Applied Value Quarterly Steel Report

Q3 2020 Report

August 2020

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Applied Value is a management consulting & investment firm with deep expertise in supporting clients throughout the steel industry.

Applied Value Group

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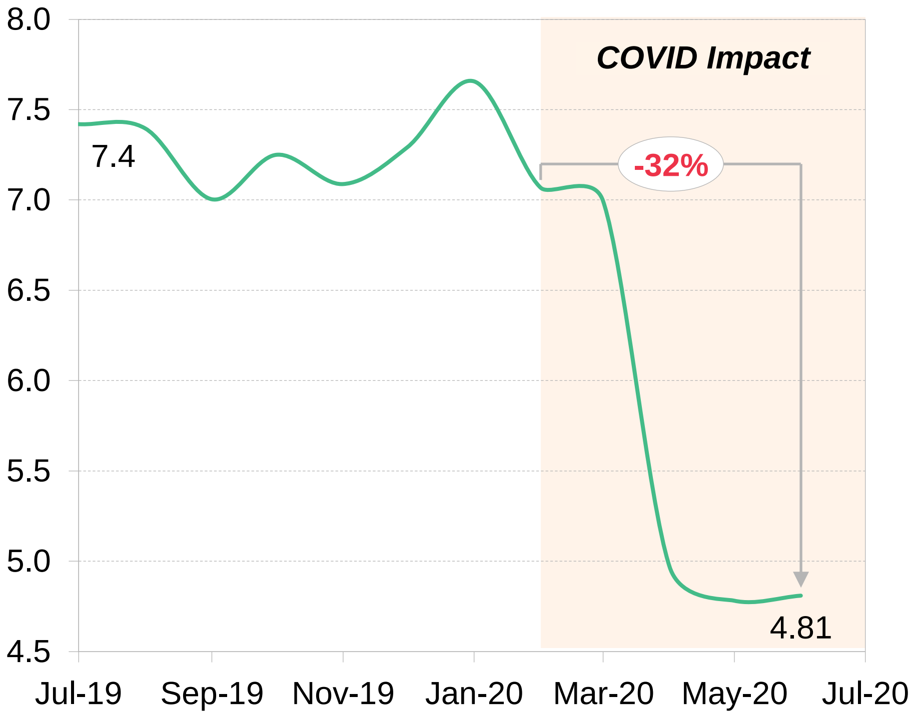
US Steel Production levels plummeted during the March & April peak of production shut-downs, with the majority of impact stemming from Auto.

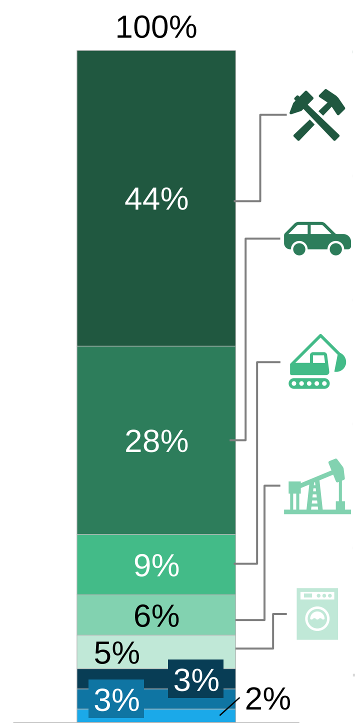
US Crude Steel Production, MMT
Jul '19 – Jun '20



Note: Run-Rate production shown for June

- North America Crude Steel Production is down **~32%** since February when COVID hit the US
- Most of this decrease coincides with the timing of automotive production stoppages

% of US steel shipments by Industry
2018



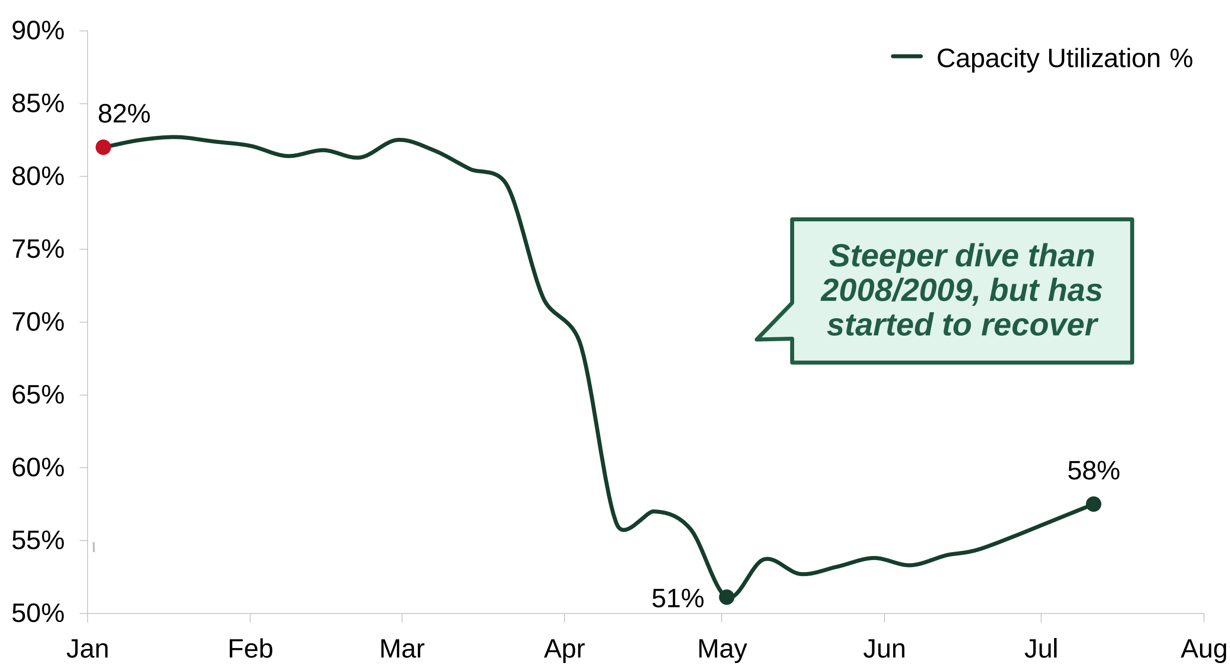
Industry	COVID Demand
Construction	"April construction spend is up 3% YoY"
Automotive	"Near 0 production mid-Mar to mid-May
Heavy Equip	"Machinery ship. down 16% MoM March-April"
Energy	"US Oil Prod. dropped 11% from March-May"
Appliances	"Reduced production to re-tweak lines"

- Automotive accounts for **~28%** of Steel consumption and was shut down to 0 production for ~8 weeks
- This implies that roughly **~85%** of the decline in production can be attributed to Automotive

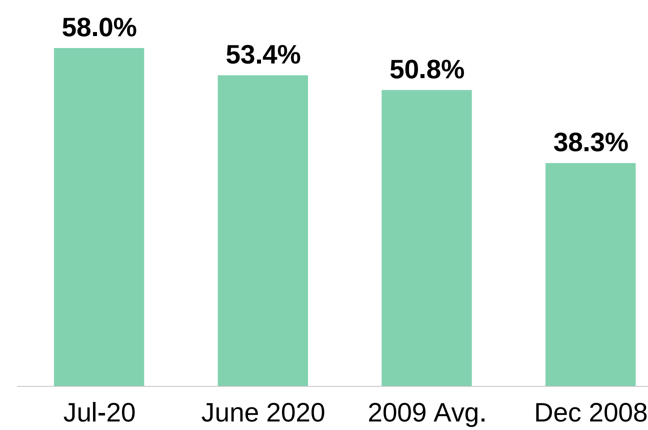
Sources: AISI, Statista, World Steel, Applied Value Analysis

With lower volumes & demand, utilization has dropped significantly, encouraging a competitive environment for steel buyers in sourcing.

US Domestic Utilization Rates, % of total capacity



Mill capacity utilization in the US has dropped to the lowest level in the last decade, although still not near lowest levels seen in '08



Buyers have continued to source steel "normally" with typical negotiation flows…the current environment is particularly competitive for buyers as suppliers are hungry for business

Competitive Environment

Suppliers have been eager & hungry to quote business

Quicker Response Time

Additional resource bandwidth means shorter amount of time for RFQs

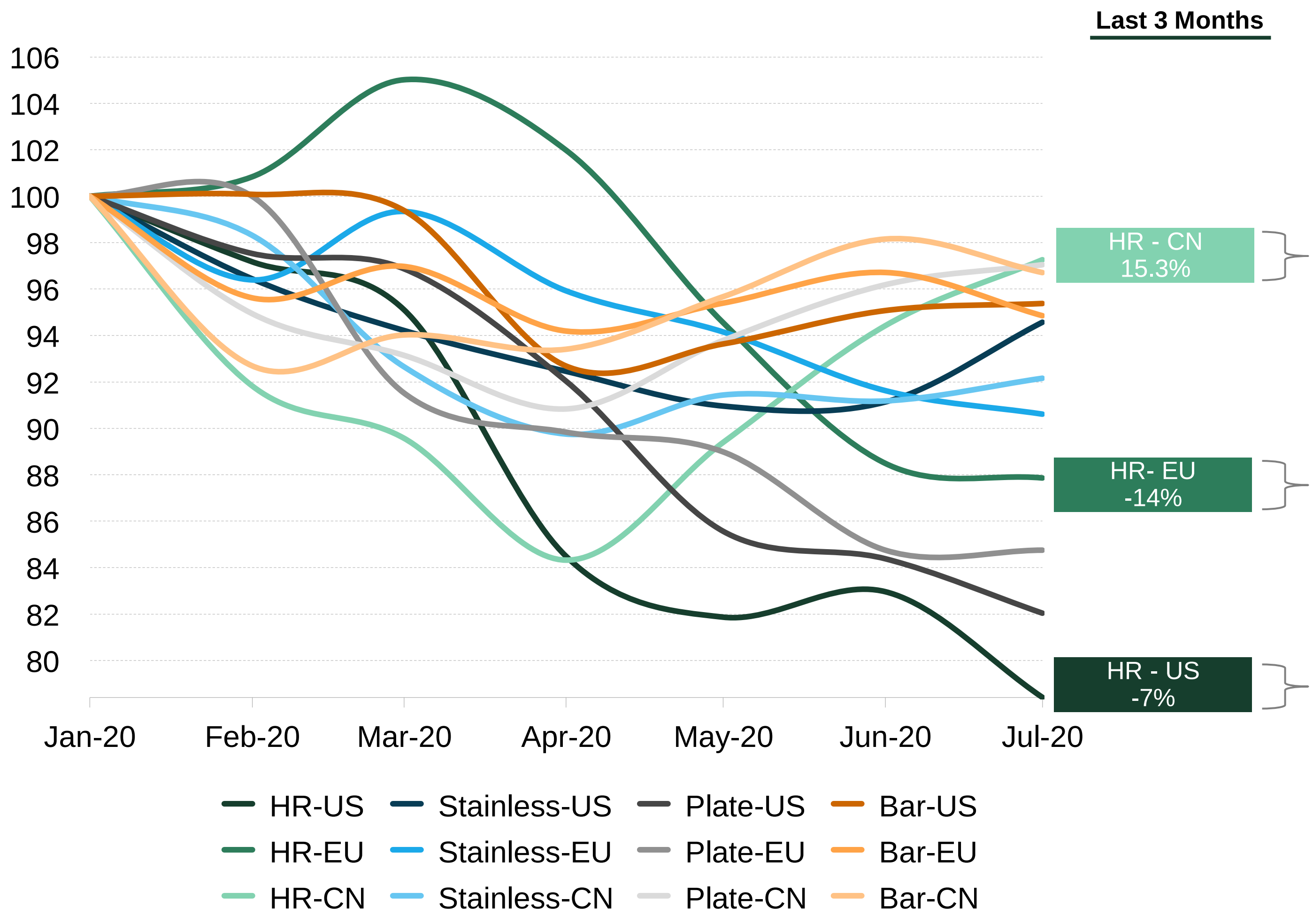
Shorter Lead-Times

Slightly shorter lead-times, although increasing with shuttering capacity

Source: AISI

All major commodities in US and EU plunged in Q2 2020, while Chinese commodities almost rebounded back to pre-COVID levels.

Indexed Steel Costs
January 2020 – July 2020



Chinese Steel prices started their rebound earlier than other countries owing to an earlier production ramp up

EU HR is one of the few markets yet to show signs of rebound

US HR was the most negatively affected steel commodity during COVID

Source: AV Analysis

Global steel commodities saw significant decline in Q2 '20 due to COVID, however global HR was most negatively affected due to the Auto shutdown.

United States	Europe	China

Steel Pricing Trends and Forecasts

Q2'20 Trend

United States	Europe	China
The US HR market was the hardest hit of all steel commodities falling 19% between Jan and May, before beginning a muted rally in June. Although a rebound is underway, mill utilization rates have fallen, mill utilization sits around ~55%, which will provide a ceiling for prices in the near term.	**EU HR price fell less dramatically than in the US, posting a 12% decline Jan to June although it is the only market to not yet rebound.** Prior to COVID, EU prices had just started to rebound off of multi-year lows. As production reopens recovery is expected in line with that observed in the US.	**Chinese HR June prices sit just 7% below their January level as it was one of the first markets to reopen and has benefited from extra time reopened.** With production back up, Chinese prices have gained momentum, but will likely struggle to make further gains as Pre-COVID downward pressures kick back in.

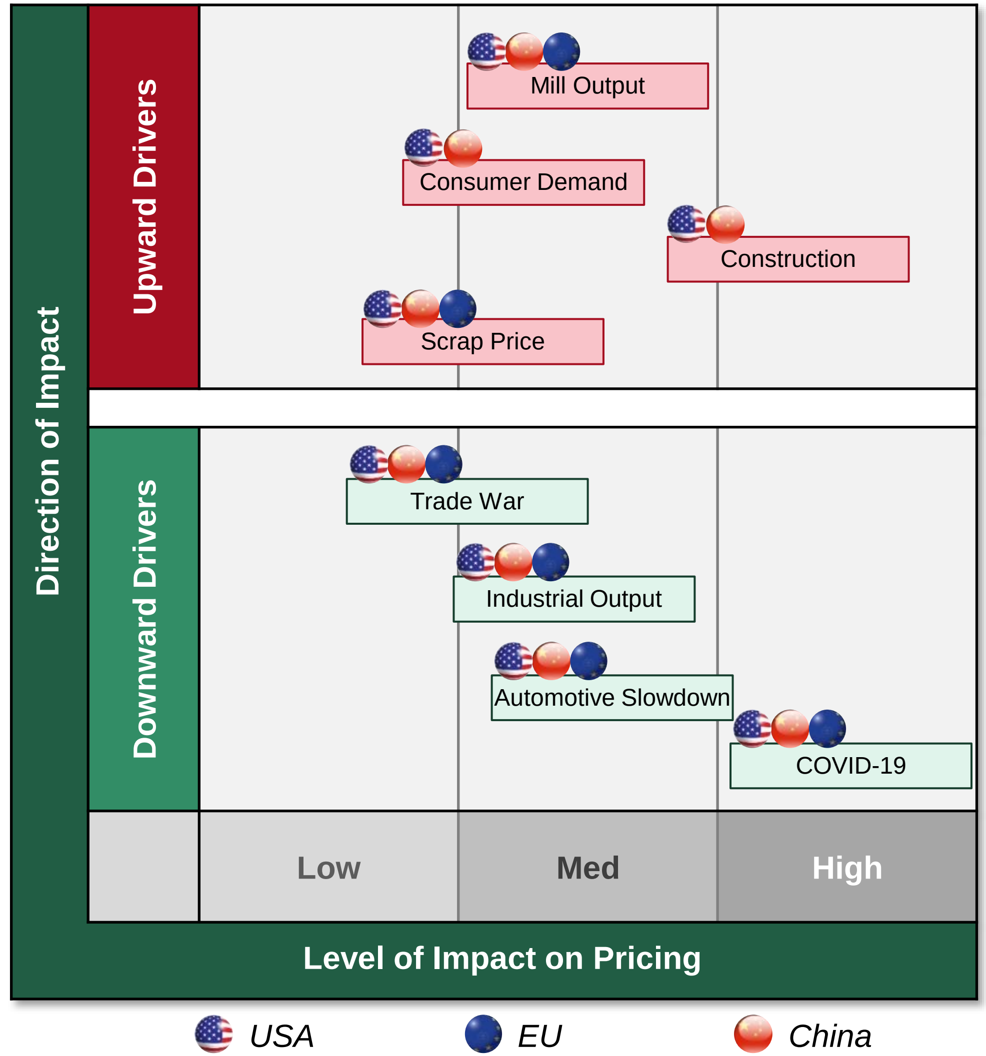
Raw Material Trends

Scrap prices rose 6% in the US, but fell -8% in Europe, and -2% China, while Iron Ore prices ticked strongly upwards 12% over the same period. Coking Coal prices plummeted 39% following a significant rally in Q1

Global Steel Price & Trend Summary.

Commodity		Latest Approx. Price (July)	Last 3 Months	Trend (Forward)
Flat[1]	*US*	~$520/MT	-7%	→
	EU	~€420/MT	-14%	↘
	CN	~$538/MT	15%	→
SS	*US*	~$2,368/MT	2%	→
	EU	~$1,951/MT	-6%	→
	CN	~$1,996/MT	3%	→
Plate	*US*	~$595/MT	-11%	→
	EU	~$500/MT	-6%	→
	CN	~$546/MT	7%	→
Bar	*US*	~$730/MT	3%	→
	EU	~$520/MT	1%	→
	CN	~$508/MT	3%	↗

Major Market Drivers



Note: US, EU and CN latest flat prices are from April, and the last 3 months comparison take January as the baseline

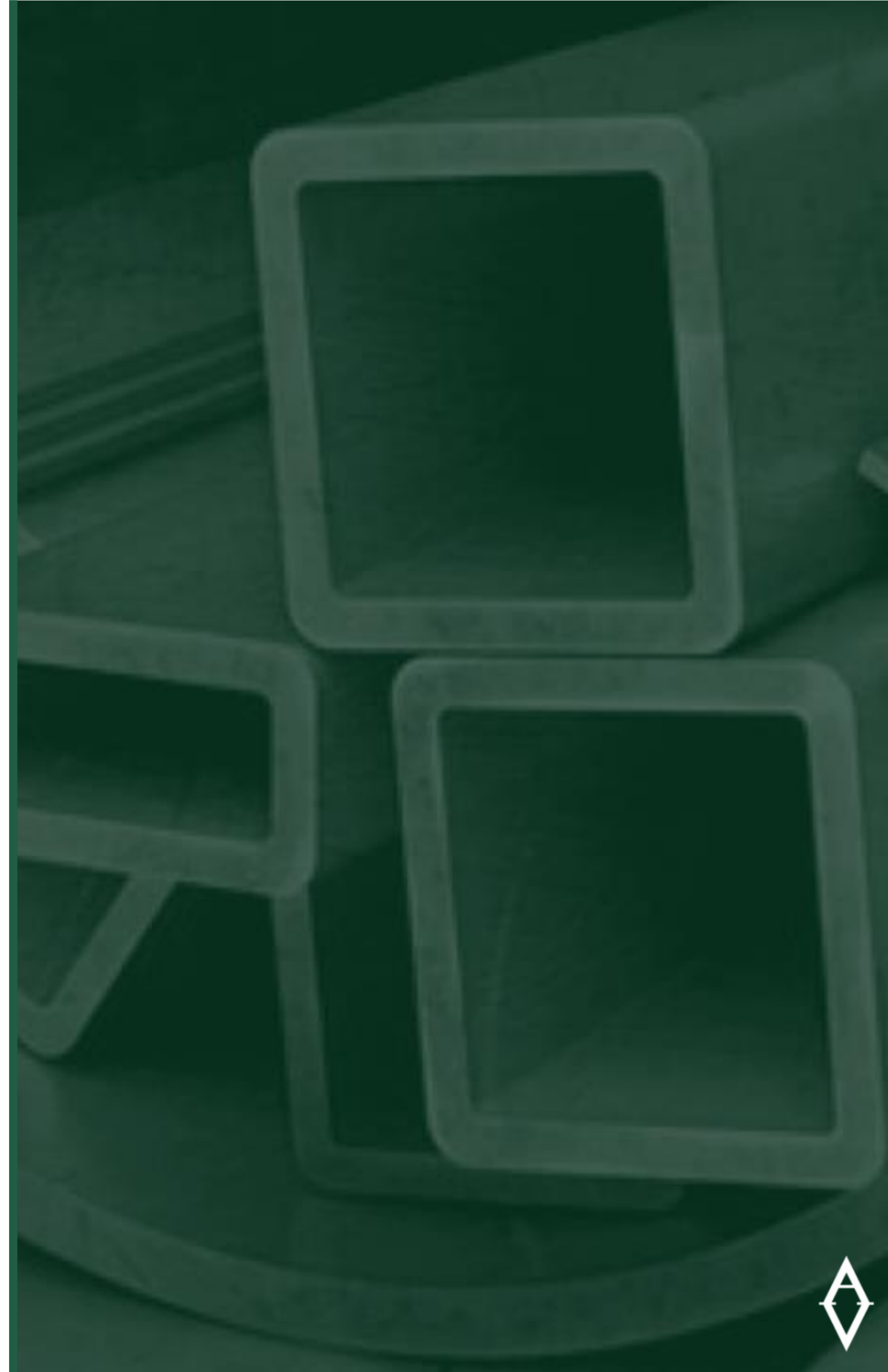
Applied Value Quarterly Steel Report

Q3 2020

Market Conditions by Region

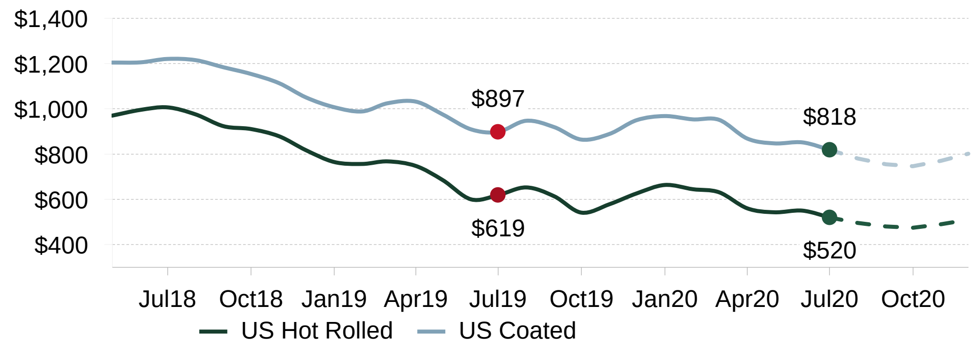
Steel Production Costs

Major Steel Mill Company Performance



US HR prices ended in July at multi-year lows of ~$520/MT as more states reversing or slowing reopening plans.

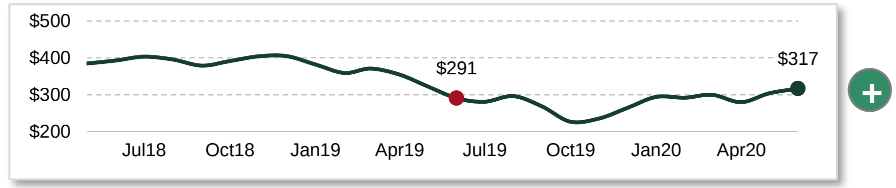
US Flat Prices (USD/MT)



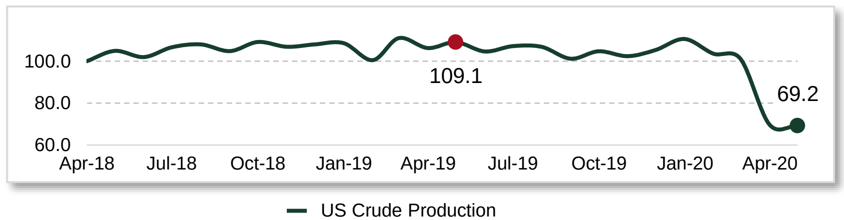
- Both Hot-Rolled and Coated prices have been continuously decreasing since March when COVID-19 outbreak began, with prices going down 18% and 14%, respectively. Demand recovery has been slow with production volumes down and SSCs focused mostly on reducing inventory. Some increase can be found in May, attributing to price hikes implemented by major North American steelmakers supported by idlings, outages, and higher scrap costs.
- Scrap prices are up 6% Q-Q, rounding out June at ~$320/MT. Prices are also up nearly 40% from the floor in October 2019. With the high levels of manufacturing shutdowns across the board, scrap supply has dropped significantly, which in turn increases price.
- US Crude Steel Production steeply declined ~31% from pre-COVID levels, with the majority attributed to complete automotive shutdowns which is nearly 30% of US production output.
- US Mill Capacity Utilization fell to a low of 54% in June, although early readings from AISI's June utilization figures do not indicate any growth in the short-term. These lower utilization rates can be a driver for price stabilization as demand recovery slowly ramps back up.
- The China-US HR spread fell to -$17/MT, primarily as a result of China HR prices rising as production activity returned to pre-COVID levels and US slowing reopening plans

Source: AV Analysis

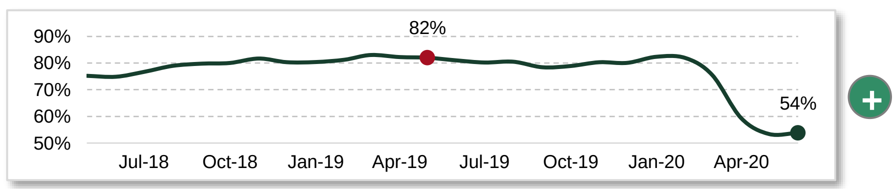
US Scrap Steel Price *USD/MT*



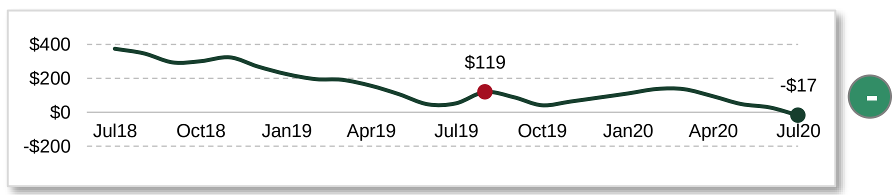
US Indexed Crude Steel Production Volume *100= Apr 2018*



US Mill Capacity Utilization



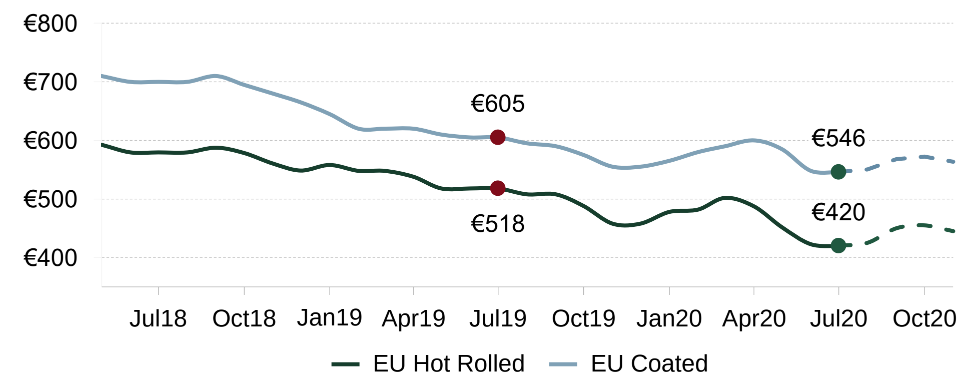
US vs China Price *USD/MT*



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

EU HR prices drop 14% Q-o-Q in July to 420 EUR/MT, erasing all progress made in Q1, the first significant rally in EU prices in the last two years.

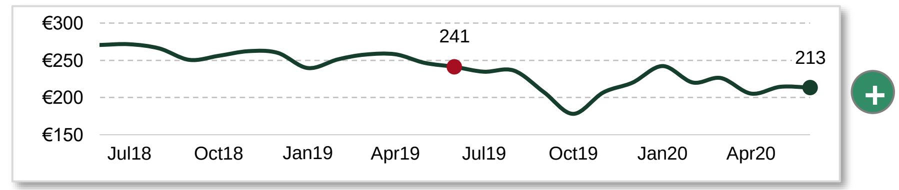
European Flat Prices (EUR/MT)



- After finally starting to see an uptick in price last quarter after declining for so long, COVID-related shutdowns erased this progress and caused EU HR and Coated prices started to dip in Q2, falling ~16% and ~7%, respectively since March. EU Scrap prices have also fallen with the onset of COVID-19, declining 5% Q-o-Q. Reduced demand in Italy and Germany offset the recovery of ferrous scrap prices in Turkey.
- EU crude steel production decreased ~10% from pre-COVID levels in March due to widespread lockdowns across Europe. Production remains down -24% Y-o-Y. The production decline in Europe was not nearly as severe as the 31% decline in US production. EU utilization rates fell ~10% over the same period.
- Euro Zone PMI has rebounded swiftly off the April floor caused by COVID. However, it remains well below the 2-year low prior to COVID impact.
- The spread between EU and Chinese steel prices dropped to -55 EUR in July reflecting a decline in EU prices and simultaneous increase in China's price, which was first to begin the reopening process. Unless manufacturing activity continues to pick up European steel prices will once again become the cheapest globally.

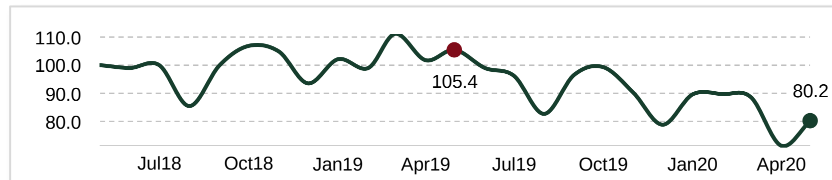
European Scrap Prices

EUR/MT



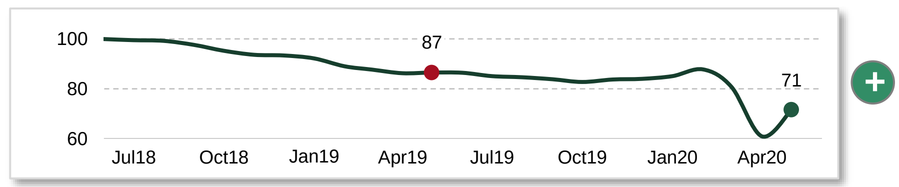
EU Indexed Crude Steel Production

100= May 2018



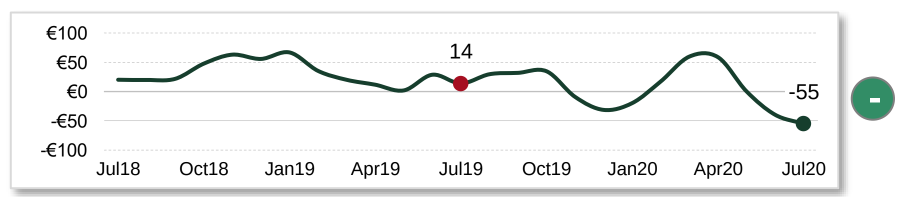
Euro Zone Manufacturing Indexed PMI

100= June 2018



EU vs. China Price

EUR/MT

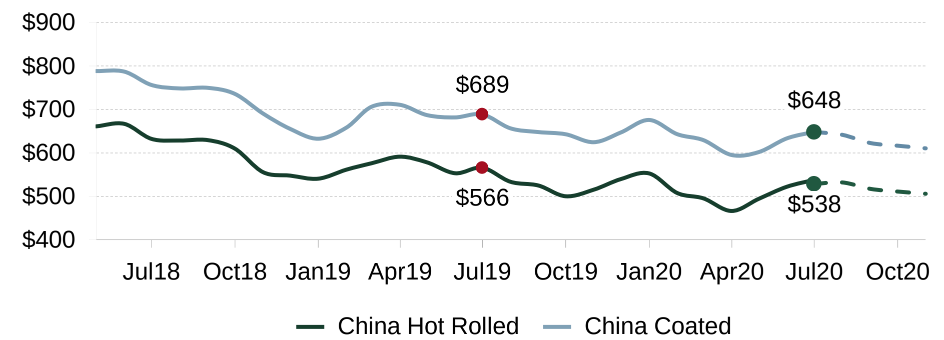


Previous Year's Data Latest Data + - Correlation to Market Price

Source: AV Analysis

China HR prices ticked upwards in Q2 2020 and reached ~$538/MT in July as one of the first markets to begin reopening following COVID lock-downs.

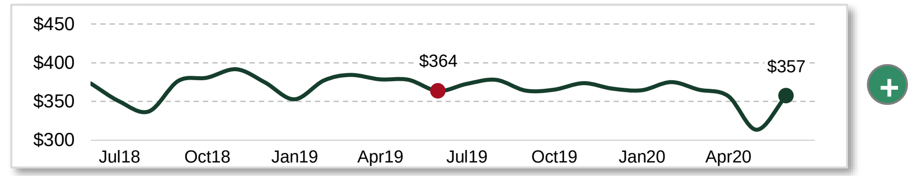
China Flat Prices (USD/MT)



- As the first market to recover from the COVID-19 crisis, China's hot-rolled and coated steel have seen price rebounds of 13% and 8%, Q-o-Q to July at ~$538/MT and ~$649/MT, respectively. Despite this increase, prices remain down by ~6% Y-o-Y.
- In May, Chinese scrap steel prices reflected the impact of COVID by decreasing ~17% Y-o-Y and reaching a multi-year low of ~$310/MT. Scrap dealers attributed this temporary market shock to a reported ~19% decrease in demand compounded with a ~14% increase in inventory levels. However, as production began to pick back up in June, the market began to rebalance.
- In Q1 2020, China aggregate production dropped 16% compared with the same quarter last year, one of the most significant declines in Chinese production witnessed in years. However, some production had already started to pick back up in March and Q2 numbers could show a nearly 100% return to pre-COVID levels when reported.
- China steel exports surged in March, achieving the highest level since 2018 Q2, amid concerns globally of the pending production stoppages. In May, exports dropped sharply, due to a recovery in domestic demand and more than 10 countries imposed new anti-dumping duties on China's steel product.
- Over the last two years, the spread between global steel prices has narrowed significantly, with both US vs. CN and EU vs. CN prices falling to negative

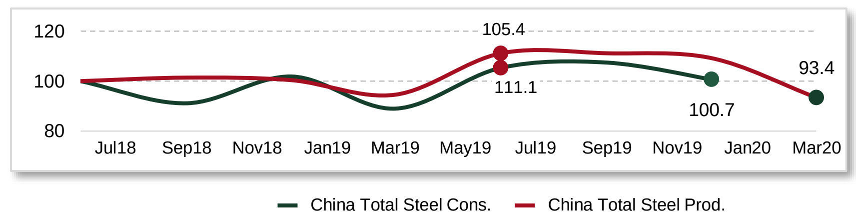
China Scrap Steel Price

USD/MT



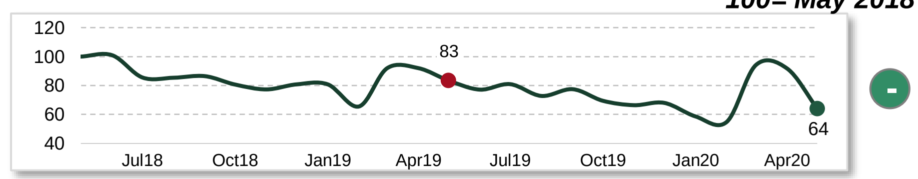
Indexed Production and Consumption

100= June 2018



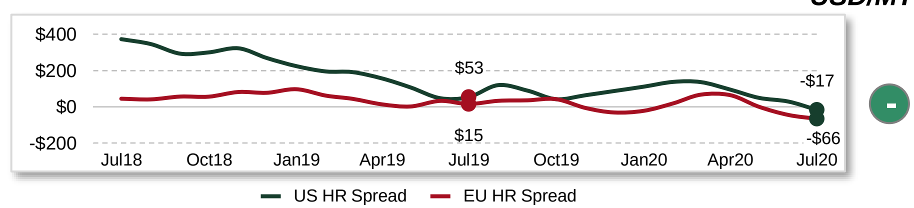
China Steel Exports

100= May 2018



Spread between US & EU

USD/MT



Previous Year's Data · Latest Data · Correlation to Market Price

Reduced utilization levels paired with global production restarts will provide some upward momentum to steel prices in the near term.

Upward Market Drivers

Capacity Utilization and Supply

- US: In response to demand decreases due to COVID-19, many manufacturers in the US dropped their capacity utilization, from 82% in February to only 53% in May. Although this decrease means less output, this move will help the country to mitigate supply issues post-COVID and stabilize prices moving forward.
- CN: Industrial capacity utilization in China slumped to a record low of 67.3% in Q1, down from a rate of 75.8% in the same period one year prior due to the country's ongoing battle with coronavirus. This was a significant drop after Q4 2019's rate of 77.5% was the highest in two years.
- EU: European capacity utilization dropped 12.5% Q-o-Q, rounding out Q2 at 70.1%. Because demand and production in the EU dropped significantly, but capacity utilization stayed high, compared to the US, the EU may deal with excess supply in the following months.

Construction

- CN: The construction market in China is rising to pre-COVID levels. In Wuhan, following the end of lockdown on April 8, the construction sector has already reached 100% productivity. Additionally, China has agreed to invest 100 billion yuan into national railway construction as well as 600 billion yuan for domestic investments in broad infrastructure projects which will boost steel demand.
- US: Total US construction spending decreased 2.9% MoM from March to April 2020; but spending increased 3% YoY from April 2019 to 2020, counteracting the steep production declines in other segments such as auto. Although the construction industry appeared unscathed from the COVID pandemic, unemployment rates in this sector were triple what it was at the start of last year, landing at 16.6% in April.

Consumer Demand Growing

- US: Retail sales in the states have begun stabilizing, with 44.1% and 50.5% accelerations in May sales M-o-M at auto dealerships and electronics/ appliance stores, respectively. In auto, specifically, these increases in consumer demand have contributed to a 3% M-o-M increase in manufacturing production in May.
- CN: April consumer spending shrank 7.5% Y-o-Y, but this was an improvement over March's 15.8% Y-o-Y contraction.

Scrap Price Increases

- Global: Scrap prices across the globe have increased because of widespread production halts due to COVID stay-at-home orders from March through May. Less scrap is being produced, and this dip in supply hiked prices up.

As the global economy suffered from COVID-19 repercussions, the steel market took a hit in response.

Downward Market Drivers

COVID-19 Manufacturing Shutdowns

- Global: The unprecedented COVID-19 pandemic impacted several industries across the globe, disrupting supply chains and causing manufacturing and sales forecasts to be cut drastically. Countries around the globe saw some degree of shelter in place orders and halts on "non-essential" business operations. The shutdowns led to significant production decreases and dropping prices.

Automotive Slowdown

- EU: Most European auto plants have reopened after months of inactivity; however, most of these facilities are operating well below full capacity. VW Group reported that all its factories are open but operating at 60-90% capacity. Renault Group's factories are all running only one or two shifts, down from three.
- US: Automotive manufacturers across the board were shuttered for the majority of March & April. April production ground to a halt, declining near to 0, while auto sales only fell approximately 35% M-o-M. Nearly 85% of the decline in US crude steel production was due to automotive facility shutdowns. Production is ramping back up slowly, but the dent in annual consumption will have a lasting impact.

Declined Industrial Output

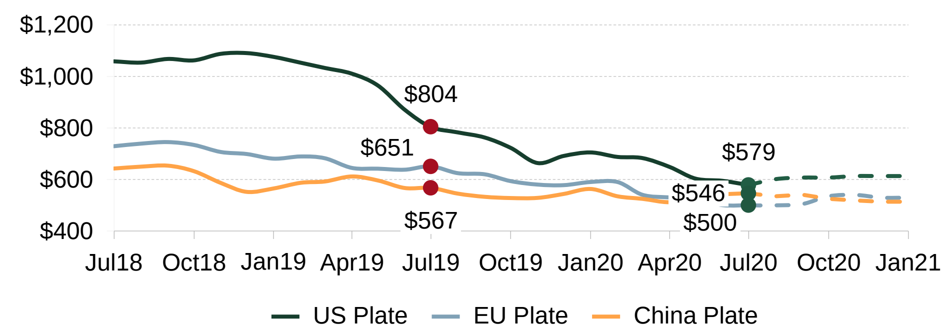
- US: The US Manufacturing PMI came in at 39.8 in May of 2020, 9% above a record low in April. The PMI drop in April was the second-steepest drop in manufacturing output since April of 2009, largely driven by a weakening of client demand and lower new order inflows from both domestic and foreign customers amid the COVID pandemic.
- EU: Industrial output declined quickly across the Eurozone in April, but the PMI rose 18% M-o-M from April to May. As factories continue to reopen, output will slowly rise.
- CN: China's May PMI came in at 50.6, down 0.2 percentage points from April, reflecting the country's ongoing economic recovery from COVID-19. Despite the small drop, the National Bureau of Statistics shared that the PMI has been in expansionary territory for three straight months since the COVID outbreak in January.

Trade Flows

- US: The US has experienced a surge of steel and aluminum imports from Canada and Mexico in recent months as a result of removing Section 232 tariffs last May. Canadian and Mexican steel imports increased 16.1% and 11.8% respectively in January-April 2020 compared to the same period in 2019.
- CN: China has stated that they will continue to develop its free-trade zones, creating a business environment where both domestic and foreign companies are treated fairly.

US plate prices have fallen 32% Y-o-Y, aligning more closely with EU and Chinese prices, after experiencing a slower decline off their 232 peak.

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

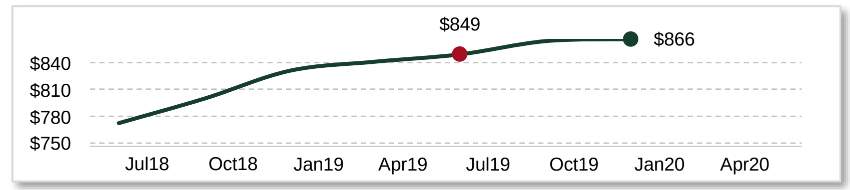


- US plate has showed the largest decline among all regions, with ~32% price drop Y-o-Y and fell to ~$579/MT. Although some of this decline is still attributed to market correction post-232, There was also downward pressure from the downturn in US crude oil production, a plunge in demand for new rail cars and a slowdown in production of heavy equipment during the pandemic.
- EU prices were not significantly affected by COVID, hovering around $500/MT for the duration. Prices remain at multi-year lows but could fall further with the decline in manufacturing activity.
- China plate prices picked up in Q2 2020, ending the quarter on par with European prices at $546/MT.
- During the pandemic, oil futures went negative for the first time in history and prompting a large reaction from OPEC, which cut oil production to ~29 MBPD in June from their recent standard of ~33MBPD. The US has implemented a much lighter production cut, moving from ~20MBPD to ~18 MBPD in June.
- BDI reached the lowest record for the last 24 months, dropping by ~28% Y-o-Y to 495, as the dry bulk shipping market felt the impact of COVID-19, but it is expected to increase in the next few months as the global pandemic gradually gets controlled.

Source: AV Analysis

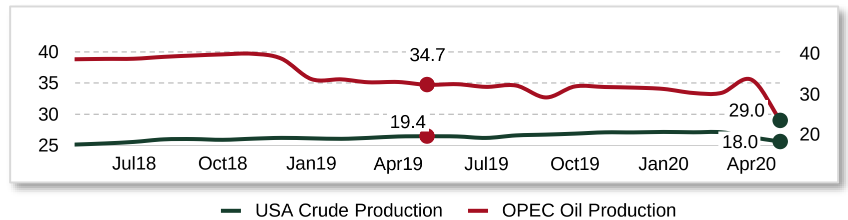
US Defense Spending

BUSD



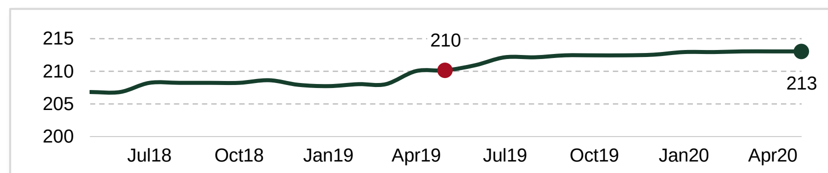
Crude Oil Production

MBPD

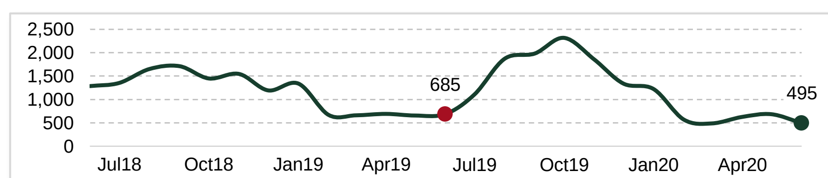


US Ship Building and Repairs

Index: 1985 = 100



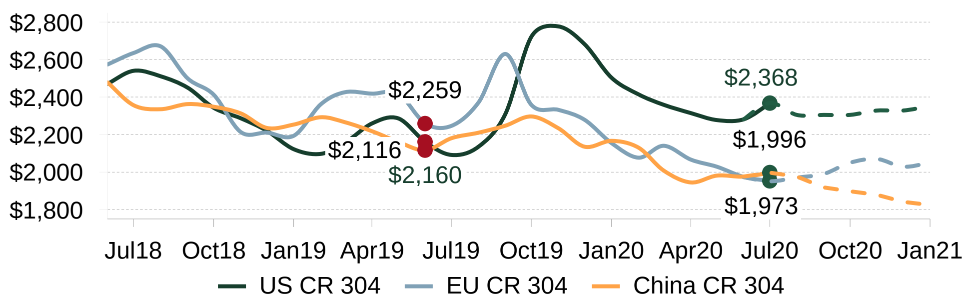
Baltic Dry Index



Previous Year's Data Latest Data Correlation to Market Price

US and Chinese prices had a modest decline of -3% and -2% Q-o-Q, respectively, while EU fell ~8% Q-o-Q to be in line with Chinese prices.

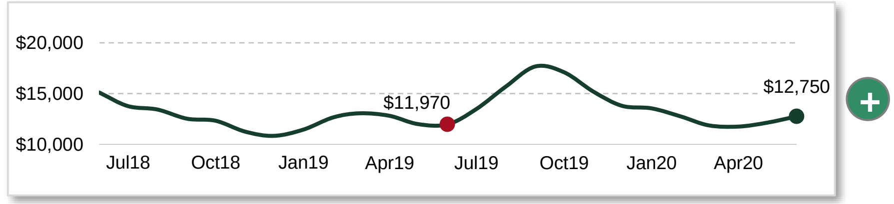
Stainless Steel Prices – US / Europe / China (USD/MT)



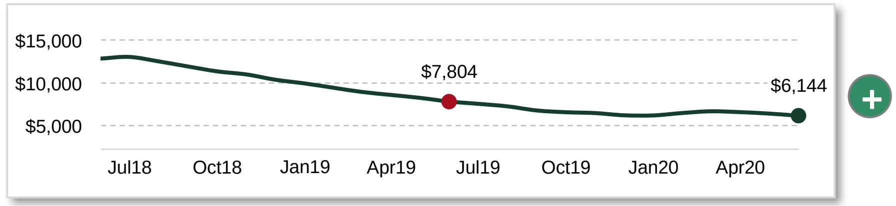
- US Stainless prices remain up ~5% Y-o-Y. Along with the rest of the market, US prices surged in late 2019 as a supply shock disrupted the Nickel supply chain and some of this increase remains absorbed in the spot price despite nearly full correction of Nickel prices.
- Both EU and China stainless steel prices decreased to the bottom, with drops of 12.6% and 6.7% Y-o-Y respectively, mainly caused by weak demand from end-user markets; the two regions had almost the same price level in Q2.
- Philippine Nickel producers ramped up production in Q4 ’19 and Q1 ‘20 to combat supply shortages that sent global Nickel prices soaring in Q3 ‘19. However, safety measures implemented to contain COVID-19 slowed the additional production efforts and as a result, prices are once again on the upswing – up 7% since March.
- Iron ore price displayed a strong upward trend in Q2 on reduced shipments from Brazil, where the pandemic conditions have continued to deteriorate.
- Natural gas prices reached their lowest point in 24 months at $1.8/mmBtu, continuing a downward trend that began in late 2018, but exacerbated by COVID.

Source: AV Analysis

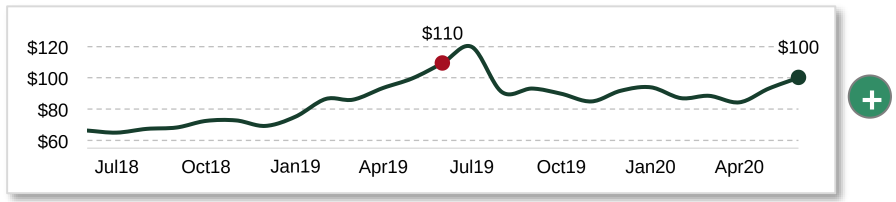
Nickel
USD/MT



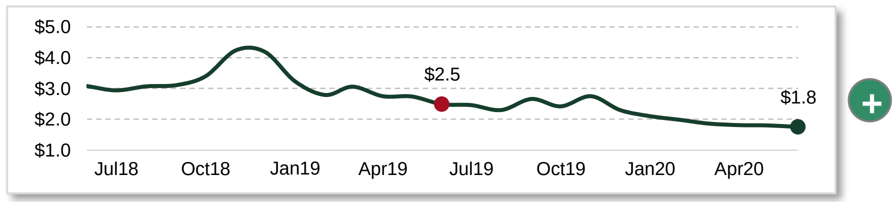
Chromium
USD/MT



Iron Ore
USD/MT



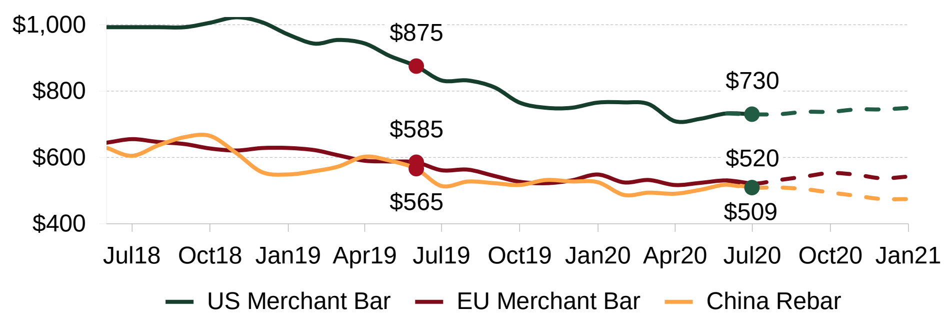
Natural Gas
USD/mmBtu



Previous Year’s Data   Latest Data   Correlation to Market Price

Impacted by suspension of construction, all regions' prices have declined Y-o-Y, with US price dropping by of ~16%, EU and CN prices falling by ~9%.

Long Steel Prices (USD/MT)

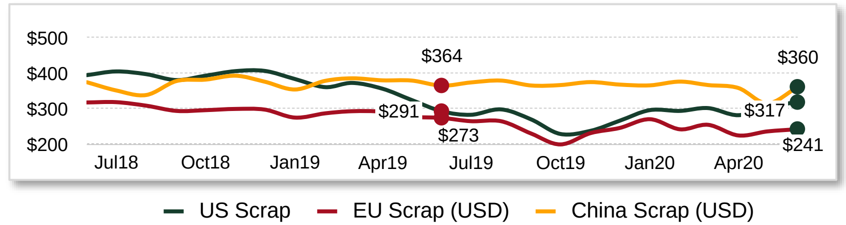


- US long steel price experienced the biggest drop among all region, with 16.5% decline Y-o-Y, caused by low demand during COVID-19 outbreak; however, the price showed a slight upward trend in Q2, due to a return of demand from the construction sector, high scrap price, and low inventory.
- China rebar prices fell by 9.5% Y-o-Y with a slight upward trend at end of Q2 as increasing number of construction projects had resumed work, and the trend may remain if China confirmed the grand infrastructure plan.
- As many constructions and infrastructure project cancelled or postponed, EU merchant bar price experienced a drop of 9.4% Y-o-Y, approaching the same price level as China rebar price.
- Ferrochrome price hit the floor price since 2018 Q3, declining by 10.6% Y-o-Y, which mainly led by excessive supply and lower production of stainless steel, but the price is expected to recover as suppliers are cutting production.
- Molybdenum price declined by 31.7% Y-o-Y, but a slight uptrend can be found in May and the growth may continue as some suppliers starting to reduce the production and strong demand from China further pushing up the price.

Source: AV Analysis

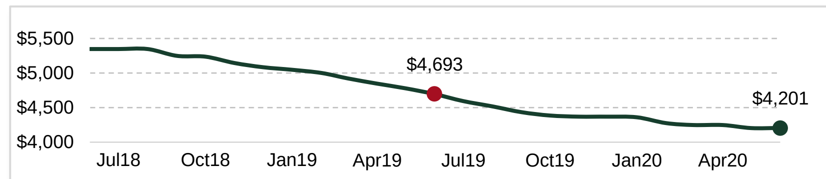
Scrap Steel Price

USD/MT



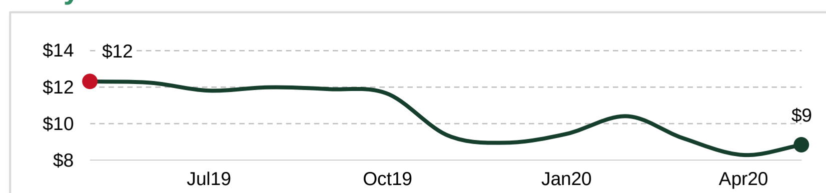
Ferrochrome

USD/MT



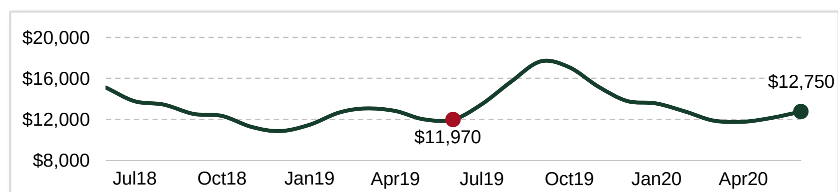
Molybdenum

USD/MT



Nickel

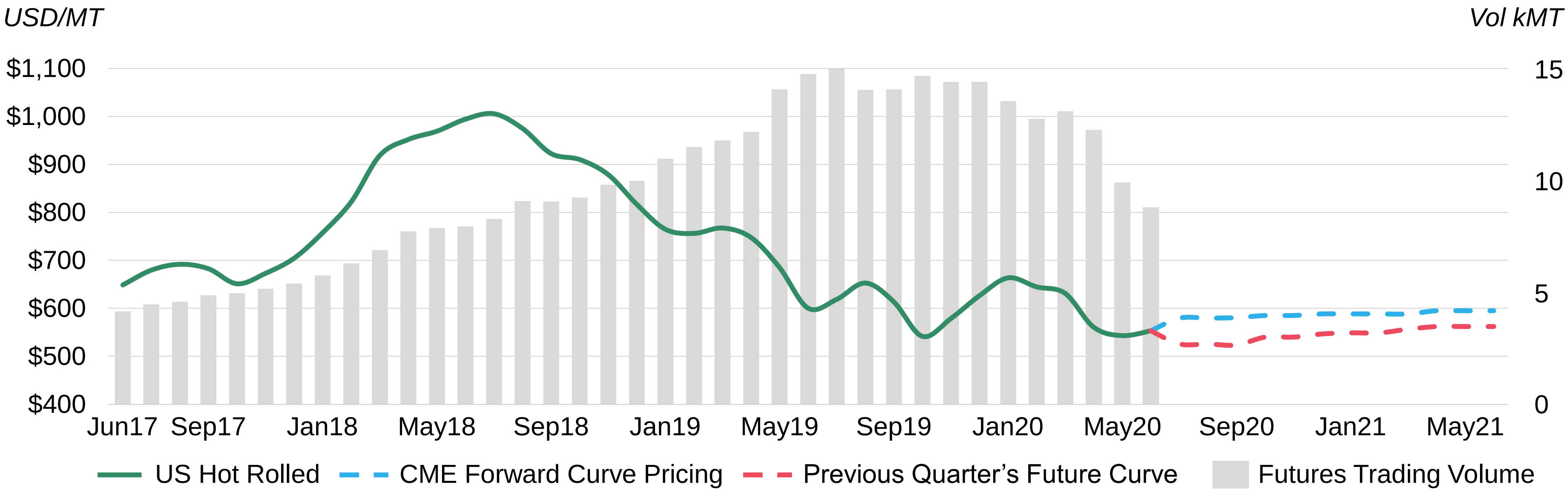
USD/MT



Previous Year's Data   Latest Data   Correlation to Market Price

US HR futures rebounded slightly after the COVID-19 crisis, with the difference indicating improved market sentiment.

Hot Rolled Historical Pricing and Contract Volume & Futures CME Pricing



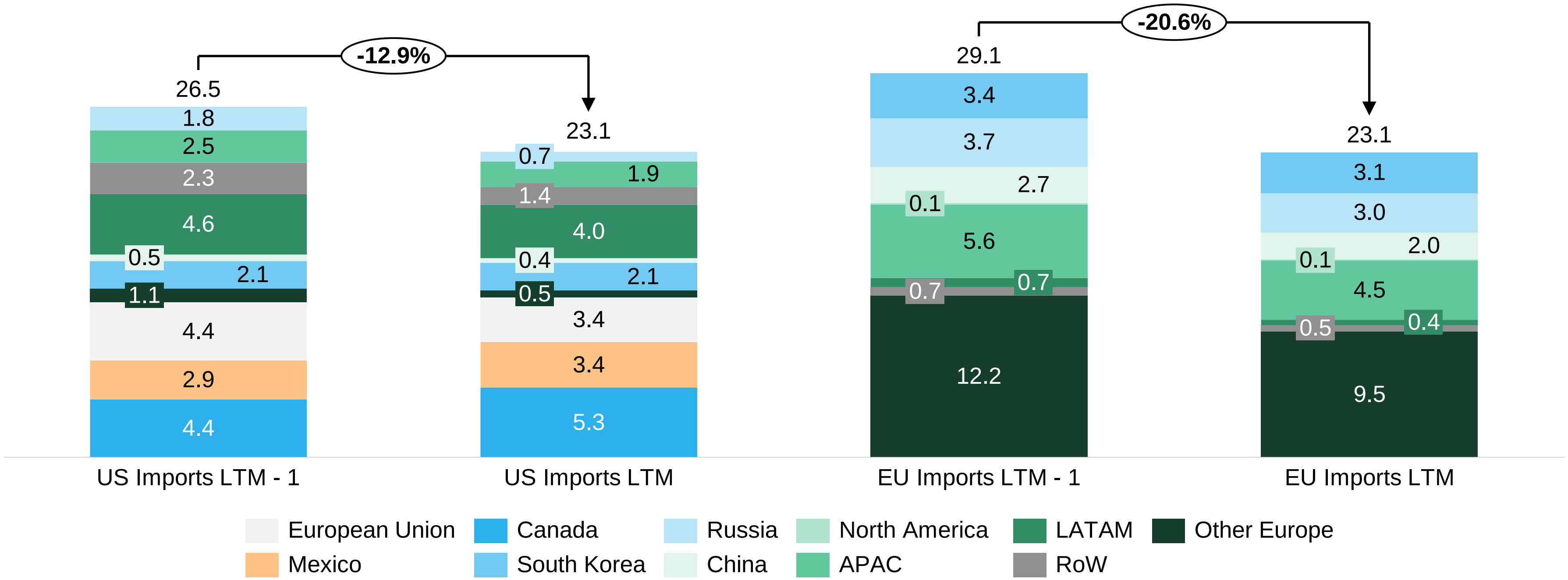
- The CME HRC Futures Curve is slightly above the previous quarter's future curve, indicating that market sentiment has improved slightly as we are starting to see a slow and steady rehabilitation of HR prices post-COVID.
- Volume of future contracts has decreased for the eighth consecutive month, except for March, as buyers are possibly waiting to see where the market bottoms before locking contracts out in advance. However it is interesting to note that volumes are nearly double than when prices were at the same level in 2017, perhaps due to large steel consumers adopting risk mitigation strategies.
- With the ongoing COVID crisis, and the potential second wave, the current futures curve could fluctuate with rising case counts and further economic shutdowns.

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 Jan 8th, 2020

Source: CME, AV Analysis

US imports from Canada and Mexico have recovered since their exemption from 232, but this was offset by declines in imports from Russia and EU.

US and EU Imports – All Steel Products MMT *LTM: May 19 – Apr 20*[1]



- With the effect of 25% additional tariff on steel derivative products, US imports have declined 12.9% on yearly basis, Russia and EU exports suffered the most significant falls, dropped by 1.1 MMT (60%) and 1 MMT (23%) respectively; Due to NAFTA agreement, Canada and Mexico were excluded from the additional tariff, the two regions both saw exports to US increase by 13% and 5% severally, Canada replaced LATAM becoming the biggest exporter to US; Canada and Mexico's steel exports to the US likely to maintain or continue increase as the U.S.-Mexico-Canada Agreement (USMCA) will take effect on 1 July 2020
- Weak demand in EU market brought down imports by 20.6%, the decline largely from Other Europe country and APAC, the two largest exporters to EU plunged volume by 2.7 MMT (22%) and 1.1 MMT (19%) respectively; the downward trend may continue as EU commission announced it will make adjustment on current EU safeguard quota for steel imports on 1st July 2020

Note 1: There is a one-quarter lag on the publication of import data

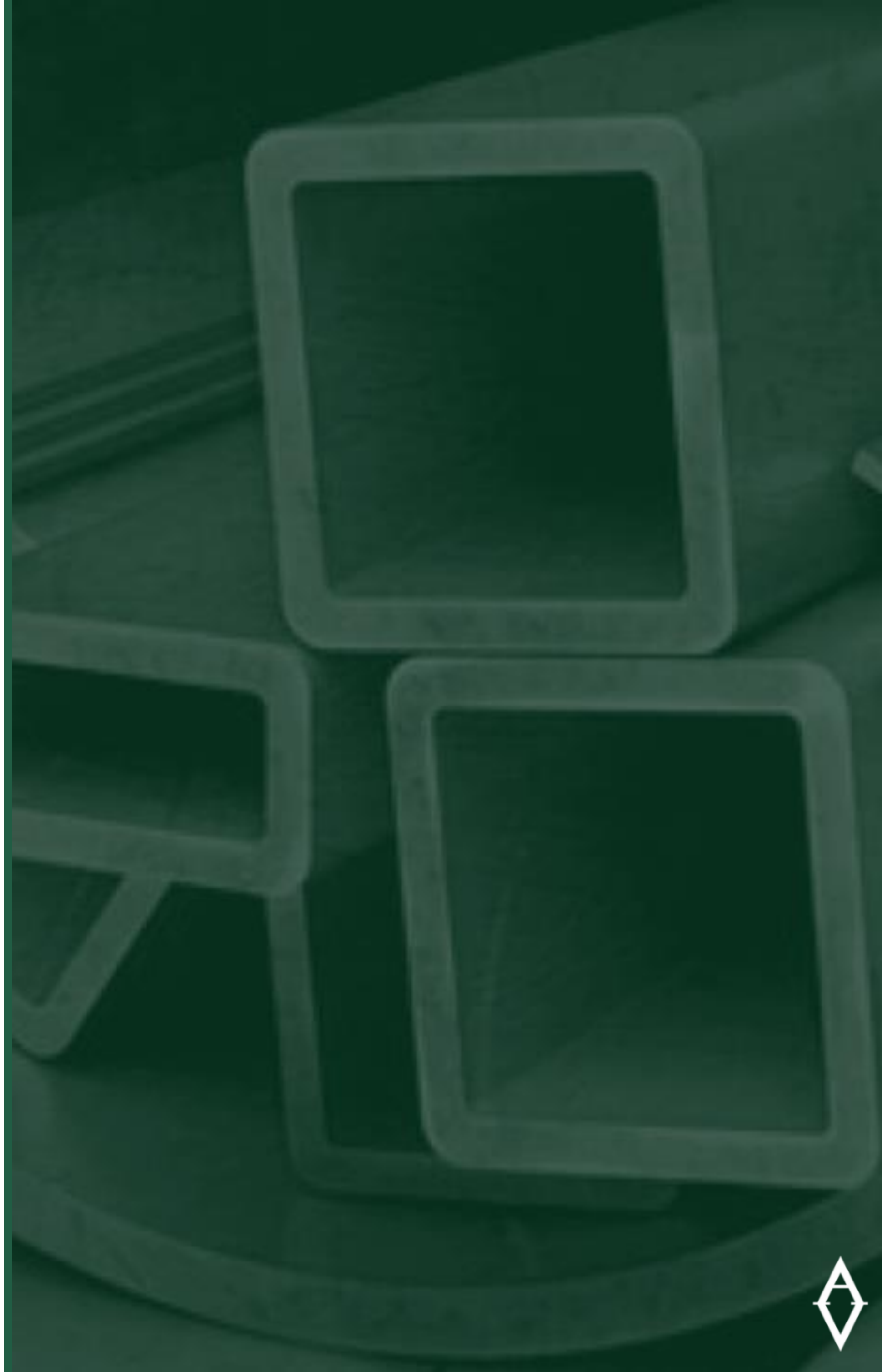
Applied Value Quarterly Steel Report

Q3 2020

Market Conditions by Region

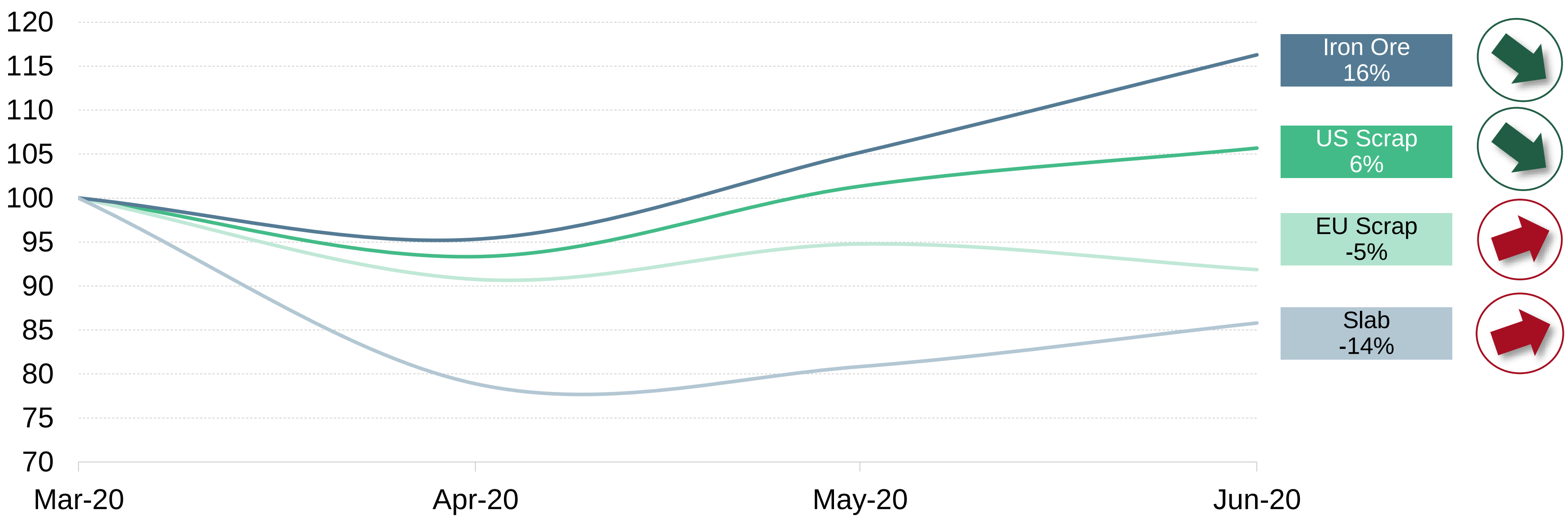
Steel Production Costs

Major Steel Mill Company Performance



All commodities have seen price rebounds in Q2, as scrap and iron ore facing short supply and slab having increasing demand.

Current Market Update | **Q3 Forecast**



US Scrap

- US scrap price has been supported by short supply due to manufacturing shutdowns across the board

EU Scrap

- EU scrap was lack of growing momentum due to reduction demand in Italy and Germany offset the recovery of ferrous scrap prices in Turkey

Iron Ore

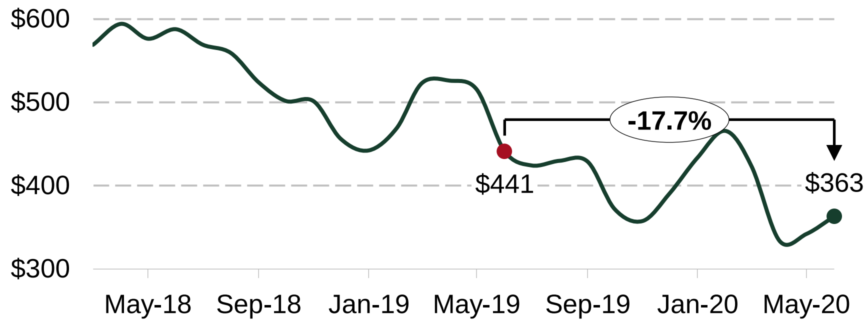
- Iron ore price showed a strong upward trend in Q2 on reduced shipments from Brazil, but it is expected to decline as iron ore supply normalizes

Slab

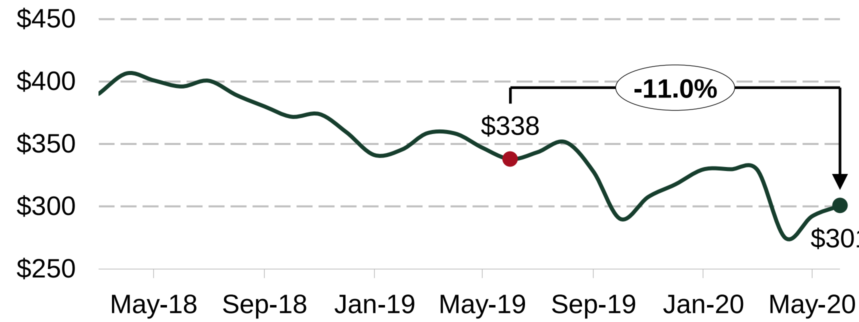
- After price crash on weak demand in March, high import from China and the new quarterly quotas for Brazilian slab to the US are expected to continuously push up slab price in Q3

US scrap's growth continued though Q2, having ~9% increase Y-o-Y, while slabs, pig iron, and Europe scrap dropped in range between 11% and 18%.

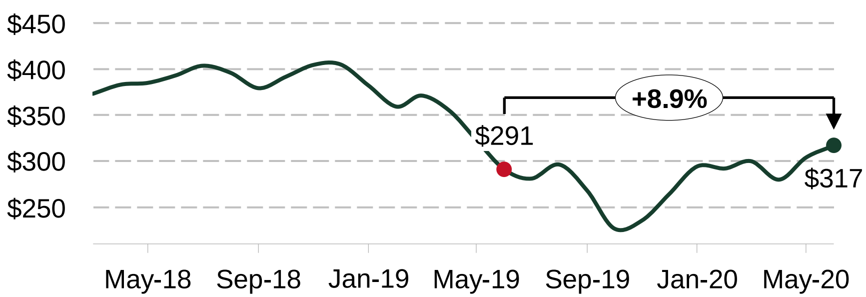
Slabs
USD/MT



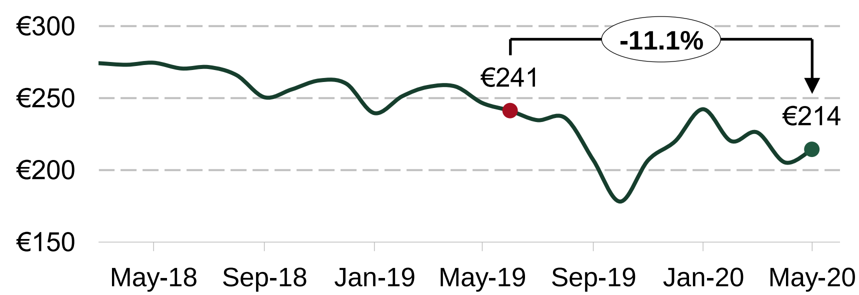
Pig Iron
USD/MT



Ferrous Scrap US
USD/GT



Ferrous Scrap Europe
EUR/MT

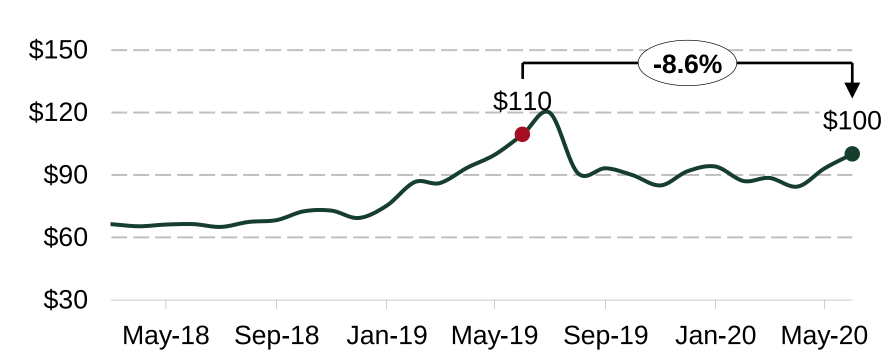


Previous Year's Data
Latest Data

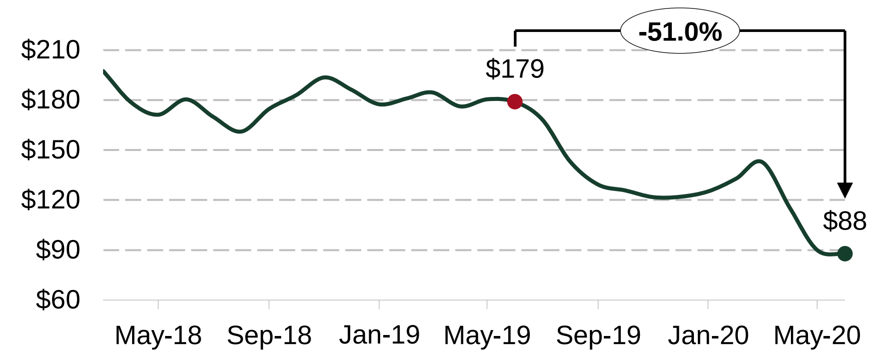
Source: AV Analysis

Coking Coal dropped 51% in Q2, due to improved gross spreads and production shutdown, while Zinc prices dropped ~24% over the same time.

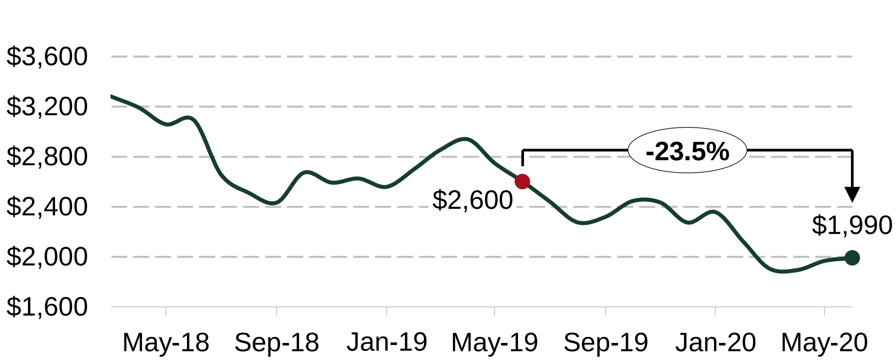
Iron Ore
USD/MT



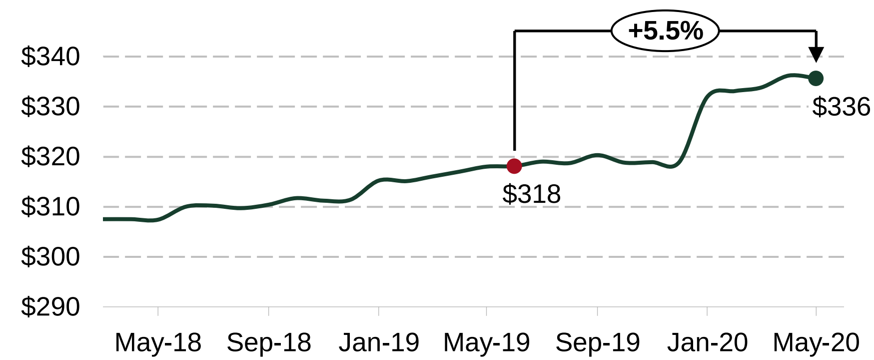
Coking Coal
USD/MT



Zinc
USD/MT



Limestone – Producer Price Index

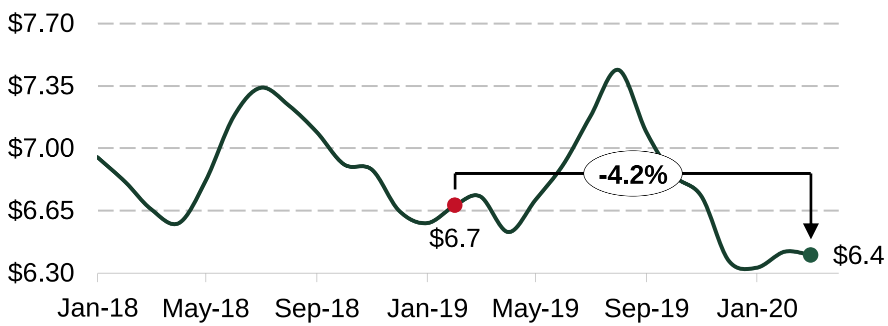


Previous Year's Data
Latest Data

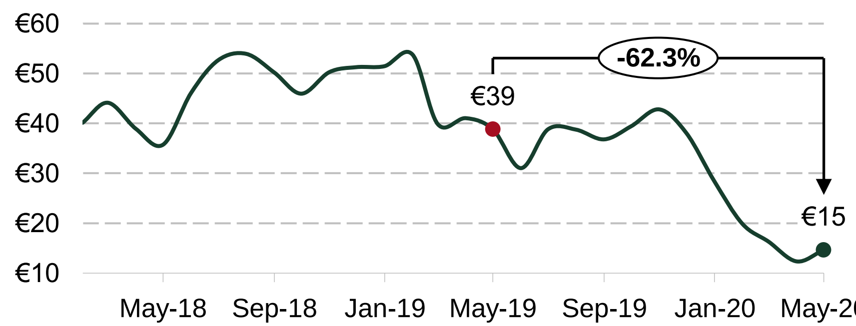
Source: AV Analysis

Natural gas prices hit record low as the markets continue to plunge in Q2, while electricity prices has seen a slight pickup Q-o-Q.

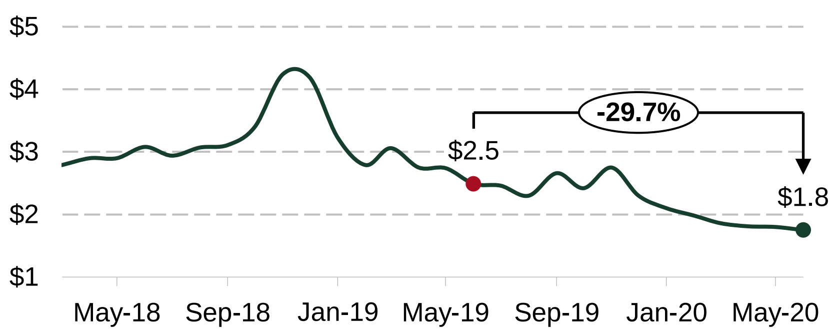
Electricity US
US cents/KWH



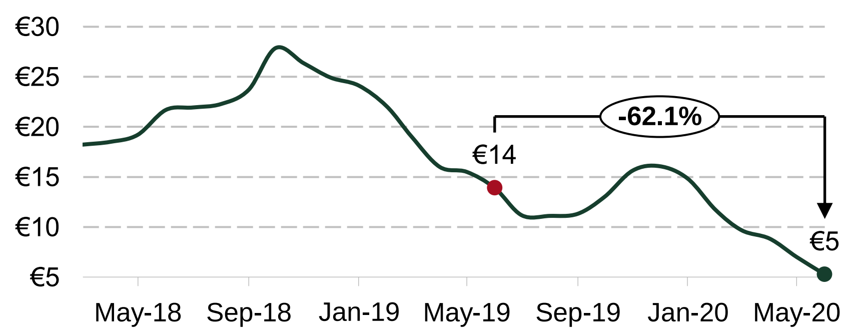
Electricity Europe
EUR/MWH



Natural Gas US
USD/mmBtu



Natural Gas Germany
EUR/MWH



Previous Year's Data
Latest Data

Source: AV Analysis

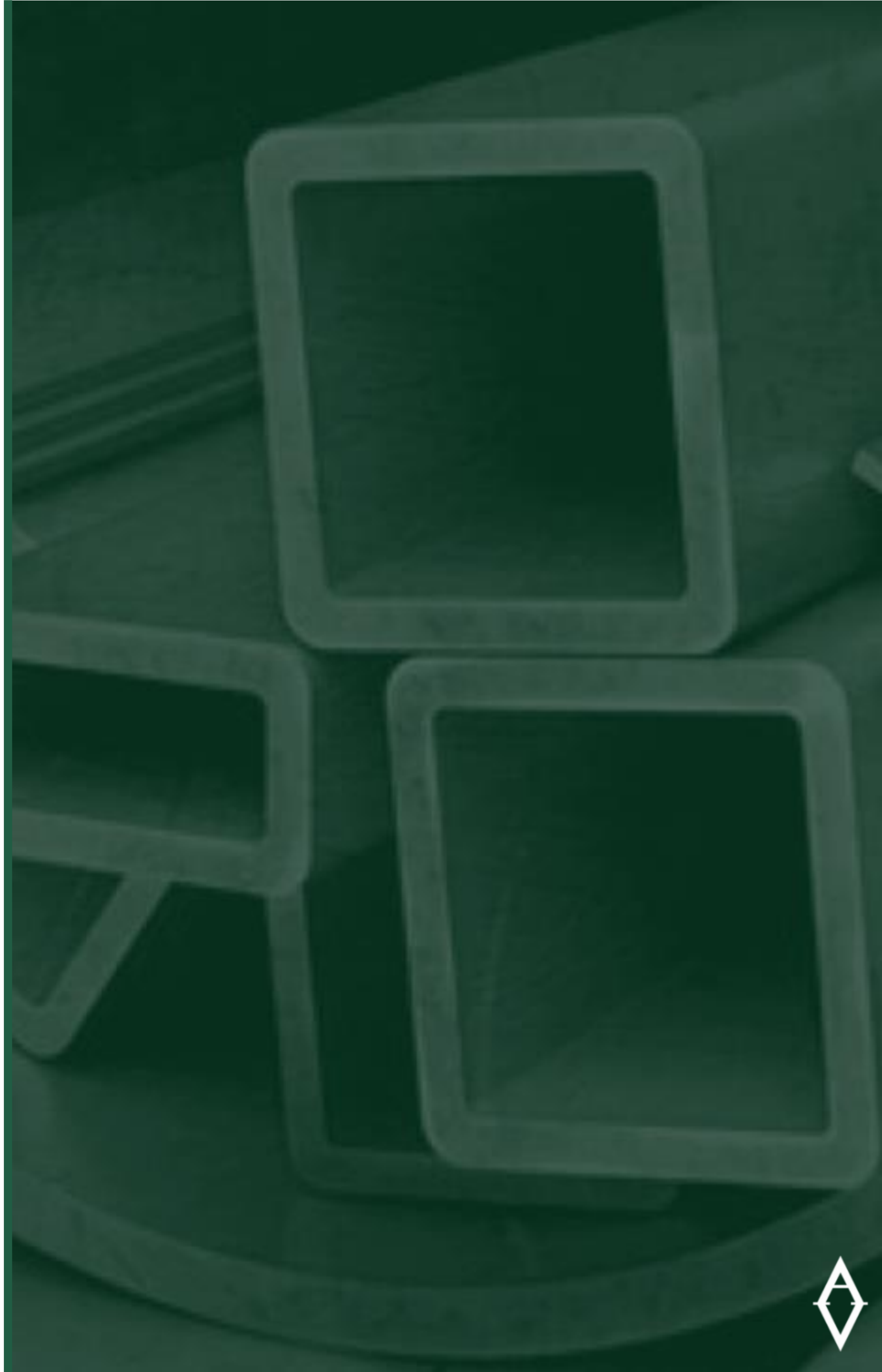
Applied Value Quarterly Steel Report

Q2 2020

Market Conditions by Region

Steel Production Costs

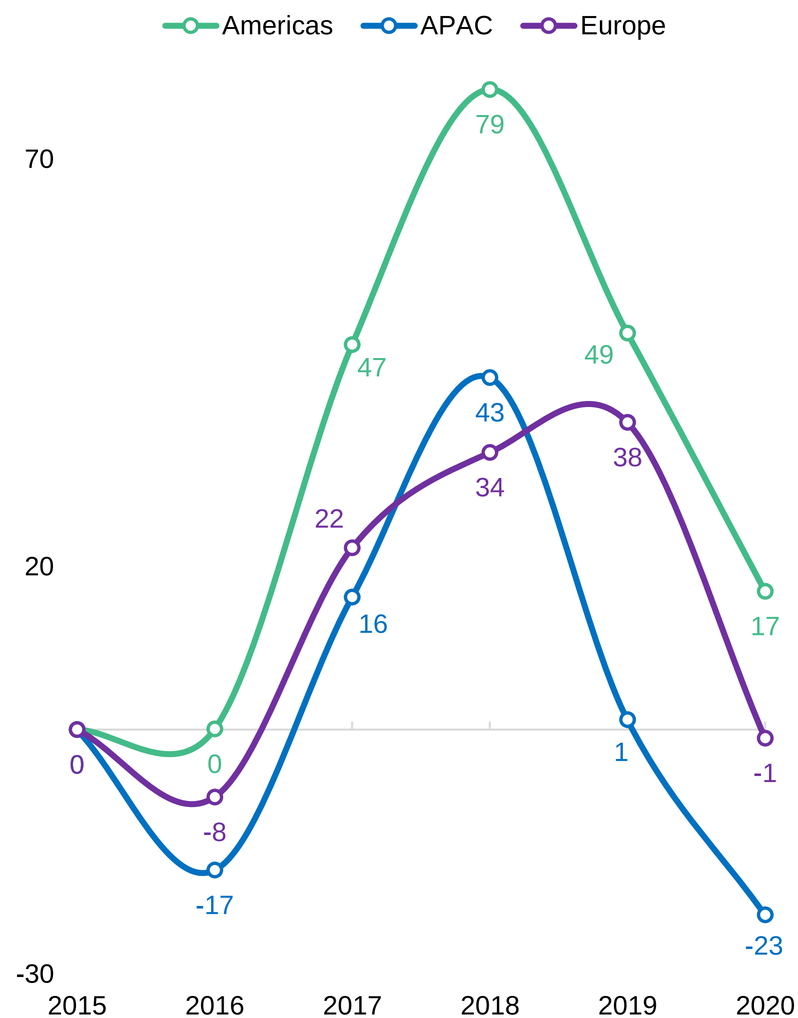
Major Steel Mill Company Performance



Global markets are plunging, with Europe stock suffering a significant decline of ~23 points YTD and hitting the record low.

Regions	Mills	Indexed Stock Movement				
		2016	2017	2018	2019	2020
Americas	CLIFFS	8.3	70.9	98.1	102.8	28.6
	GERDAU	-5.8	42.4	100.0	87.6	96.7
	NUCOR	8.0	31.4	42.0	22.7	-1.2
	USS	-10.3	44.3	74.2	-18.5	-56.1
APAC	ANSTEEL	-25.4	23.4	54.7	-4.5	-25.5
	山钢集团 SHAN STEEL	-23.0	4.8	23.0	-5.3	-24.9
	JFE	-36.5	-22.8	-3.9	-37.7	-59.4
	TATA STEEL	16.0	59.7	99.1	52.4	18.7
Europe	ArcelorMittal	-31.7	-6.6	7.9	-31.5	-50.7
	EVRAZ	-6.6	60.7	83.1	269.6	129.8
	Severstal	9.0	27.2	45.4	16.8	19.4
	ThyssenKrupp	-2.5	5.8	6.6	-42.2	-62.6
	voestalpine	-9.6	24.5	27.2	-24.1	-41.1

Regional Stock Movement 2016-2020

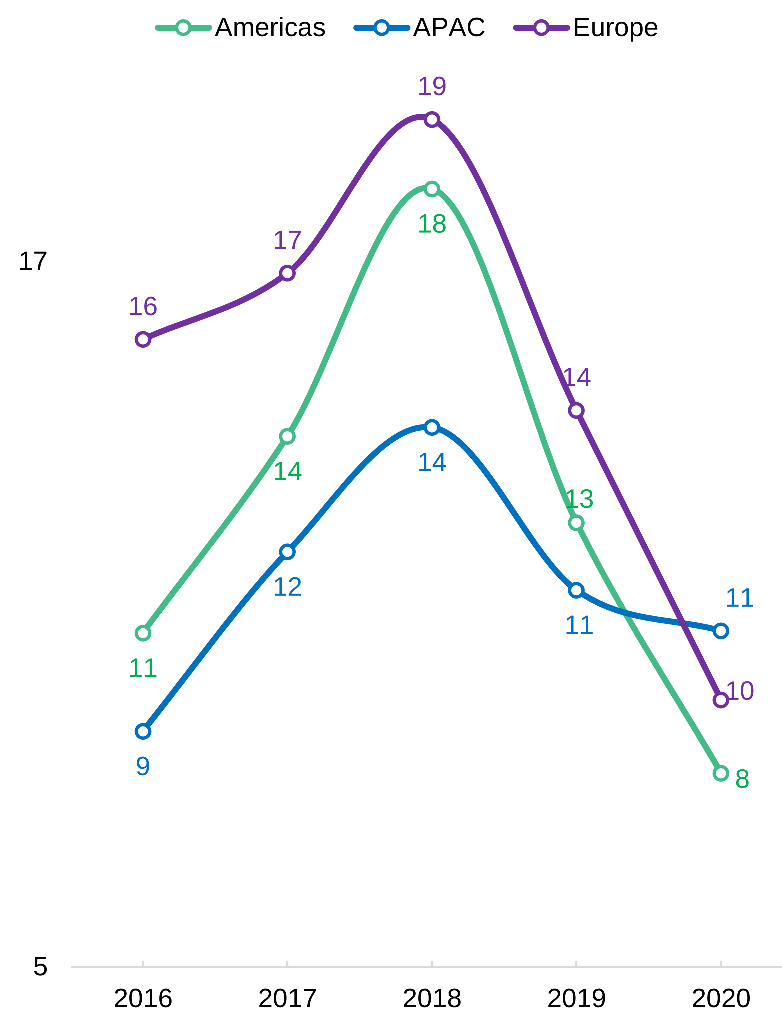


Note: Index base is average stock price of each company in 2015

Margins of US and Europe companies have seen downward trends since 2018, while APAC surpass other region in 2020, with highest margin of 11%.

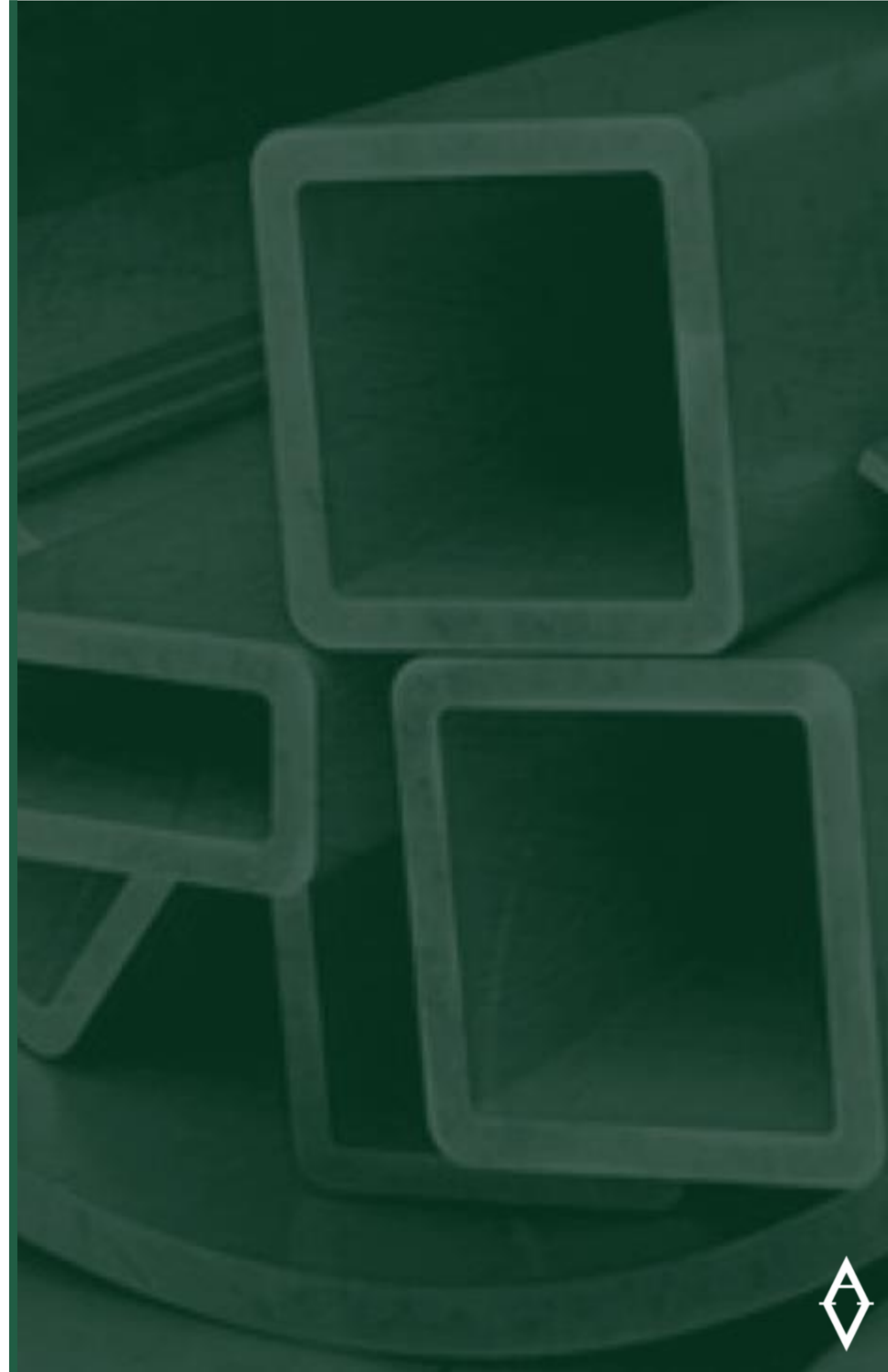
Regions	Mills	EBITDA % 2016	2017	2018	2019	2020
Americas	Cliffs	16.3	24.1	33.0	23.0	7.5
	Gerdau	9.9	10.8	13.3	12.3	11.0
	Nucor	13.1	13.1	16.4	11.8	12.0
	USS	3.4	8.1	10.3	3.1	2.7
APAC	Ansteel	9.5	11.7	14.0	6.3	7.8
	山钢集团 Shan Steel	13.6	15.1	15.7	11.2	12.4
	JFE	7.8	8.1	11.3	9.5	8.4
	Tata Steel	5.2	13.3	15.8	18.6	14.3
Europe	ArcelorMittal	10.2	11.8	12.6	4.7	6.5
	Evraz	19.0	23.6	29.0	21.1	0.0
	Severstal	31.3	32.3	36.1	33.6	30.7
	ThyssenKrupp	5.1	3.3	4.2	1.8	-0.5
	voestalpine	12.9	13.0	15.1	11.1	11.0

Regional EBITDA Movement 2016-2020



Introduction to Applied Value

Background



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	✓	✓	✓		✓		
	Lifting OEM	✓	✓	✓	✓	✓		✓
	Global Engineering	✓	✓	✓		✓		
0.1M	Consumer Goods OEM		✓	✓				✓
	EU Turbine Manufacturer	✓	✓	✓	✓	✓		
0.01M	Automotive Tier 1	✓	✓		✓	✓		
	Scand. Engineering	✓	✓	✓			✓	
	Scand. Construction	✓	✓	✓				

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

Lean Growth

Focus
- ✓ Define strategic focus
- ✓ Excel in key capabilities
- ✓ Use partners for non-core activities

Simplicity
- ✓ Reduce complexity
- ✓ Simplify and standardize processes, organization and supply chain

Speed
- ✓ Set targets
- ✓ Measure and improve
- ✓ Reduce Time to Market-Customer-Cash

Offerings

Go-to-Market
Segmentation, Market Studies, Positioning, Product/Channel Mix

Gross Margin Improvement
Pricing, Sourcing, VA/VE, Supply Chain, Operations

OPEX Efficiency
Operational efficiency, S&M / G&A productivity, Organization

Capital Efficiency
Working Capital mgmt., Innovation/R&D performance, M&A, Fixed asset leverage

Digital Transformation and Efficiency
Strategy, Capability improvement, Execution

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