

Basic Materials - China

Copper jumped on potential production cut; cement gain on off-peak production

Industry Overview

Coal: Price down amid weak demand

The QHD 5,500kcal price was down 4.4% WoW at RMB875/t amid weak downstream demand & mild market transaction. NEWC 6,000K price was down 2.2% WoW to US\$131.50/t, at 20.3% of premium vs QHD price. The Liulin No.4 HCC price was down 4.8% WoW to RMB1,980/t. As of Mar 10, the water inflow of Three Gorges Reservoir was 6,700 cm/s, 19% higher than 2005-23 avg. of 5,642 cm/s, while storage was 29.0 bn cm, 6% lower than 2005-23 avg. of 30.8bn cm.

Cement: Price recovery led by regional off-peak production

The average national cement price was up by 0.47% to RMB352/t as of 15 Mar. Cement prices in Henan, Gansu and Shaanxi increased by RMB10-20/t, while prices in Jiangsu and Anhui decreased by RMB10-30/t. National cement demand continued to recover during the week. Supported by off-peak production in the North, cement price was up WoW.

Steel: Price down on weak demand/low raw material px

The rebar price was down 4.6% WoW to RMB3,618/t and HRC was down 3.5% WoW to RMB3,834/t. Iron ore prices -12.3% WoW to US\$104.4/t. Spot rebar cash margin +RMB154/t to RMB122/t, and spot HRC cash margin +RMB82/t to -RMB143/t. Weekly rebar/HRC production was -0.9%/+2.5% and apparent consumption +18.7%/+3.6% WoW. Mill inventory +3.2% WoW, while social inventory -0.3% WoW. Both steel apparent consumption and production continued to recover WoW, while restocking came slower WoW. However, given slow demand recovery and lower iron ore/coke prices, steel prices were forced lower.

Metals: Copper traded higher on potential production cut

LME aluminum price was +0.5% WoW to US\$2,252/t, while SHFE +0.3% WoW to RMB19,220/t. Domestic Al ingot inventory was up 11.7% WoW to 791kt. LME copper price +3.6% WoW at US\$8,888/t, SHFE was 3.52% WoW to RMB72,400/t. The Comex gold price down 0.54% WoW at US\$2,167/oz. Battery grade lithium carbonate price was up 3.0% WoW to RMB112.2k/t and battery grade lithium hydroxide price was up 4.5% WoW to RMB98.0k/

Paper: Price dropped amid weak market

Paper price was down by 0.51% WoW to RMB3,834/t as of 13 Mar. Some paper mills continued to provide quantity discount, while some paper mills just lowered their prices.

Glass: Price dipped on weak demand recovery

Given insignificant demand recovery and supply pressure from high capacity & inventory, national float price continued to drop WoW. Downstream processors remained cautious on restocking.

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Refer to important disclosures on page 25 to 27.

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Equity China Basic Materials

Matty Zhao >> Research Analyst Merrill Lynch (Hong Kong) +852 3508 4001 matty.zhao@bofa.com

Edward Leung, CFA >> Research Analyst Merrill Lynch (Hong Kong) +852 3508 3282 edward.leung@bofa.com

Miriam Chan, CFA >> Research Analyst Merrill Lynch (Hong Kong) +852 3508 7478 miriam.chan@bofa.com

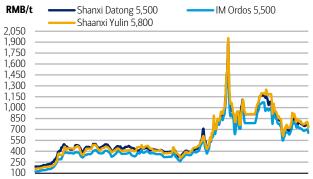
Cheng Gao >> Research Analyst Merrill Lynch (Hong Kong) +852 3508 4340 cheng.gao2@bofa.com

Yiming Wang >> Research Analyst Merrill Lynch (Hong Kong) +852 3508 5037 yiming.wang@bofa.com

Key charts

Exhibit 1: ASP at coal mine pits since 2016

Thermal coal prices at mine pits changed by -1%/+0%/+0.0% WoW to RMB758/700/806 in Shanxi (Kcal5.5k), Inner Mongolia (Kcal5.5k) and Shaanxi (Kcal5.8k)



Jan-16Oct-16Jul-17Apr-18Jan-19Oct-19Jul-20Apr-21Jan-22Oct-22Jul-23

Source: Sxcoal, BofA Global Research

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Exhibit 3: China national average cement price and inventory level

Price was up WoW while inventory was down WoW



Source: Digital Cement, Company data, BofA Global Research

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Exhibit 5: China domestic steel prices at key cities

Chinese steel prices at key cities -4.6%/-3.5% WoW for rebar/HRC



 $\textbf{Source:} \ \mathsf{Bloomberg, Wind, Sxcoal, BofA Global \ Research}$

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Exhibit 2: ASP at Qinhuangdao port (Kcal5,500)

ASP of QHD 5,500kcal spot price down 4.4% WoW to RMB875t as of 15 Mar

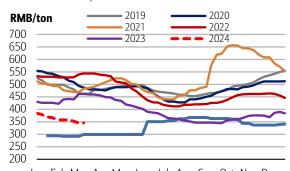


Source: Sxcoal, BofA Global Research

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Exhibit 4: East China average cement price

East China cement prices were flattish WoW



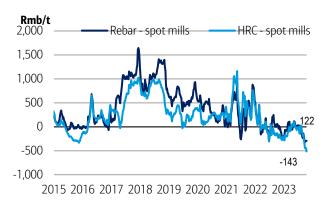
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Source: Digital Cement, Company data, BofA Global Research

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Exhibit 6: Spot cash margins at steel mills

Spot rebar cash margin +RMB154/t to RMB122/t, and spot HRC cash margin +RMB82/t to -RMB143/t



Source: Wind, BofA Global Research

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Exhibit 7: Price comparison in LME & SHFE copper

LME copper price up by 3.6% WoW to US\$8,888/t during the week ended 15 Mar, while SHFE \pm 3.52% WoW to RMB72,400/t. SHFE is at a premium of 0.2% to LME price

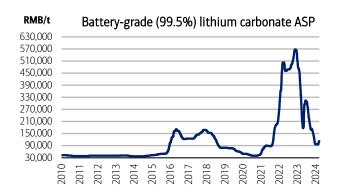


Source: Bloomberg, BofA Global Research

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Exhibit 9: Domestic battery-grade lithium carbonate ASP

Average price of domestic battery-grade lithium carbonate (99.5%) was up 3.0% WoW to RMB112.2k/t



Source: SMM, BofA Global Research

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Exhibit 11: Containerboard margin tracker

The Nine Dragons margin tracker is now indicating NP/t of RMB102/t for this week, down 1.5% WoW.



Exhibit 8: Price comparison in LME & SHFE aluminum

LME aluminum price +0.5% WoW to US\$2,252/t during the week ended 15 Mar, while SHFE up 0.3% WoW to RMB19,220/t

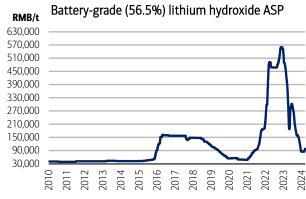


Source: Bloomberg, BofA Global Research

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Exhibit 10: Domestic battery-grade lithium hydroxide ASP

Average price of domestic battery-grade lithium hydroxide up by 4.5% WoW to RMB98.0k/t



Source: SMM, BofA Global Research

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Exhibit 12: National Float Glass Price and Xinyi float glass GPM

As of 14 Mar, the national average float glass price was down 4.7% WoW to RMB1,942/t. Our analysis shows Xinyi float glass GPM was down 2.5% WoW to 34.0%



Source: Wind, BofA Global Research, SCI99

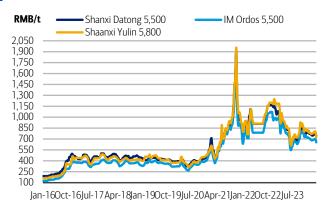


Coal: Price down amid weak demand

The QHD 5,500kcal price was down 4.4% WoW at RMB875/t amid weak downstream demand & mild market transaction. NEWC 6,000K price was down 2.2% WoW to US\$131.50/t, at 20.3% of premium vs QHD price. The Liulin No.4 HCC price was down 4.8% WoW to RMB1,980/t. As of Mar 10, the water inflow of Three Gorges Reservoir was 6,700 cm/s, 19% higher than 2005-23 avg. of 5,642 cm/s, while storage was 29.0 bn cm, 6% lower than 2005-23 avg. of 30.8bn cm.

Exhibit 13: ASP at coal mine pits

Thermal coal prices at mine pits changed by -2%/-7%/-9.2% WoW to RMB745/654/722 in Shanxi (Kcal5.5k), Inner Mongolia (Kcal5.5k) and Shaanxi (Kcal5.8k)



Source: Sxcoal. BofA Global Research

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Exhibit 14: ASP at Qinhuangdao port (Kcal5,500)

ASP of QHD 5,500kcal spot price down 4.4% WoW to RMB875t as of 15 Mar

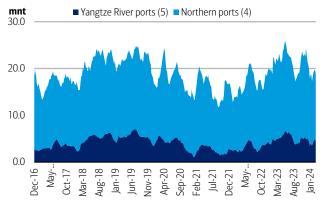


Source: Sxcoal, BofA Global Research

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Exhibit 15: Ports inventory (Northern and Southern)

Ports inventory (Northern and Southern) -4.4% WoW to 18.89mnt as of 15 Mar

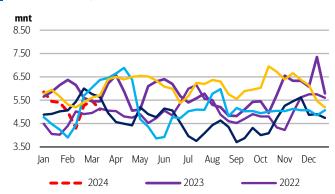


Source: Sxcoal, BofA Global Research

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Exhibit 16: QHD port inventory

QHD port inventory was down 6.9% WoW to 5.10mnt



Source: Sxcoal, BofA Global Research



Exhibit 17: China six major IPPs (unit: kt)

Inventory at the six major IPPs up 2.9% WoW to 13.10mnt as of 10 Mar; daily burn down by 1.2% WoW at 789 kt

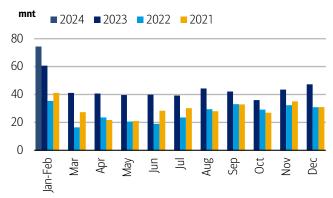


Source: Sxcoal, BofA Global Research

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Exhibit 18: China monthly coal imports

Total coal (incl. lignite) imports +22.9% YoY to 74.5mnt in Jan-Feb 2024



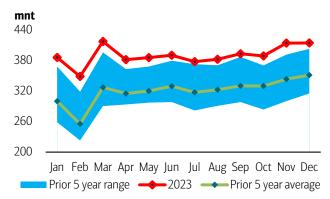
Source: China Customs, Wind, BofA Global Research

Note: Since 2020, no single-month trade data are available for Jan-Feb

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Exhibit 19: YTD China coal production

China coal production in Dec 23 increased 1.9% YoY to 414.3mnt

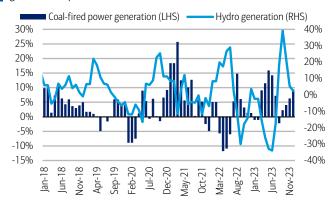


Source: China NBS, Wind, BofA Global Research

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Exhibit 20: Monthly power generation growth

Thermal power generation up 9.3% YoY in Dec'23, total power generation up 2.5% YoY in Dec'23

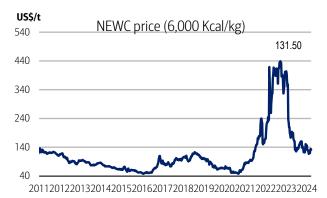


Source: Wind, BofA Global Research

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Exhibit 21: NEWC 6,000K thermal coal

NEWC 6,000K thermal coal was down 2.2% WoW to US\$131.50/t, at 20.3% of premium vs QHD price

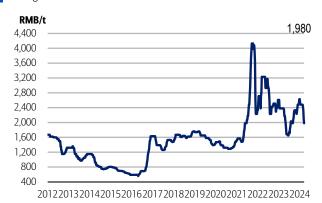


Source: Sxcoal, Wind, BofA Global Research

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Exhibit 22: Liulin No. 4 hard coking coal price (incl. VAT)

Liulin No. 4 hard coking coal price was down 4.8% WoW to RMB1,980/t during the week ended 15 Mar

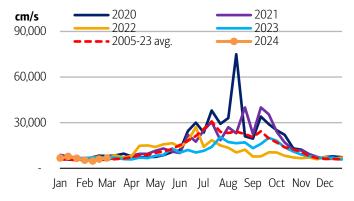


Source: Sxcoal, BofA Global Research



Exhibit 23: Three Gorges Reservoir water inflow (cm/s)

As of Mar 10, the water inflow of Three Gorges Reservoir was 6,700 cm/s, 19% higher than 2005-23 avg. of 5,642 cm/s



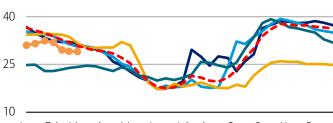
Source: Wind, BofA Global Research

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Exhibit 24: Three Gorges Reservoir water storage (bn cm)

As of Mar 10, the water storage of Three Gorges Reservoir was 29.0 bn cm, 6% lower than 2005-23 avg. of 30.8bn cm





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

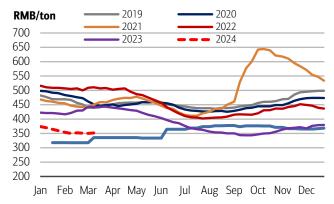
Source: Wind, BofA Global Research

Cement: Price recovery led by regional off-peak production

The average national cement price was up by 0.47% to RMB352/t as of 15 Mar. Cement prices in Henan, Gansu and Shaanxi increased by RMB10-20/t, while prices in Jiangsu and Anhui decreased by RMB10-30/t. Nationwide shipment ratio came at 34.8%, +12.7% WoW, while nationwide inventory ratio reached 62.2%, -1.8% WoW. National cement demand continued to recover during the week. Supported by off-peak production in the North, cement price was up WoW.

Exhibit 25: National average Cement price

Average national cement price up 0.47% to RMB352/t as of 15 Mar

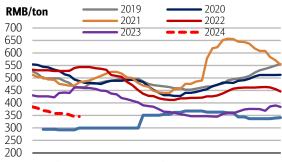


Source: Digital Cement, BofA Global Research

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Exhibit 26: East China average cement price

East China cement prices were flattish WoW



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

Source: Digital Cement, BofA Global Research

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Exhibit 27: Central South China average cement price

Central South China cement prices up 0.7% WoW

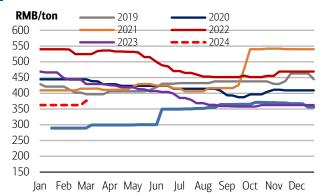


Source: Digital Cement, BofA Global Research

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Exhibit 27: North China average cement price

North China cement prices were flattish WoW

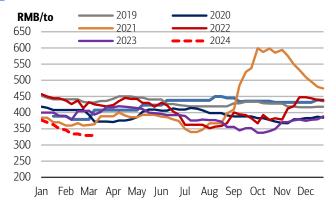


Source: Digital Cement, BofA Global Research



Exhibit 28: South West China average cement price

SW China cement prices were flattish WoW

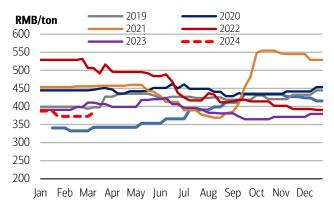


Source: Digital Cement, BofA Global Research

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Exhibit 30: North West China average cement price

NW China cement prices were flattish WoW

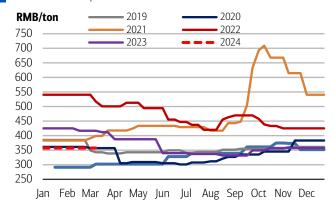


Source: Digital Cement, BofA Global Research

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Exhibit 29: North East China average cement price

NE China cement prices were flattish WoW



Source: Digital Cement, BofA Global Research

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Exhibit 31: China national average cement prices vs inventory

Price was up WoW while inventory was down WoW



Source: Digital Cement, BofA Global Research

Steel: Price down on weak demand/low raw material prices

The rebar price was down 4.6% WoW to RMB3,618/t and HRC was down 3.5% WoW to RMB3,834/t. Iron ore prices -12.3% WoW to US\$104.4/t. Spot rebar cash margin +RMB154/t to RMB122/t, and spot HRC cash margin +RMB82/t to -RMB143/t. Weekly rebar/HRC production was -0.9%/+2.5% and apparent consumption +18.7%/+3.6% WoW. Mill inventory +3.2% WoW, while social inventory -0.3% WoW. Both steel apparent consumption and production continued to recover WoW, while restocking came slower WoW. However, given slow demand recovery and lower iron ore/coke prices, steel prices were forced lower.

Exhibit 32: China domestic steel prices at key cities

Chinese steel prices at key cities -4.6%/-3.5% WoW for rebar/HRC

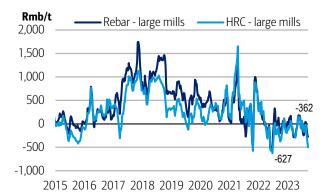


Source: Wind, BofA Global Research

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Exhibit 34: Cash margins at large mills (inventory lag)

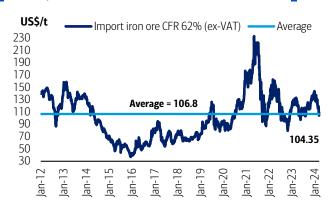
Rebar cash margin at large mills -RMB9/t to -RMB362/t, and HRC cash margin at those mills -RMB81/t to -RMB627/t



Source: Wind, BofA Global Research

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Exhibit 33: Imported iron ore CFR 62% prices at Tianjin Port Iron ore price -12.3% WoW to US\$104.4/t as of 14 Mar

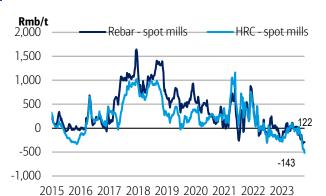


Source: Wind, BofA Global Research

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Exhibit 35: Spot cash margins at steel mills

Spot rebar cash margin +RMB154/t to RMB122/t, and spot HRC cash margin +RMB82/t to -RMB143/t

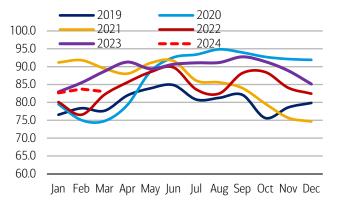


Source: Wind, BofA Global Research



Exhibit 36: Utilization rates of blast furnaces across the nation

Utilization rates of blast furnaces across the nation -0.53ppt WoW to 82.58% as of 15 \mbox{Mar}

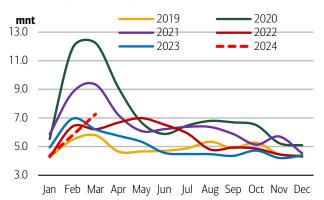


Source: Mysteel, BofA Global Research

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Exhibit 38: Steel inventory at mills

Steel inventory at mills up by 3.2% WoW to 7.46mnt

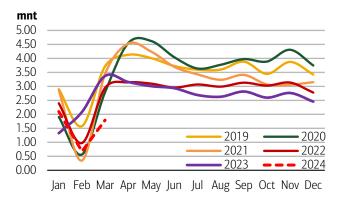


Source: Mysteel, BofA Global Research

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Exhibit 40: Weekly rebar apparent consumption

Weekly rebar apparent consumption was +18.7% WoW to 2.12mnt

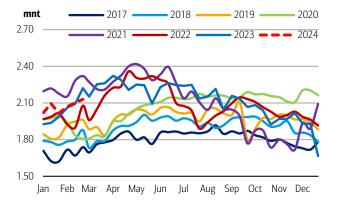


Source: Mysteel, BofA Global Research

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Exhibit 37: CISA crude steel output for large and median mills (10-day)

Daily crude steel production at CISA's sample was reported to be 2.130 mnt/day as of 29 Feb, compared with 2.101 mnt/day in the previous 10 days

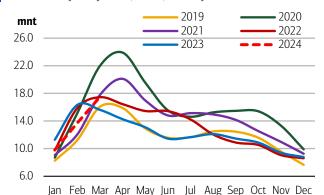


Source: CISA, BofA Global Research

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Exhibit 39: Steel inventory at key cities (traders)

Steel inventory at key cities (traders) down by 0.3% WoW to 17.60mt



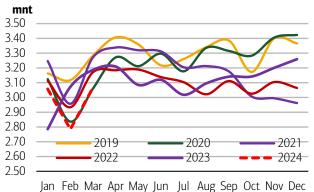
Source: Mysteel, BofA Global Research

Source: Mysteel, BofA Global Research

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Exhibit 41: Weekly HRC apparent consumption

Weekly HRC apparent consumption was +3.6% WoW to 3.15mnt



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Exhibit 42: Weekly rebar output

Rebar output for the week ended 15 Mar decreased 0.9% WoW to 2.19mnt

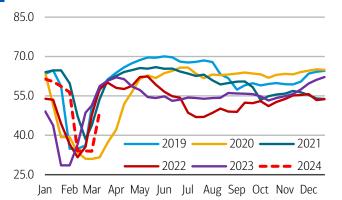


Source: Mysteel, BofA Global Research

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Exhibit 44: Operating rate of Electric-arc-furnace (EAF) mills

The operating rate of EAF mills +2.52ppt WoW to 51.61% in the week ended 15 \mbox{Mar}

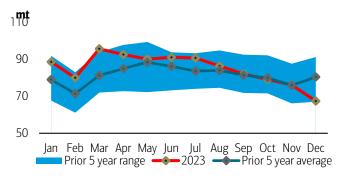


Source: Custeel, BofA Global Research

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Exhibit 46: YTD China crude steel production

China produced 67.4mnt of crude steel in Nov 2023, -14.9% YoY

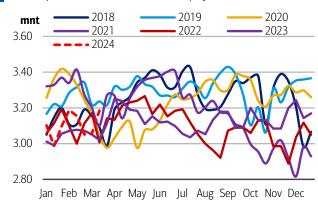


Source: NBS, CEIC, BofA Global Research

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Exhibit 43: Weekly HRC output

HRC output for the week ended 15 Mar up by 2.5% WoW to 3.19mnt

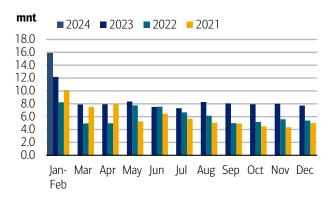


Source: Mysteel, BofA Global Research

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Exhibit 45: China monthly steel product exports

In Jan-Feb 24, Chinese exports of steel were 15.91mnt, +30.5% YoY. YTD net exports reached 14.8mnt, + 35% YoY

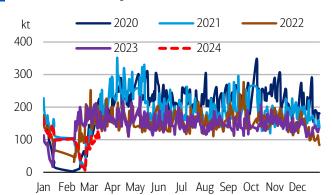


Source: China Customs, CEIC, BofA Global Research

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Exhibit 47: Construction steel trading volume

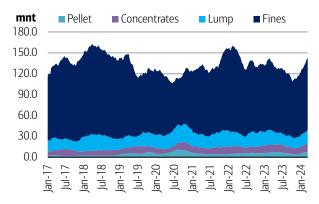
Construction steel trading volume -16.9% WoW to 93.6kt/d as of 14 Mar



Source: Wind, BofA Global Research

Exhibit 48: Iron ore port inventory by product type

Iron ore fine currently accounts for 72.9% of port inventory

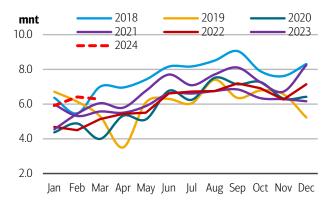


Source: Mysteel, BofA Global Research

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Exhibit 50: Weekly iron ore exports from major Brazilian ports

Weekly iron ore exports from major Brazilian ports – Mar 24 up 3.9% yoy as of 8 Mar

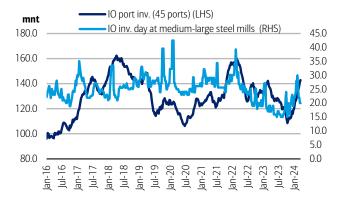


Source: Mysteel, BofA Global Research

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Exhibit 49: Iron ore inventory at large-medium steel mills and at ports

Iron ore port inventory ended at 142.82mnt, +1.0% WoW as of 15 Mar

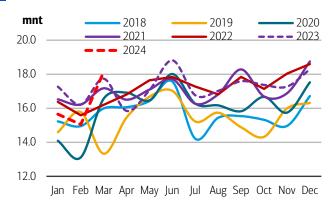


Source: Wind, BofA Global Research

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Exhibit 51: Weekly iron ore exports from major Australian ports

Weekly iron ore exports from major Australian ports – Mar 24 up 2.2% yoy as of 8 Mar

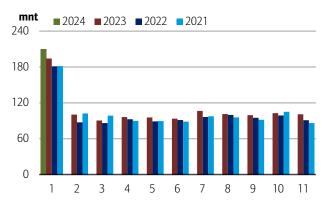


Source: Mysteel, BofA Global Research

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Exhibit 52: China monthly iron ore imports

Chinese imports of iron ore in Jan-Feb 2024 were 209.5mnt, +7.9% YoY



Source: China Customs, Wind, BofA Global Research

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Exhibit 53: Daily domestic iron ore concentrate production

Daily domestic iron ore concentrate production at 186 iron ore miners / 363 mines Mar 24 up 9.9% YoY, as of 8 Mar



Source: Mysteel, BofA Global Research



Metals: Copper traded higher on potential production cut

LME aluminum price was +0.5% WoW to US\$2,252/t, while SHFE +0.3% WoW to RMB19,220/t. Domestic Al ingot inventory was up 11.7% WoW to 791kt. LME copper price +3.6% WoW at US\$8,888/t, SHFE was 3.52% WoW to RMB72,400/t. According to Baiinfo, 1.6mt of capacity was expected to resume and 1.25mt of new capacity was expected to launch in 2024. The Comex gold price down 0.54% WoW at US\$2,167/oz. Battery grade lithium carbonate price was up 3.0% WoW to RMB112.2k/t and battery grade lithium hydroxide price was up 4.5% WoW to RMB98.0k/t.

Aluminum

Exhibit 54: Price comparison in LME & SHFE Aluminum

LME aluminum price $\pm 0.5\%$ WoW to US\$2,252/t during the week ended 15 Mar, while SHFE up 0.3% WoW to RMB19,220/t



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Exhibit 56: Avg. national aluminum margin (60% captive plant)

Avg. national aluminum margin +RMB50/t WoW to RMB2,583/t as of 15 Mar

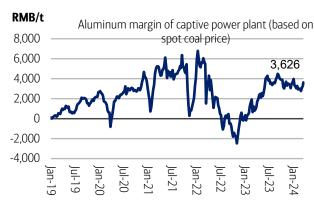


Source: Bloomberg, SMM, Wind, BofA Global Research

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Exhibit 55: Aluminum margin of captive power plant

Aluminum margin of captive power plant +RMB294/t WoW to RMB3,626/t as of 15 Mar $\,$

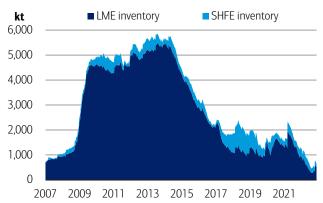


Source: Bloomberg, SMM, Wind, BofA Global Research

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Exhibit 57: Inventory comparison in LME & SHFE Aluminum

LME aluminum inventory decreased by 1.2% WoW to 573kt, and SHFE inventory was up 12.0% WoW to 206kt

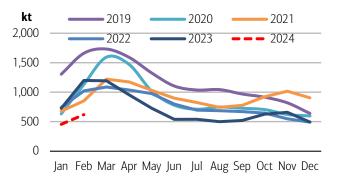


Source: Bloomberg, BofA Global Research



Exhibit 58: Aluminum ingot inventory

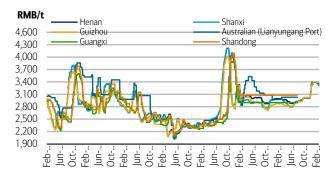
Domestic aluminum ingot inventory up 2.7% WoW to 845kt as of 14 Mar



Source: SMM, BofA Global Research

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Exhibit 59: Domestic alumina pricesDomestic alumina prices down 0.40% to RMB3,348t as of 15 Mar



Source: Wind, BofA Global Research

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Exhibit 60: Aluminum capacity change in 2024

1.6mt of capacity was expected to resume and 1.25mt of new capacity was expected to launch in 2024

	Suspension	Resumption	Expected resumption in remaining-24	Total expected resumption in FY24	New start	Expected new start in remaining-24	Total expected new start in FY24
Yunnan	=		- 1,235	1,235	-	530	530
Inner Mongolia	=			-	-	420	420
Shanxi	=			-	-	-	=
Guangxi	=		- 20	20	=	=	=
Xinjiang	=		= =	=	=	200	200
Henan	=			=	=	=	=
Guizhou	-		- 135	135	-	100	100
Liaoning	=		= =	=	=	=	=
Chongqing	=		= =	=	=	=	=
Qinghai	-			-	-	-	-
Gansu	=		= =	=	=	=	=
Sichuan	20		- 175	175	=	=	=
Shandong	<u>-</u>			=	<u> </u>	=	-
Total	20		- 1,565	1,565	-	1,250	1,250

Source: Baiinfo, BofA Global Research

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Copper & Gold

Exhibit 61: Price comparison in LME & SHFE copper

LME copper price up by 3.6% WoW to US\$8,888/t during the week ended 15 Mar, while SHFE +3.52% WoW to RMB72,400/t. SHFE is at a premium of 0.2% to LME price

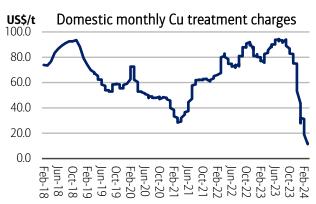


Source: Bloomberg, BofA Global Research

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Exhibit 63: Domestic monthly treatment charges on Cu concentrate

Domestic monthly treatment charges on copper concentrate: US\$12.2/t as of 15 Mar

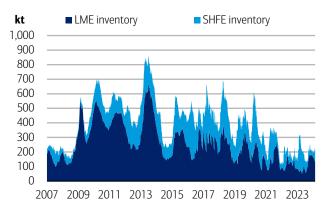


Source: Wind, BofA Global Research

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Exhibit 65: Inventory comparison in LME & SHFE copper

LME copper inventory -4.2% WoW to 108kt, and SHFE inventory +19.7% WoW to 286kt



Source: Bloomberg, BofA Global Research

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Exhibit 62: Gold spot price

The Comex gold (spot) price down 0.54% WoW to US\$2,167/oz



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Exhibit 64: Domestic monthly refining charges on blister copper

Domestic monthly refining charges on blister copper: Mar-avg.: RMB850/t



Source: Mymetal, BofA Global Research

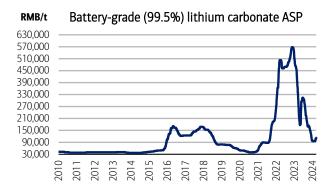


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Lithium

Exhibit 66: Domestic battery-grade lithium carbonate ASP

Average price of domestic battery-grade lithium carbonate (99.5%) was up 3.0% WoW to RMB112.2k/t

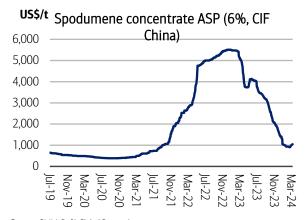


Source: SMM, BofA Global Research

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Exhibit 68: Spodumene concentrate ASP (6%, CIF China)

Average price of spodumene concentrate ASP (6%, CIF China) up 2.96% WoW to USD1,045/t

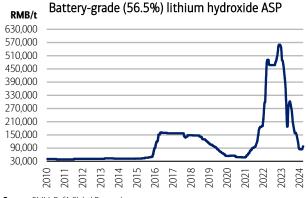


Source: SMM, BofA Global Research

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Exhibit 67: Domestic battery-grade lithium hydroxide ASP

Average price of domestic battery-grade lithium hydroxide up by 4.5% WoW to RMB98.0k/t

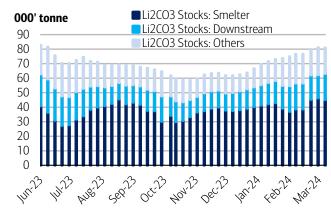


Source: SMM, BofA Global Research

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Exhibit 69: Domestic lithium carbonate inventory

Lithium carbonate inventory ramped up entering new year



Source: SMM, BofA Global Research

Paper: Price dropped amid weak market

Raw paper: Paper price was down by 0.51% WoW to RMB3,834/t as of 13 Mar. Some paper mills continued to provide quantity discount, while some paper mills just lowered their prices. More paper mills started to lose balance between production and sales. Several paper mills were still under suspension since Spring Festival due to poor market condition.

Waste paper: In the domestic market, the China OCC average was down by 1.6% WoW to RMB1,500/t.

Spread: The Nine Dragons margin tracker is now indicating NP/t of RMB102/t for this week.

Exhibit 70: China linerboard and corrugating medium price

Paper was down 0.51% WoW to RMB3,834/t as of 13 Mar.



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Exhibit 71: Nine Dragons Margin tracker

The Nine Dragons margin tracker is now indicating NP/t of RMB102/t for this week, down 1.5% WoW.



 $\textbf{Source:} \ \mathsf{UMPaper}, \ \mathsf{RISI}, \ \mathsf{BofA} \ \mathsf{Global} \ \mathsf{Research}$

Glass: Price dipped on weak demand recovery

Given insignificant demand recovery and supply pressure from high capacity & inventory, national float price continued to drop WoW. Downstream processors remained cautious on restocking.

Market price and raw materials prices: As of 14 Mar, the national average float glass price (incl. VAT) was down by 4.7% WoW at RMB1,942/t. The soda ash price was down by 0.7% WoW to RMB2,000/t as of 15 Mar. National direct supplied pipeline natural gas remains RMB2.30/cbm. Our analysis shows Xinyi float glass GPM was down by 2.5% to 34.0%.

Inventory and capacity: As of 14 Mar, national inventory was 56.57mn weight case, representing 26.45 inventory days. Nationally effective capacity of all float glass lines was 175,765t/d.

Exhibit 72: National Float Glass Price and Xinyi float glass GPM

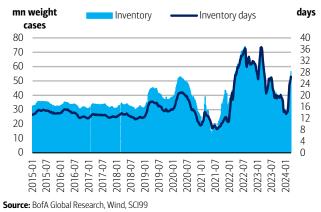
As of 14 Mar, the national average float glass price was down 4.7% WoW to RMB1,942/t. Our analysis shows Xinyi float glass GPM was down 2.5% WoW to 34.0%



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Exhibit 73: Inventory & Inventory day

As of 14 Mar, national inventory was $56.57 \, \text{mn}$ weight case, representing 26.45 inventory days



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Exhibit 74: China Soda Ash Price (incl. VAT)

The soda ash price was down 0.7% WoW to RMB2,000/t as of 15 Mar

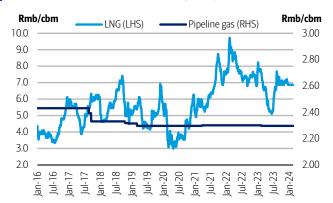


Source: BofA Global Research, Wind, SCI99

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Exhibit 75: China Natural Gas Price

National direct supplied pipeline natural gas stayed at RMB2.30/cbm

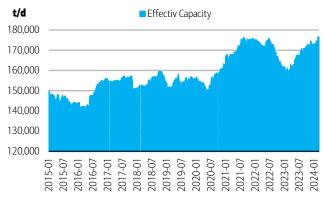


Source: BofA Global Research, Wind, SCI99



Exhibit 76: Effective capacity % of total capacity

Nationally effective capacity of all float glass lines was 175,765t/d.



Source: BofA Global Research, Wind, SCI99



Solar materials: stable after small rebound

Overall polysilicon price stays stable at RMB61/kg (incl. VAT) with GPM at 27% in the week of March 11st 2024, among which polycrystalline silicon at RMB58/kg, granular silicon at RMB56/kg and electronic grade polysilicon at USD 28.5/kg.

PV film price also stayed unchanged this week with POE PV film, EVA PV (white) film, EVA PV film (transparent), POE PV film-380g/m2, EPE PV film – 440g/m2 prices all stay unchanged as of March 15th at RMB13.46/m2, RMB8.17/m2, RMB7.48/m2, RMB11.12/m2, RMB9.22/m2. On upstream, Solar grade EVA copolymer price increased 1% wow to RMB12,643/t while imported POE copolymer stayed unchanged at USD2.800/t as of March 15th.

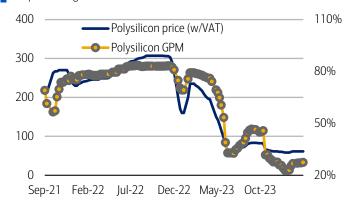
Spot 3.2mm coated solar glass price stayed unchanged wow at RMB25.5/sqm, and 2.0mm coated solar glass price also stayed same wow at RMB16.5/sqm as of March 14th. Solar glass daily production increased 1% wow to 99,810t/day while inventory days decreased 9% wow to 23.32 as of March 14th, implying solar glass demand is climbing this week. Market transaction improved WoW amid rigid & restocking demand from module producers. Given improved S/D balance and steady raw material prices, profitability among solar glass producers continued to improve.

Market price and GPM: As of 14 Mar, China 3.2mm coated solar glass price was flattish WoW at RMB25.50/sqm, China 2.0mm coated solar glass price was flattish at RMB16.4/sqm. Our analysis shows Flat Glass GPM was flattish WoW at 21.2%, Xinyi Solar GPM was flattish WoW at 23.0%

Inventory and capacity: As of 14 Mar, sample inventory days was at 23.3. Nationally effective capacity of all solar glass lines was 99,810t/d.

Exhibit 77: Polysilicon price and GPM%

Polysilicon price stays stable at RMB62/KG (w/VAT) and polysilicon GPM also keeps unchanged at 27% as of March 14th.

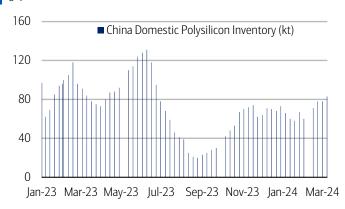


Source: Solarzoom, BofA Global Research

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Exhibit 78: China Domestic Polysilicon Inventory

China domestic polysilicon inventory increased 6% wow to 83kt as of March $8^{\text{th}}. \\$

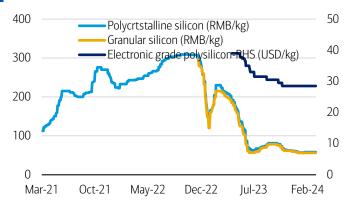


Source: SMM, BofA Global Research



Exhibit 79: Polysilicon price by type

Polycrystalline silicon, granular silicon and electronic grade polysilicon prices all stay unchanged at RMB58/kg, RMB56/kg and USD28.5/kg respectively as of March 15th.

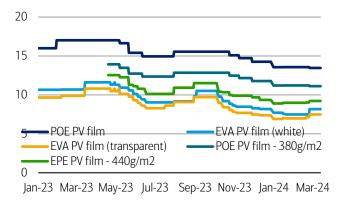


Source: SMM, BofA Global Research

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Exhibit 81: PV Film Price (RMB/M2)

POE PV film, EVA PV (white) film, EVA PV film (transparent), POE PV film-380g/m2, EPE PV film – 440g/m2 prices all stay unchanged as of March 15th at RMB13.46/m2, RMB8.17/m2, RMB7.48/m2, RMB11.12/m2, RMB9.22/m2.

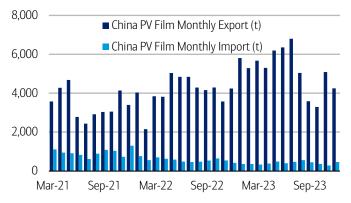


Source: SMM, BofA Global Research

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Exhibit 83: China PV Film Export and Import

As of December 2023, China exported 4,248t PV film and imported 459t.

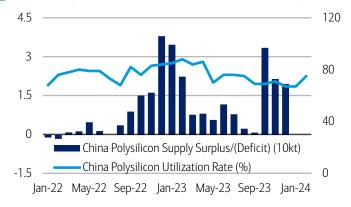


Source: SMM, BofA Global Research

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Exhibit 80: China Polysilicon Supply Surplus and Utilization Rate

As of year end 2023, China polysilicon supply surplus at 19.5 kt. China polysilicon player held utilization rate at 75% at the end of February 2024.

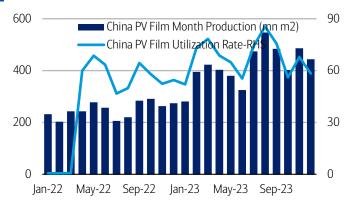


Source: SMM, BofA Global Research

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Exhibit 82: China PV Film Production

As of December 2023, China produced 444mn m2 PV film monthly with 58.34% utilization rate.

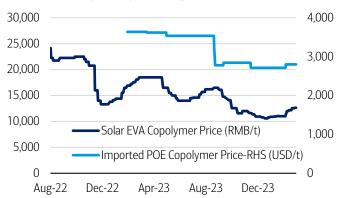


Source: SMM, BofA Global Research

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Exhibit 84: EVA POE copolymer price

Solar grade EVA copolymer price increased 1% wow to RMB12,643/t while imported POE copolymer stayed unchanged at USD2,800/t as of March 15th.

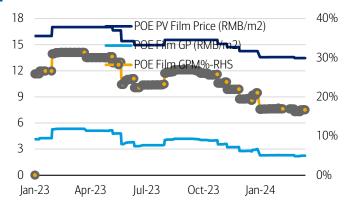


Source: SMM, BofA Global Research



Exhibit 85: Calculated POE Film GPM%

Calculated POE film GPM% stayed unchanged compared to past week at 16.7% as of March 15^{th} .

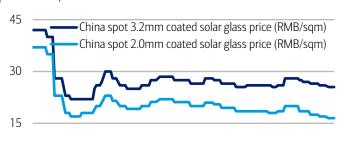


Source: SMM, Wind, BofA Global Research

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Exhibit 87: China Solar Glass Price

China spot 3.2mm coated solar glass price stayed unchanged wow at RMB25.5/sqm, and 2.0mm coated solar glass price also stayed same wow at RMB16.5/sqm as of March 14^{th} .



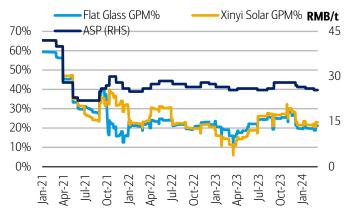
Jan-21 Jun-21 Nov-21 Apr-22 Sep-22 Feb-23 Jul-23 Dec-23

Source: SMM, BofA Global Research

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Exhibit 89: National solar glass price and Flat Glass/Xinyi Solar GPM

As of 14 Mar, China average solar glass (3.2mm/2.0mm, coated) price was flattish at RMB25.5/sqm and RMB16.5/sqm, respectively. Our analysis shows Xinyi float glass GPM was flattish WoW at 21.2%/23.0%, respectively

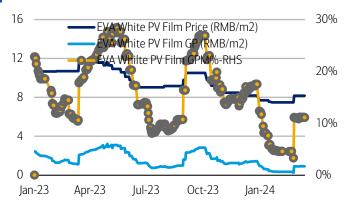


Source: Wind, SCI99, Baiinfo, BofA Global Research

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Exhibit 86: Calculated EVA White PV Film GPM%

Calculated EVA white PV film GPM stayed unchanged wow at 11.1% as of March $15^{\rm th}$.

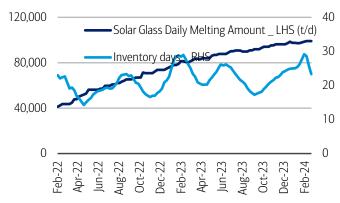


Source: SMM, Wind, BofA Global Research

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Exhibit 88: China Solar Glass Production and Inventory

China solar glass daily production increased 1% wow to 99,810t/day while inventory days decreased 9% wow to 23.32 as of March 14th.

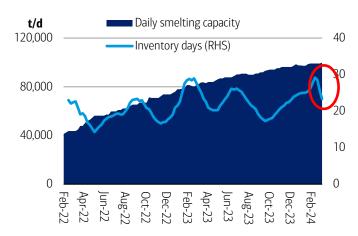


Source: SMM, BofA Global Research

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Exhibit 90: Daily smelting capacity and inventory days

As of 14 Mar, sample inventory days was at 23.3. Nationally effective capacity of all solar glass lines was 99,810t/d.



Source: SCI99. BofA Global Research



Appendix

Exhibit 79: GlossarySummary of terminologies/abbreviation mentioned in the report

Abbreviation	Elaboration
WoW	Week-on-Week
ASP	Average Selling Price
HRC	Hot Rolled Coil
LME	London Metal Exchange
SHFE	Shanghai Futures Exchange
OCC	Old Corrugated Containers
ND	Nine Dragon Paper (02689 HK)
GPM	Gross Profit Margin
NP	Net Profit
QHD 5,500kcal	Qinghuangdao port 5,500kcal thermal coal
NEWC 6,000K	Newcastle 6000kcal thermal coal
Liulin No.4 HCC	Liulin No.4 hard coking coal

Source: BofA Global Research



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Investment rating	Total return expectation (within 12-month period of date of initial	Ratings dispersion guidelines for coverage cluster ^{R1}		
	rating)			

Buy $\geq 10\%$ $\leq 70\%$ Neutral $\geq 0\%$ $\leq 30\%$ Underperform N/A $\geq 20\%$

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