

Ferrous Markets Update

SEASI, November 2022

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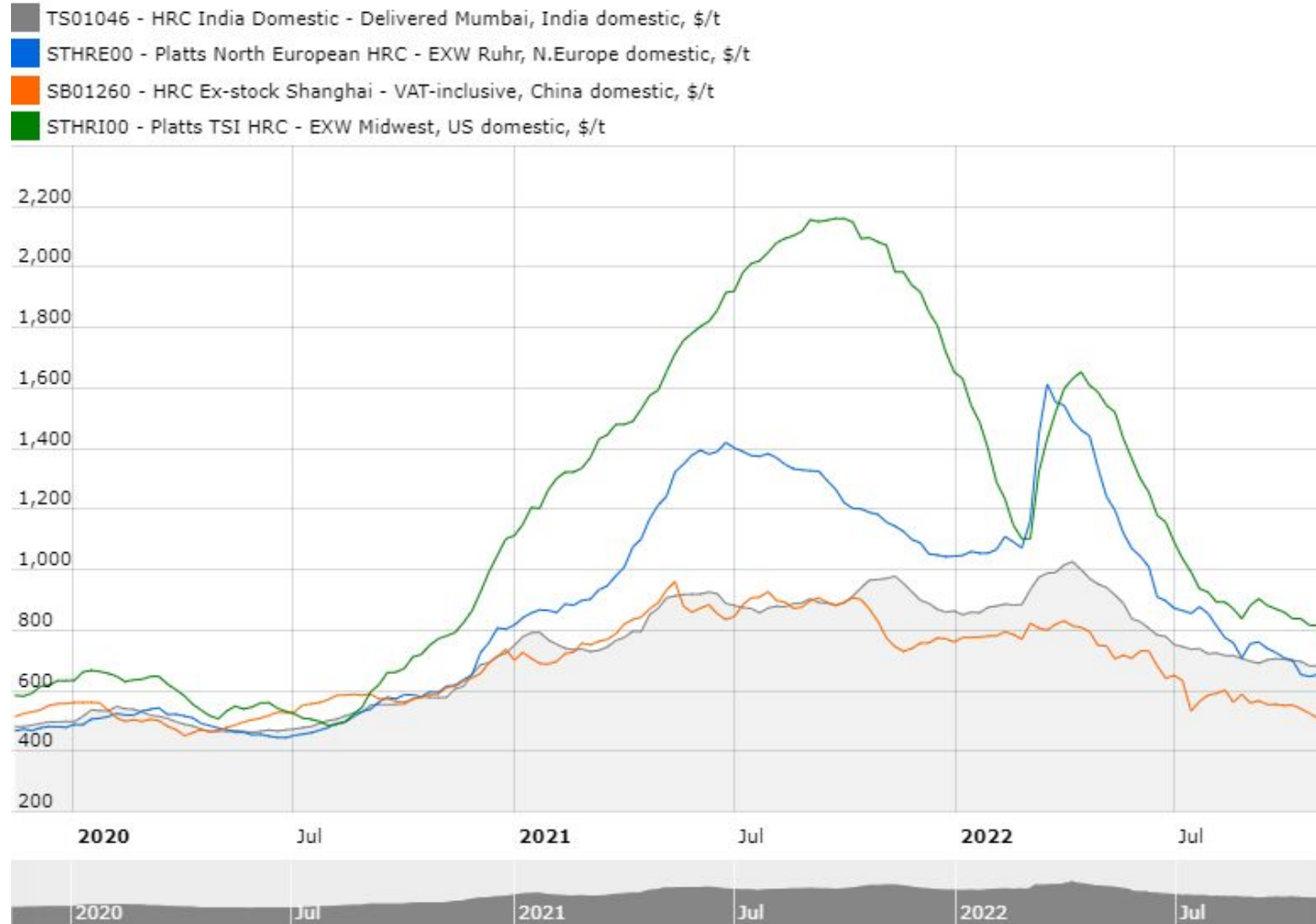
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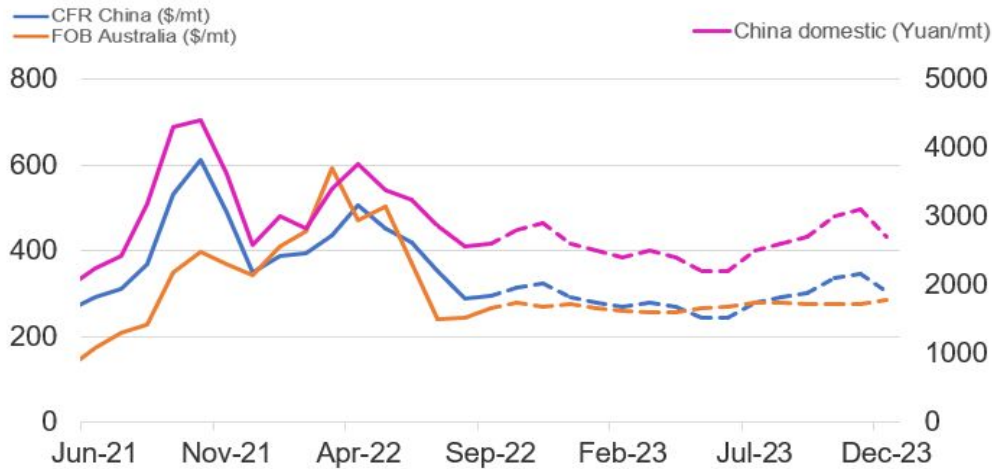
Global steel prices falling due to recession threats, uncertainty



- Downstream demand in most markets hurt by inflation, lack of workers, supply chain constraints, and weak auto sector
- **EU and US prices have been largely supported by higher costs rather than demand**
- **Prices looking for floor since the post-Ukraine invasion spike**
- US and EU manufacturing at 2-year lows in August (S&P Global PMIs). GDP 2023 forecasts downgraded
- Indian steel exports hurt by export duties and lack of overseas demand

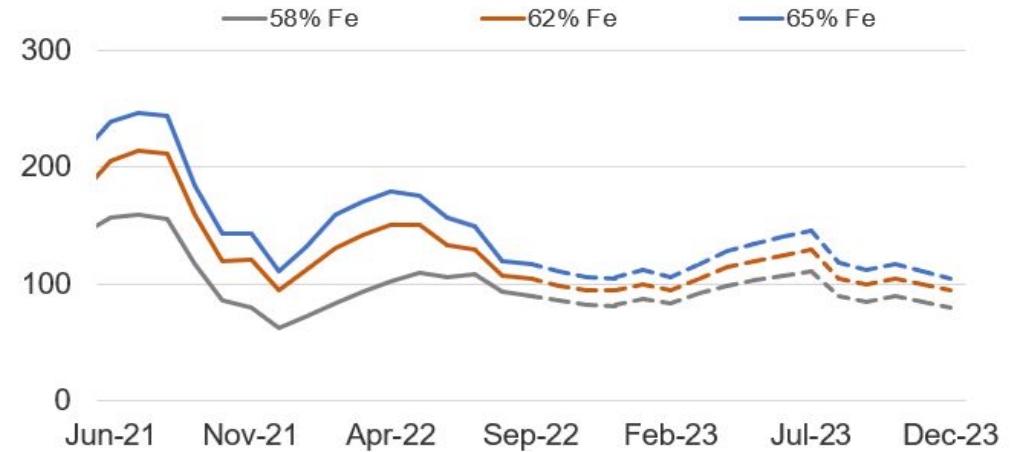
Gloomy Outlook

PREMIUM LOW-VOL COKING COAL PRICES AND FORECAST



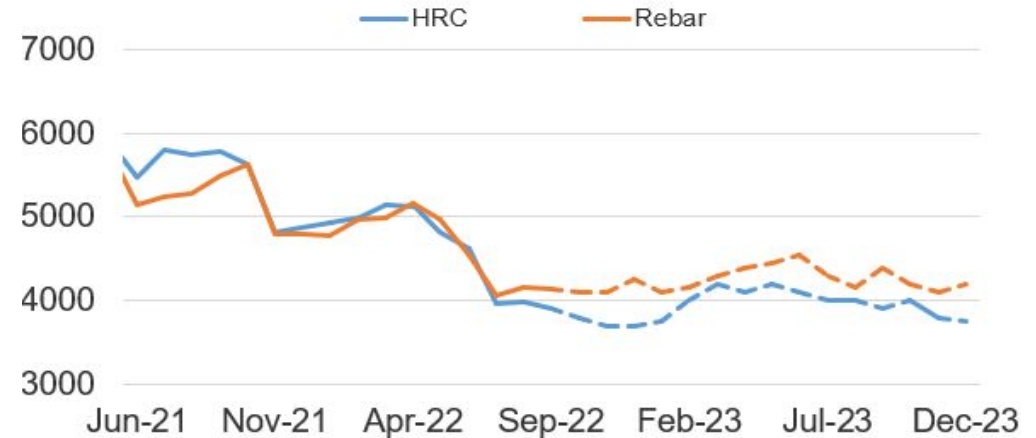
Source: S&P Global Commodity Insights

IRON ORE IMPORT PRICES ESTIMATION (\$/mt CFR China)



Source: S&P Global Commodity Insights

CHINA DOMESTIC STEEL PRICES AND FORECAST (Yuan/mt)

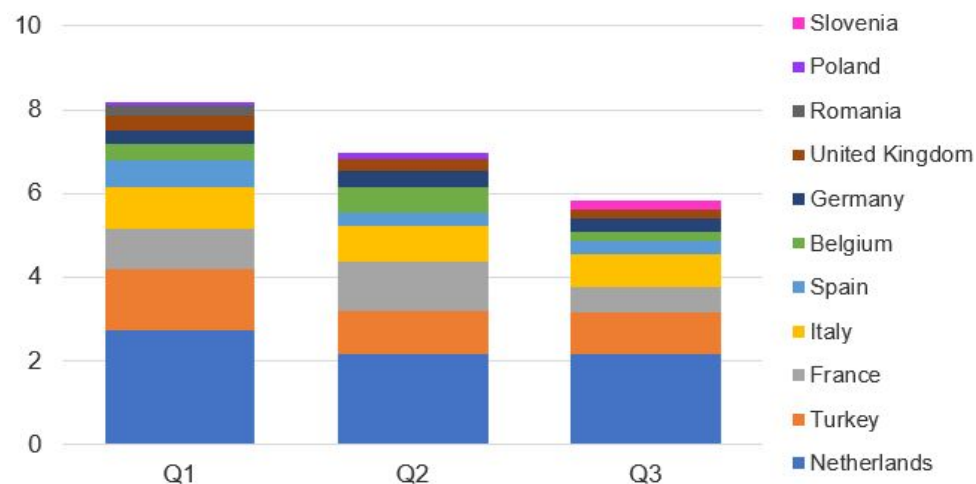


Source: S&P Global Commodity Insights

EU steel demand to weaken next year

- German GDP minus 0.3% in 2023
- Steel inventories still high despite production cuts, though energy costs have eased
- We expect more steel output reductions if margins do not improve
- **We have lowered our EU steel price forecasts in 2023**

BRAZILIAN IRON ORE EXPORTS TO EUROPE 2022



Source: S&P Global Commodities at Sea

Northern EU HRC Steel Price Forecast 2022/23

	HRC	PMI	Steel Output	Flats stocks
	<i>EU Domestic ex-Ruhr</i>	<i>Germany</i>	<i>German Monthly Average</i>	<i>Germany</i>
	<i>EUR/mt</i>	<i>Points</i>	<i>Million mt</i>	<i>Million mt</i>
Sep-22	750	48.3	2.8	1.4
Oct-22	680	48.8	2.8	1.4
Nov-22	630	49.1	2.9	1.3
Dec-22	640	49.0	2.8	1.3
Jan-23	650	49.3	3.0	1.3
Feb-23	655	50.0	3.0	1.4
Mar-23	650	49.3	3.1	1.4
Apr-23	680	48.7	2.9	1.4
May-23	670	49.1	2.9	1.4
Jun-23	660	50.7	2.8	1.4
Jul-23	690	51.3	2.6	1.4
Aug-23	720	51.0	2.7	1.4
Sep-23	720	50.4	2.9	1.4
Oct-23	700	51.0	3.2	1.4
Nov-23	680	51.3	2.9	1.3
Dec-23	700	51.2	2.8	1.3
Q3-22	789	49	3	1
Q4-22	650	49	3	1
CY-22	904	53	3	1
Q1-23	652	50	3	1
Q2-23	670	49	3	1
Q3-23	710	51	3	1
Q4-23	693	51	3	1

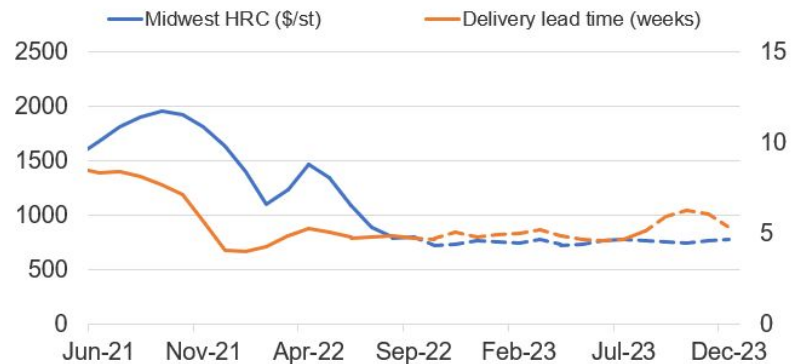
US steel market subdued next year

New US flat steel capacity

Company	Project	State	Capacity (million mt)	Steelmaking route	Scheduled start date
Steel Dynamics	Sinton	Texas	3	EAF	2022
Nucor	Gallatin	Kentucky	1.4	EAF	2022
BlueScope Steel	North Star	Ohio	0.9	EAF	2022
ArcelorMittal-Nippon Steel	Calvert	Alabama	1.5	EAF	2023
Commercial Metals Co	Arizona 2	Arizona	0.5	EAF	2023
Nucor	EAF mill	Midwest	3	EAF	2024
Nucor	EAF mill	South Atlantic	0.4	EAF	2024
US Steel	EAF mill	Arkansas or Alabama	3	EAF	2024
Pacific Steel Group	Mojave	California	0.4	EAF	2025

Source S&P Global Commodity Insights, Company updates

US MIDWEST HRC PRICES AND DELIVERY LEAD TIME FORECAST



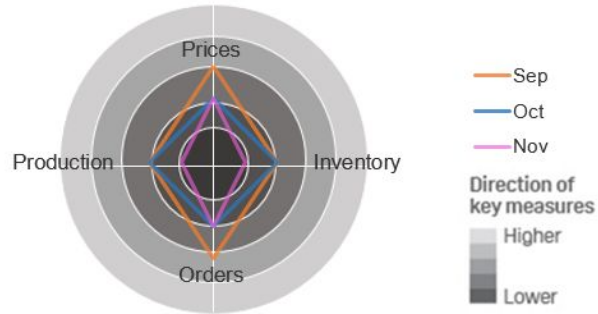
Source: S&P Global Commodity Insights

US Midwest HRC Steel Price Forecast 2022/23

	HRC	PMI	Utilization	Delivery lead times
	<i>US Midwest</i>	<i>Domestic US</i>	<i>Domestic US</i>	<i>Domestic US</i>
	<i>\$/st</i>	<i>Points</i>	<i>%</i>	<i>Weeks</i>
Sep-22	800	53.2	76.4	4.8
Oct-22	720	53.1	76.0	4.7
Nov-22	740	53.0	76.6	5.1
Dec-22	770	53.3	77.5	4.8
Jan-23	760	53.7	77.2	5.0
Feb-23	750	54.1	77.0	5.0
Mar-23	780	54.1	77.2	5.2
Apr-23	730	53.0	75.9	4.9
May-23	740	52.9	75.9	4.7
Jun-23	770	53.2	76.4	4.6
Jul-23	780	53.0	76.8	4.7
Aug-23	770	52.9	77.4	5.2
Sep-23	760	53.3	77.7	5.9
Oct-23	750	53.3	77.6	6.3
Nov-23	770	53.2	78.2	6.1
Dec-23	780	53.5	79.2	5.4
Q3-22	830	52.9	78.3	4.8
Q4-22	743	53.2	76.7	4.9
CY-22	1,030	54.7	79.2	4.8
Q1-23	763	54.0	77.1	5.0
Q2-23	747	53.0	76.1	4.7

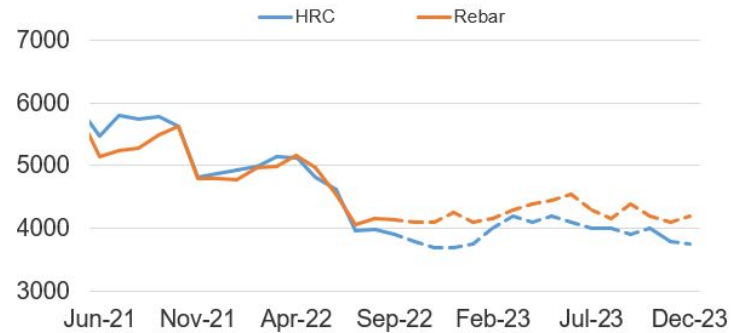
China steel: Market hoping for stimulus

CHINA STEEL MARKET DIRECTION IN OCT-NOV 2022



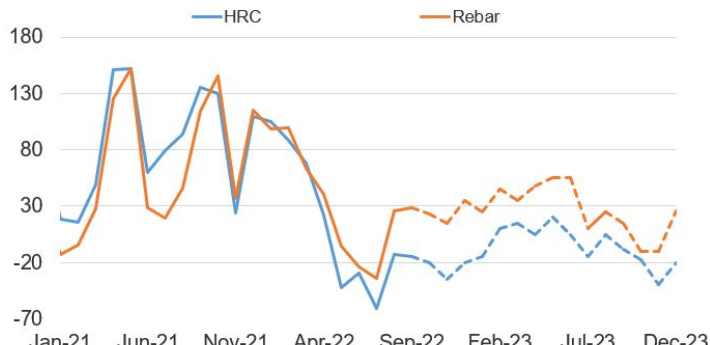
Source: S&P Global Commodity Insights

CHINA DOMESTIC STEEL PRICES AND FORECAST (Yuan/mt)



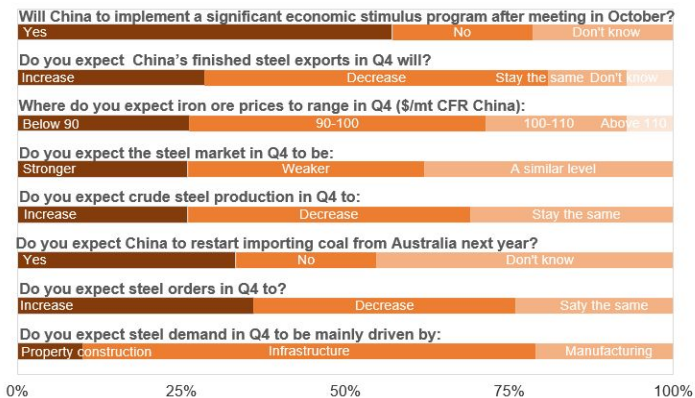
Source: S&P Global Commodity Insights

CHINA DOMESTIC MILL MARGINS AND ESTIMATION (\$/mt)



Source: S&P Global Commodity Insights

China iron ore and steel: market view of Q4, 2022



Source: S&P Global Commodity Insights

- **China set to maintain its zero-Covid policy**
- **Market hoping for stimulus measures during March government meeting**
- Property construction to stay weak: house sales to fall by up to 28-33%, L-shaped recovery next year (S&P Ratings)
- **Does housing stimulus even have ability to kick-start activity, demand anymore?**
- Manufacturing recovery was short-lived; some upside for auto
- Infrastructure unlikely to offset lackluster property demand, bond issuance not helping much
- S&P Ratings: China GDP 2.7% in 2022; 4.7% in 2023
- HRC mill margins negative since June, but prices robust

Survey: Hopes pinned on stimulus measures

WHERE DO YOU EXPECT IRON ORE PRICES TO RANGE IN Q4?



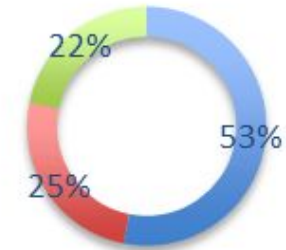
Source: S&P Global Commodity Insights

COMPARED WITH Q3, DO YOU EXPECT CHINESE CRUDE STEEL PRODUCTION IN Q4 WILL?



Source: S&P Global Commodity Insights

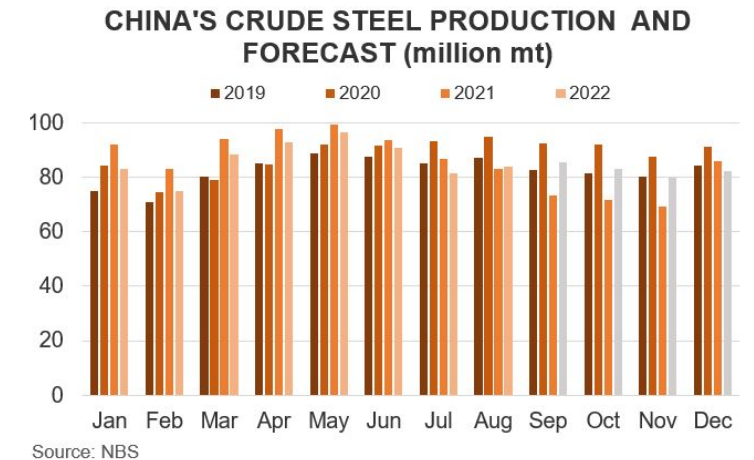
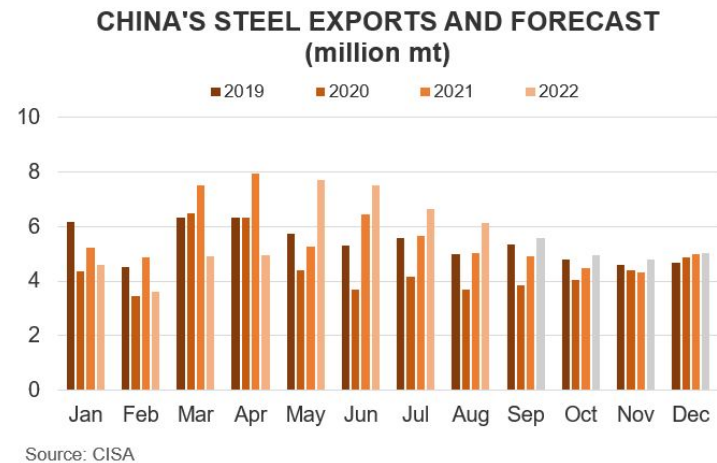
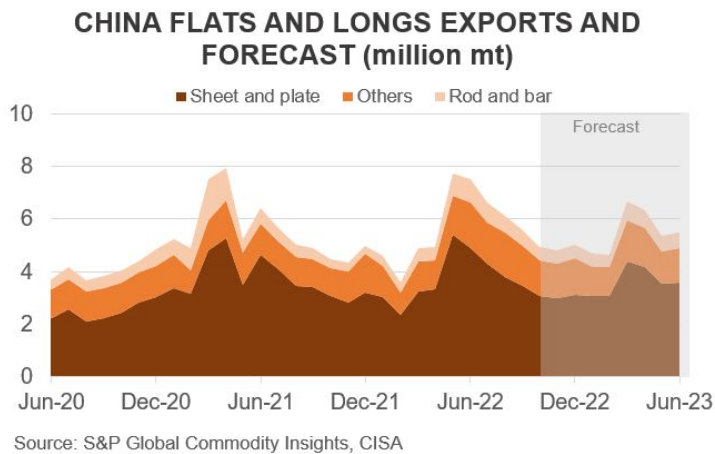
Do you expect China to implement a significant economic stimulus program after the conference in October to activate economy and steel demand?



■ Yes ■ No ■ Don't know

China production, exports at similar levels to last year

- We expect crude steel output to reach 1027.5 million mt in 2022, down 0.5%, or 5.3 million mt lower. For 2023, output could see a further 0.3% drop, to 1,024.4 million mt, down 3.1 million y-o-y
- New capacity due onstream but China will not allow production to grow on year
- We forecast that China's steel exports will reach 66.42 million mt in 2022; Flat steel products will reach 42.9 million mt and longs 7.11 million mt



Southeast Asia the next steel capacity growth region?

ASEAN STEEL CAPACITY EXPANSION 2022-2030



ASEAN integrated steel capacity expansion (million mt/year)

	(million mt/year)	Start date	Project status
Philippines			
Panhua Group	10	2022	Construction
Steel Asia Manufacturing/HBIS	8	2023	Delayed
Steel Asia Manufacturing*	1.2	Unknown	Delayed
Indonesia			
Dexin Steel Indonesia	2.5	2023	Delayed
Fuhai Group Indonesia	3	Unknown	Construction
Krakatau-POSCO	3	2026	Delayed
Hebei Bishi	3	2023	Awaiting approval
Gunung Raja Paksi Steel	1.5	2022	Construction
Vietnam			
Vina Roma Steel	1.1	2025	Planning
Hoa Phat	5.6	2023	Construction
Formosa Ha Tinh	14	Unknown	Planning
Malaysia			
Wen'an Iron & Steel	5	2024	Delayed
Eastern Steel	1.3	Unknown	Planning
Alliance Steel	6.5	Unknown	Delayed
Oriental Shield	2.5	2024	Delayed
Myanmar			
Kunming Iron & Steel	4	Unknown	Planning
Cambodia			
Baowu	3.1	Unknown	Planning
Total	75.8		

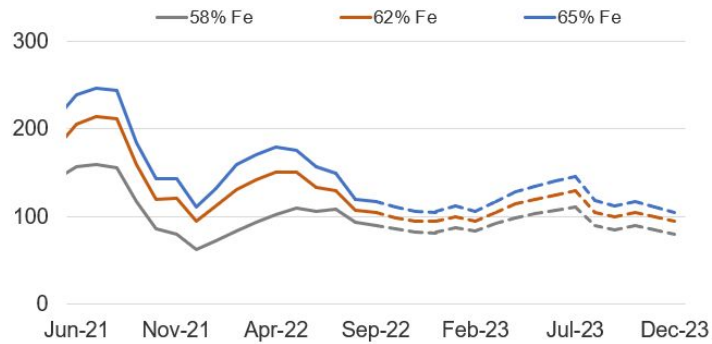
Southeast Asia steel production, raw materials demand

- We estimate around 75 million mt of new capacity in the pipeline
- But we think only 50 million mt/year could be developed by the end of the decade
- Additional raw materials demand will be modest, and growth depends on China's risk appetite

	Steel capacity	Pig iron	Iron ore	Coking coal
2022	1	0.9	1.4	0.5
2023	2	1.8	2.9	0.9
2024	6	5.4	8.6	2.7
2025	6	5.4	8.6	2.7
2026	8	7.2	11.5	3.6
2027	8	7.2	11.5	3.6
2028	7	6.3	10.1	3.2
2029	6	5.4	8.6	2.7
2030	6	5.4	8.6	2.7
Total	50	45	72.0	22.5

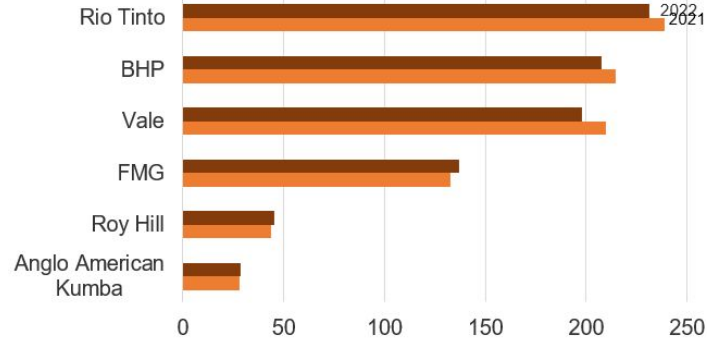
Iron ore prices to stay around \$95-\$100/mt over next 12 months

IRON ORE IMPORT PRICES ESTIMATION
(\$/mt CFR China)



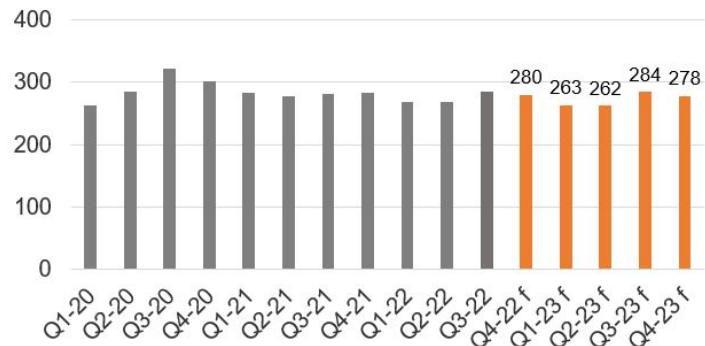
Source: S&P Global Commodity Insights

TOP IRON ORE MINERS' EXPORTS
JAN-SEP 2022 (million mt)



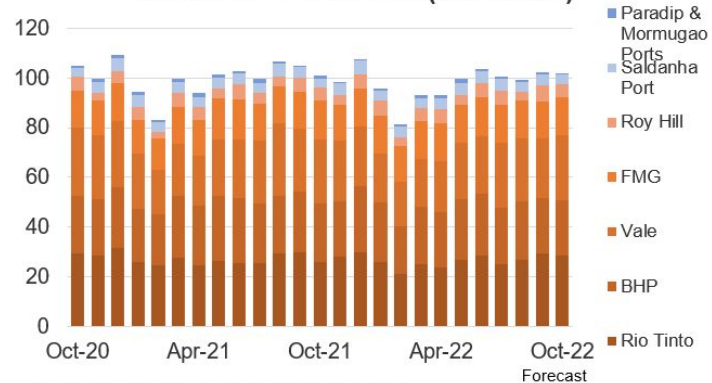
Source: Company's reports, cFlow

CHINA IRON ORE IMPORTS AND FORECAST
(million mt)



Source: China Customs, S&P Global Commodity Insights

MONTHLY IRON ORE EXPORTS FOR MAJOR PRODUCERS
(million mt)



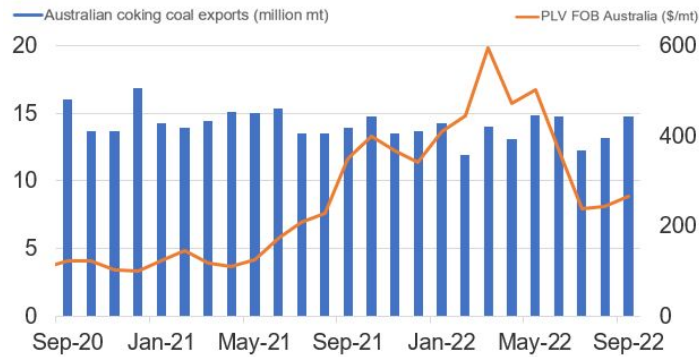
Source: S&P Global Commodity Insights, cFlow

- Iron ore prices slumped since Golden Week due to thin margins and bearish sentiment
- We see iron ore prices at \$97/mt in Q4, and \$108/mt in 2023
- We think China's iron ore imports will fall by 2% in 2022 to 1.102 billion mt before dropping another 1.2% in 2023 to 1.085 billion mt.
- Most majors struggling to keep pace with last year
- Project development is slower due to ESG concerns

Met coal price volatility continues: FOB and CFR decoupled

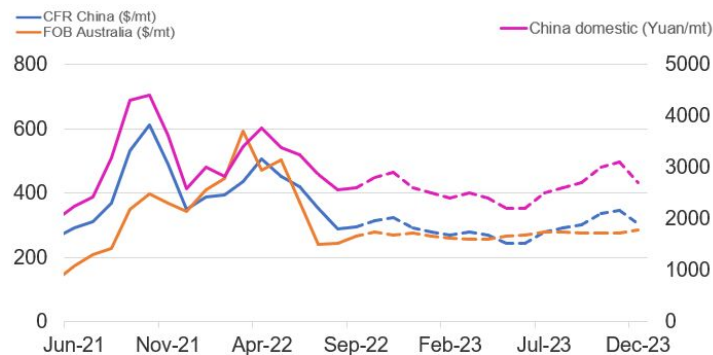
- Australian FOB prices rise on wet weather fears and strike at BHP
- Some Chinese market participants expect Australian coal import ban to be overturned

AUSTRALIAN COKING COAL EXPORTS AND PRICE



Source: S&P Global Commodities at Sea

PREMIUM LOW-VOL COKING COAL PRICES AND FORECAST



Source: S&P Global Commodity Insights

Metallurgical coal exports (mil mt)

	2019	2020	2021	2022	2023	2024
Australia	184	172	163	162	166	170
Mongolia	30	26	13	20	25	30
US	50	38	47	45	40	40
Canada	30	33	30	32	27	25
Russia	32	30	32	32	32	31
Mozambique	4	5	5	5	5	5

Metallurgical coal imports

	2019	2020	2021	2022	2023	2024
China	75	73	53	49	45	45
India	53	63	73	67	70	70
Japan	47	42	48	46	46	43
South Korea	37	35	37	35	35	34

Source: Trade data, S&P Global Commodity Insights

In summary....A rocky road ahead

- Tight credit conditions, inflation to keep downwards pressure on steel demand, prices and raw materials in 2023
- EU expected to be very weak and the US not much better
- Easing of logistics bottlenecks, supply chain pressures offset by lack of end-user demand
- Pent-up demand for manufactured goods – but can people afford it when interest rates are rising, and housing markets are deteriorating
- **Potential upside for China if COVID restrictions and economic constraints eased**
- Any global recovery likely to be in late 2023

Platts Analytics - Metals

- Monthly analysis report + slide deck
- Ad-hoc Spotlights
- Data available on Dimensions Pro

[Platts: Ferrous Markets Analytics Monthly \(spglobal.com\)](https://spglobal.com)

FERROUS MARKETS ANALYTICS

June 23, 2022

Global steel prices continue downwards trend

- US and EU steel demand and prices may not rebound until after summer vacations
- Chinese mills consider output cuts due to sub-economic margins and lack of demand
- Iron ore price volatility and weakness to prevail in Q3
- Analysis Spotlight: Southeast Asian steel capacity explosion more mirage than miracle

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[Metallurgical coal](#)
[Energy](#)
[Analysis Spotlight](#)

Forecast Summary

	Iron Ore	PLV Coking Coal	PLV Coking Coal	Coking Coal	Rebar	HRC	HRC	HRC
	CFR China	CFR China	FOB Australia	Domestic China	Domestic China	Domestic China	US Domestic west	EU Domestic ex-Ruhr
	\$/mt	\$/mt	\$/mt	Yuan/mt	Yuan/mt	Yuan/mt	\$/mt	EUR/mt
Jan-22	131	389	409	3,011	4,770	4,929	1,398	927
Feb-22	142	393	445	2,822	4,961	4,989	1,102	959
Mar-22	151	435	594	3,399	4,989	5,138	1,232	1,290
Apr-22	151	505	472	3,760	5,154	5,138	1,467	1,346
May-22	134	452	502	3,386	4,979	4,818	1,347	1,115
Jun-22	135	425	370	3,200	4,750	4,800	1,100	900
Jul-22	130	425	380	3,200	4,700	4,750	1,100	920
Aug-22	125	415	380	3,100	4,600	4,750	1,150	920
Sep-22	120	415	360	3,100	4,700	4,900	1,150	880
Oct-22	120	400	350	3,000	4,800	5,000	1,180	850
Nov-22	115	400	350	3,000	4,800	5,000	1,180	850
Dec-22	125	425	390	3,200	4,900	5,100	1,200	800
Q1-22	141	406	482	3,077	4,906	5,019	1,244	1059
Q2-22	140	461	448	3,449	4,961	4,919	1,305	1120
Q3-22	125	418	373	3,133	4,667	4,800	1,133	907
Q4-22	120	408	363	3,067	4,833	5,033	1,187	833
CY-22	132	423	417	3,181	4,842	4,943	1,217	980

Source S&P Global Commodity Insights

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