



Applied Value Quarterly Steel Report

Q1 2020 Report

January 2020

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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



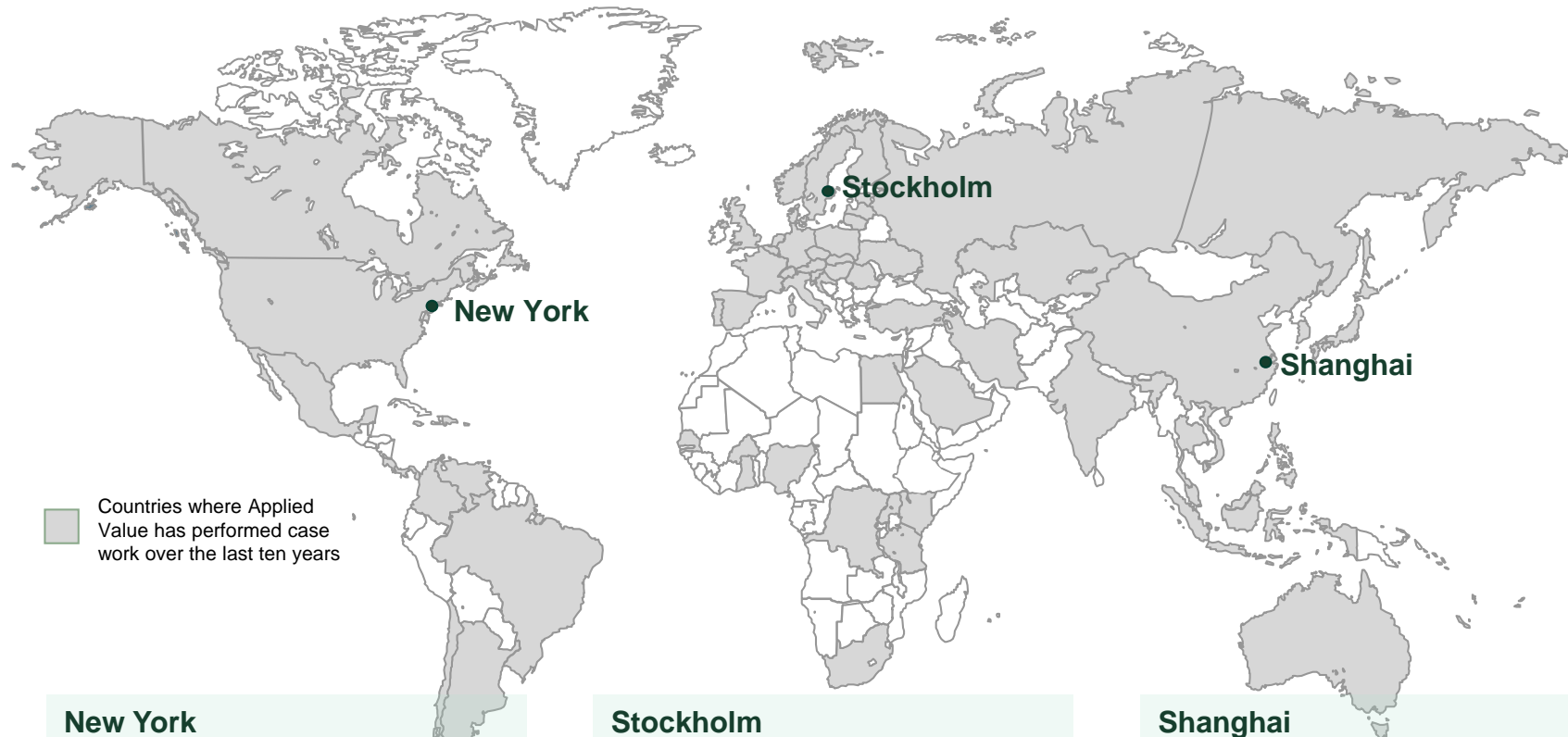
Hands-On



Global perspectives



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



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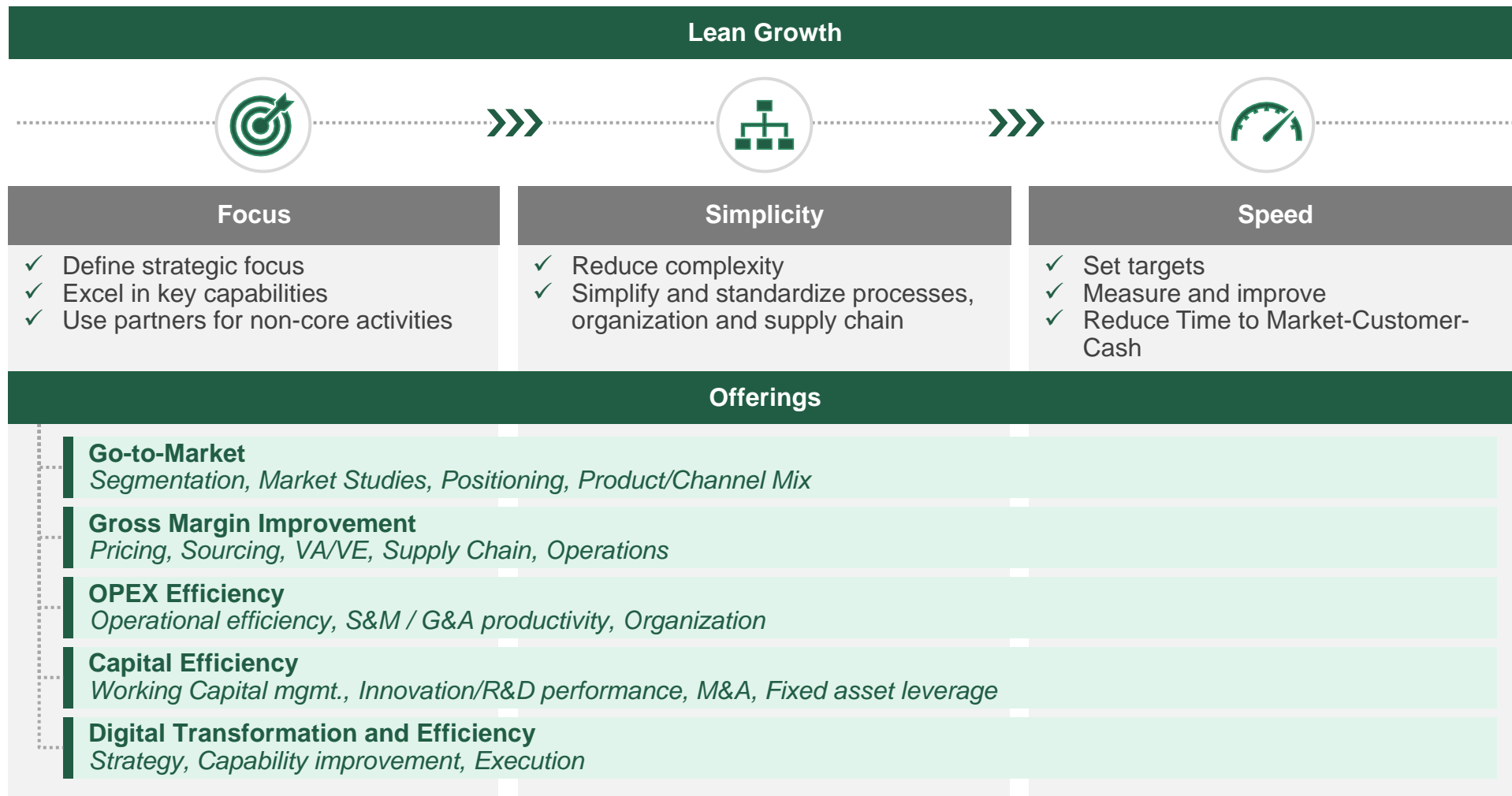
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Our Lean Growth framework is based on Focus, Simplicity, Speed – guiding principles to raise client performance.

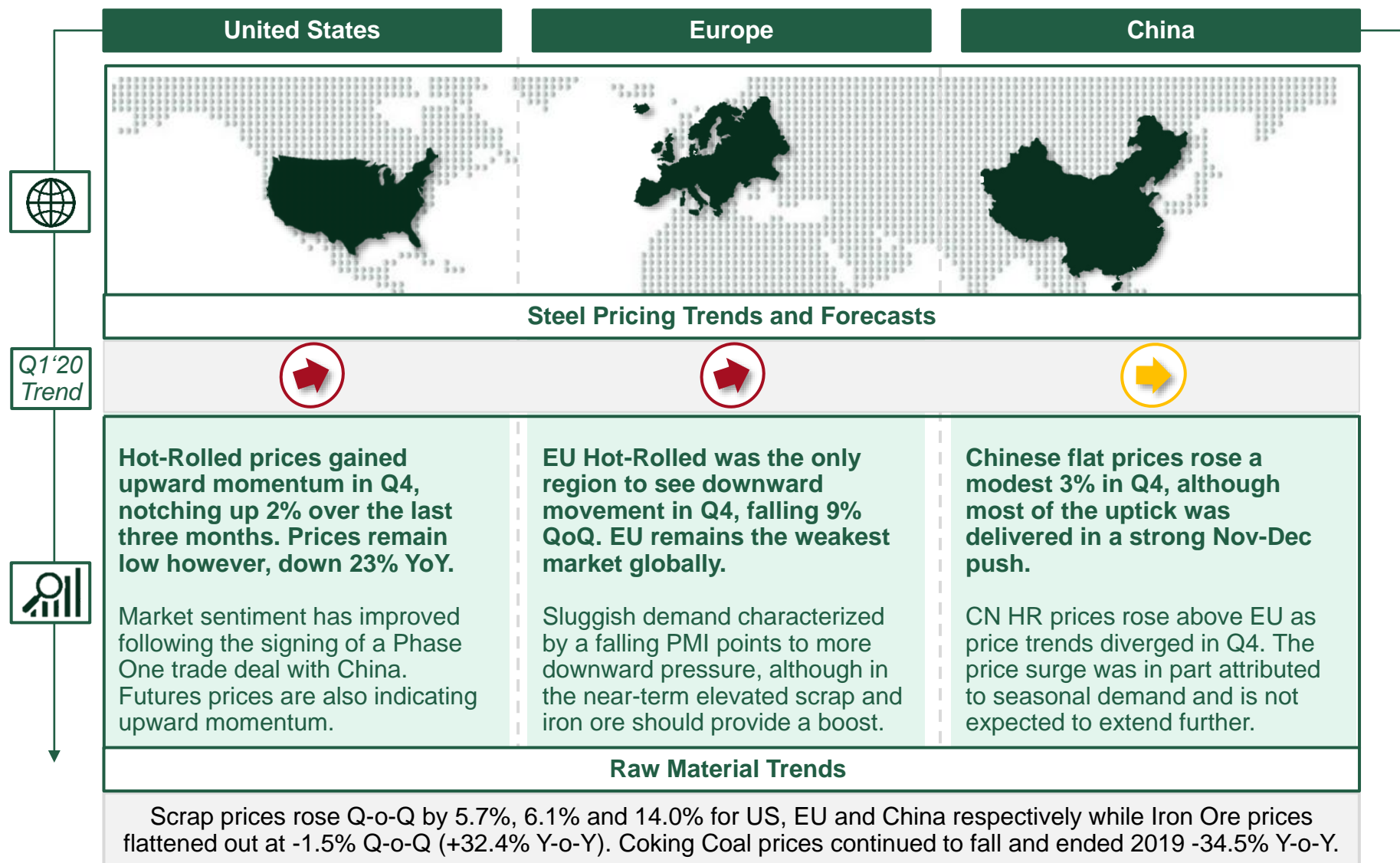


Applied Value has 15+ years of experience working with clients in numerous industries involved in various facets of steel purchasing.





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	✓	✓	✓				



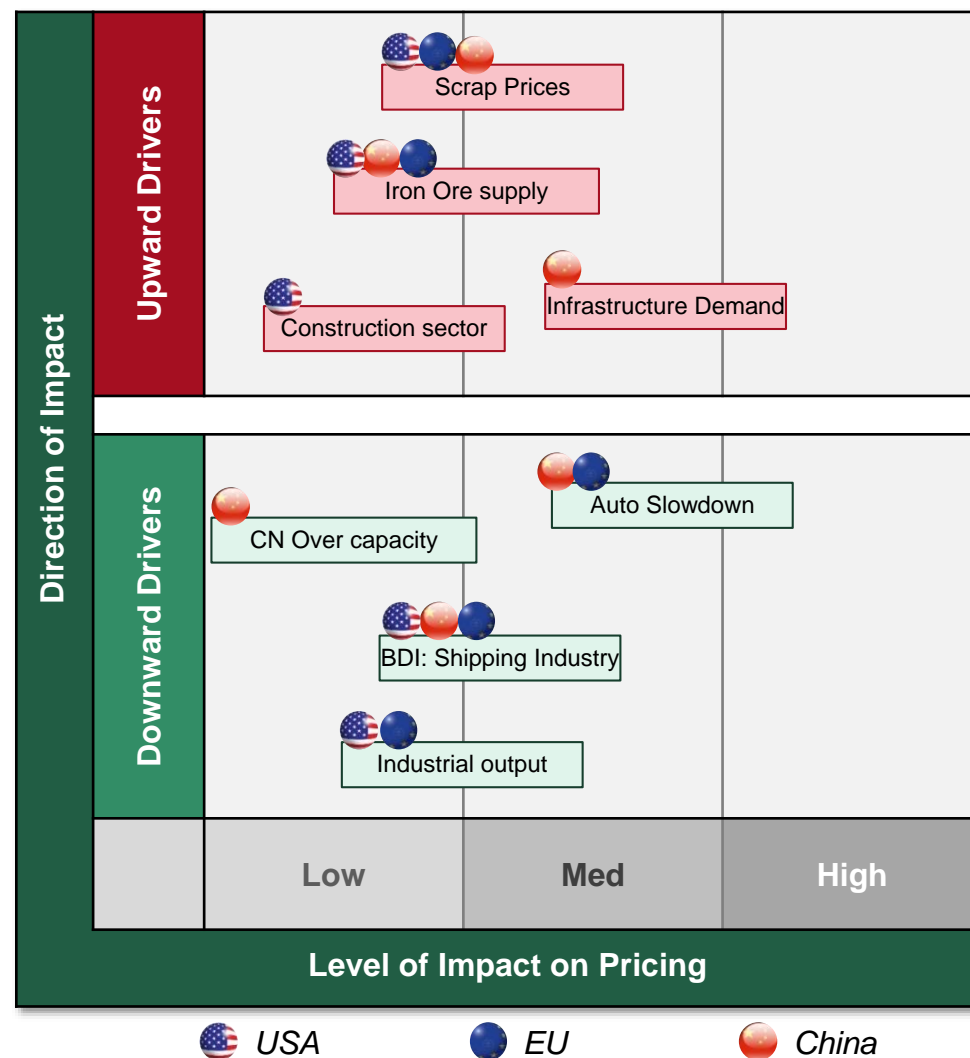
Steel prices saw minor fluctuations in Q4, although recent upticks in most regions globally point towards some recovery in Q1.



Global Steel Price & Trend Summary.

Commodity		Latest Approx. Price (Dec)	Last 3 Months	Trend (Forward)
 Flat¹	US	\$630/MT	2%	➡
	EU	€450/MT	-9%	➡
	CN	\$540/MT	3%	➡
 SS	US	\$2,680/MT	16%	➡
	EU	\$2,280/MT	-13%	➡
	CN	\$2,230/MT	-1%	➡
 Plate	US	\$690/MT	-9%	➡
	EU	\$580/MT	-7%	➡
	CN	\$540/MT	2%	➡
 Bar	US	\$730/MT	-3%	➡
	EU	\$520/MT	-4%	➡
	CN	\$520/MT	1%	➡

Major Market Drivers



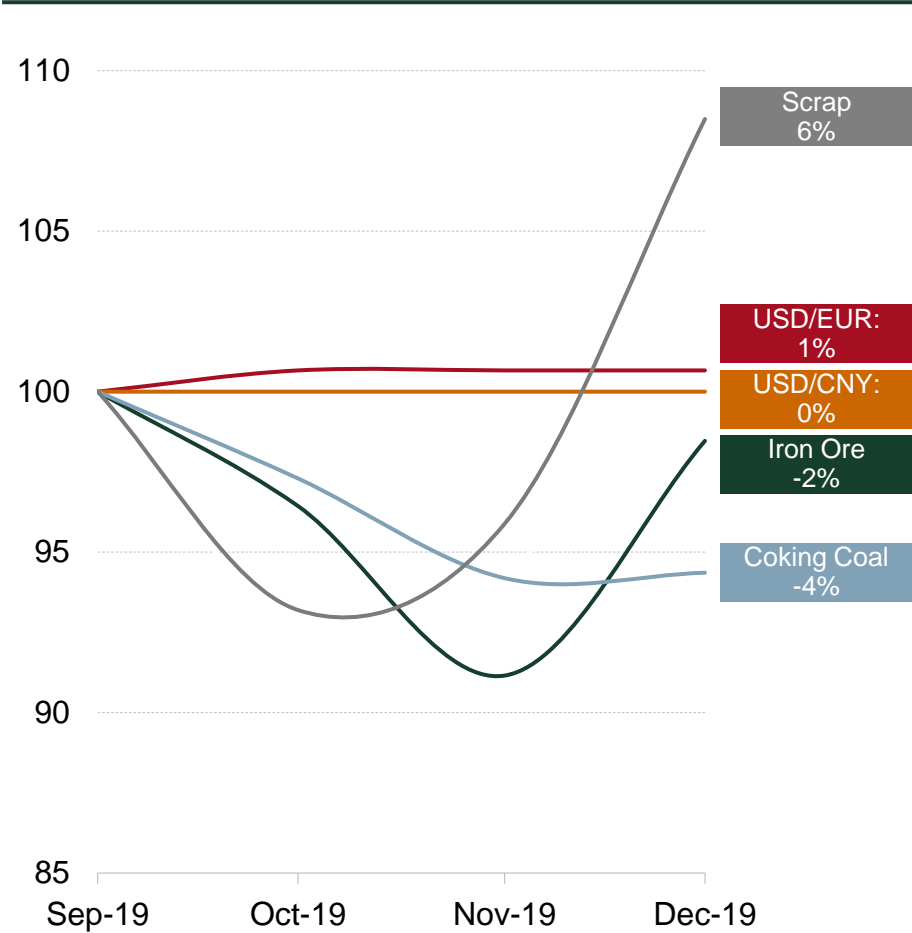
Notes

1: Flat latest prices are from December 2019, and 3 month trend compares September to December

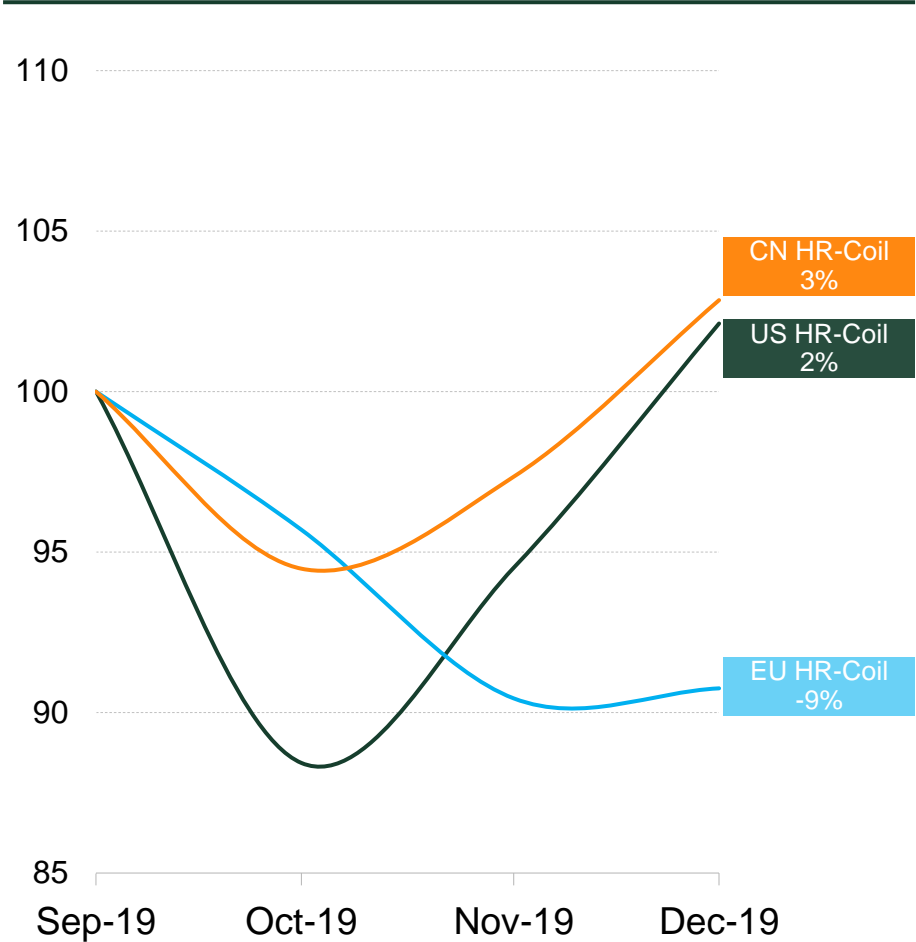


Global Scrap prices increased by 6% in Q4, while Europe is the only market that has seen decreasing HR prices across the quarter.

Indexed Input Costs
September 2019 – December 2019



Indexed HR-Coil Prices
September 2019 – December 2019



Applied Value Quarterly Steel Report

Q1 2020

Market Conditions by Region

Special Section – M&A Activity

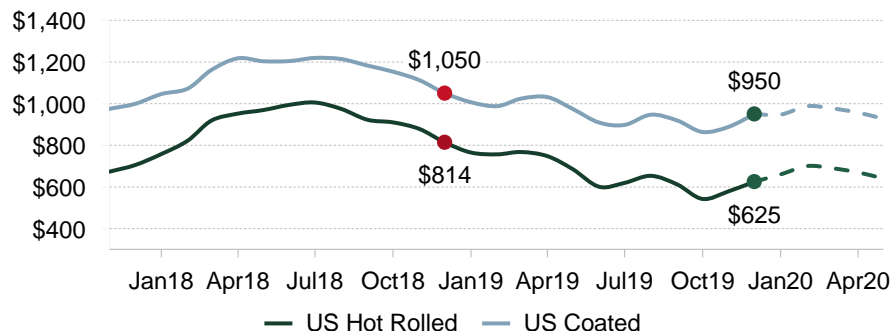
Steel Production Costs

Major Steel Mill Company Performance



US HR prices dipped early in Q4, falling to new historic lows of ~\$541/MT in October before aggressively rebounding +16% to end the year at ~\$625/MT.

US Flat Prices (USD/MT)

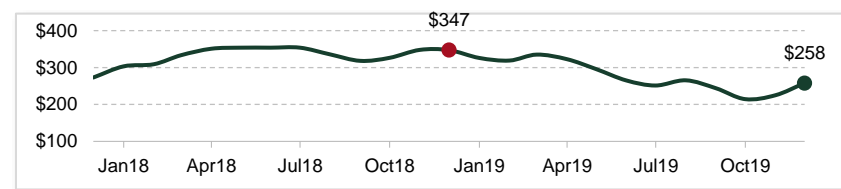


- Hot-Rolled prices offset the downward trend and ended 2019 up 2% Q-o-Q, reaching ~\$625/MT after a brief decline in October. At the same time, Coated prices had a similar correction, up 3% and ending the period at ~\$950/MT. The recovery was largely due to increased demand from the domestic manufacturing sector. PMI, rebounded during Q4, increasing from 51.1 to 52.4.
- Scrap prices also showed upward momentum in Q4, ending the year up 6% QoQ. Though this start of a price rebound comes due to sustained demand, the Y-o-Y prices are down 26%.
- US Steel acquired 49.9% of EAC producer Big River for 700MUSD and Iron ore producer Cleveland-Cliffs acquired AK-Steel with for Stock-Equivalent of 1.1BUSD
- Even though Mexico and Canada were exempt from article 232 in Q3, US Mill Capacity Utilization recovered by 3% Q-o-Q and ended 2019, remaining at the high levels it reached since the 232 tariff implementation in Q3 2018.
- The China-US HR spread stayed relatively flat at ~\$86/MT. The widened gap following Trump's order to enact section 232 in March 2018 has all but disappeared.

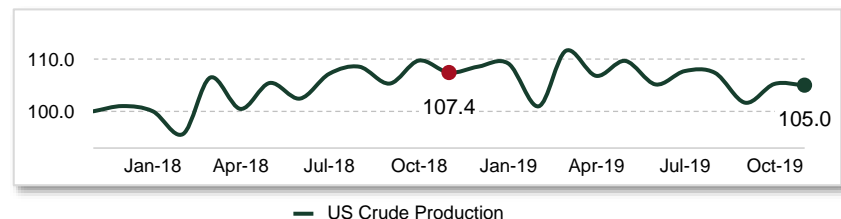
Source: AV Analysis

US Scrap Steel Price

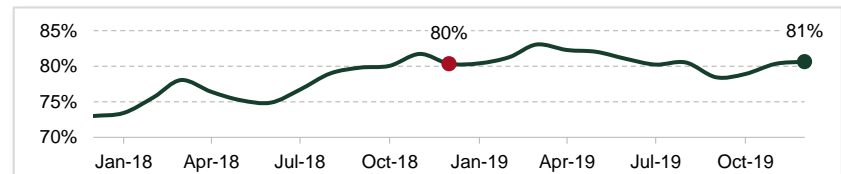
USD/MT



Indexed Crude Production Volume

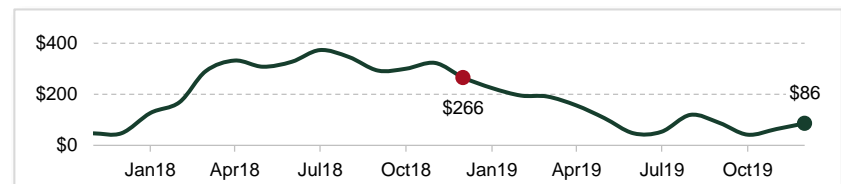


US Mill Capacity Utilization



US vs China Price

USD/MT

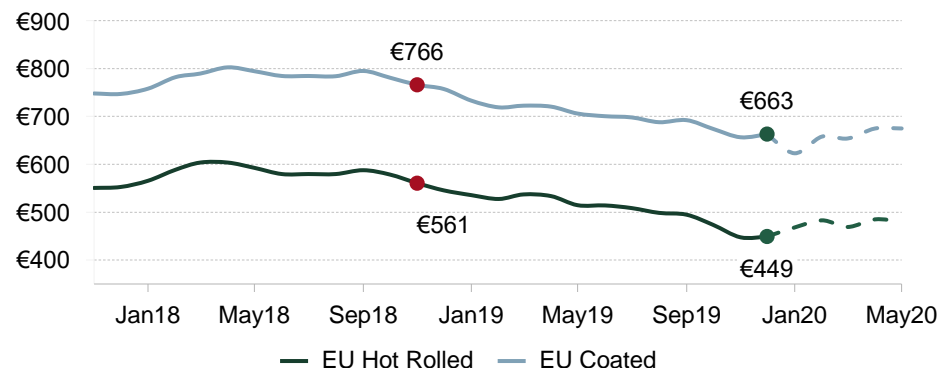


● Previous Year's Data ● Latest Data + - Correlation to Market Price



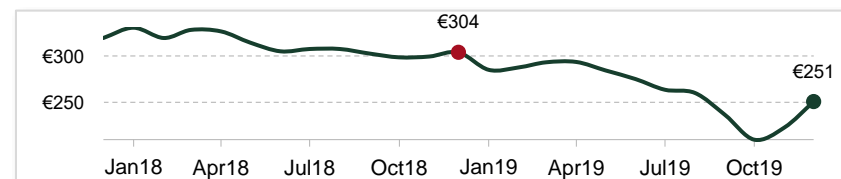
EU HR prices continued downwards, falling 9% QoQ after nearly 20+ straight months of falling, despite upward movements in both the US and China.

European Flat Prices (EUR/MT)

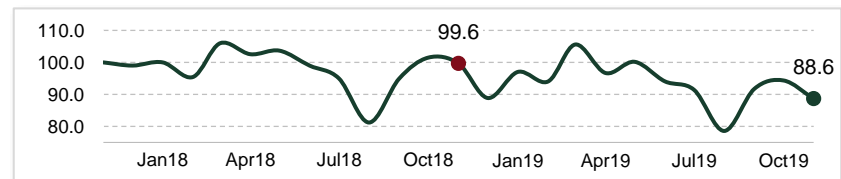


European Scrap Prices

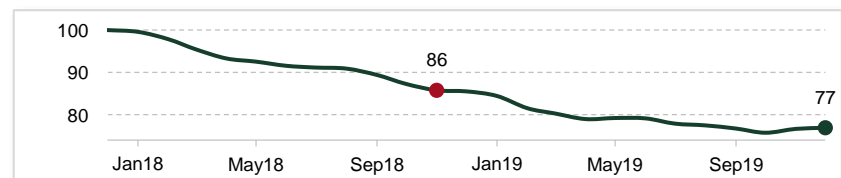
EUR/MT



European Union Indexed Crude Production

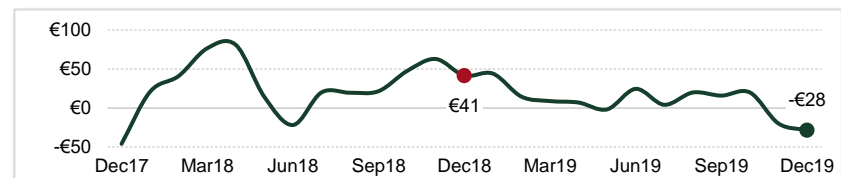


Euro Zone Manufacturing Indexed PMI



EU vs. China Price

EUR/MT

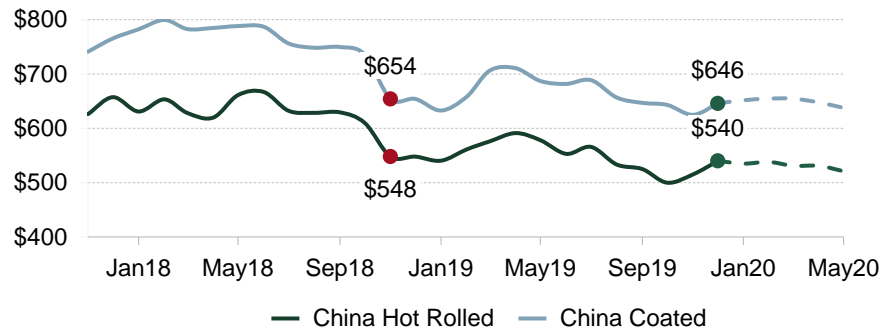


- European HR prices dropped 9% Q-o-Q, bottoming out in December at ~449 EUR/MT. The market is down 18% YoY. Overall demand continues to drag at a low level, most notably within the auto sector. While mills are pushing for price increases, downward pressures have been felt from eastern European suppliers who continued to sell aggressively.
- EU Scrap prices continued to fall in October but turned upward in November, ending Q4 with a 6% Q-o-Q increase. This was in part due to unexpectedly high demand, most notably for long-products from Italy. Despite the late quarter rebound, Y-o-Y scrap prices fell by 18%.
- EU crude steel production has continued with a downward trend that started in March 2019. After rebounding since the 2-year low in August, production dipped once again in November.
- The spread between EU and Chinese steel has widened with EU HR's continued decline in Q4. Particularly as Chinese steel prices rose on demand from large infrastructure projects. EU flat steel is now ~30 EUR/MT cheaper than in China. One year ago EU steel was ~40 EUR/MT more expensive than Chinese steel.



China flat prices slightly increased at 3% in Q4 2019, but the trend is unlikely to last as increased domestic production increases supply surplus.

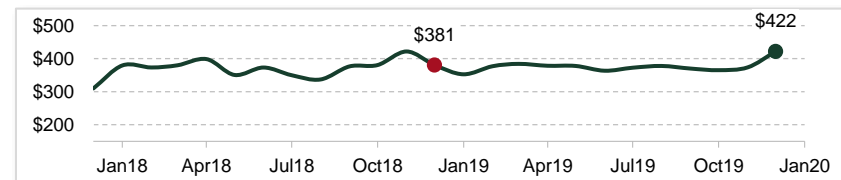
China Flat Prices (USD/MT)



- Chinese HRC prices went up 2.9% Q-o-Q to ~\$540/MT while Chinese coated declined 0.1% Q-o-Q to ~\$646/MT in Q4 2019, powered by domestic infrastructure projects and market confidence with the developments of the US-China trade negotiation, as both parties have reached an agreement on Phase One of the trade deal.
- Chinese scrap price rose 14% in Q-o-Q, largely due to China's ongoing effort to switch to cleaner electric arc furnaces as well as increased stocking efforts ahead of the Chinese New Year.
- Production levels in China rose despite Beijing's attempts to limit capacity due to oversupply and environmental impact. Demand from infrastructure projects provided continued capacity stimulus, and some mills have increased their output amidst relaxed environmental enforcement.
- Spread between US-China and Europe-China steel price has narrowed significantly in last two years. In 2019 Q4, Europe-China spread has been kept below zero, as EU prices continue to fall. US Steel is current ~\$86/MT more expensive than Chinese steel excluding any tariffs.

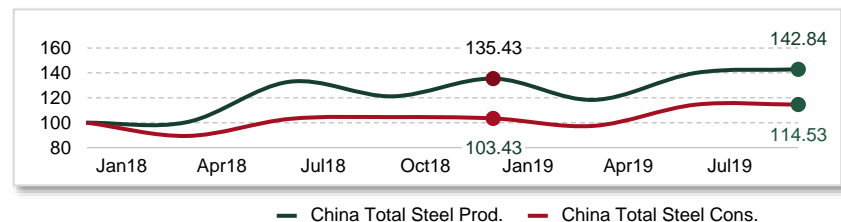
China Scrap Steel Price

USD/MT



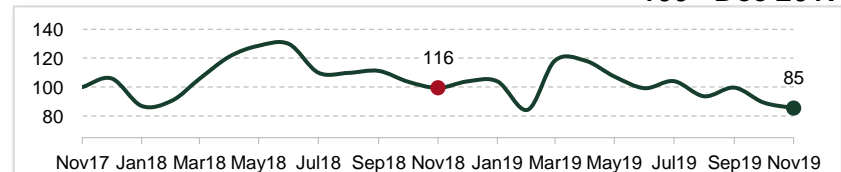
Indexed Production and Consumption

100= Dec 2017



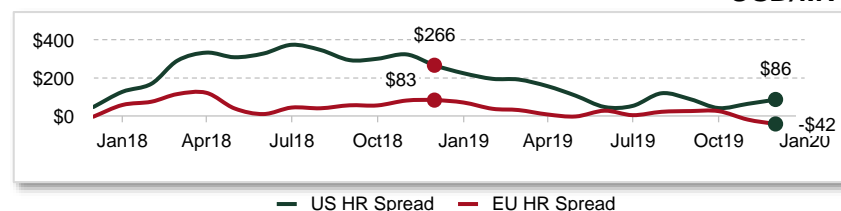
China Exports

100= Dec 2017



Spread between US & EU

USD/MT



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



Rising Scrap and Iron Ore prices have supported a small recovery in the US and CN markets and could support increases in the EU market as well.

Upward Market Drivers



Scrap Price Increases

- › Global: Scrap prices which have been on a downward trend throughout 2019 in U.S. and EU and relatively flat in China have reversed trend and increased significantly across all markets. The increased prices for scrap gives mills further motive to push for higher prices.



Steel trader's expectations

- › US: As the HR prices increased during Q4, futures suggest that the market has bottomed and will continue to rise a bit further. Futures for Hot Rolled Coil indicate a 2-5% increase for Q1 2020. Mills' have been pushing to increase prices following the downward trend in 2019.



Iron Ore Supply Uncertainty

- › Global: While the price rally following the Brumadinho dam incident was partly reversed in Q3. Vale has announced cuts in production from its Brucutu mine in the Minas Gerais state. Combined with mine leases expiring in India on March 2020, accounting for 25 - 35% of total world Iron Ore output, the production cuts will provide an upward pressure on the global iron ore market. A market auction has been postponed with no set date yet on the calendar, but it is known that the government will be inviting bids for 50-year mining rights.



Environmental standards to limit steel supply

- › China: Higher emission & environmental standards are expected to contribute to a slowdown in China's total steel production in 2020 after reaching record highs in 2019 at 750 million tonnes.



Construction

- › US: Construction in the United States rose by ~4% Y-o-Y in 2019 adding positive market sentiment and upward pressure on steel demand.
- › China: Upward price pressure for construction steel strengthened as Beijing, during the Communist Party conference, restated the need for increased infrastructure construction.



Supplier Consolidation

- › US: USS acquisition of 49.9% interest in Big River Steel and Cleveland Cliffs' acquisition of AK Steel further consolidated the market supply, leading to a scenario where prices could be tightened due to less competitiveness from mills



Low industrial output, particularly within the auto sector, as well as weak trade flows are applying downward pressure on the global marketplace.

Downward Market Drivers



Declined Industrial Output

- › EU: Industrial output have dropped across the Eurozone. In October, overall production was down 0.5% across the Euro Area compared to September according to Eurostat. Germany, EU's largest manufacturer have seen a reduced output of nearly 8% since the sector fell into recession in May 2018.
- › US: United States manufacturing is also facing headwinds including trade wars, Boeing's woes and weak global demand. US manufacturing output was down 0.8% in October, the largest decline since May 2018.



Purchasing Managers' Index

- › Global: International trade flows are weak and Global Manufacturing PMI, fell to 50.1 in December, to remain only marginally above the 50.0 waterline that separates expansion from contraction. The dropping PMI figures suggest a weak pace of growth in global output.



Automotive Slowdown

- › CN: The automotive production in China rebounded in 2019 Q3 and the uptick continued also during Q4, reaching the highest production levels for the year. However, on the sales side the market still sees negative developments on a Y-o-Y basis (~5% decrease in both October and November) adding downward sentiment in the market.
- › EU: European car sales rebounded in the fourth quarter after the drop in August reaching y-o-y increases all months September to November. Driven by the strong sales in these months the sales levels almost reached the same levels as for 2018, however Germany is the only big market in the EU reaching growth January to November 2019 (+3.9%). Out of EU's five major markets only Germany has been seeing growth in the auto-sector during 2019. Spain and UK have recorded -6% and -3% respectively.



Baltic Dry Index

- › Global: The global economic indicator for shipping rates has tumbled in Q4, offsetting increases which were gained during Q3. The index is approaching the 5Y low levels set in March 2016 and will allow mills to source raw material at lower rates than in previously.



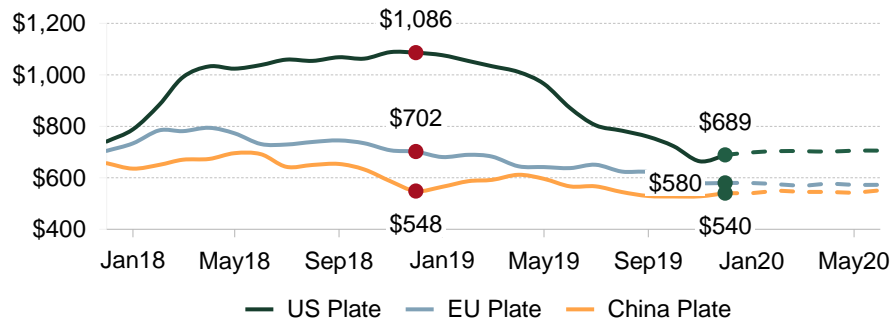
Italian Court Ruling on Ilva Blast Furnace

- › An Italian Court overturned a previous order from a local magistrate that furnace AFO2 needs to be shut down following the death of a worker in 2015. Commissioners now have 12 months to make the blast furnace compliant with a set of environmental and safety rules. The ruling strengthens belief in that ArcelorMittal will be able to reach a deal with the Italian Government and keep the plant open.



Plate Prices continued to drop and US plate is down by >35% since last year, however indications of an uptick in price were seen in December.

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

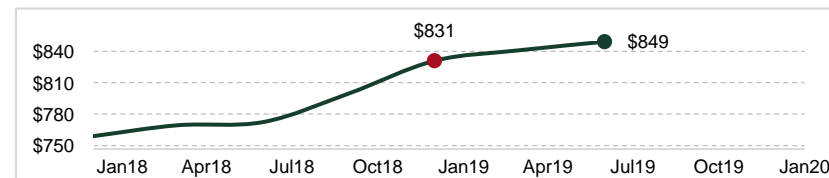


- US plate price continued to drop during the majority of Q4 – compared to December last year the price has declined by 36.6%. The low prices could depend on the mills strive to make late year deals with customers in order to extend lead times into next year and to raise prices during Q1 when prices and demand is usually higher.
- In the end of Q4 the US plate price indicated an upturn, increasing 4% November to December as several domestic mills raised prices. The increase is also correlated to the increase in the hot-rolled coil market and gains in US ferrous scrap prices.
- Chinese Plate prices have increased slightly in Q4 and increased by 2% from Q3 to Q4. The trend is supported by Environmental Restrictions imposed by Beijing.
- EU plate prices dropped 7% Q-o-Q, also in line with EU flat prices.
- US Crude Oil production continues to grow and reached levels of 20.9MBPD in December. In Q4 the OPEC Oil Production rebounded from the drop in late Q3.
- BDI plummeted in Q4 2019, losing most of what had been gained during Q3 driven by falling rates across all vessel segments.

Source: AV Analysis

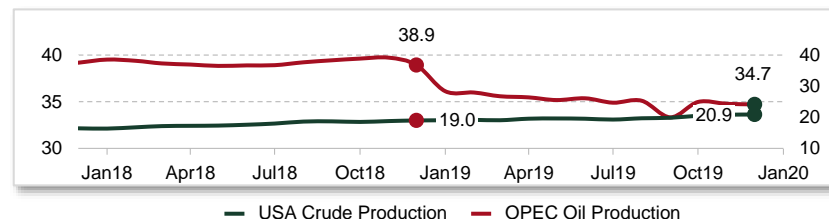
US Defense Spending

BUSD



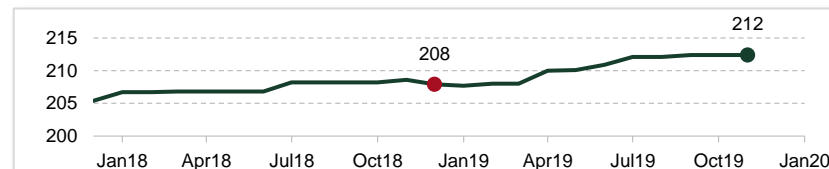
Crude Oil Production

MBPD

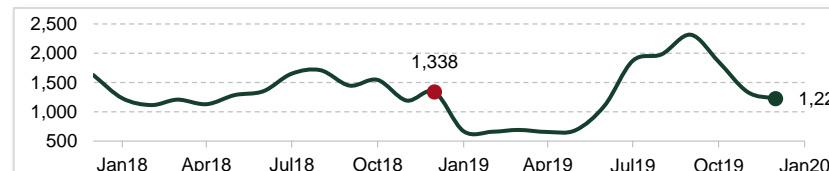


US Ship Building and Repairs

Index: 1985 = 100



Baltic Dry Index

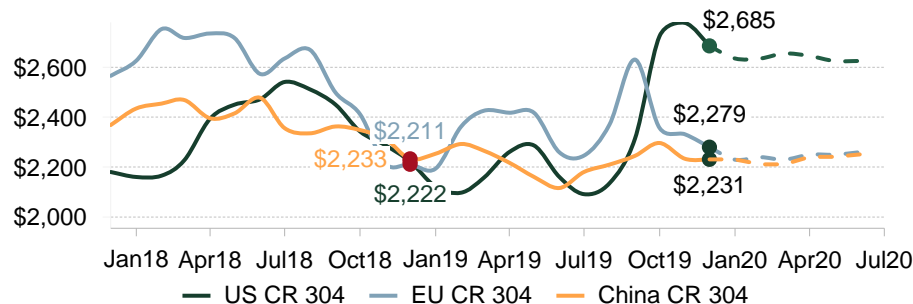


● Previous Year's Data ● Latest Data + - Correlation to Market Price



Weakened nickel and chromium costs in Q4, -22% and -8% respectively, allowed for Stainless Steel prices to soften following the surge in Q3.

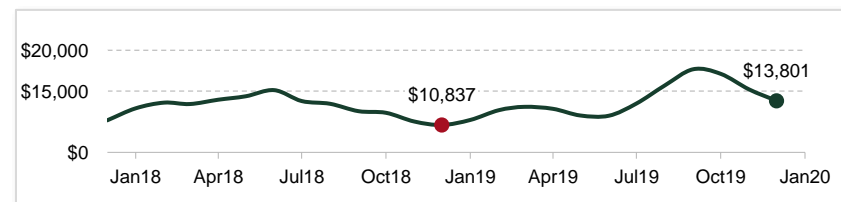
Stainless Steel Prices – US / Europe / China (USD/MT)



- US stainless prices rose in the beginning of Q4, however the price turned back down in December affected by the correction of previously peaking Nickel prices. Despite the late downturn the price is up by 21% y-o-y.
- Also the European price was affected by the big moves on Nickel. In the last three months, EU stainless has seen a major drop from the peak in September and is now down by 13.4% from those levels. Y-o-Y the price is still up by 3.1%. Demand continues to stay weak.
- Chinese stainless prices has remained fairly stable during the last quarter, and the price in December 2019 was in line with December 2018.
- Nickel prices have turned back down again after the peak in September, decreasing 22% September to December – the reductions in price followed reduced demand from China as well as announcements about increased output from Brazil and Philippines, offsetting the drop from Papua New Guinea last quarter. The mine where the leakage happened has since then been shut down and will remain closed until further notice.
- Chromium prices continued to decline also during Q4, reaching low levels at \$6,193/MT in December. The raw material has decreased 8.3% q-o-q and 40.2% y-o-y.

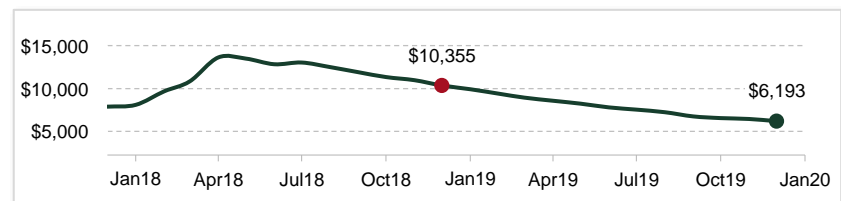
Nickel

USD/MT



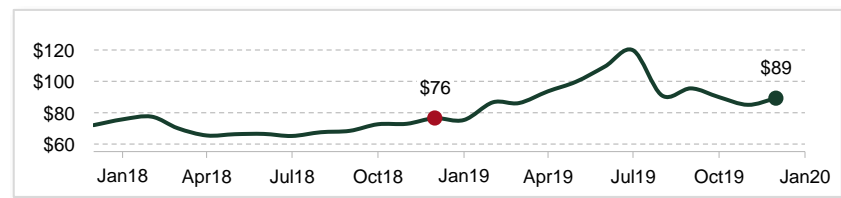
Chromium

USD/MT



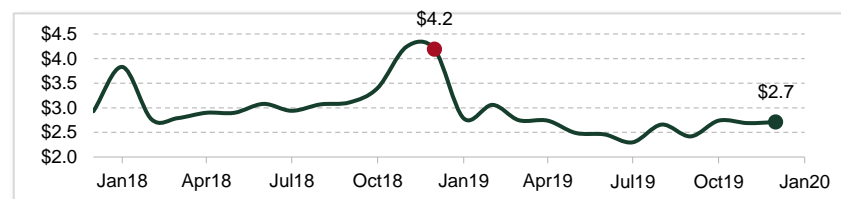
Iron Ore

USD/MT



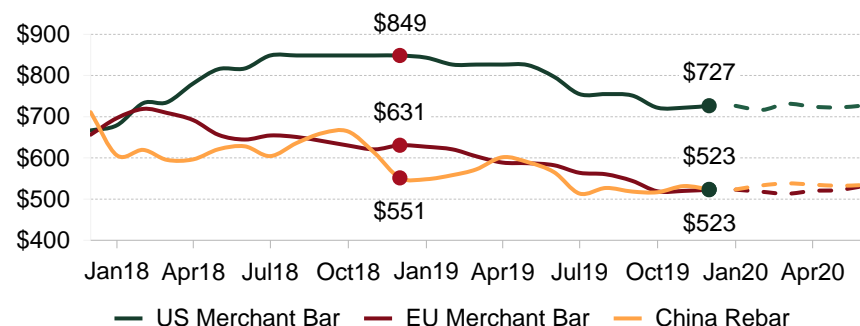
Natural Gas

USD/mmBtu



Bar prices continued to fall across all three markets in Q4, despite an acceleration in scrap prices in the US and EU.

Long Steel Prices (USD/MT)

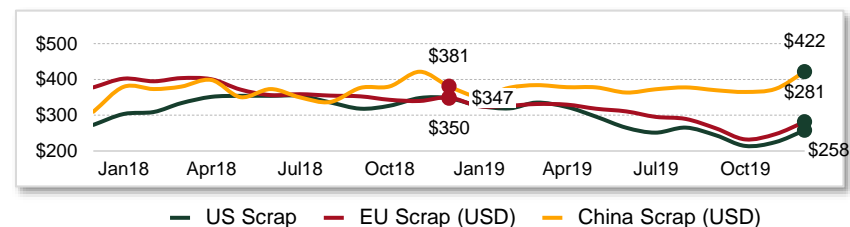


- US merchant bar prices have dropped 3.3% in the last three months, extending the year's price decline. During the beginning of 2020 the prices are expected to flatten out driven by a trend shift in the scrap market.
- EU merchant bar prices have continued to decline in Q4 2019, dropping 4% and reaching the lowest point in the last 24 months. Low prices have been supported by continued decreasing scrap prices in EU and ferrochrome costs globally.
- China Rebar prices stayed flat during the year's last quarter as in December traded for the same price as EU merchant bar. The trend shift from declining prices is partly driven by an improved outlook for Chinese real estate sales levels.
- Prices for Molybdenum plummeted by 25% in Q4 following slowdown in demand for stainless steel by the automotive sector.
- Following price hikes in Q3, nickel supply side has been stimulated by announcements about increased production from Brazil and Philippines. Combined with decreased demand from China, prices fell by 22% in Q4.

Source: AV Analysis

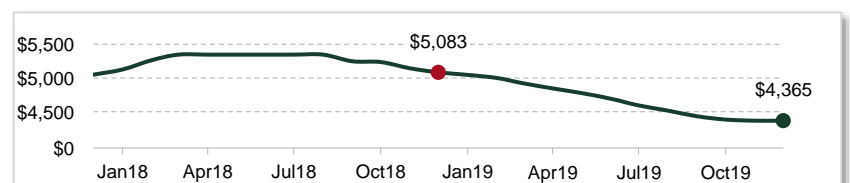
Scrap Steel Price

USD/MT



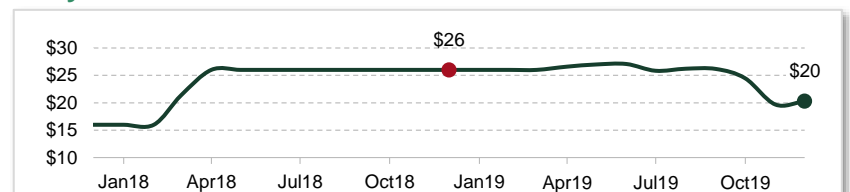
Ferrochrome

USD/MT



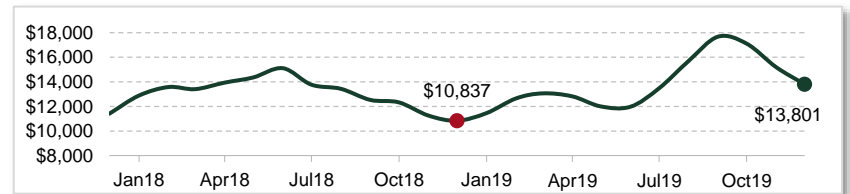
Molybdenum

USD/MT



Nickel

USD/MT

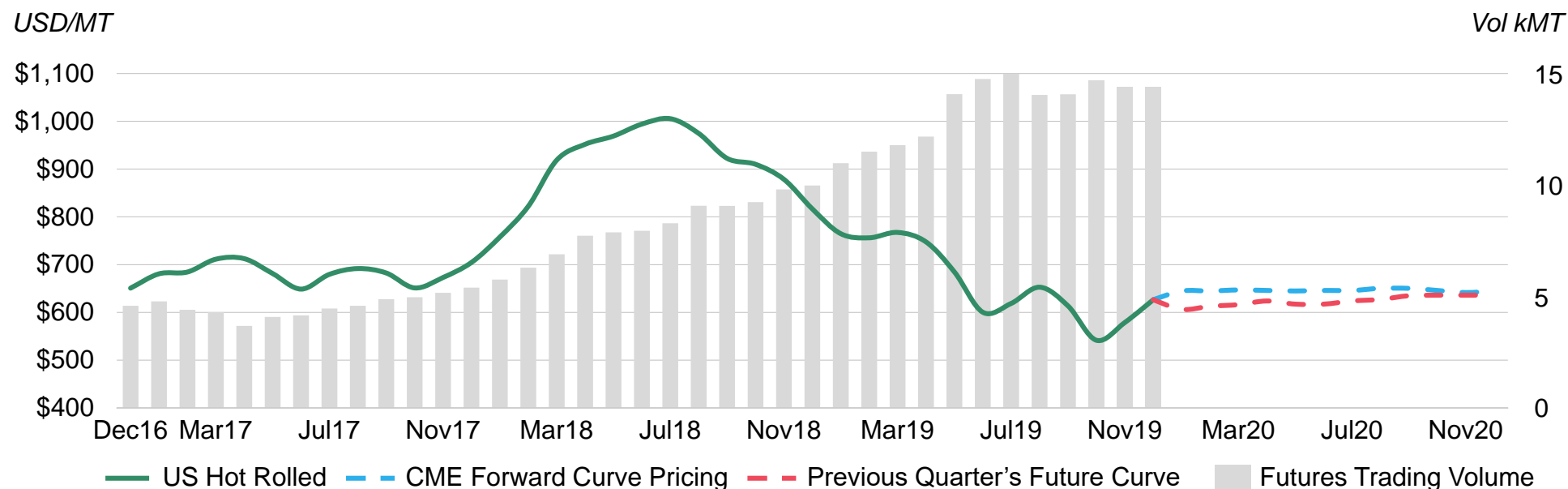


● Previous Year's Data ● Latest Data + - Correlation to Market Price



US HR steel futures currently indicate an uptick in the market sentiment vs. last quarter, with current contracts recovering about \$75/MT from October.

Hot Rolled Historical Pricing and Contract Volume & Futures CME Pricing



- › The CME HRC Futures Curve indicate that, compared to last quarter, some market faith has been restored in short term HR prices. The increased sentiment was correlated to near-term contracts which closed at recovered levels in in Dec 2019. The current curve suggest that markets will increase slightly and stay flat across 2020.
- › Participation in the exchange market increased slightly in October but then dropped again for November and the Holiday season. The historically high trading volumes indicate that there is still a belief in price volatility.

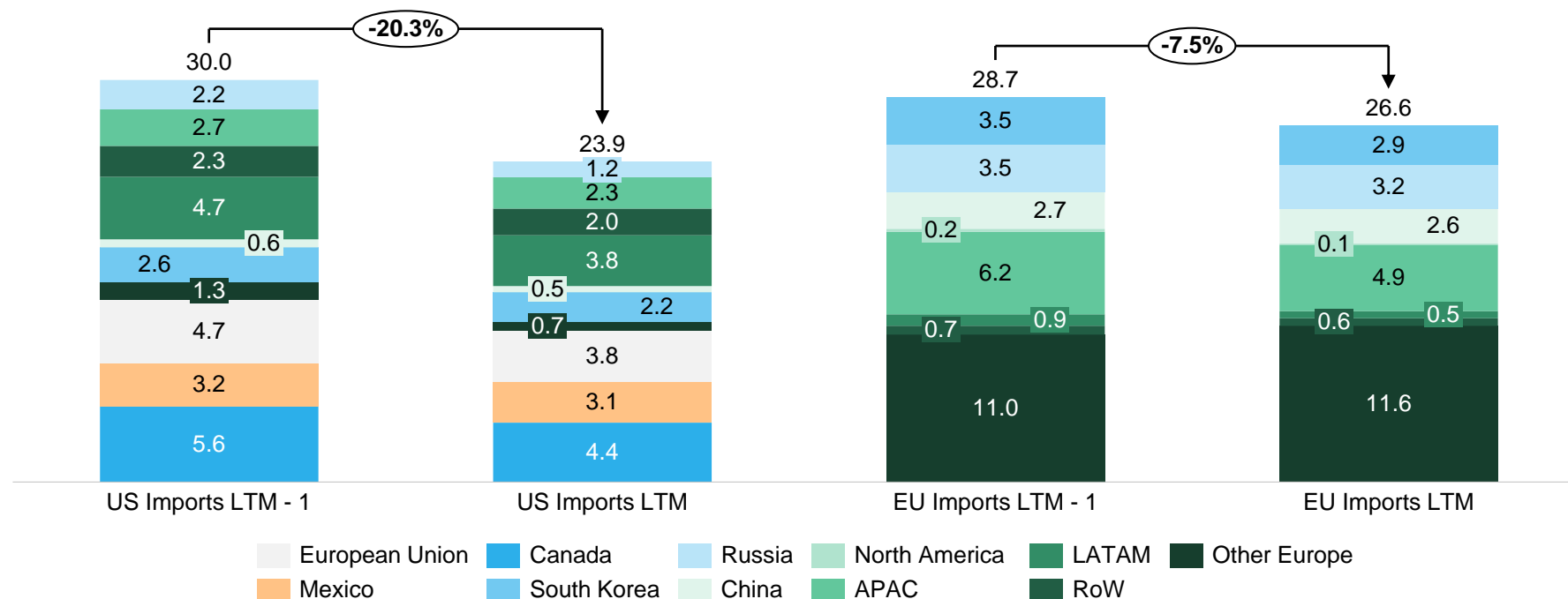
Note: Volumes are traded volumes cleared by CME, i.e. they exclude the "off exchange" OTC (over-the-counter) volumes not cleared by CME Prices pulled for CME futures Jan 8th, 2020



Y-o-Y both the US and EU now sees decreases in imports, and there are indications of further imposed tariffs on steel from Brazil to the US.

US and EU Imports – All Steel Products MMT

LTM: Nov 18 – Oct 19¹



- › US imports still sees a significant decrease of 20.3% LTM vs. the same period one year earlier. The biggest decreases could be seen in Canada, LATAM and the European Union. Canada's import volumes were significantly lower during December to May (-1.5 MMT). The decrease in LATAM is explained by exceptionally low import volume during August and September (50 kMT total compared to last year's 712 kMT).
- › On December 2, President Trump said that he would impose tariffs on steel and aluminum from Brazil and Argentina, it is still unclear what the effects will be on imports from those countries going forward.
- › The previous growth trend in EU imports LTM Y-o-Y has now turned and the last development was a decrease of 7.5%. The trend shift is largely driven by the continued downturn in imports from APAC and a stagnation of the high increases previously seen in imports from other European countries.

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



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Q4 2019

Market Conditions by Region








Special Section – M&A Activity

Steel Production Costs

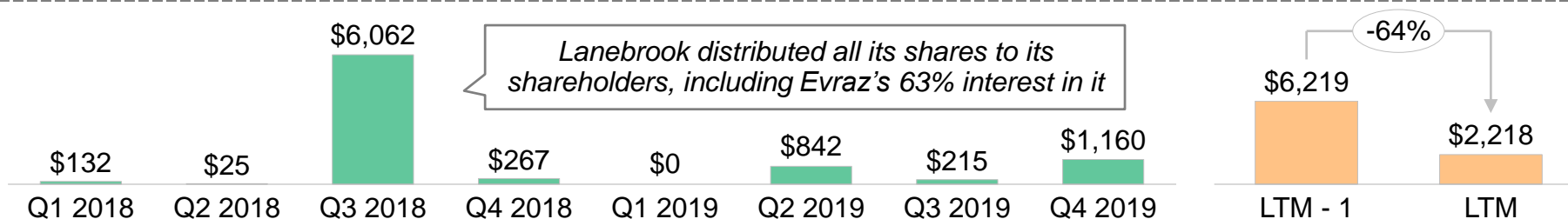
Major Steel Mill Company Performance



Cleveland Cliffs acquired AK-Steel for shares at the equivalent of 1.1BUSD, overall M&A activity is significantly down in 2019 compared to 2018.

<div> <div>Acquisitions</div> <div>Divestures</div> </div>		5 Example Recent M&A Activity		
Company	Target	Close Date	Value, USD	Target Description
		12/03/2019	1.1B	Iron Ore Producer Cleveland Cliffs, pursues investments in Steel Manufacturing and acquired AK-Steel.
(US\$)		10/31/2019	700M	US Steel bought 49.9% of Electric Arc Furnace Steel Producer Big River Steel, adding ~3MMT of output to its portfolio
	GCL	12/23/2019	530M	Arcelor Mittal agreed to sell 50% of it's logistics subsidiary Global Chartering Limited to DryLog Ltd to reduce net debt.
	Mini-Mill Balakova	07/25/2019	220M	Severstal sold it's stake in Mini-Mill Balakova to Abinsk Electric Steel Works for approx. 220MUSD
		11/27/2019	111M	Gerdau acquired 96% of the Brazilian rebar and wire rod mill Silat from the Spanish group Hierros Añón

M&A transaction amounts for Top 13 Steel Mills as analyzed in this report previous 2 years, MUSD*



*Note – Total amount only includes the 13 firms that we have analyzed in the report



Applied Value Quarterly Steel Report

Q4 2019

Market Conditions by Region

Special Section – M&A Activity

Steel Production Costs

Major Steel Mill Company Performance



Slab and Iron ore prices dropped across all markets in Q4 2019, while Scrap broke the negative trends and recovered in both US and EU.

Current Market Update

Q1 Forecast

• Scrap

- **US Scrap** prices ended 2019 by increasing by 5.7% Q-o-Q, despite dropping in October. Although scrap flows to yards have increased, supply has not been enough to counter the increased demand both domestic and abroad. Going forward, markets are expected to stabilize at the end of January as export prices to Turkey's rebar market are yet to pick up, and Taiwan is holding off on more scrap imports until the domestic finished steel demand increases.
- **EU Scrap** prices broke the downward trend and increased by 6.1% during the final quarter of 2019, partly due to unexpectedly high order volumes in southern EU. Turkish demand is expected to remain relatively stable the short term as long producers want to estimate the demand for rebar. However, reports coming out of Germany reveal that mills had to increase their scrap bids to secure supplies before they were exported, indicating a strong Q1 for EU Scrap.



Iron Ore

- **Iron Ore** prices, although increasing in December, showed a 1.5% reduction and remained relatively flat in Q4, following a 14.9% drop in Q3. The recent decline in port stocks has provided an upward pressure on prices as Chinese mills have been looking to secure their stocks ahead of the New Year at the end of January. Expectations are for demand to be steady in the spring while supply risks decreasing significantly followed by Vale's announced production cuts and mine leases' ending in India.



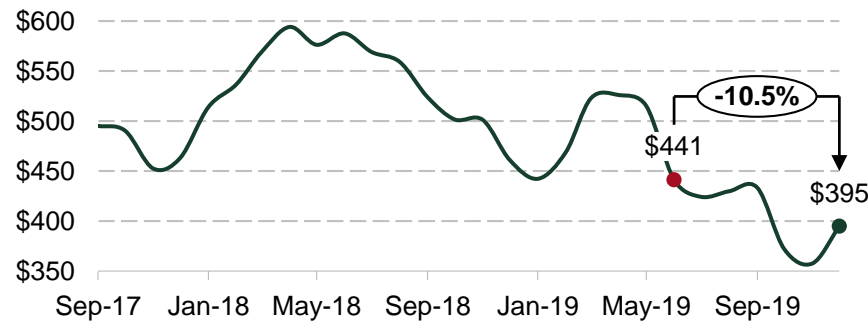
• Slab

- **Slab** prices had a significant drop in Q4, decreasing 8.9% Q-o-Q despite already tight margins reported by semi-finished products suppliers. The price fall is partly due to weak demand for hot-rolled coil across, most notably in Europe. President Trump threatened Brazil and Argentina at the beginning of December with 232 tariffs. Brazil is a major supplier of steel slabs to U.S. and without access to relatively affordable Brazilian slabs, mills risk suffering from short supply. Brazil's President Jair Bolsonaro claims however that after speaking on the phone with Mr. Trump, Brazil would be exempted from additional tariffs, casting doubt about future movements. Slab prices ended 2019 at -14.4% Y-o-Y.

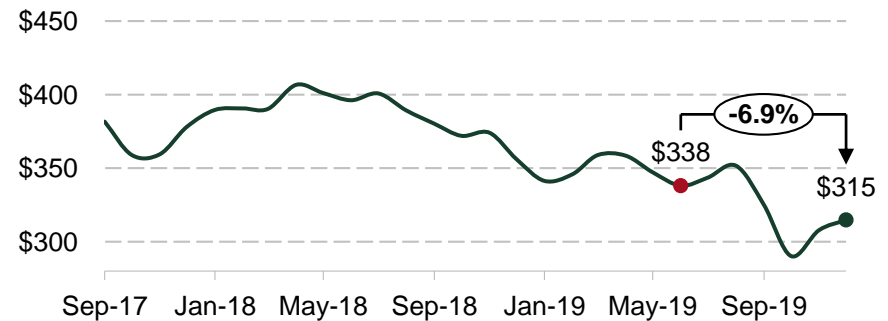


Even though increased prices were recorded for semi finished inputs in Q4, Year-on-Year impact resulted between -26% and -11% for 2019.

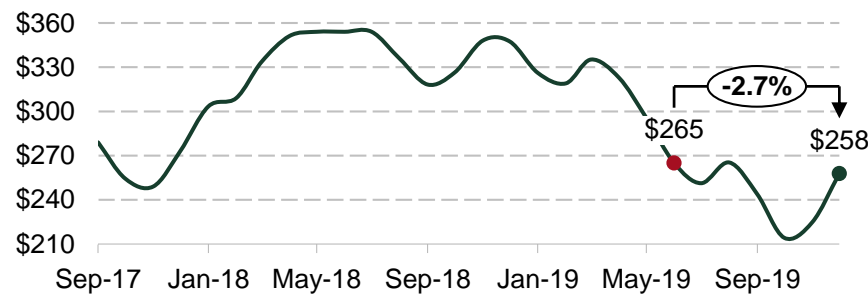
Slabs
USD/MT



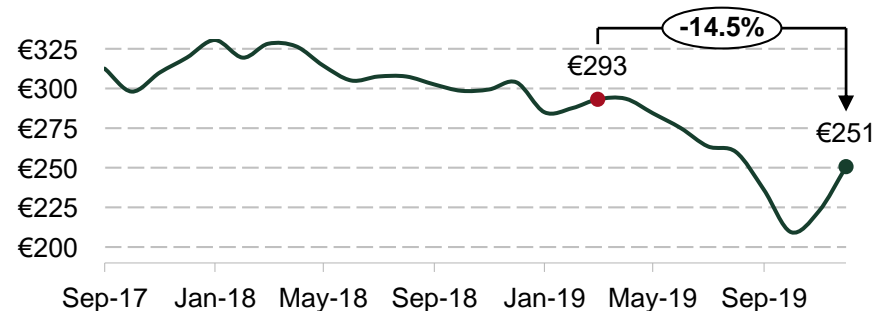
Pig Iron
USD/MT



Ferrous Scrap US
USD/GT



Ferrous Scrap Europe
EUR/MT

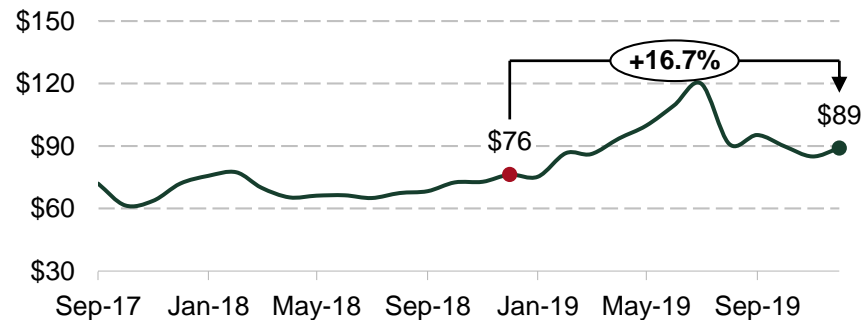


● Previous Year's Data
● Latest Data

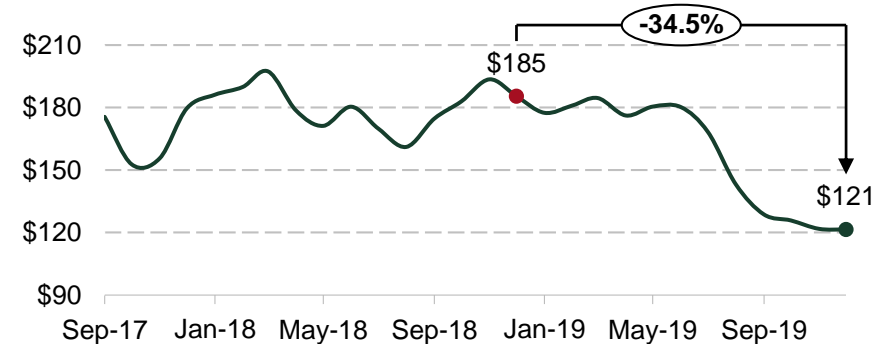


Iron Ore declined 1.5% in Q4 2019 but it still trades 32.4% higher Y-o-Y, while coking coal continued to fall and ended the -34.5% Y-o-Y.

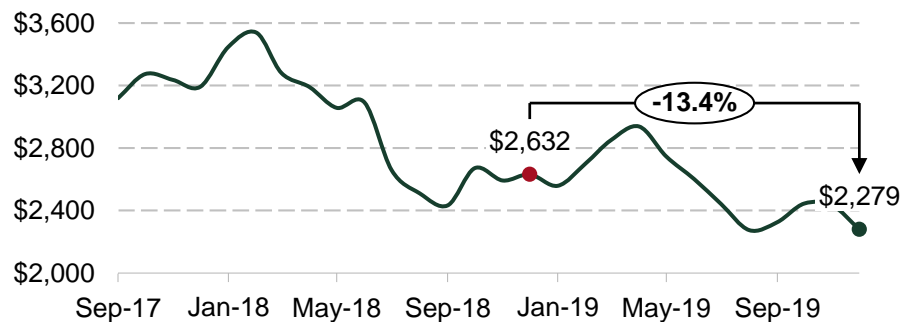
Iron Ore
USD/MT



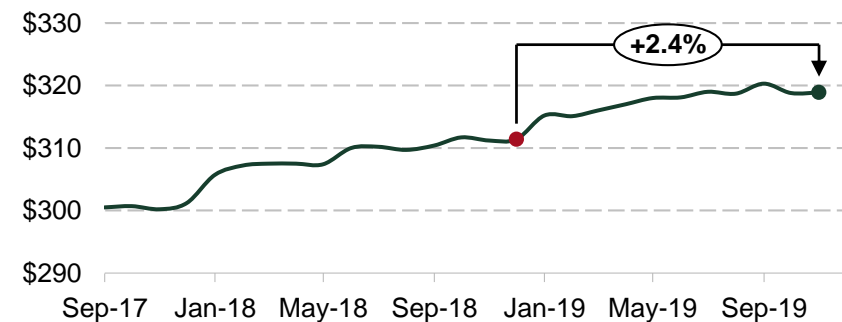
Coking Coal
USD/MT



Zinc
USD/MT



Limestone – Producer Price Index



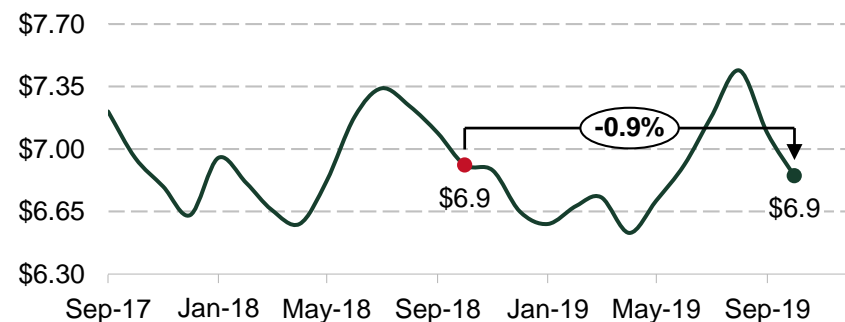
● Previous Year's Data
● Latest Data



European Electricity and Natural Gas prices have decreased significantly during the last twelve months, while U.S. electricity prices are flat Y-o-Y.

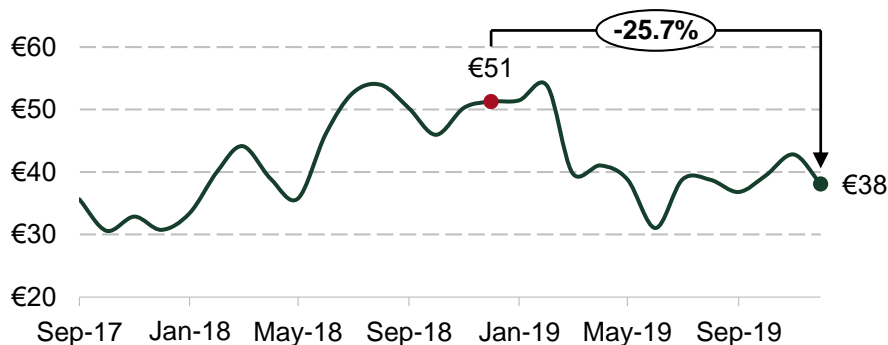
Electricity US

US cents/KWH



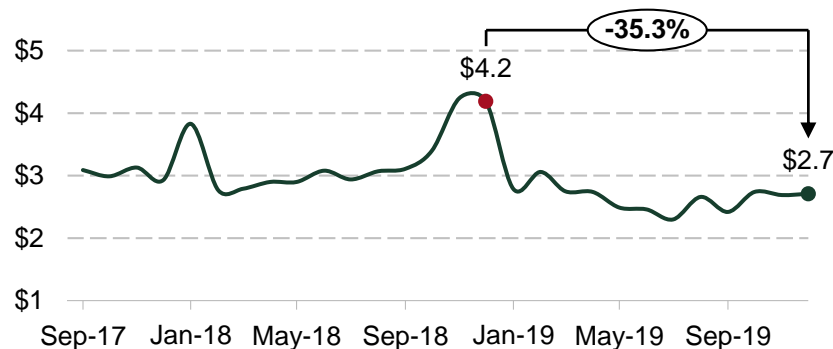
Electricity Europe

EUR/MWH



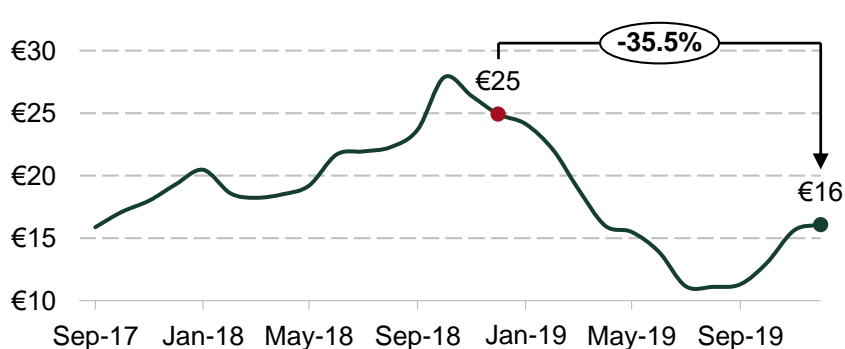
Natural Gas US

USD/mmBtu



Natural Gas Germany

EUR/MWH



● Previous Year's Data
● Latest Data



Applied Value Quarterly Steel Report

Q4 2019

Market Conditions by Region









Special Section – M&A Activity

Steel Production Costs

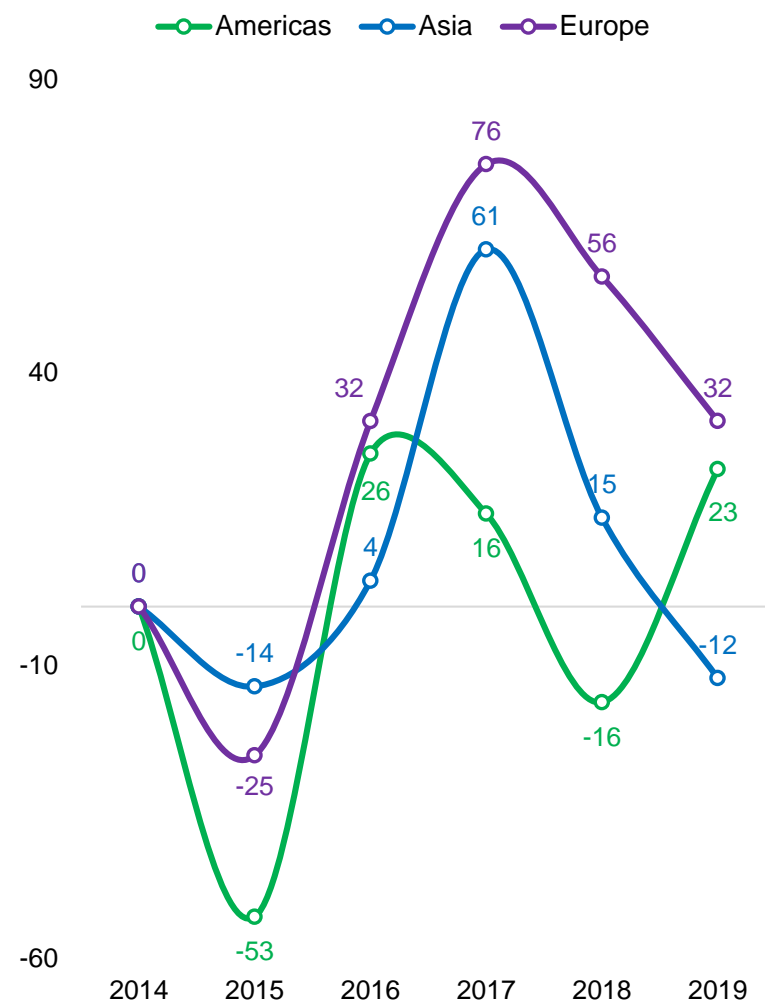
Major Steel Mill Company Performance











If Jan '15 is set as base year, EVRAZ and Gerdau have seen the largest stock price growth while US Steel has seen the largest decline.

Regions	Mills	Indexed Stock Movement				
		2015	2016	2017	2018	2019
Americas	 AKSteel	-63.56	75.79	8.50	-63.24	-25.19
	 GERDAU	-56.09	-3.45	12.55	34.73	151.03
	NUCOR	-16.61	22.19	32.64	7.19	20.18
	(US)	-75.48	9.92	9.80	-43.96	-52.16
APAC	 ANSTEEL	-37.45	-7.77	40.44	7.57	-33.08
	 BAOSTEEL	29.77	44.19	100.93	49.53	-8.19
	JFE	-3.52	-6.00	38.63	-12.83	-39.05
	TATA STEEL	-43.32	-12.74	63.91	16.43	31.53
Europe	 ArcelorMittal	-59.60	-26.74	0.89	-37.32	-36.57
	 EVRAZ	-37.92	85.59	214.49	307.20	178.34
	 Severstal	-13.14	52.44	55.91	39.00	67.69
	 ThyssenKrupp	-13.32	24.28	31.67	-16.42	-37.19
	voestalpine	-2.94	22.79	74.63	-10.84	-13.79

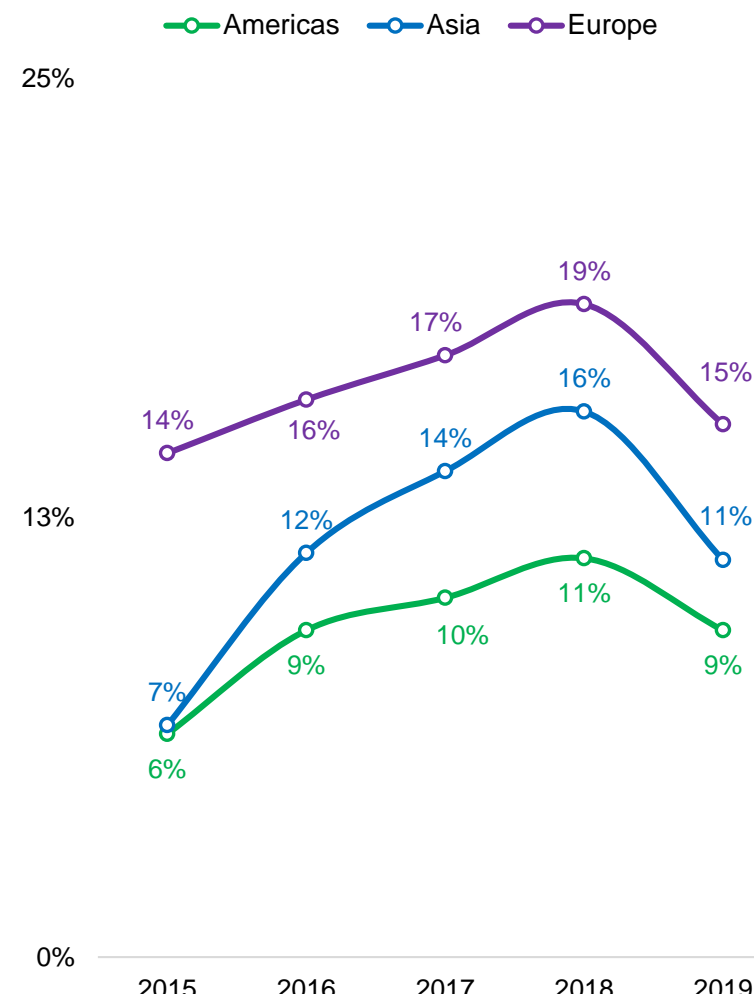
Regional Stock Movement 2015-2019



Steel mills have seen slight decline in EBITDA in the last year while European mills maintains relatively higher EBITDA margin.

Regions	Mills	EBITDA				
		2015	2016	2017	2018	2019
Americas	 AKSteel	7.2%	10.2%	8.8%	7.1%	7.2%
	 GERDAU	9.8%	9.9%	10.8%	13.2%	13.0%
	NUCOR	8.2%	13.3%	13.0%	15.1%	11.8%
	(Uss)	0.2%	3.8%	8.3%	10.0%	5.3%
APAC	 ANSTEEL	1.9%	10.2%	11.7%	15.3%	7.8%
	 BAOSTEEL	9.1%	13.4%	15.1%	17.0%	12.5%
	JFE	7.8%	8.4%	11.0%	11.2%	8.9%
	TATA STEEL	7.6%	14.0%	17.5%	18.6%	16.0%
Europe	 ArcelorMittal	5.3%	10.2%	11.7%	13.4%	7.5%
	 EVRAZ	15.7%	19.2%	23.7%	27.5%	22.1%
	 Severstal	32.4%	31.8%	32.4%	35.3%	33.7%
	 ThyssenKrupp	5.4%	5.1%	2.7%	2.8%	2.6%
	voestalpine	12.9%	13.0%	15.1%	13.9%	9.9%

Regional EBITDA Movement 2015-2019





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