

MONTHLY FERROUS ANALYTICS

JANUARY 2023

China mill margins improve in January after steel price rally

Chinese steelmakers' margins improved in January 2023, thanks to a continued rally in prices for finished steel and a slower increase in costs.

The net margin proxy for rebar producers increased by 155.02 yuan (\$22.83) per tonne month on month to 56.02 yuan per tonne on a daily average basis in January, while that for hotrolled coil producers rose by 88.70 yuan per tonne to 204.45 yuan per tonne.

An optimistic market outlook following the introduction of a series of stimulus measures underpinned steel prices last month. Eastern China rebar prices rose to a five-month high of 4,160-4,180 yuan per tonne on January 30, while Eastern China HRC prices reached a seven-month high of 4,270-4,290 yuan per tonne.

Hot metal costs rose by \$19.71 per tonne month on month to \$436.38 on a daily average basis in January, following an increase of \$36.21 per tonne the prior month. The cost increase slowed after top regulators' latest attempt to stabilize iron ore

prices and subdued production at mills due to thin margins curbed the rally in prices for steelmaking raw materials.

Scrap prices extended their gains in January, narrowing the discounts of domestic heavy scrap prices against hot metal costs to \$21.33 per tonne on a daily average basis, from \$32.44 per tonne in the previous month.

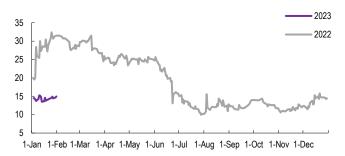
Analyst comment

Fastmarkets forecasts that steelmaker margins will remain under pressure in February with little scope to rise during the month. Steel market sentiment has been bullish following the Spring Festival holiday, but the outlook for steel prices is mixed. The positive steel price sentiment is being met with downward price risk, mainly due to high inventories. Long products prices have the potential to rise modestly this month on improving demand. Conversely, we expect flat product prices to weaken. Iron ore prices are poised to rise modestly while coal prices are expected to remain stable.

	11	Monthly	Previous month	Oh samus	January	January	Current quarterly	Previous quarterly
	Unit	average	average	Change	maximum	minimum	average	average
Iron Ore								
Iron Ore 65% Fe Fines/62% Fe Fines Differential	Usd/tonne	14.40	13.68	▲ 0.72	15.25	13.53	14.40	12.74
Iron ore 66% Fe Concentrates/65% Fe Fines Differential	Usd/tonne	2.77	2.07	▲ 0.71	2.93	2.64	2.77	1.03
Hot Metal								
Hot metal cost (Iron ore 62% Fe fines, PHCC)	Usd/tonne	436.38	416.67	▲ 19.71	456.52	425.51	436.38	393.62
East China Domestic HRC / Hot Metal Spread	Usd/tonne	110.86	98.54	▲ 12.32	121.78	97.87	110.86	92.06
East China Domestic Rebar / Hot Metal Spread	Usd/tonne	91.53	71.34	▲20.19	104.62	84.13	91.53	76.00
Scrap								
South Korea import HMS 1&2 VS South Korea import H2	Usd/tonne	14.20	22.91	▼8.71	24.42	2.23	14.20	20.96
Vietnam import HMS1&2 VS Vietnam import H2	Usd/tonne	9.50	16.88	▼ 7.38	15.00	5.00	9.50	13.33
China steel scrap premium over hot metal	Usd/tonne	-21.33	-32.44	▲ 11.11	-20.11	-22.03	-21.33	-34.31
Steel billet spread (Steel billet import cfr SE Asia VS scrap HMS cfr Vietnam)	Usd/tonne	149.75	137.18	▲ 12.58	160.00	136.50	149.75	140.47
Steel scrap Shindachi Premium over steel scrap H2 fob Japan	Usd/tonne	22.60	23.13	▼0.52	25.09	17.59	22.60	20.45
Steel Mills Margin								
China steel mills' Rebar Margin Proxy	Yuan/tonne	56.02	-99.00	▲ 155.02	146.55	-15.15	56.02	-38.92
China steel mills' HRC Margin Proxy	Yuan/tonne	204.45	115.76	▲88.70	274.15	85.55	204.45	89.27

IRON ORE SPREAD

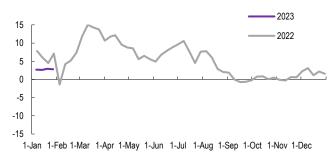
Iron Ore 65% Fe Fines/62% Fe Fines Differential, usd/tonne



Formula: Fastmarkets' Iron ore 65% Fe Brazil-origin fines, cfr Qingdao, \$/tonne - Fastmarkets' Iron ore 62% Fe fines, cfr Qingdao, \$/tonne

The differential indicates the price competitiveness between seaborne Brazilian high-grade iron ore fines and seaborne mid-grade iron ore fines driven by the fundamental supply and demand of the two products.

Iron ore 66% Fe Concentrates/65% Fe Fines Differential, usd/tonne



Formula: Fastmarkets' Iron ore 66% Fe concentrate, cfr Qingdao, \$/tonne - Fastmarkets' Iron ore 65% Fe Brazil-origin fines,

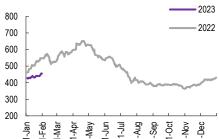
cfr Qingdao, \$/tonne

The differential indicates the price competitiveness between seaborne iron ore concentrates and seaborne Brazilian high-grade iron ore fines driven by the fundamental supply and demand of the two products.



HOT METAL COST

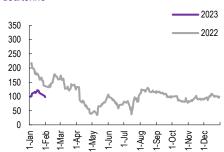
Hot metal cost, usd/tonne



Formula: 1.6'Fastmarkets' Iron ore 62% Fe fines, cfr Qingdao, \$/tonne + 0.77* Fastmarkets' Premium hard coking coal, cfr Jingtang, \$/tonne The cost of hot metal in the blast furnace steelmaking route in China with imported mid-grade iron ore fines and imported premium hard coking coal.

Formula: 1.6*Fastmarkets' Iron ore 62% Fe fines, cfr Qingdao, \$/tonne + 0.77*

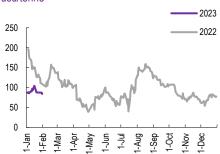
East China Domestic HRC/Hot metal spread, usd/tonne



Formula: Fastmarkets' Steel hot-rolled coil domestic, ex-whs Eastern China, ¥/tonne (converted to usd/tonne) - Hot metal cost

The spread between China's domestic hot-rolled coil price in the eastern region and the cost of hot metal indicates the profitability of HRC producing steel mills.

East China Domestic Rebar/Hot metal spread, usd/tonne

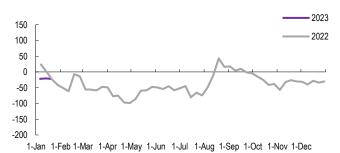


Formula: Fastmarkets' Steel reinforcing bar (rebar) domestic, ex-whs Eastern China, ¥/tonne (converted to usd/tonne) - Hot metal cost

The spread between China's domestic reinforcing bar price in the eastern region and the cost of hot metal indicates the profitability of rebar producing steel mills.

SCRAP

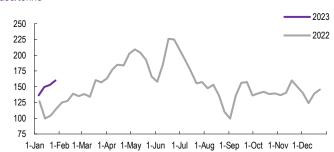
China steel scrap premium over hot metal, usd/tonne



Formula: Fastmarkets' Steel scrap heavy scrap domestic, delivered mill China, ¥/tonne (converted to \$/tonne) -

The premium indicates the price competitiveness between China's domestic steel heavy scrap and the cost of hot metal.

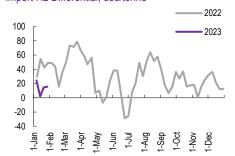
Steel billet spread (Steel billet import cfr SE Asia VS scrap HMS cfr Vietnam), usd/tonne



Formula: Fastmarkets' Steel billet import, cfr Southeast Asia, \$/tonne - Fastmarkets' Steel scrap HMS 1&2 (80:20) cfr Vietnam, \$/tonne

The spread indicates the price competitiveness between Southeast Asia imported steel billet and Vietnam imported recycled steel

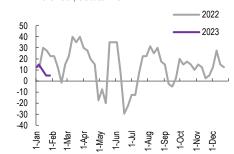
South Korea import HMS 1&2/South Korea import H2 Differential, usd/tonne



Formula: Fastmarkets' Steel scrap HMS 18.2 (80:20) deep-sea origin import, cfr South Korea, \$/tonne - Fastmarkets' Steel scrap H2 Japan origin import, cfr main port South Korea, \$/tonne (converted to usd/tonne)

The premium for deep-sea origin HMS 18.2 scrap over Japan-origin H2 scrap on a cfr South Korea basis shows which material is more competitive for Korean steelmakers to purchase.

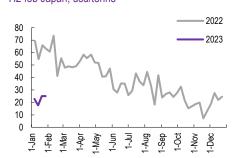
Vietnam import HMS1&2/Vietnam import H2 Differential, usd/tonne



Formula: Fastmarkets' Steel scrap HMS 1&2 (80:20), cfr Vietnam, \$/tonne - Fastmarkets' Steel scrap H2 Japan-origin import, cfr Vietnam, \$/tonne

The premium for deep-sea origin HMS 182 scrap over Japan-origin H2 scrap on a cfr Vietnam basis shows which material is more competitive for Vietnamese steelmakers to purchase.

Steel scrap Shindachi premium over steel scrap H2 fob Japan, usd/tonne

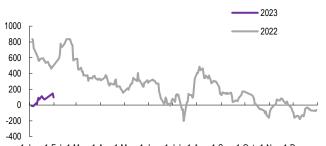


*Formula: Fastmarkets' Steel scrap Shindachi export, fob main port Japan, #/tonne (converted to usd/tonne) - Fastmarkets' Steel scrap H2 export, fob main port Japan, #/tonne (converted to usd/tonne)

The premium for Japan export Shindachi over Japan export H2 shows how competitive high-grade busheling scrap prices are compared with those for the base-grade heavy scrap material.

STEEL MILLS MARGIN

China's Steel Mill rebar margin proxy, yuan/tonne

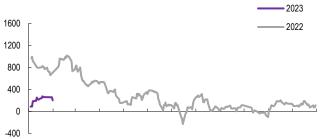


1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep 1-Oct 1-Nov 1-Dec

Formula: Fastmarkets' Steel reinforcing bar (rebar) domestic, ex-whs Eastern China, ¥ltonne - 1.6°Fastmarkets' Iron ore 62% Fe fines, fot Qingdao, ¥lwet tonne - 0.5°China Domestic Coke price - Other costs (1250¥/tonne)

The profitability of China's rebar producing steel mills with portside purchased iron ore and domestic coke.

China's Steel Mill HRC margin proxy, yuan/tonne



1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep 1-Oct 1-Nov 1-Dec

Formula: Fastmarkets' Steel hot-rolled coil domestic, ex-whs Eastern China, ¥/tonne - 1.6'Fastmarkets' Iron ore 62% Fe fines, fot Qingdao, ¥/wet tonne - 0.5'China Domestic Coke price - Other costs (1250¥/tonne)

The profitability of China's HRC producing steel mills with portside purchased iron ore and domestic coker