BofAML Weekly Metals Musings

The great Steelmageddon™ debate

Industry Overview

Equity | 25 March 2019

The week that was: Soft start for steels into 2019E

Last week, STLD gave weaker-than-expected mid-qtr Q1E guidance, but with a positive view toward Q2E. CMC also posted a weak FQ2, but sounded upbeat into H2E, with an end by late 2019E to years of downstream losses. It noted particularly wet weather hurt construction in its just-completed Feb qtr. Nucor announced its first investor day since founder Ken Iverson was at the helm, planned for June in NYC. In SMU's latest survey, lead times grew but mills were more apt to negotiate on price despite steady demand. Tenaris reportedly agreed to buy TMK Ipsco, consolidating the U.S. oil country tubular goods (OCTG) mkt, which has been weak. OCTG maker X could benefit from greater discipline.

The week ahead: Vale to post delayed Q4E

Vale was scheduled to post belated Q4E results after market close on Wednesday, and we expect the earnings call the following day to focus on updated production plans and how much lost production it may be able to offset with supply ramp up plans. Last week, it reportedly got the final environmental license required to restart the involuntarily closed Brucutu mine, with an annual 30Mt/yr, yet its 10Mt/yr Alegria mine was separately required shut. Keeping up with Vale's production changes has been a deterrent to some investors, but others seem more focused on eventual timing of cash returns. Meanwhile, U.S. April scrap prices likely find direction this week with the latest reports anticipating a sideway market but with the South weaker m/m and support shortfalls elsewhere.

Musings: Responses to *Steelmageddon™* pushback

Last week, we spelled out our Steelmageddon™ thesis, elaborating on U.S. steel oversupply concerns from our research over the past several quarters. We remain constructive on near-term market conditions, but foresee a sharp drop in prices in 18-24 months due to 20-25% installed new supply. We received little pushback from investors on the theme, but 2/3rds of steel buyers responding to a Steel Market Update poll said they did not expect new supply to hurt prices. The biggest argument was that demand is more important than supply (Chart 1), to which we wonder if these respondents actually expect a 20-25% increase in demand in the mature U.S. economy? Some of the mill defense of the new supply centered around replacing imports, and we illustrate in Chart 2 that annual net imports ex semi-finished steels (i.e. slabs) averaged 14M tons. Even if we take the unlikely scenario that imports just fall to zero, the new capacity is more than the imported tons on average. Also, for imports to retreat, prices would have to drop substantially so as not to be an incentive to ship to the U.S., hence prices still fall.

Top picks and thoughts: Flood risk, poor construction data

While our coverage has seemed to sway with macro sentiment such as rate direction, Germany's economic health, and U.S.-China trade talks, we note recent U.S.-focused negatives. First, steel channel checks continue to be cautious, noting limited demand strength. This contradicts enthusiasm from aggregates mgmts, but explains recent weak construction starts data. Second, rains used to explain a slow start to 2019 may not lead to volume recovery in Q2E with high risk of flooding through May in 2/3rds of the lower 48 states in a report from the National Oceanic and Atmospheric Administration. Finally, we see less obvious H2E iron ore and steel upside given Vale's capacity partly restarting. We remain near-term positive steels and like value in TECK and AA.

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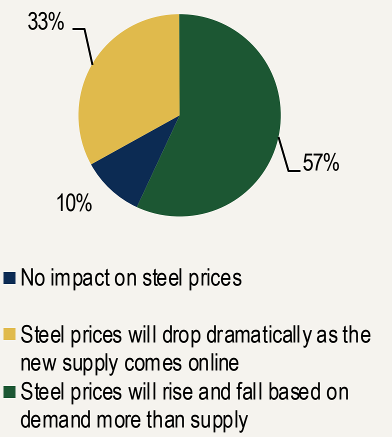
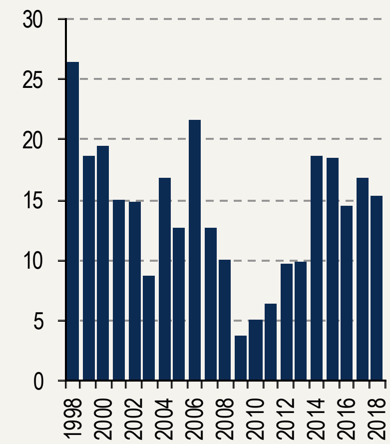
Chart 1: SMU survey response to new capacity impact on steel prices



Source: Steel Market Update

Chart 2: U.S. annual net steel imports ex semis (Mt)



Source: U.S. Census Bureau, BofA Merrill Lynch Global Research

Table 1: U.S. Metals & Mining comp sheet

	Ticker	Rating	Price Objective	Price 22-Mar	Market Cap ($M)	Dividend Yield %	Calendar Year EPS 2017A	2018A	2019E	2020E	Calendar Year P/E 2017A	2018A	2019E	2020E
Steel Mills														
AK Steel	AKS	Underperform	$2.50	$2.65	$837	0.0%	$0.00	$0.64	$0.52	$0.30	NM	4.1x	5.1x	8.8x
Commercial Metals	CMC	Underperform	$18	$16.65	$1,980	2.9%	$0.81	$1.53	$2.30	$2.30	20.6x	10.9x	7.2x	7.2x
Nucor	NUE	Buy	$71	$57.00	$17,695	2.8%	$3.62	$7.76	$7.05	$6.55	15.7x	7.3x	8.1x	8.7x
Steel Dynamics	STLD	Buy	$47	$33.97	$7,829	2.2%	$2.58	$5.35	$4.55	$3.85	13.2x	6.3x	7.5x	8.8x
U.S. Steel	X	Buy	$31	$19.09	$3,391	1.0%	$1.94	$5.40	$3.05	$2.30	9.8x	3.5x	6.3x	8.3x
Mining														
Freeport-McMoRan	FCX	Neutral	$13	$12.18	$17,746	1.6%	$1.17	$1.51	$0.44	$0.57	10.4x	8.1x	27.7x	21.4x
Teck Resources	TECK	Buy	C$38	C$30.25	$13,070	0.7%	$4.40	$4.09	$3.15	$3.07	6.9x	7.4x	9.6x	9.9x
Nexa Resources	NEXA	Underperform	$11	$12.40	$1,652	4.2%	$1.05	$0.56	$0.36	$0.55	11.8x	22.1x	34.4x	22.5x
Aluminum														
Alcoa	AA	Buy	$45	$28.12	$5,293	0.0%	$3.02	$3.60	$1.65	$2.15	9.3x	7.8x	17.0x	13.1x
Metal Distribution														
Reliance Steel & Aluminum	RS	Neutral	$96	$87.09	$5,825	2.5%	$5.44	$8.99	$8.50	$8.15	16.0x	9.7x	10.2x	10.7x
Specialty Metals														
Allegheny Technologies	ATI	Buy	$35	$24.88	$3,645	0.0%	$0.44	$1.51	$2.05	$2.65	56.5x	16.5x	12.1x	9.4x
Building Materials														
Vulcan Materials	VMC	Underperform	$105	$113.45	$15,131	1.1%	$3.02	$4.06	$4.80	$5.55	37.6x	27.9x	23.6x	20.4x

	Enterprise Value ($M)	Net Debt ($M)	Net Debt / Capital	Net Debt / 19E EBITDA	FCF Yield (%) 2019E	2020E	Calendar Year EBITDA ($M) 2017A	2018A	2019E	2020E	Calendar Year EV/EBITDA 2017A	2018A	2019E	2020E
Steel Mills														
AK Steel	$3,256	$1,871	93%	3.6x	18%	16%	$529	$563	$526	$452	6.2x	5.8x	6.2x	7.2x
Commercial Metals	$3,442	$1,163	46%	2.1x	-11%	8%	$288	$343	$543	$590	11.9x	10.0x	6.3x	5.8x
Nucor	$21,429	$2,644	20%	0.7x	8%	7%	$2,671	$4,085	$3,810	$3,590	8.0x	5.2x	5.6x	6.0x
Steel Dynamics	$9,268	$1,091	21%	0.6x	11%	2%	$1,366	$2,037	$1,772	$1,561	6.8x	4.6x	5.2x	5.9x
U.S. Steel	$6,053	$1,445	21%	1.1x	-1%	0%	$1,087	$1,767	$1,299	$1,163	5.6x	3.4x	4.7x	5.2x
Mining														
Freeport-McMoRan	$39,044	$7,524	24%	2.0x	-2%	2%	$5,964	$6,742	$3,720	$4,454	6.5x	5.8x	10.5x	8.8x
Teck Resources	$23,713	$3,056	13%	0.7x	8%	9%	$5,771	$5,367	$4,468	$4,287	4.1x	4.4x	5.3x	5.5x
Nexa Resources	$2,377	$421	7%	0.9x	-3%	-4%	$645	$602	$445	$475	3.7x	4.0x	5.3x	5.0x
Aluminum														
Alcoa	$8,584	$810	7%	0.4x	6%	9%	$2,373	$3,043	$2,216	$2,038	3.6x	2.8x	3.9x	4.2x
Metal Distribution														
Reliance Steel & Aluminum	$7,996	$1,722	30%	1.6x	9%	7%	$878	$1,153	$1,082	$1,037	9.1x	6.9x	7.4x	7.7x
Specialty Metals														
Allegheny Technologies	$5,833	$1,050	34%	1.8x	5%	3%	$356	$519	$577	$674	16.4x	11.2x	10.1x	8.7x
Building Materials														
Vulcan Materials	$18,332	$2,521	35%	1.9x	3%	5%	$982	$1,132	$1,294	$1,399	18.7x	16.2x	14.2x	13.1x

Source: Company reports, Bloomberg, BofA Merrill Lynch Global Research estimates

Channel checks

We spoke with several large Midwest buyers over the past 10 days, and found them more skeptical on our near-term pricing upside thesis. Sustained mill discounting, perhaps to combat the new volume from JSW's Mingo Junction, continued to plague the sheet market. AMM reported that benchmark hot rolled coil (HRC) prices were steady at $695/st, with lead times an average four to five weeks.

Meanwhile, export prices for Chinese cold-rolled coil and hot-dipped galvanized coil rose for a sixth consecutive week.

Steel Market Update's survey results

> The SMU Buyer's Sentiment index increased 2 points to 58 from its prior survey

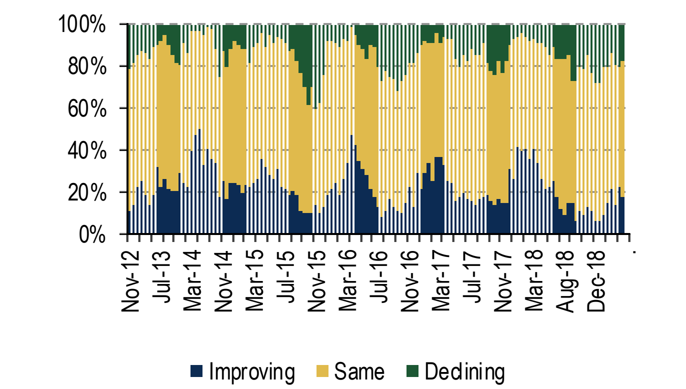
SMU's March 18-21 steel buyer's survey sentiment index improved to 58 from 56 in its prior survey. About 78% of survey participants said domestic mills were willing to negotiate pricing on new orders for HRC, up from 56% in the prior survey.

In the latest survey, 65% of respondents said demand was stable, up from 57% in the prior survey; while 18% saw demand improving, down from 23% in the prior survey. The remaining 17% said demand was declining, down from 20% in the prior survey.

Lead times were described as slightly longer than normal by 19% of service center respondents, 67% said they were normal, and 14% called them shorter than normal. In the prior survey, 12% had described them longer than normal, 76% said they were normal and 12% said they were shorter than normal.

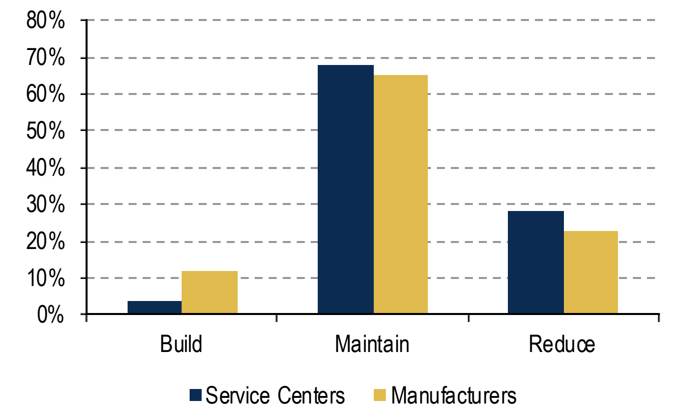
SMU reported HRC lead times at 4.21 weeks, within the normal four-to-six-week range, and up from the prior survey at 4.19 weeks. Galvanized and cold-rolled lead times were reported at 6.82 and 6.19 respectively, vs. 6.77 and 6.24 in the prior survey.

Chart 3: SMU survey responses on overall demand



Source: SMU

Chart 4: SMU survey responses on inventory strategy

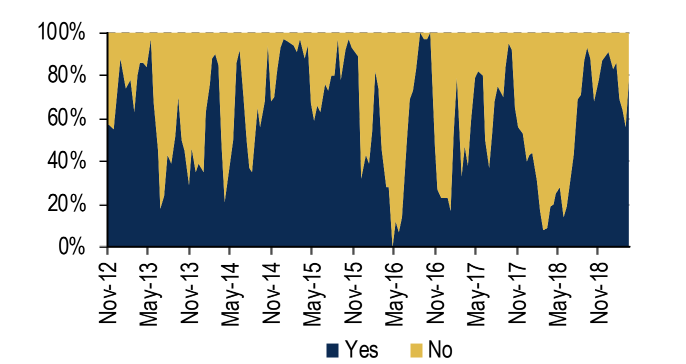


Source: SMU

Some 65-68% of respondents said they intended to keep inventories steady, and 23-28% were looking to reduce inventories, while 4-12% wanted to lift inventories. In the prior survey, 68-72% said they intended to keep inventories steady and 23-25% said they wanted to reduce inventories, while 3-9% intended to raise inventories.

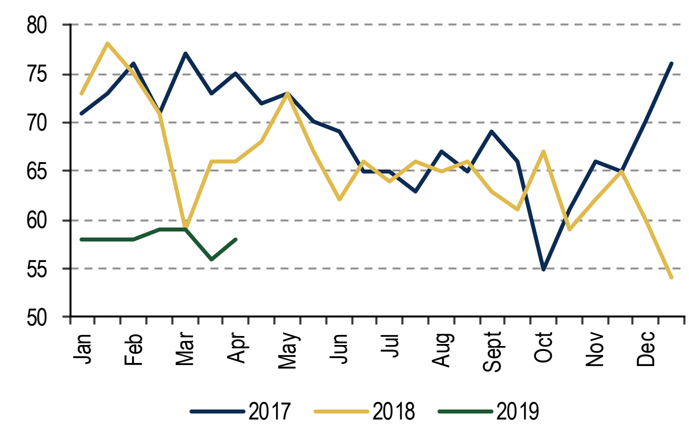
Asked if foreign steel suppliers were quoting prices for new orders, 51% of service centers and 69% manufacturers said they were quoting for new orders for future delivery.

Chart 5: Are you finding the domestic mills are willing to negotiate pricing on brand new orders placed this week?



Source: SMU

Chart 6: SMU's Buyers Sentiment Index

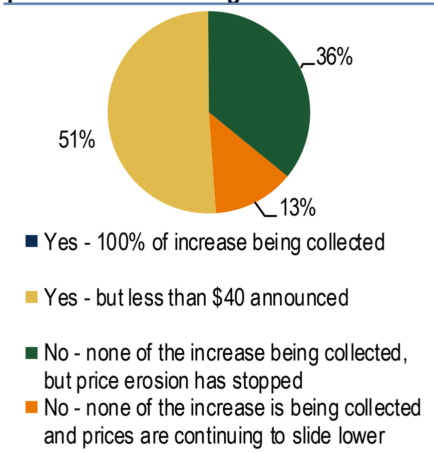


Source: SMU

Asked if the latest announced flat rolled price increases were "sticking", 75% of respondents said yes, 72% said the increase collected was less than $40 announced while 3% said 100% of the increase was being collected; 25% of the respondents said no, 23% said none of the increase was being collected but price erosion had stopped while 2% said prices continued to slide lower.

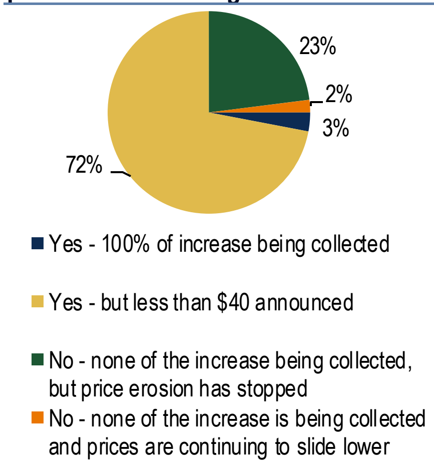
Some 33% of the respondents said they expected steel prices would drop dramatically as announced 20Mt of new capacity is added over the next few years, 57% said steel prices would rise and fall based on demand more than supply, whereas 10% said the new capacity would have no impact on steel prices.

Chart 7: Are the latest announced flat rolled price increases "sticking"? as of Feb 22



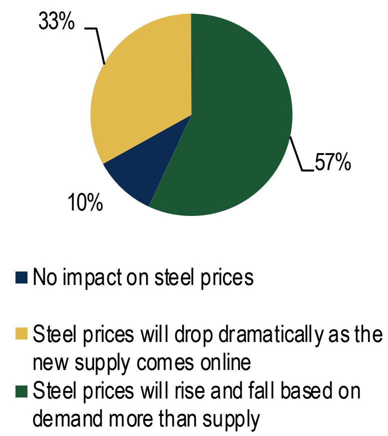
Source: SMU

Chart 8: Are the latest announced flat rolled price increases "sticking"? as of March 22



Source: SMU

Chart 9: New capacity impact on prices



Source: SMU

Company/Sector checks

Tenaris to buy IPSCO Tubulars for $1.2B

On March 22, Tenaris announced it plans to buy IPSCO Tubulars from TMK for $1.21B, excluding debt. With production facilities throughout the U.S., IPSCO Tubulars produced seamless and welded oil country tubular goods (OCTG) and line pipe products, with production capacity of 450Kt/yr of steel bars, 400Kt/yr of steel pipe, and 1Mt/yr of welded pipe. ***Our take: Consolidating two of the larger OCTG names could add to pricing discipline, although the market has been soft in recent years. Pipe mills struggled to pass through higher steel input costs in 2018, and cautionary spending among E&Ps in 2019E could stifle demand.***

Feb employment up in 37 states; skilled workers shortage a challenge

According to an Associated General Contractors of America (AGC) analysis of Bureau of Labor Statistics data, U.S. construction employment increased in 37 states from Feb 2018 to Feb 2019, on a seasonally adjusted basis. Texas added the most construction jobs (22.7K, +3.1%), followed by Florida (22.4K, +4.2%) and Arizona (16.5K, +10.7%). According to the FMI, a construction consultancy, 80% of 100 companies (contractors, construction managers and specialty contractors) that were active in AGC's Surety Bonding and Construction Risk Management Forum cited "limited supply of skilled/craftworkers" as the top risk, followed by 44% that said "limited supply of experienced field supervisors" and 33% that said "changes in contract language/insurance. Separately, on March 14, the U.S. Chamber USG quarterly Commercial Construction index decreased by 3 points to the lowest level since Q117. ***Our take: The weaker index could be a sign of construction activity stumbling, or merely a reflection of poor weather. Skilled worker availability continues to be a challenge.***

Value of transportation construction put in place rose 12% y/y in January

According to the American Road and Transportation Builders Association (ARTBA), contractors did $8.6B in transportation and transportation-related construction work in January, up 12% y/y. All transportation construction sectors saw increases in January, except subway and light rail. Dock, railroad, highway and bridge construction saw the largest increases in January, up 61% y/y, 22% y/y, 13% y/y and 12% y/y, respectively. Total transportation growth in January followed a year of growth after two years of tepid growth and declines. ***Our take: Better construction activity in transportation is positive for aggregates names, VMC and MLM, although we see risks of weather-related disruption and offsetting private sector weakness.***

Alcoa's power agreement for smelter in Massena extended by NY State

On March 21, Governor Andrew Cuomo said the New York Power Authority would extend Alcoa's previous contract at Massena, due to expire at the end of March, through 2026. ***Our take: Securing low-cost power was a key determinant for Alcoa deciding to keep Massena running, but it was not profitable in the U.S. on a net basis as of its last update.***

Union workers submit a counter-proposal to Alcoa to end lockout

According to press reports, union workers at the ABI aluminum smelter in Quebec, Canada submitted a counter-proposal to Alcoa in attempt to end the lockout in place since January 2018. The union said that the counter-proposal considered requests Alcoa made and offered concessions on relevant points regarding pensions and wage increases. This followed the union workers rejection to Alcoa's offer on March 11. ***Our take: We think recently low aluminum prices don't force Alcoa's hand to resolve the now 14-month lockout.***

S&P Global Ratings upgrades Teck Resources credit rating

On March 21, S&P Global Ratings upgraded Teck Resources debt rating to BBB- from BB+ as the company reduced debt over the past couple of years and on expectations it would maintain conservative leverage over the next several years. Teck's credit rating upgrade by S&P followed Fitch's upgrade on Feb 21 and Moody's upgrade on Jan 16. ***Our take: The other two upgrades already cemented Teck's spot back among the small group of Metals and Mining investment grade credits in the Americas, but the S&P move is a reminder of Teck's follow through on debt reduction plans. At its investor day in two weeks we will be eager to hear about its future cash use plans.***

USFS approves HudBay's Rosemont copper mine project

On March 21 HudBay said it received an approved mine plan of operations for its $2B Rosemont copper mine project in Arizona from the U.S. Forest Service (USFS). Obtaining the mine plan approval was the final step in a multi-year permitting process. Rosemont would be developed as an open-pit mine and would produce 127Kt/yr of copper during the first 10 years of its projected 19-year mine life. ***Our take: A flurry of new copper projects beginning in 2022E make us wonder if investors should be wary of a Coppermageddon…***

Fabricated steel imports hurt U.S. industry

On March 21, the U.S. International Trade Commission (ITC) issued an affirmative preliminary determination in the Department of Commerce's anti-dumping (AD) and countervailing probes into fabricated structural steel imports from Canada, China and Mexico. The Department of Commerce was expected to issue its preliminary countervailing duty determinations around May 1 and its preliminary AD duties around June 15. ***Our take: Fabricated structural steel imports have had a substantially negative impact on U.S. beam makers, namely Nucor, Steel Dynamics and Gerdau.***

Some of Norsk Hydro operations to restart following cyber attack

According to press reports, Norsk Hydro planned to restart some rolling and extrusion operations to maintain deliveries to customers the day following a cyber-attack that temporarily halted its operations on March 19. ***Our take: Hydro's challenges may have temporarily supported global aluminum markets.***

Company questions

In this section, we offer a few pertinent questions for companies that investors might be meeting or speaking with in upcoming events.

AA

What capacity would AA be inclined to restart and what would it take to restart additional idled facilities? What implications has Section 232 had on its operations? What does the bauxite export opportunity look like? What is the status of its ABI labor negotiations and what is the impact on the company? What are your latest plans for addressing underfunded pension and health care and any targets there? How does AA look at uses of cash? Is the current footprint ideal, or is there more to permanently shut? What does the Spanish closure mean for costs overall? Thoughts on Alunorte restarting? How is the removal of sanctions on Rusal affecting the market? Any fresh thoughts on Chinese costs and production capacity? Can Section 232 limit finished aluminum products from entering the U.S. market? What are plans for the canned sheet business?

AKS

With 2019 contracts seemingly settled, how do you pass through higher costs? Electrical steel market conditions have been softer in recent years, what are your plans there? How secure are you in maintaining volumes in a softer auto market and why? How do you plan to address your 2021 maturity?

ATI

How does ATI avoid overbuilding in a growing demand environment? Is the FRP segment able to break even in a flat-to-down nickel price environment, or does it need rising prices and fewer imports? What is the latest with its appeal at its HRPF JV from Section 232? Any further tolling partners contemplated? How does a slowdown in wide-body build rates affect ATI and is it concerned over slower narrow-body demand? What do you say to concerns the global aerospace cycle is near a peak? Talk us through the jet engine opportunity and the offsetting effect of other slower markets? How is the competitive landscape and how good is visibility? What conditions are needed for a split? What conditions are needed to reinstate a dividend? Are you able to support LEAP engine production beyond 60-70/mo rates? Where are bottlenecks in your supply chain and in the broader engine market? Any comments on your positioning for Boeing's middle of the market aircraft and "cleansheet" opportunity?

CMC

How confident are you in a sustainably improved environment for rebar margins in the U.S.? Are you concerned with the recent extent of rebar supply additions from STLD and Nucor? How do you view your European operations? Where do you think we are in the U.S. non-residential construction cycle and what do you think the prospects are for an infrastructure spending program?

FCX

What are cash uses now that the company is well past its 2x debt-to-EBITDA goal and near 1x? What other growth opportunities do you see at FCX, and what copper price is needed to move forward? Where should investors be focused in terms of growth options ex-Grasberg and what timing are you contemplating for these initiatives?

MLM

Do you see any evidence of sharp oil and gas capex cuts in the regions you serve? Are you prepared for them? How is the M&A landscape? How far out is your visibility on demand in your three end market categories: residential, private non-res, and public non-res/infrastructure? Where do you think we are in the U.S. non-residential construction cycle and what do you think the prospects are for an infrastructure spending program?

NUE

How can NUE grow and deploy cash in an oversupplied global market? How can long products mimic the sheet market's pricing – are more consolidation or closures possible? How far downstream can NUE go? Can/would NUE take its business model overseas? At what point does NUE consider a special dividend? Which of its acquisitions and internal projects have succeeded and which ones have not? Would NUE be interested in acquiring any of the remaining independent mills? What options might it be considering for cash use going forward?

RS

How does Reliance think about capital allocation? What would be the right dividend yield and debt ratios? Does RS think about ways to mitigate pricing exposure in steel or nonferrous products? Where does RS look to expand geographically or in terms of product? Is the environment becoming more competitive? At your 2013 investor day, revs were guided to $12B on a normalized basis, gross profits 25-27%, operating income margins of 8-10% and pretax returns at 6-8%. Revenues have fallen short despite acquisitions. EBIT margins have hovered around 6%, and pretax returns at 5%. Why have margins missed? Any updated thoughts on what "normal" entails?

STLD

Can STLD find more value-add projects like rail and SBQ? Why is it no longer so important to procure alternative iron units? What is the vision for its struggling scrap segment? Are you concerned about passing through the next scrap increases to all products? How likely may further trade cases be on sheet or other products? What are your energy customers telling you about the pace of demand? Any other notable trends among customers? Why are you expanding into an oversupplied rebar market?

TECK

Under what conditions would you consider adding capacity in met coal or other commodities? How do you see the takeaway capacity evolving for your oil sands production? What uses of cash would you contemplate once your oil sands investment needs subside and in light of expected windfall 2018 earnings?

X

How does it envision the company positioned in five years (global, EAF vs BF, etc.)? What other big cost-cutting measures are left? Would it still consider divesting Tubular and its European operations? What is the outlook for the Tubular segment and how has the competitive landscape changed since last upcycle? Has Europe structurally worsened? What are the biggest risks to the asset overhaul plan? Why announce capex (new European line, Lone Star restart, and Fairfield EAF completion) when FCF outlook has worsened? Once recent capex surge is behind, what will be U.S. Steel's HRC breakeven equivalent in the U.S.? Can you/would you sell third party pellets? Who are you displacing by making your own rounds and what is the benefit?

VMC

How is the M&A landscape? Is the company prepared to stay in aggregates or looking at other parts of the value chain? What are other uses of cash? Where do you think we are in the construction cycle? Where do you think we are in the U.S. non-residential construction cycle and what do you think the prospects are for an infrastructure spending program? What does Vulcan look like in a "normalized" environment and when might we get there? How do we navigate the state vs federal spending outlook, and how do we understand any benefit from FAST spending?

Steel view

U.S. mill capacity utilization ended 2018 at 81%, growing from the low 70s to start the year. Historically levels above 80% generally support pricing power, but greater imports in late summer/early fall pressured the market, in addition to restarting sheet supply. On the demand side, activity has been firm, even with auto down from record 2016 levels. Construction demand growth has been sluggish but with a slow, steady recovery. Energy-driven demand looked vulnerable in early 2019 with benchmark WTI oil prices near $50/bbl, but Permian breakeven around $40/bbl should continue to support some demand.

We think integrated sheet mills are not profitable below $500-550/st, while lower-cost mini-mill producers are in the black at an estimated $160-180/t premium to shredded scrap prices. Over the past several years the average benchmark hot rolled coil (HRC) price was $627 in 2013, $657 in 2014, $459 in 2015, $519 in 2016, $617 in 2017, and $831/st in 2018. We forecast an average $730/st for 2019, assuming some rollback of tariffs to quotas.

Higher steel prices have invited new capacity, fueled by lower taxes driving greater cash generation. The first wave occurred mostly in 2018 and was largely restarts of idled sheet capacity, between U.S. Steel's Granite City furnaces and JSW's Q4 restart of Mingo Junction (detailed in Table 2). An additional wave of new sheet capacity is expected in 2020-21 with NUE's Gallatin expansion, Big River's planned expansion, STLD's recently approved new sheet mill, plus two new rolling mills planned in Mexico, and most recently announced NUE's greenfield expansion to build a plate mill in the Midwest.

Table 2: New and restarting U.S. steel capacity

Restarting/new capacity	Min (Mt/yr)	Max (Mt/yr)	Type	Product	Cost ($M)	Start up
CMC new micromill in Durant	0.35	0.35	Electric arc furnace	Rebar	250	Q218
STLD new Roanoke, VA line	0.1	0.125	Electric arc furnace	Rebar	38	Q218
U.S. Steel Granite City furnace restart	1.5	1.5	Blast furnace	Sheet	10	Q318
U.S. Steel second Granite City furnace restart	1	1	Blast furnace	Sheet	10	Q418
Liberty Georgetown, SC restart	0.75	0.75	Electric arc furnace	Wire rod	NA	H218
STLD Columbia City, IN new line	0.24	0.24	Electric arc furnace	Rebar	75	Q418E
JSW Mingo furnace restart	1.5	3	Electric arc furnace	Sheet	500	Q418E
Republic Steel's Lorain, OH restart	1	1	Electric arc furnace	SBQ	NA	Q219E
NUE Sedalia, MO micromill	0.35	0.35	Electric arc furnace	Rebar	250	Q419E
Gerdau Monroe, MI SBQ expansion	0.16	0.16	Electric arc furnace	SBQ	69	2020E
Big River Steel expansion at Osceola, AR	1.65	1.65	Electric arc furnace	Sheet	1200	H220E
JSW Baytown, TX mill	1	1	Electric arc furnace	Plate	500	H120E
NUE Frostproof, FL micromill	0.35	0.35	Electric arc furnace	Rebar	240	H120E
U.S. Steel's Fairfield, Al rounds mill	1.6	1.6	Electric arc furnace	Rounds	215	H220E
STLD new sheet EAF in SW	3	3	Electric arc furnace	Sheet	1750	H221E
Nucor Steel Gallatin expansion	1.4	1.4	Electric arc furnace	Sheet/plate	650	2021E
NUE new Midwest (location TBD) plate mill	1.2	1.2	Electric arc furnace	Plate	1350	2022E
Possible restarts/new capacity	**Min (Mt/yr)**	**Max (Mt/yr)**				
Gerdau brownfield beam and merchant bar expansion	0.53	0.53	Electric arc furnace	Beams/merchants	120	2021E
North Star Bluescope expansion	0.9	1	Electric arc furnace	Sheet	650	2022E
Big River Steel proposed Brownsville, TX sheet mill	1.65	3.3	Electric arc furnace	Sheet		
New/restarting capacity	**17.2**	**18.7**				
Total possible restarting	**20.2**	**23.5**				

Source: Company reports. Note: NUE says of rebar capacity just 150Kt or so is incremental, rest is redirected existing capacity

Steel prices tend to be volatile and we would not expect to draw a straight line between our annual forecasts. Key factors affecting our pricing outlook would include: 1) any new or shuttered capacity; 2) demand above or below our expectations; and 3) any change in import/export trends, including the value of the U.S. dollar and trade policy changes.

Table 3: U.S. steel supply/demand (M metric tons)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019E	2020E
Crude production	**99**	**97**	**91**	**58**	**82**	**86**	**89**	**87**	**88**	**79**	**79**	**82**	**86**	**91**	**89**
(plus) Imports	41	30	29	15	22	26	30	29	40	35	30	34	31	27	30
(less) Exports	9	10	12	8	11	12	12	11	11	9	8	10	8	7	8
Net Exports (Imports)	(32)	(20)	(17)	(7)	(11)	(14)	(19)	(18)	(29)	(26)	(22)	(25)	(23)	(20)	(22)
Crude consumption	**131**	**117**	**108**	**65**	**93**	**101**	**107**	**105**	**117**	**105**	**100**	**107**	**109**	**111**	**111**
Inventory change	3	(3)	(2)	(3)	2	1	0	(0)	1.5	(1.6)	(1.1)	0.5	-	-	-
Consumption	**127**	**121**	**110**	**67**	**91**	**100**	**107**	**105**	**116**	**107**	**101**	**106**	**109**	**111**	**111**
% growth y/y	**13.8%**	**-10.2%**	**-7.8%**	**-40.3%**	**44.2%**	**8.0%**	**6.6%**	**-2.0%**	**11.7%**	**-10.6%**	**-4.4%**	**6.2%**	**1.9%**	**2.2%**	**-0.2%**
Crude utilization	88%	87%	82%	51%	70.5%	74.7%	75.7%	76.9%	77.0%	71.0%	70.9%	74.0%	77.6%	81.0%	77.0%

Source: AISI, CRU, AMM, BofA Merrill Lynch Global Research estimates

Steel price forecasts

We forecast spot benchmark hot rolled coil (HRC) at $730/short ton for 2019E, which assumes improved profits at Chinese steel mills seasonally and from stimulus but also an easing in Section 232 tariffs, with a switch to quotas for Mexico, Canada, and perhaps other key allies. Knowing the future of Section 232 is impossible, but we are encouraged U.S. utilization and demand can be supported by strong backlogs, limited attractive import prices, and further tariffs on steel product imports. Beyond 2019E we have growing concerns over the duration of the U.S. non-residential construction cycle in light of cost inflation and rising interest rates. But near-term demand fueled by pent-up projects, lower tax rates, plus large Gulf LNG and petrochemical projects should provide solid visibility. Offsetting this better demand is new supply in rebar, with 1.4Mt of new domestic capacity adding to an approximate 8Mt/yr market. We identify total new supply of 17-19Mt or nearly 20% of the U.S. market, with possible projects raising the total to 20-24Mt.

Table 4: BofAML U.S. steel/bulk metals price assumptions

	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019E	2020E	2021E
U.S. steel													
Beams	$/st	750	855	811	764	795	696	644	695	807	838	803	793
Merchant Bar	$/st	763	886	848	756	783	694	594	647	711	765	735	725
Rebar	$/st	600	725	707	662	685	588	532	591	694	711	682	672
Plate	$/st	749	970	817	716	810	561	544	671	913	921	863	700
Hot-rolled coil (HRC)	$/st	603	738	657	627	657	459	518	617	831	730	675	575
Cold-rolled coil (CRC)	$/st	718	847	764	737	783	588	713	817	952	853	785	685
Hot dip galvanized	$/st	775	910	822	794	840	654	769	888	1,030	925	845	745
Stainless (CR 304)	$/st	3,315	3,542	2,965	2,633	2,844	2,337	1,921	2,364	2,667	2,497	2,734	2,810
Benchmark HM Scrap	$/t	334	417	376	357	368	221	205	263	332	315	300	290
Bulks													
Iron ore fines benchmark	$/dmt	147	168	128	135	98	55	58	71	69	84	64	64
Hard coking coal	$/mt	191	289	209	159	126	90	142	188	199	180	170	165

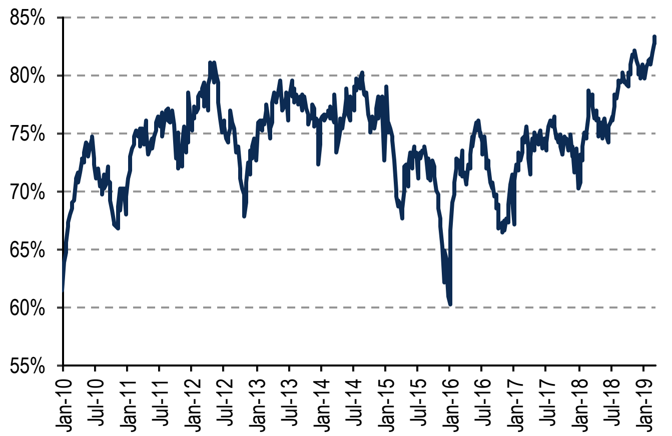
Source: CRU, Platts, AMM, BofA Merrill Lynch Research estimates

Scrap prices as measured by the benchmark heavy melt grade delivered Midwest slipped to start 2019E, but stabilized into February as prices below $300/t choked off supply and in March prices were expected to rise $10-20/t. Key export destination Turkey began to resume purchases in early February, after an absence. While mills announced price hikes into late January/early February, they were met with skepticism, but a second round of hikes in late February had begun to gain traction in early March amid rising global prices.

Weekly U.S. crude steel production down 0.6% w/w

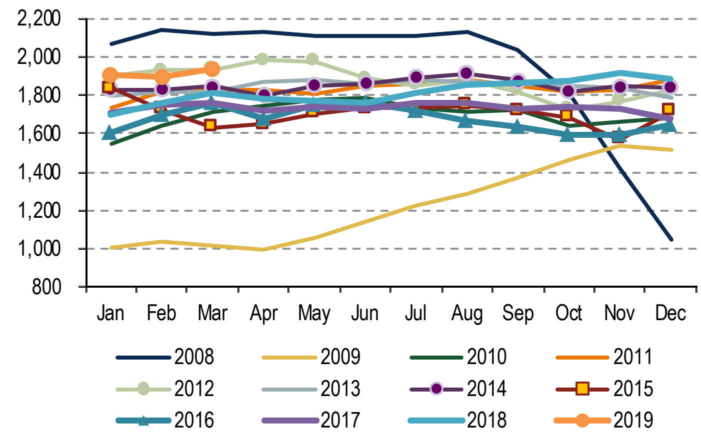
For the week ending on March 16, the American Iron and Steel Institute (AISI) reported U.S. raw steel production of 1.93Mt, down 0.6% w/w, but up 5.7% y/y. Capacity utilization fell to 82.9% from 83.4% in the prior week. Year-to-date capacity utilization was 81.4%, above the long-term U.S. average capacity utilization rate of 77.6%.

Chart 10: Weekly U.S. steel capacity utilization



Source: AISI

Chart 11: U.S. average weekly steel production (in 000 tons)



Source: AISI

Recent trends in raw materials prices:

- **Iron ore -** According to SBB/Platts, IODEX 62% Fe fines rose w/w to $86.80/dmt as of Friday, from $86.20/dmt CFR North China the prior Friday.
- **Metallurgical coal -** Spot premium low-vol met coal prices FOB Australia were $212/t as of Friday, down from the prior Friday's price of $213.25/t, according to SBB/Platts.
- **Ferrous scrap -** Prices for HMS 1/2 N. America delivered to the U.S. Midwest were flat w/w at $319/t. Prices for shred delivered to the Midwest U.S. were unchanged w/w from the prior Friday's price $351.25/t, according to SBB/Platts.

Chart 12: Iron ore fines cfr China ($/mt)

Source: SBB/Platts

Chart 13: Low-vol coal fob Australia($/mt)

Source: SBB/Platts

Chart 14: Heavy melt #1 scrap ($/gross ton)

Source: SBB/Platts

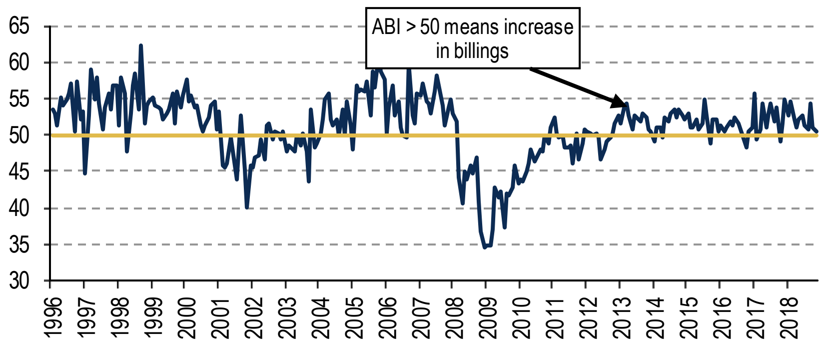
Recent end market updates and industry data

Feb U.S. Architectural Billings Index down m/m, still in expansionary territory

The Architectural Billings Index (ABI), a leading indicator of non-residential construction activity has been in expansionary territory (above 50) for 17 consecutive months.

- The ABI was 50.3 for February, down from 55.3 in January, but remained in expansionary territory. Project inquiries were at 59.8, while new design contracts came in at 53.1.
- Trends regionally were mixed m/m. The Midwest fell to 51.3 from 54.4 and the Northeast fell to 51.5 from 52.4 in January; the West was up to 51.6 from 51.5 and the South increased to 58.3 from 54.7 m/m.
- All of the main markets were in expansionary territory, above the 50 threshold for the month. Mixed Practice was up to 57.2 from 53.8 in January. However Residential fell to 51.6 from 52.6, and Institutional decreased to 50.9 from 52.9 in January.

Chart 15: U.S. architecture billings index (ABI)



Source: Bloomberg

In case you missed it...

FQ2 largely in line despite soggy weather, FYH2 poised for improvement

Please see our full note for additional details: CMC: 21 March 2019

FQ2 results were in line with EBITDA forecasts, and mgmt was upbeat on its H2 demand. It also detailed an expected Fab turnaround, repricing loss-making for new contracts. We raise our PO to $18 and remain at Underperform, noting risks of peak U.S. construction demand.

A step forward for Vale, back for iron ore

Please see our full note for additional details: Vale: 21 March 2019

Last week, two of Vale's smaller mines (total 22.8Mtpy) were slated to shut, and Brucutu (30Mtpy) took a step closer to reopening. Brucutu represents 2% of the global seaborne iron ore market, and with it restarting, Vale's reduced output would add up to 47Mt. We remain at Neutral and reduced valuation discounts raising our PO to US$14 (from US$12.50) earlier today.

The growth "challenge": Capex vs. buybacks

Please see our full note for additional details: Big Global Miners: 21 March 2019

We consider the growth challenge for our larger caps: BHP RIO VALE GLEN market caps $60-120 bn = need to spend a LOT to grow. We think smaller large caps such as Anglo, Teck, FCX & S32 are in a better position to deliver value via growth investing. Mega caps may be best served by non-core asset sales & buybacks. Buy: AAL GLEN FMG S32 MNOD TECK. Neutral: BHP VALE FCX. Underperform: RIO.

Investing in advance of Steelmageddon™

Please see our full note for additional details: US Steel: 18 March 2019

We launch Steelmageddon™ as a theme that can dominate the U.S. steel industry for an expected five years of upheaval. Market conditions look favorable near term, but more than 20% new supply should upend pricing, in our view. We conclude longer-term investors should proceed with caution, and multiples could remain compressed.

Soft sheet start hurts Q1's guide, but recent price hikes support Buy rating

Please see our full note for additional details: Steel Dynamics: 18 March 2019

A light Q1E guide of $0.88-$0.92 compared to our $0.94 and consensus at $1.08, plus was lighter q/q and y/y. Sheet prices have begun to rebound, and we see further strength ahead, supporting our above-consensus Q2E EPS. We remain at Buy, and our $47/shr PO is unchanged.

Global read through

Taranto: Huge opportunity, not fully understood

Please see our full note for additional details: MT: 21 March 2019

Taranto steel mill (Europe's largest) is very impressive, better capitalised than expected. Local management highly motivated. MT uniquely placed to turn the asset around quickly leveraging skills within broader MT group. Ilva acquisition an example of prudent capital allocation, can help assuage investor's "empire building" concerns. Buy.

Copper pure play that does what it says on the package

Please see our full note for additional details: Antofagasta: 19 March 2019

ANTO FY2018 results EBITDA US$2.23B, -7% y/y, in line with consensus. Positive surprise on dividend, 65% payout ratio++. We like copper a squeeze just happened on LME but, from here, see positive macro driving prices higher. Maintain Buy on Antofagasta, Raise price objective to GBp1100, 7.5x our 2019E EBITDA.

Shareholders sold 1.8%, maintain Underperform

Please see our full note for additional details: Evraz: 19 March 2019

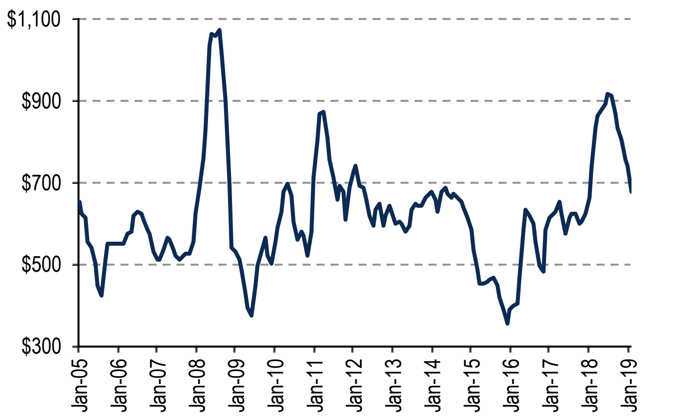
Main shareholder sold 1.8% at GBp595 per share, 5% discount to market with 60-day lock-up period. We maintain U/P: expensive vs. EEMEA peers, near-term pressure from further possible share sale, LT risk to NA segment.

ArcelorMittal in India: consolidation, removing a disruptive supplier

Please see our full note for additional details: Steel - India: 18 March 2019

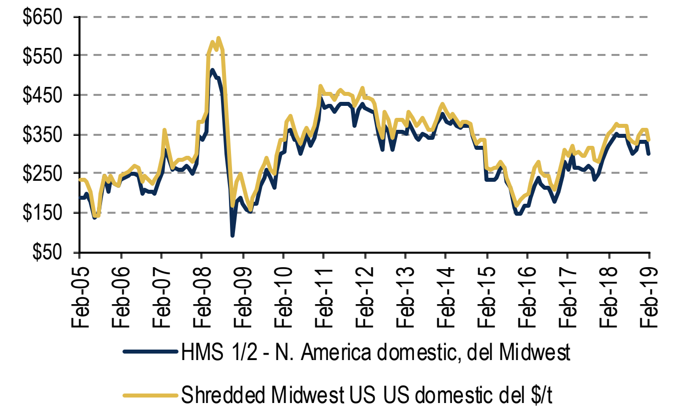
MT's acquisition will add to ongoing consolidation with share of top 5 producers rising to 58% by FY21, up from 51% in FY11. Upside risk to domestic steel prices on (i) stoppage of distress sales (ii) potential supply disruption at Essar in near term. LT risks (i) aggressive capacity expansion, (ii) competition in value-added products, (iii) competition in iron ore bidding

Chart 16: U.S. benchmark hot rolled coil ($/ton)



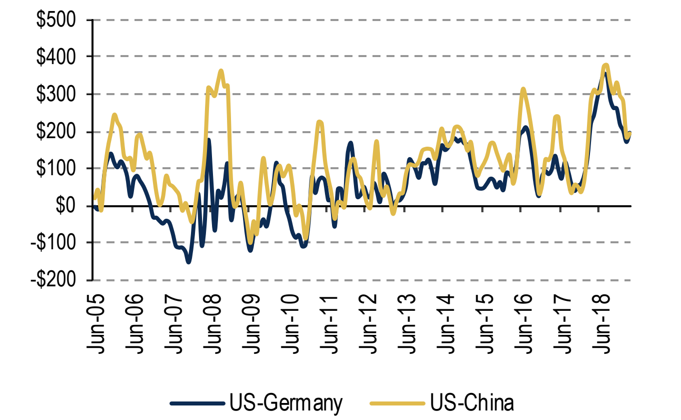
Source: CRU

Chart 17: HMS 1/2 - N. America domestic, delivered to the Midwest



Source: CRU

Chart 18: Global HRC price spread ($/mt)



Source: CRU

Chart 19: China domestic HRC avg. price ($/mt)

Source: Bloomberg

Chart 20: LME nickel spot prices ($/pound)

Source: Bloomberg

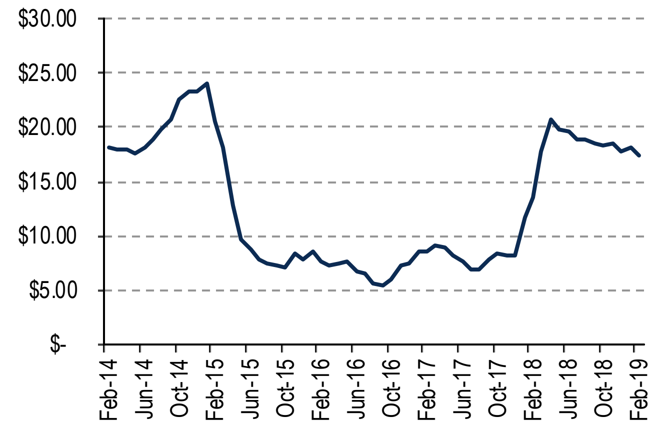
Chart 21: China spot iron ore fines 62% Fe ($/dmt)

Source: SBB

Chart 22: LME aluminum spot price ($/pound)

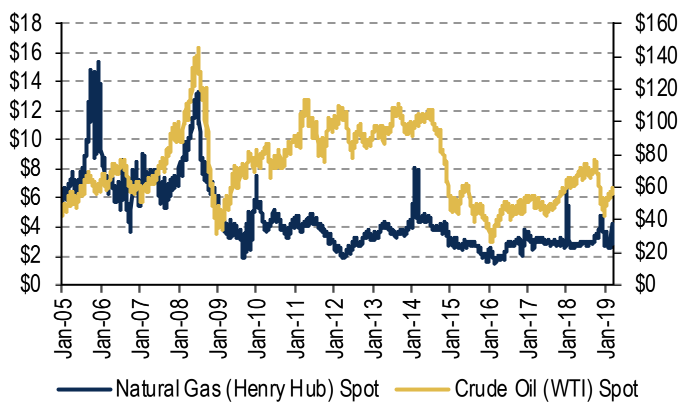
Source: Bloomberg

Chart 23: U.S. aluminum midwest premium ($/lb)



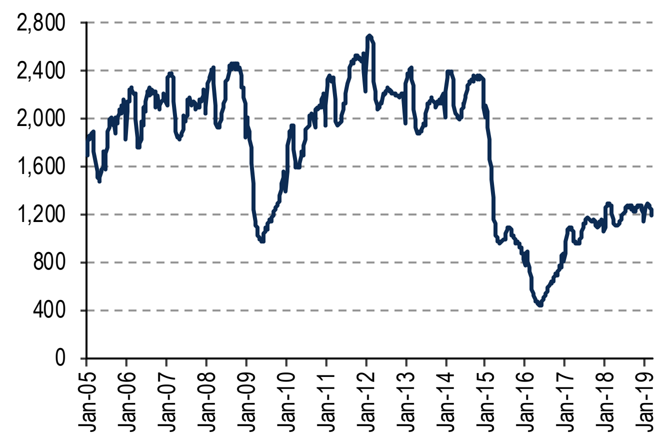
Source: Bloomberg

Chart 24: Henry Hub natural gas & WTI crude oil prices



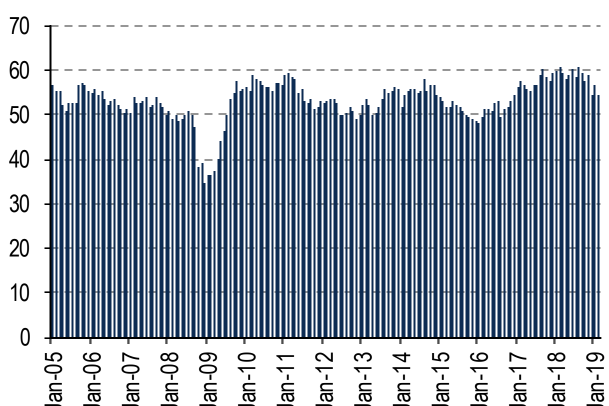
Source: Bloomberg

Chart 25: Weekly North American rig count



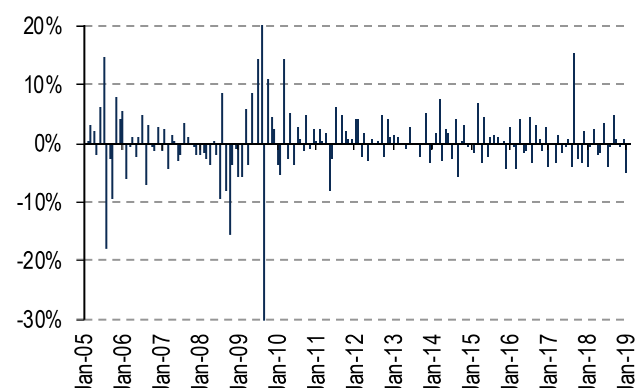
Source: Bloomberg

Chart 26: U.S. ISM composite index



Source: Bloomberg

Chart 27: Total U.S. motor vehicle retail sales SAAR y/y % change



Source: Bloomberg

Chart 28: U.S. dollar trade-weighted major currency

Source: Bloomberg

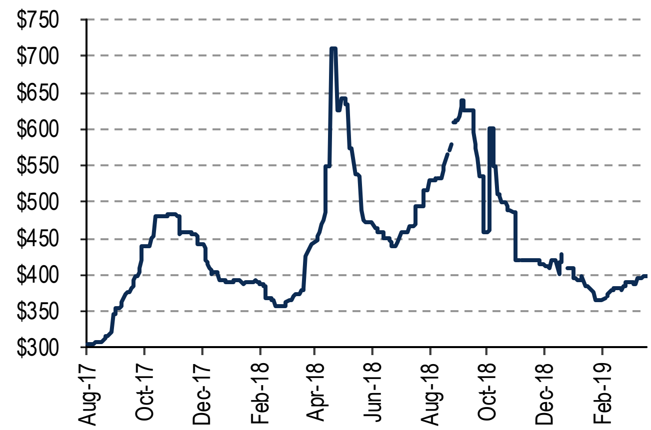
Chart 29: LME copper spot price ($/pound)

Source: Bloomberg

Chart 30: LME zinc spot price ($/pound)

Source: Bloomberg

Chart 31: Alumina price ($/mt)



Source: Platts

Table 5: Stocks mentioned

BofAML Ticker	Bloomberg ticker	Company name	Price	Rating
AKS	AKS US	AK Steel	US$ 2.65	C-3-9
AA	AA US	Alcoa Corp.	US$ 28.12	C-1-9
ATI	ATI US	Allegheny Tech	US$ 24.88	C-1-9
CMC	CMC US	Commercial Metals	US$ 16.65	B-3-7
FCX	FCX US	Freeport-McMoRan	US$ 12.18	C-2-7
NEXA	NEXA US	Nexa Resources	US$ 12.4	C-3-7
YNEXA	NEXA CN	Nexa Resources	C$ 16.82	C-3-7
NUE	NUE US	Nucor	US$ 57	B-1-7
RS	RS US	Reliance Steel	US$ 87.09	B-2-7
STLD	STLD US	Steel Dynamics	US$ 33.97	B-1-7
YTECK B	TECK/B CN	Teck Resources	C$ 30.25	C-1-7
TECK	TECK US	Teck Resources Ltd	US$ 22.53	C-1-7
X	X US	US Steel	US$ 19.09	C-1-7
VALEF	VALE3 BZ	Vale	BRL 50.05	C-2-9
VALE	VALE US	Vale SA	US$ 12.82	C-2-9
VMC	VMC US	Vulcan Materials Co	US$ 113.45	C-3-7

Source: BofA Merrill Lynch Global Research

Price objective basis & risk

AK Steel (AKS)

Our $2.5/share PO is based on 6.5x 2019/20E EV/EBITDA well below a 10-year forward 8.7x EV/EBITDA given its balance sheet leverage and contract pricing uncertainty. We treat underfunded pension and OPEB similar to debt when calculating POs on forward EV/EBITDA.

Downside risks to our PO are: 1) high legacy obligations, which limit available cash use, 2) a stretched balance sheet, 3) pressure to volume and margin from new competition in all its products, 4) lack of investment in its facilities, and 5) operational challenges.

Upside risks to our PO are: 1) better-than-expected steel prices, 2) cost-savings above expectations from greater vertical integrations, 3) falling pension and liability costs, 4) delay in new capacity additions, 5) takeout risk, which we think is low, and 6) further protectionist measures from the government.

Alcoa Corp. (AA)

Our $45/share price objective uses 5x 2019E/20E EV/EBITDA, and we think conservative multiples (vs. historical through the cycle average of approx. 7x forward estimates) reflect a more uncertain outlook for alumina and aluminum given excess supply in alumina and a preponderance of loss-making aluminum producers globally.

Downside risks to our price objective are: 1) aluminum price weakness, 2) excess supply from slowing global demand and lack of curtailment progress, 3) high pension costs that add to costs and liabilities, 4) rising costs for raw materials including electricity, oil, caustic soda, coke, and pitch, 5) power contract negotiation risk, given electricity is an integral component of costs, 6) power disruption risk and other unforeseen weather-related risks, 7) political and country risk with its international operations, and 8) risk that LME alumina and aluminum contracts trade with factors separate from fundamentals.

Upside risks to our price objective are: 1) higher aluminum and/or alumina prices, 2) better-than-expected cost containment, and 3) global demand growth.

Allegheny Technologies (ATI)

Our $35 price objective reflects our sum-of-the-parts analysis amid the expectation of better sustained margins ahead on aerospace jet engine growth as it shifts to a more aero-focused mix. 13x for HPMC, comparable to aerospace companies and 8x 2019E for EBITDA for FRP, comparable to other rolling companies.

Upside risks to our PO are: 1) a greater engine ramp-up than we model, 2) cost-saving initiatives to support margin improvement, 3) a better cash flow outlook as capex slows with the wind-down of recent projects, 4) market share gains from other products and rivals, and 5) possible partnership at its underutilized HRPF mill.

Downside risks to our PO are: 1) macroeconomic headwinds that could hurt demand, 2) nickel price volatility hurting margins and potentially distorting demand in the short term, 3) stainless steel global overcapacity, 4) unknown future competitors, 5) operational challenges in ramping up its new facilities, and 6) any weakness in aerospace or other key end-market demand.

Commercial Metals Company (CMC)
Our $18/share price objective is based on 6x 2019/20E EV/EBITDA, compared with a 10-year historical forward 6.2x EV/EBITDA. We assume a multiple below its 10-yr avg forward 6.2x EV/EBITDA due to: 1) rebar margins well above normal and investors loathe to pay for supernormal earnings, 2) risk of U.S. non-res construction activity near a peak, 3) concerns over new rebar capacity with an incremental 1-1.4M/yr relative to U.S. existing oversupply and about 8Mt of annual consumption, and 4) risk of trade protection being removed given global oversupply and significantly lower overseas prices for rebar.

Upside risks to our price objective are: 1) better-than-expected construction demand, 2) steel pricing upside, 3) quicker-than-expected success in turning around underperforming businesses, 4) better-than-expected pricing power in global long products, 5) additional and sustained trade case conclusions that support import relief, 6) cash deployment for growth.

Downside risks to our price objective are: 1) sluggish construction demand, 2) delays addressing underperforming businesses given structural challenges (not just cyclical), 3) execution risk related to carrying out its business plan, 4) any rollback from trade relief, particularly related to Section 232, and 5) threat of lower priced imports.

Freeport-McMoRan (FCX)
Our $13 per share price objective reflects 8x/6.5x 2019/20/21E. Our previous PO also blended in a multiple of 1.3x NPV which we have removed. Copper equities tend to trade at premiums during periods of rising copper prices which we foresee in the near term.

Downside risks to our price objective are: 1) global economic weakness, 2) Chinese restarting mines to oversupply global markets, 3) unplanned FCX operating disruptions, 4) stricter or unfavorable regulatory or environmental regulations, particularly at its Indonesian operations, 5) other factors pressuring prices of the commodities it produces, 6) sustained low oil prices, and 7) unfavorable currency moves.

Upside risks are: 1) better-than-expected copper and gold prices, 2) a more accommodating operating environment in Indonesia, and 3) further cost-cutting progress.

Nexa Resources (NEXA / YNEXA)
Our $11/share (CAD $14.5) price objective is based on 5x 2019E EV/EBITDA. Our EBITDA multiple is slightly below the typical 6-8x range for base metal miners, which we think is deserved given a cautious view on zinc given new supply and Nexa's limited float.

Downside risks to our price objective are: 1) zinc price weakness or weakness in other key commodities, 2) global economic weakness, but particularly China, 3) Chinese and other mine restarts oversupplying global markets, 4) a stronger U.S. dollar tends to weigh on commodity prices, 5) unplanned operating disruptions at Nexa, 6) stricter mining regulations in Peru or Brazil, 7) parent Votorantim holds over 60% of Nexa shares and retains voting control.

Upside risks to our price objective are: 1) higher-than-expected zinc prices or other key commodities, 2) better-than-expected cost containment, 3) upside to global demand growth, but particularly China, 4) greater-than-expected challenges at other competitors looking to lift their mining production.

Nucor (NUE)
Our price objective of $71/share is based on 6.5/7x 2019E/20E EV/EBITDA. Our valuation multiples are in line with STLD and NUE's historical 10-year average.

Downside risks to our price objective are: 1) steel and scrap price volatility squeezing margins, 2) delayed construction recovery, and 3) project start-up delays and cost overruns.

Upside risks are: 1) lower scrap prices and higher steel prices, 2) better-than-expected domestic demand, 3) margin expansion through more downstream activity, and 4) attractive acquisition options.

Reliance Steel & Aluminum (RS)
Our $96/share price objective is based on 8x 2019E/20E EV/EBITDA, in line with its five-year historical average forward multiple of 8x. Steady cash return to shareholders and support of shares through buybacks help justify the multiple, in addition to its track record of FCF generation through the cycle and diversified end markets.

Downside risks to our price objective are: 1) delayed economic recovery, 2) execution risk related its acquisition strategy, and 3) any sharp correction in prices.

Upside risks are: 1) aggressive buybacks or dividend increases, 2) higher metal prices, 3) more attractive consolidation opportunities than we currently model. Upside risks could come from M&A and a stronger pricing and demand environment than we forecast.

Steel Dynamics (STLD)
Our $47/share 12-month price objective uses 6.5/7.5x our 2019/20E EV/EBITDA. This multiple is similar to its historical 6.7x EV/EBITDA.

Downside risks to our price objective are steel and scrap price volatility, project delays, delayed economic recovery, and excess supply.

Teck Resources Ltd (TECK / YTECK B)
Our US$29 (C$38) per share price objective reflects 5.5x 2019E/20E EV/EBITDA. The multiple compares with an average historical multiple of 5.3x or a five-year average 5.5x. We like Teck's strong free cash flow outlook, stronger balance sheet, and commodity positioning.

Downside risks to our price objective are: 1) global economic weakness, 2) Chinese restarting mines to oversupply global markets, 3) unplanned Teck operating disruptions, 4) stricter regulatory or environmental regulations, 5) other factors pressuring prices of the commodities it produces.

US Steel (X)

Our $31/share price objective is based on 6x 2019E/20E EV/EBITDA assuming steel prices rebound and settle around $750/t for benchmark hot rolled coil (HRC) in 2019E. This compares with an average historical forward EV/EBITDA of 7.2x to reflect operational and execution risks associated with the overhaul of its assets.

Upside risks to our price objective are: 1) better steel demand than we anticipate, 2) potential steel price outperformance, especially if this is driven by better iron ore pricing, as U.S. Steel is self-sufficient for about 70% of its production, and 3) better progress in its asset "revitalization" program. Downside risks are: 1) weaker demand and prices than we anticipate in all its products and regions, 2) lack of execution on its cost-cutting plan, 3) struggles to execute its asset overhaul program, and 4) margin pressure from new supply and higher raw material costs.

Vale (VALE / VALEF)

Our US$14 (R$52.50) PO is based on a blended valuation approach. On multiples, we use a 10% discounted to normalized 5.5x 2020E EV/EBITDA and 5x 2019E (was a 15% discount). On DCF we remove our previous 50 bp "mark up" on WACC. We assume a 2.5% terminal growth and WACC of c. 10%, Assume US$5B outlay assumed for penalties and fines. These discounts seem deserved mainly due to: 1) a less attractive dividend yield/buyback thesis near term, 2) potential change in investor base given lack of dividend and ESG concerns, and 3) continued uncertainty over volume and costs. We assume iron ore prices at US$84/t for 2019E and a long-term price of US$64/t in 2023E. We assume Vale resumes paying a dividend in 2020E.

Downside risks to our price objective: 1) weaker than expected iron ore prices, 2) a global economic slowdown, negatively impacting metals prices, 3) appreciation of the Brazilian Real and the Canadian Dollar (80% of Vale's costs are denominated in those currencies), without an offsetting increase in metal prices, 4) slowdown in infrastructure spending or global steel production, mainly in China, 5) higher freight rates, reducing Vale's competitiveness in China, 6) higher government intervention, and 7) more fallout from its Brumadinho tailings dam tragedy.

Upside risks: 1) Stronger than expected iron ore prices, 2) stronger than expected global economic growth, and 3) acceleration of infrastructure spending or global steel production, mainly in China.

Vulcan Materials Co (VMC)

Our $105/share price objective is based on 13x 2019E EV/EBITDA, below its five-year historical average (14.9x) to reflect concerns over late-cycle construction risks. Aggregates tend to merit an elevated multiple to other building materials peers due to steadier pricing characteristics. While we remain constructive on pricing power, we see risks to the cycle from inflated costs and higher interest rates.

Downside risks are: 1) aggregates prices and volumes fail to rise or fall as we forecast, 2) demand for residential and non-residential construction stalls, 3) shortfalls in federal or state highway spending, 4) government funding falls short for public works, 5) energy and equipment cost pressure, and 6) weather or transportation-related operating disruptions.

Upside risks are: 1) aggregates prices and volumes above forecasts, 2) better demand for residential and non-residential construction than we expect, 3) success in raising funding for federal or state highway spending, 4) energy and equipment costs falling, and 5) greater return of cash to shareholders.

Analyst Certification

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Latin America - Mining, Steel, and P&P Coverage Cluster

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
BUY				
	Gerdau S. A.	GGBUF	GGBR4 BZ	Timna Tanners
	Gerdau S.A.	GGB	GGB US	Timna Tanners
	Klabin S.A	XLWDF	KLBN11 BZ	George L. Staphos
	Southern Copper	SCCO	SCCO US	Timna Tanners
	Suzano Papel e Celulose S.A.	XXRTF	SUZB3 BZ	George L. Staphos
	Usiminas SA	USNZY	USNZY US	Timna Tanners
	Usiminas SA	USSPF	USIM5 BZ	Timna Tanners
NEUTRAL				
	Duratex	DURXF	DTEX3 BZ	Antonio Heluany
	Empresas Copec SA	PZDCF	COPEC CI	George L. Staphos
	Grupo Mexico	GMBXF	GMEXICOB MM	Timna Tanners
	Vale	VALE	VALE US	Timna Tanners
	Vale	VALEF	VALE3 BZ	Timna Tanners
UNDERPERFORM				
	CSN	SIDHF	CSNA3 BZ	Timna Tanners
	CSN	SID	SID US	Timna Tanners
	Empresas CMPC SA	XEMCF	CMPC CI	George L. Staphos
	Ternium	TX	TX US	Timna Tanners

North American Metals and Mining Coverage Cluster

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
BUY				
	Alcoa Corp.	AA	AA US	Timna Tanners
	Allegheny Technologies	ATI	ATI US	Timna Tanners
	Nucor	NUE	NUE US	Timna Tanners
	Steel Dynamics	STLD	STLD US	Timna Tanners
	Teck Resources	YTECK B	TECK/B CN	Timna Tanners
	Teck Resources Ltd	TECK	TECK US	Timna Tanners
	US Steel	X	X US	Timna Tanners
NEUTRAL				
	Freeport-McMoRan	FCX	FCX US	Timna Tanners
	Martin Marietta Materials	MLM	MLM US	Timna Tanners
	Reliance Steel & Aluminum	RS	RS US	Timna Tanners
UNDERPERFORM				
	AK Steel	AKS	AKS US	Timna Tanners
	Commercial Metals Company	CMC	CMC US	Timna Tanners
	Nexa Resources	NEXA	NEXA US	Timna Tanners
	Nexa Resources SA	YNEXA	NEXA CN	Timna Tanners
	Vulcan Materials Co	VMC	VMC US	Timna Tanners

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Important Disclosures

Equity Investment Rating Distribution: Building Group (as of 31 Dec 2018)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	36	46.15%	Buy	20	55.56%
Hold	15	19.23%	Hold	9	60.00%
Sell	27	34.62%	Sell	15	55.56%

Equity Investment Rating Distribution: Non-Ferrous Metals/Mining & Minerals Group (as of 31 Dec 2018)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	63	60.00%	Buy	27	42.86%
Hold	21	20.00%	Hold	13	61.90%
Sell	21	20.00%	Sell	6	28.57%

Equity Investment Rating Distribution: Steel Group (as of 31 Dec 2018)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	24	61.54%	Buy	15	62.50%
Hold	7	17.95%	Hold	2	28.57%
Sell	8	20.51%	Sell	2	25.00%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2018)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	1586	53.69%	Buy	1017	64.12%
Hold	690	23.36%	Hold	432	62.61%
Sell	678	22.95%	Sell	328	48.38%

* Issuers that were investment banking clients of BofA Merrill Lynch or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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