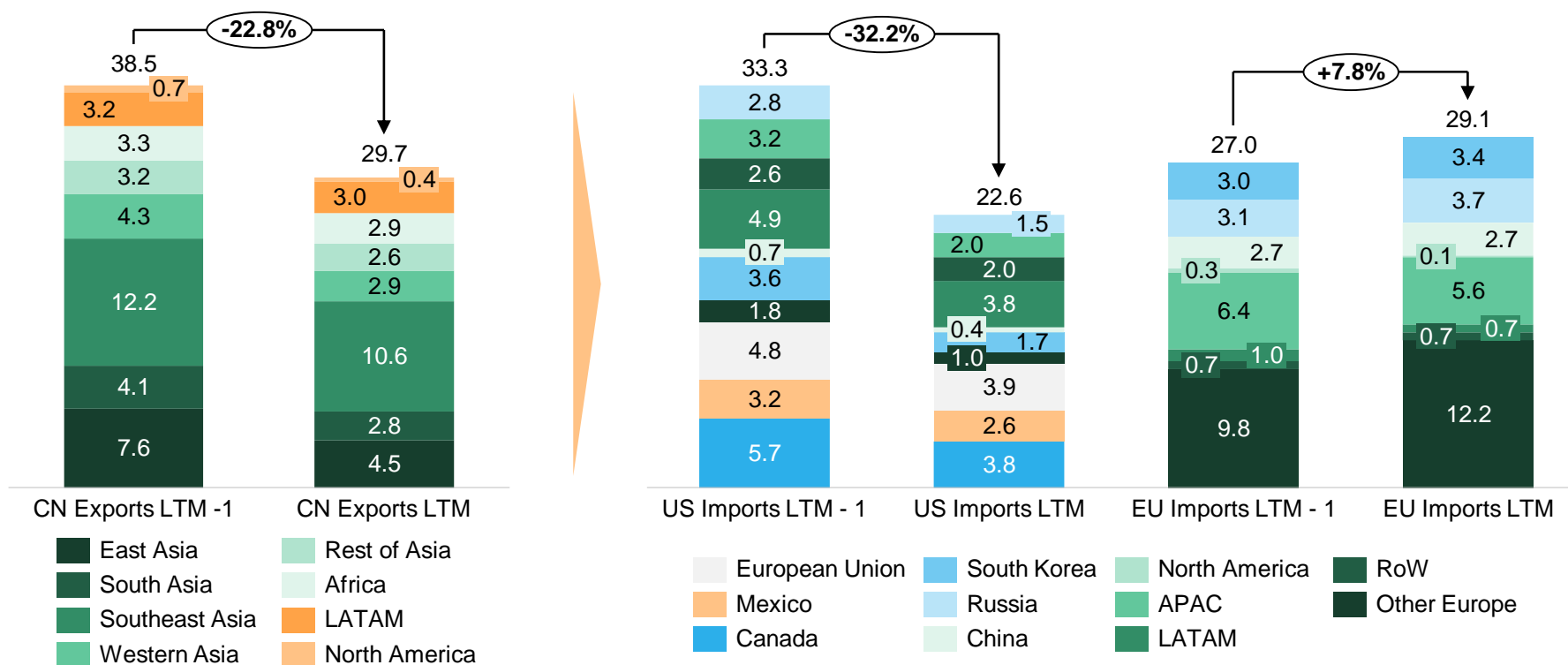
Note: Volumes are traded volumes cleared by CME, i.e. they exclude the "off exchange" OTC (over-the-counter) volumes not cleared by CME Prices pulled for CME futures Apr 6<sup>th</sup>, 2019



# Imports have continued to decline at a rapid rate in the US, while the EU has continued to see a bigger activity, despite a decline in imports from Asia.

## China Exports, and US and EU Imports – All Steel Products MMT

LTM: May 18 – Apr 19



- Chinese exports decreased 22.8% in LTM compared to the same period YoY, as the effect of trade tensions begin to become more apparent. Volume loss was primarily observed in neighboring Asian countries, which China routinely uses as intermediary steps in more complex supply chains to procure value-add services or avoid tariffs. They are not necessarily the final destination of the material.
- US imports are down 32.2% in LTM relative to the same period last year, with notable reductions in volume from neighbors Canada and Mexico. These losses are likely short lived however, with 232 tariffs being lifted recently from these countries.
- Europe imports were higher in LTM, as they increased 7.8%. Imports from other countries in Europe, Russia, and South Korea increased significantly, while the economic block imported less from APAC, LATAM, and North America.



## **Applied Value Quarterly Steel Report**

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Q3 2019

Market Conditions by Region

### **Steel Production Costs**

Special Section: Mill Capacity Increases

Stock Price Development of Major Steel Companies



# Iron ore prices have continued to rise following the vale dam incident earlier this year, notching another 17% increase in Q2 2019.

## Current Market Update

## Q3 Forecast

### • Scrap

- **US Scrap** prices continued to decline in Q2 with a 20.5% QoQ decrease, weakened primarily by a soft coil market and despite a high utilization rate at US mills. June's pricing of \$273/MT is the lowest the market has seen since November of 2016. End users have seen decreased demand for steel as buyers wait for prices to bottom out. Further, the tariff on Turkish material was cut in half from 50% to 25%, implying additional import volumes could hit the market again and drive prices down further.
- **EU Scrap** prices declined, although much less severely than in the US with only a 5.5% QoQ decrease. Even though supply remained limited, a weak economy and a reduction in construction output drove down demand for rebar, further affecting scrap prices in the region. This decline may be offset by the current preference to scrap as a steelmaking input based on the extensive increases seen in Iron Ore this year.



### • Iron Ore

- **Iron Ore** prices continued to soar this quarter, jumping 17% QoQ to \$99/MT, a 52% increase from June of last year. Iron ore prices have reached the highest price the market has seen since May 2014. The Vale dam collapse from February 2019 has had long-lasting effects on global iron ore prices. Vale, one of the world's largest producer of iron ore, has had several production facilities destroyed in the disaster and total recovery is not expected for another three years. Iron ore prices are likely to continue to climb before settling down.



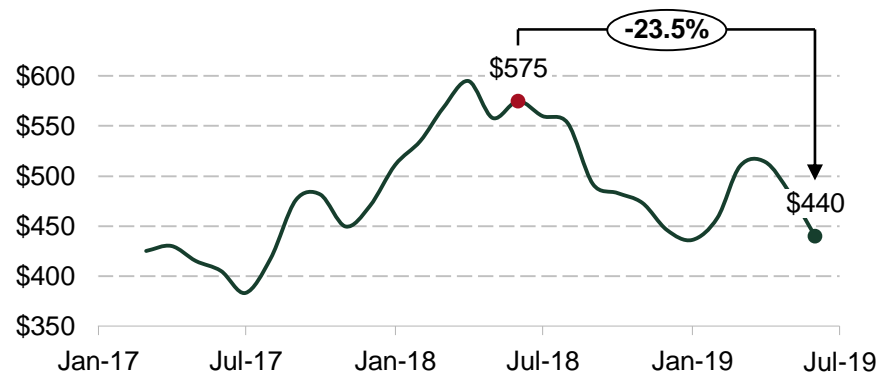
### • Slab

- **Slab** pricing saw a significant drop over Q2 with a 14% decrease. As compared to June of last year, slab prices have fallen 23.5% year over year. Brazil's focus at the beginning of the year was exporting slab to the US where higher selling prices could be found than in Brazil. However, the quota limit for Brazil imports into the US, set in place by Section 232, is almost at capacity. Brazilian slab producers must now turn to their domestic market as any material imported past the quota will be subjected to the hefty tariffs.

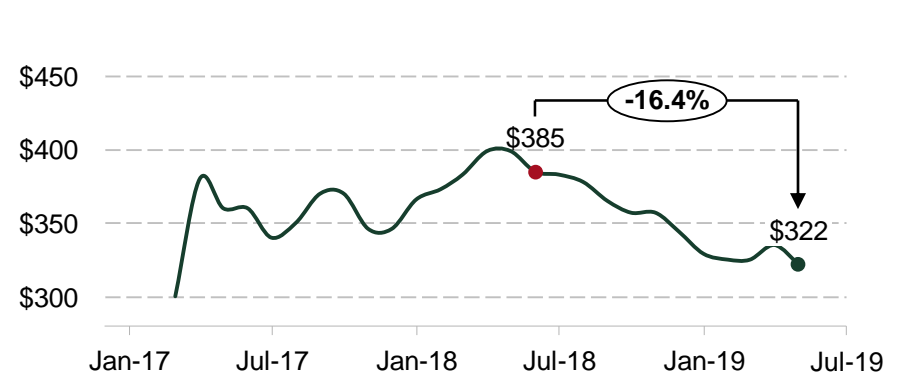


**Global input materials have seen YoY decreases, mostly in the double-digit range. Overall decrease in steel demand has weakened pricing.**

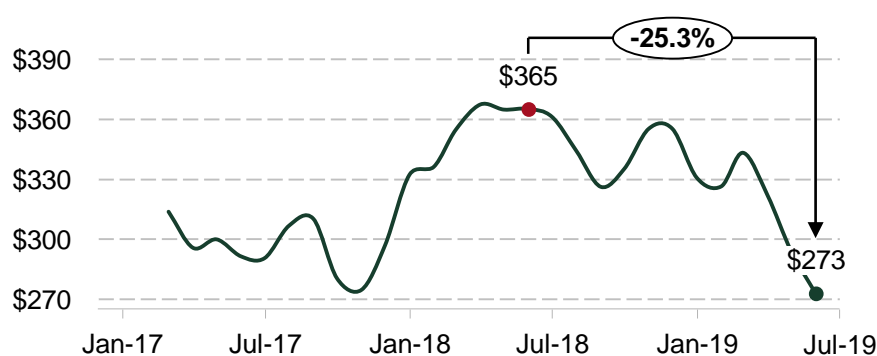
**Slabs**  
USD/MT



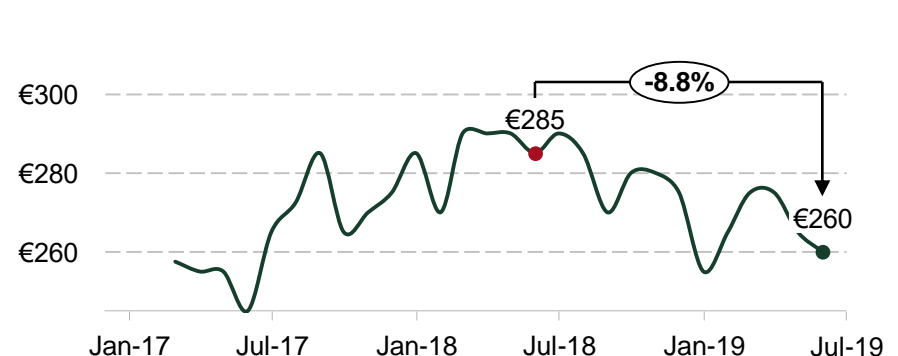
**Pig Iron**  
USD/MT



**Ferrous Scrap US**  
USD/GT



**Ferrous Scrap Europe**  
EUR/MT

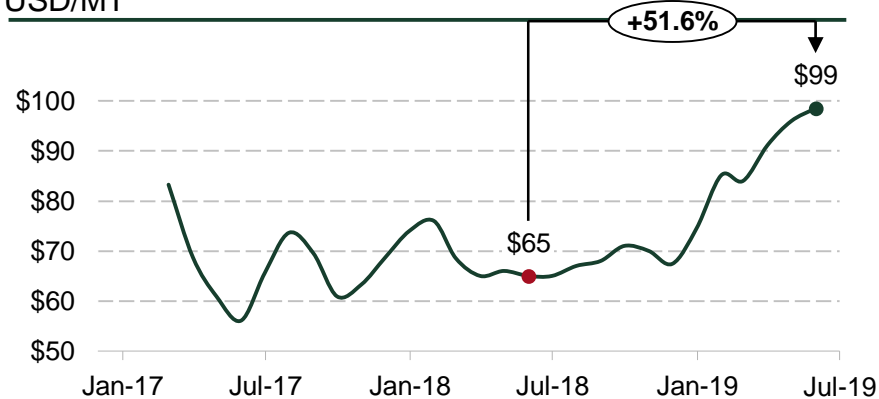


● Previous Year's Data  
● Latest Data

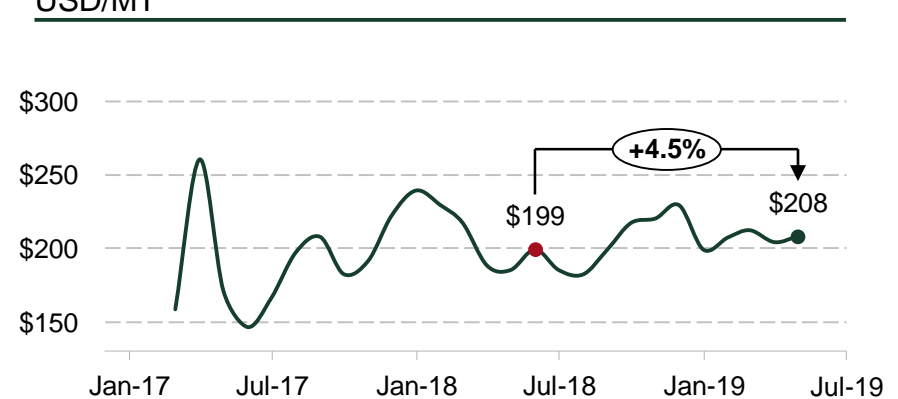


**Iron Ore has increased 51.6% YoY largely due to the Jan. Vale dam incident and Zinc prices have seen a 15% decrease YoY due to surpluses.**

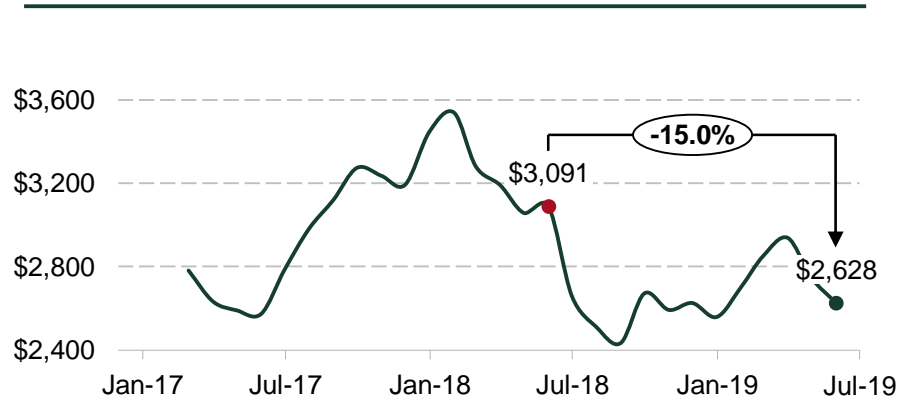
**Iron Ore**  
USD/MT



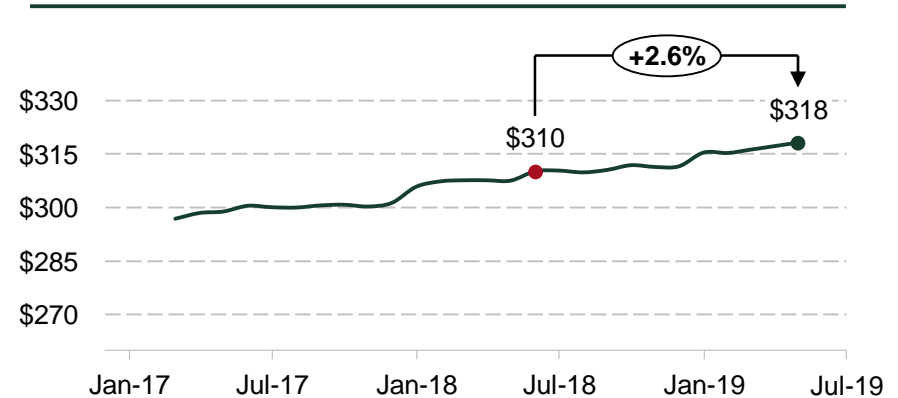
**Coking Coal**  
USD/MT



**Zinc**  
USD/MT



**Limestone – Producer Price Index**

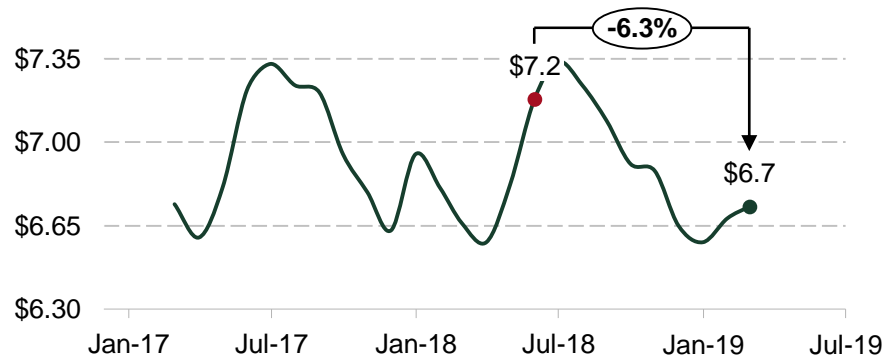


● Previous Year's Data  
● Latest Data

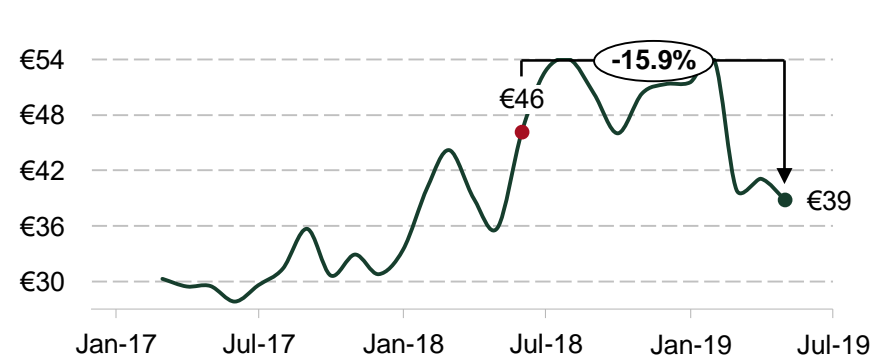


# Natural Gas prices have decreased in the US and Europe significantly while electricity prices in Europe increased and those in the US came down.

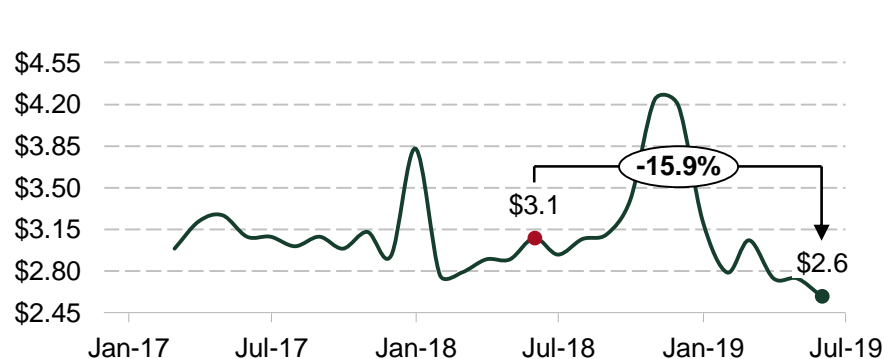
**Electricity US**  
US cents/KWH



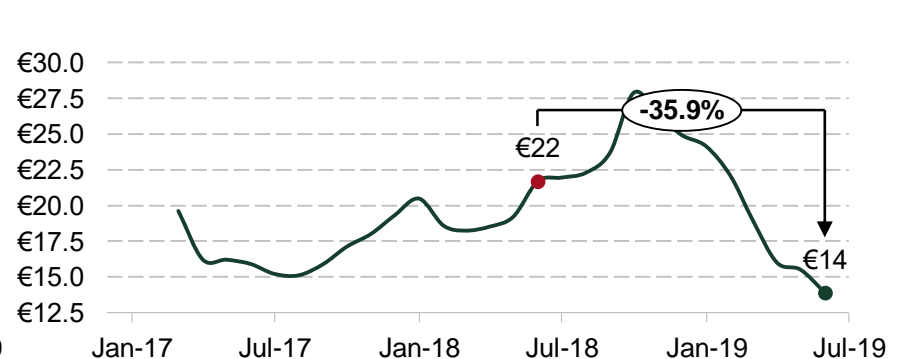
**Electricity Europe**  
EUR/MWH



**Natural Gas US**  
USD/mmBtu



**Natural Gas Germany**  
EUR/MWH



● Previous Year's Data  
● Latest Data





## Applied Value Quarterly Steel Report

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Q3 2019

Market Conditions by Region

Steel Production Costs

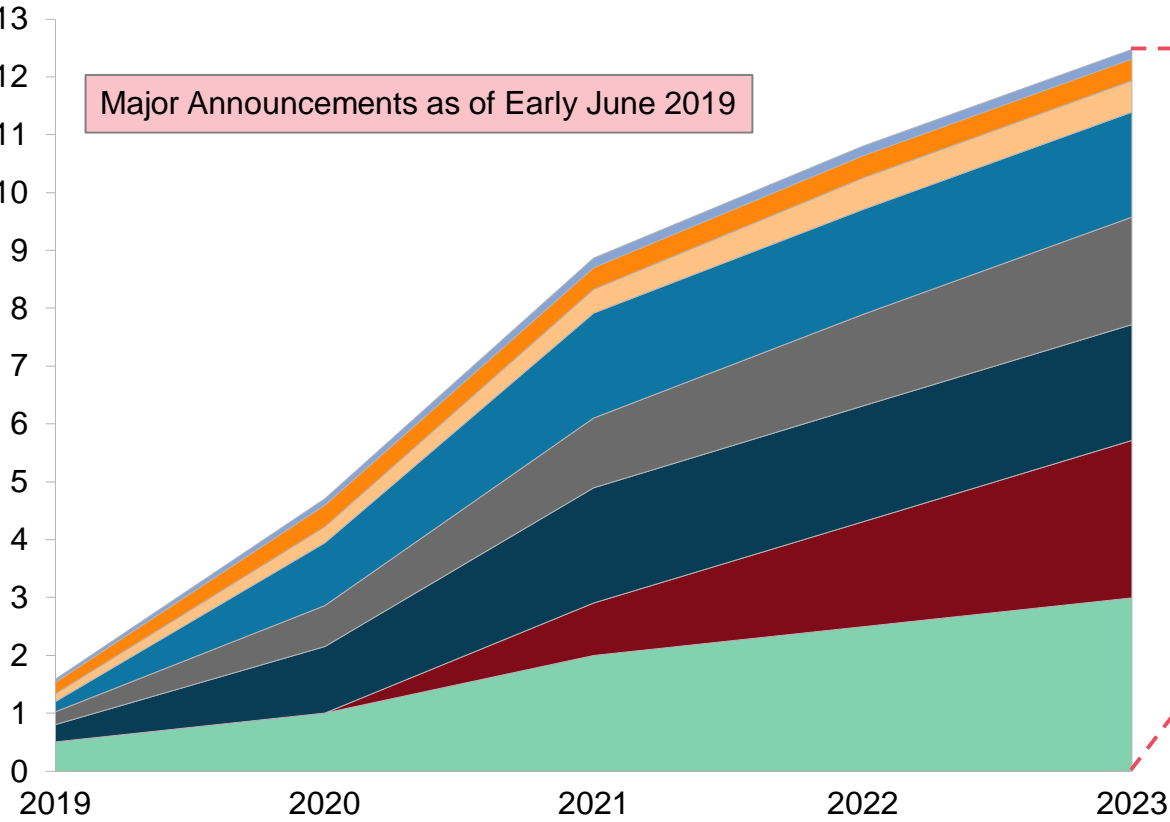
### Special Section: Mill Capacity Increases

Stock Price Development of Major Steel Companies

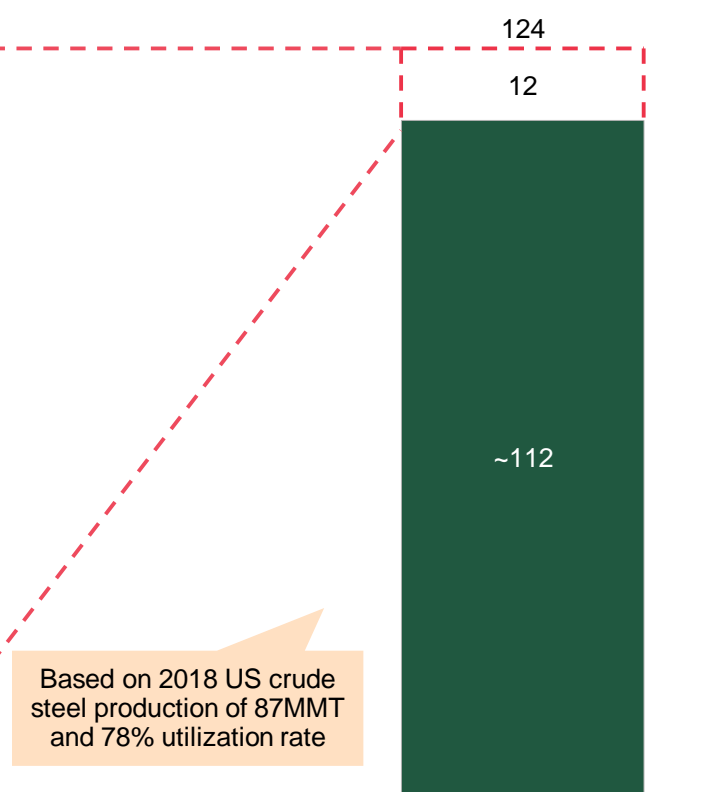


# Since 232's implementation, U.S. mills have announced plans to increase steel production capacity by ~12 million tons over the next four years.

Mill Capacity Increases over Time  
MMT



Current and Future Mill Capacity  
MMT, All Crude Steel

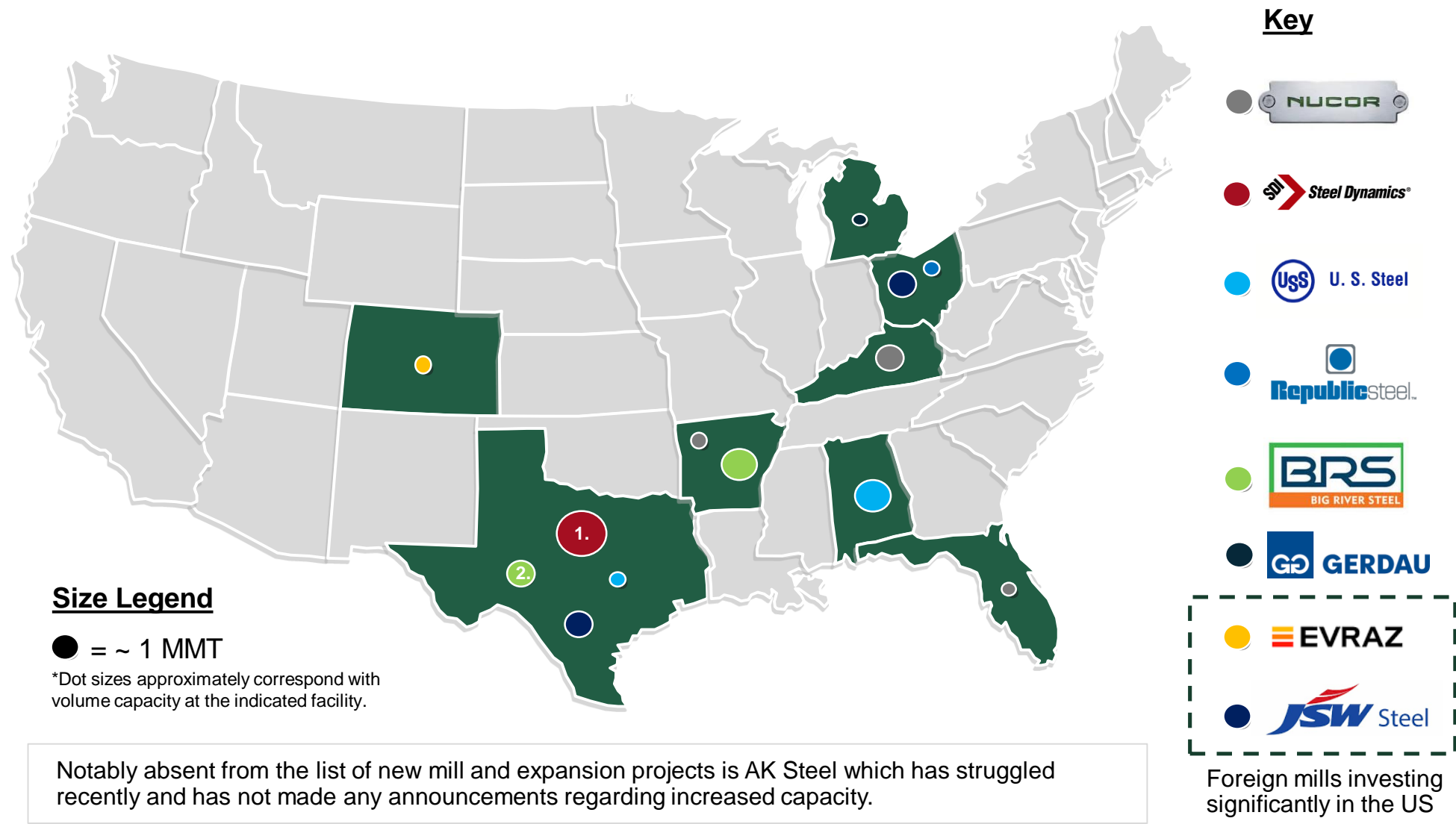


- Big River [HR Electric Steels]
- SDI [EAF Flat]
- JSW [EAF Plate & Pipe]
- Nucor [HDG & Rebar]
- USS [EAF Pipe & Tube]
- Evraz [Long]
- Republic [Flat]
- Gerdau [EAF SBQ]

New Capacity  
 Estimated Current Capacity



The estimated 12 million metric tons of domestic capacity to be added over the next four years are located primarily in the Midwest and the South.

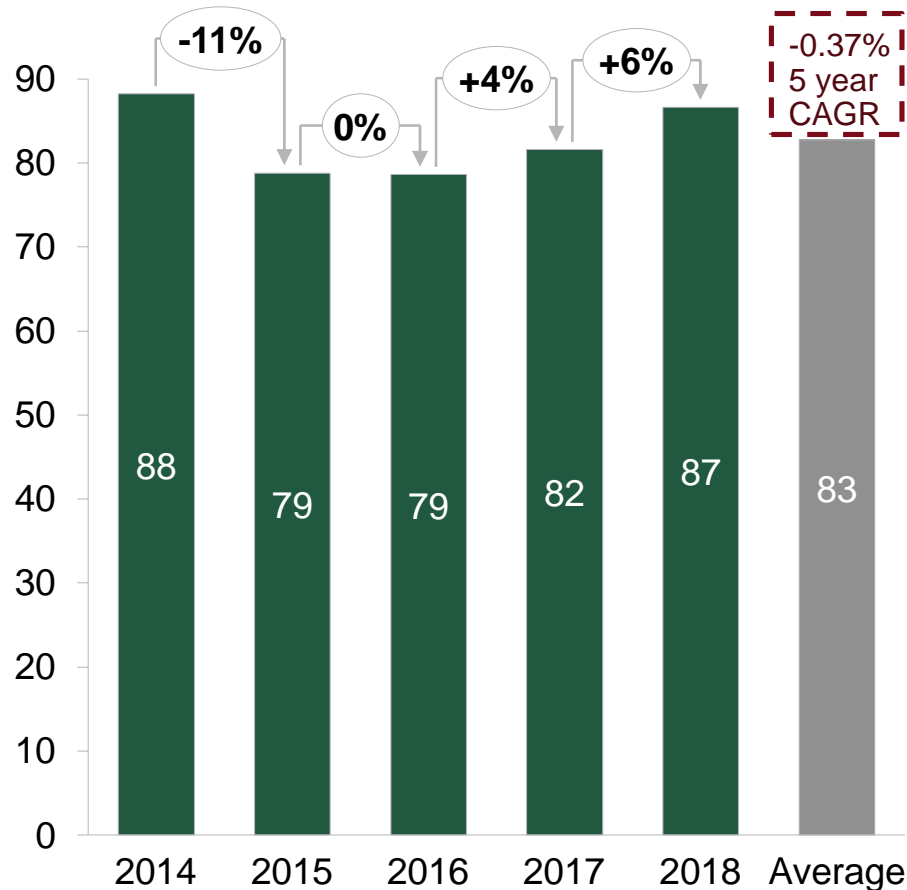


1. SDI announced a new mill to be built in an unconfirmed location in the Southwest, likely Texas or Louisiana.  
2. BRS new mill's capacity approximated on statements that the Texas facility would be modeled after the current capacity of their Arkansas mill.

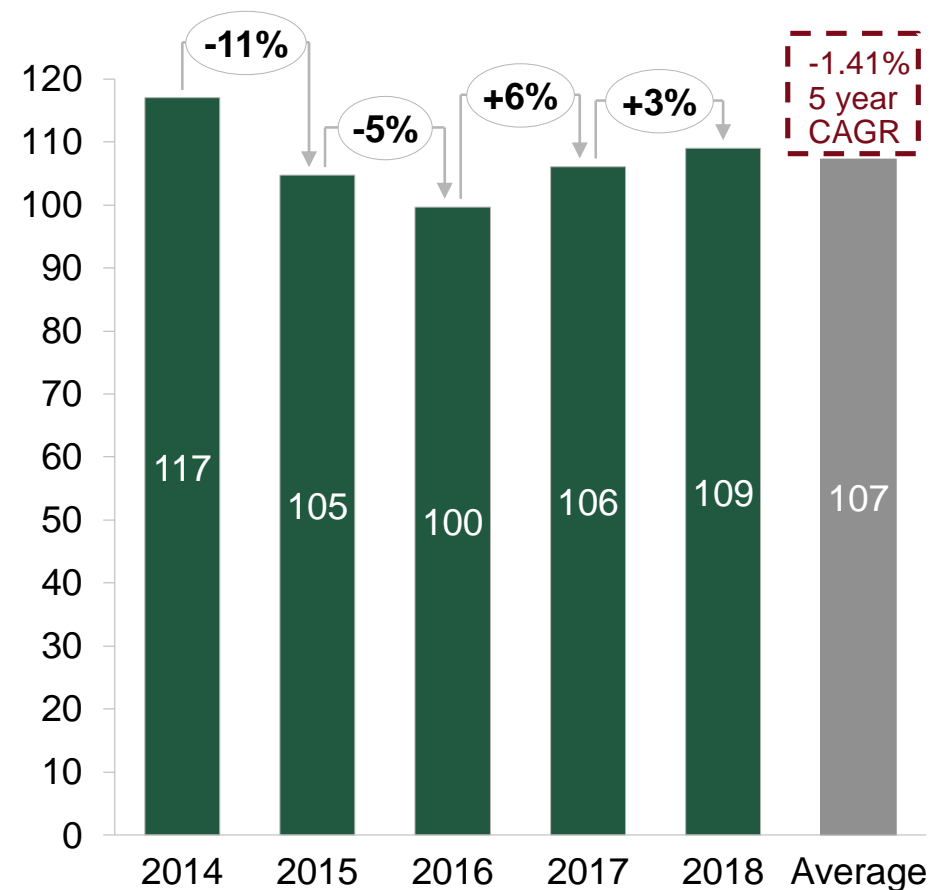


**US prod. in 2018 approached its 5-year high point while cons. continued to lag behind, causing utilization concerns related to planned cap. increases.**

**Historical US Steel Production**  
*MMT*



**Historical US Steel Apparent Consumption**  
*MMT*



## **Applied Value Quarterly Steel Report**

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Q2 2019

Market Conditions by Region









Steel Production Costs

Special Section: Mill Capacity Increases

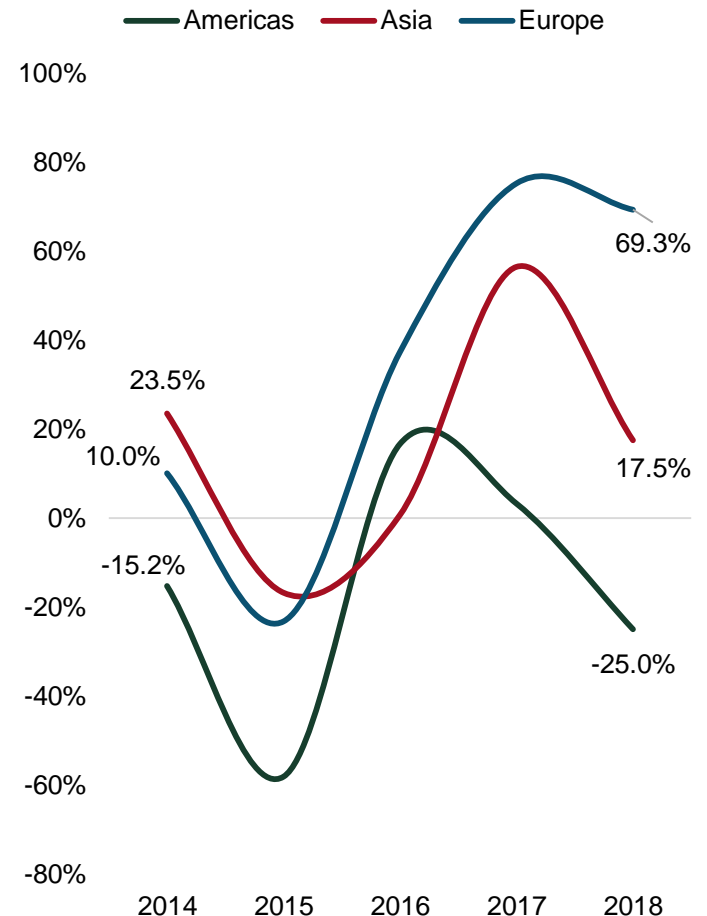
**Stock Price Development of Major Steel Companies**



**If Jan '14 is set as base year, EVRAZ and Baosteel have seen the largest stock price growth while AK Steel has seen the largest decline.**

Regions	Mills	Indexed Stock Movement				
		2014	2015	2016	2017	2018
Americas	 <b>AK Steel</b>	-6%	-65%	63%	-9%	-59%
	 <b>GERDAU</b>	-49%	-75%	-42%	-34%	-19%
	<b>NUCOR</b>	-5%	-22%	18%	25%	6%
	<b>(UgS)</b>	-1%	-70%	28%	31%	-27%
APAC	 <b>ANSTEEL</b>	18%	-44%	-18%	27%	1%
	 <b>BAOSTEEL</b>	64%	34%	51%	108%	63%
	<b>JFE</b>	14%	-20%	-25%	13%	-21%
	<b>TATA STEEL</b>	-3%	-38%	-5%	77%	26%
Europe	 <b>ArcelorMittal</b>	-23%	-67%	-41%	-24%	-46%
	 <b>EVRAZ</b>	55%	-28%	122%	246%	371%
	 <b>Severstal</b>	-4%	-11%	61%	66%	53%
	 <b>ThyssenKrupp</b>	26%	7%	33%	41%	-9%
	<b>voestalpine</b>	-4%	-17%	10%	47%	-23%

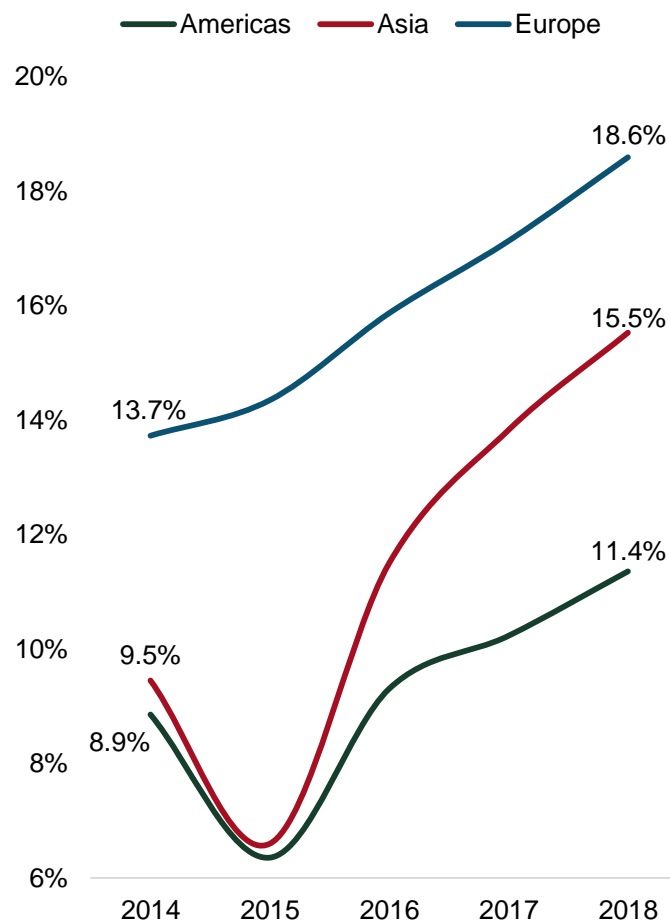
**Regional Stock Movement 2014-2018**



**Steel mills in each region have seen margin improvements in the past five years with European mills having relatively better EBITDA.**

Regions	Mills	EBITDA				
		2014	2015	2016	2017	2018
Americas	<b>AKSteel</b>	5.8%	7.2%	10.2%	8.8%	7.1%
	<b>GERDAU</b>	11.0%	9.8%	9.9%	10.8%	13.2%
	<b>NUCOR</b>	9.8%	8.2%	13.3%	13.0%	15.1%
	<b>(US\$)</b>	8.8%	0.2%	3.8%	8.3%	10.0%
APAC	<b>ANSTEEL</b>	8.3%	1.9%	10.2%	11.7%	15.3%
	<b>BAOSTEEL</b>	10.1%	9.1%	13.4%	15.1%	17.0%
	<b>JFE</b>	10.4%	7.8%	8.4%	11.0%	11.2%
	<b>TATA STEEL</b>	9.0%	7.6%	14.0%	17.5%	18.6%
Europe	<b>ArcelorMittal</b>	8.5%	5.3%	10.2%	11.7%	13.4%
	<b>EVRAZ</b>	17.5%	15.7%	19.2%	23.7%	27.5%
	<b>Severstal</b>	26.5%	32.4%	31.8%	32.4%	35.3%
	<b>ThyssenKrupp</b>	4.1%	5.4%	5.1%	2.7%	2.8%
	<b>voestalpine</b>	12.0%	12.9%	13.0%	15.1%	13.9%

**Regional EBITDA 2014-2018**





**Donald Bly**

Partner, Head of Raw Materials Practice

Empire State Building  
350 Fifth Ave. Suite 5400  
New York, NY 10118  
USA

Cell: (440) 759 3894  
Office: (646) 336 4971  
[Donald.Bly@appliedvalue.com](mailto:Donald.Bly@appliedvalue.com)



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