

## China Oil &amp; Gas

## Weekly Theme: 2M24 oil &amp; gas import rose YoY; CNOOC discovered new oilfield

Industry Overview

## 2M24 oil &amp; gas import increased YoY; fuel exports shrank

China Customs released combined data for Jan and Feb 2024 to avoid distortions created by the variable timing of the CNY holiday: in 2M24, oil imports recorded 88.3mnt/10.7mbd, up by 3% YoY from 10.4mbd in 2M23 on solid travel demand during the CNY, while slightly lower than 11.3mbd in Nov and Dec 2023. The import price fell to US\$78.7/b in 2M24 vs. US\$83.1/b in Dec 2023. If the output were the same as the last two months, the apparent oil demand would be 123.2mnt/15.0mbd, +3% YoY. Natural gas (including PNG and LNG) import was 30.1bcm in 2M24, +23% YoY on cheaper LNG spot prices (JKM swap future in 2M24 was -53% YoY and -32% compared with that in Dec 2023), indicating a record high two-month YTD gas import volume. If gas production were the same as the last two months, the apparent gas demand should be 70.9bcm, +12% YoY. In 2M24, China made 8.8mnt of refined product exports (typically includes gasoline, diesel, jet fuel and fuel oil), -31% YoY, due to robust domestic demand.

## Key messages on energy from China's Two Sessions

China held Two Sessions, namely the National People's Congress (NPC) and Chinese People's Political Consultative Conference (CPPCC) last week, outlining the government's key agendas for 2024. We summarized key energy-related messages: Beijing reiterated the importance of energy security and instructed strategic mineral resource, including oil & gas, producers to secure investment in exploration and development. Meanwhile, energy transition is on the agenda, with targets to limit the fossil fuel consumption but promote green energy and energy storage system development, with coal & coal fired power designed to provide a safety net. This echoes our views on solid fundamentals for coal and oil & gas producers (see 2024 O&G Y/A report). The Govt Work Report also mentioned controlling fossil fuels consumption and accelerating the transition to new energy through new-built solar and wind farms, as well as long distance electricity transmission, and distributed energy resources with storage. We reckon this is in line with the industry development, but the over-capacity issue remains the biggest threat for producers.

## CNOOC discovers reserve of over 100mnt of oil equivalent

China's CNOOC announced the discovery of a new deep-water and deep-play oilfield with a proven reserve of 102mnt of oil equivalent in the South China Sea. The discovered reserve, Kaiping South Oilfield, is in the Pearl River Delta near Shenzhen, Guangdong province and with an average water depth of beyond 500 meters. The reserve primarily contains light crude in a reservoir layer of 100.6 meters. The test drilling suggests that the daily oil and gas output exceeds 1000 metric tons. In recent years, China has accelerated the research pace in deep-water exploration and succeeded in discovering the Baodao 21-1 gas field in South China Sea and Bozhong 26-6 oilfield in China's Bohai Sea. The discovery of Kaiping South Oilfield further stresses the important supplementary roles of offshore oil & gas resources amid aging onshore fields.

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CNY: Chinese New Year

Mnt: Million tons

Mbd: Million barrels per day

LNG: Liquefied natural gas

YTD: Year to date

NPC: National People's Congress

CPPCC: Chinese People's Political Consultative Conference

More abbreviations in appendix

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Timestamp: 11 March 2024 12:41PM EDT

## Weekly updates

Oil prices: Brent oil price fell 1.8% WoW to US\$82.1/b and WTI oil price decreased 2.5% WoW to US\$78.0/b in the week ended 8 Mar 2024. WTI discount to Brent expanded to US\$4.1/b.

Factors supporting oil prices include:

- *Reuters* reports that Russia pledged to cut an extra 471kbd oil output and exports in the second quarter, in addition to its previous reduction, with the export cuts to be gradually eased and more weights put on the output side as time progresses;
- The US rigs count declined to 619 rigs (oil rigs -2 WoW to 504 and gas rigs -4 WoW to 115) through the week ended 8 Mar 2024;
- The US crude output (one-week lag) decreased 0.1mbd WoW to 13.2mbd through the week ended 1 Mar 2024;

Factors suppressing oil prices include:

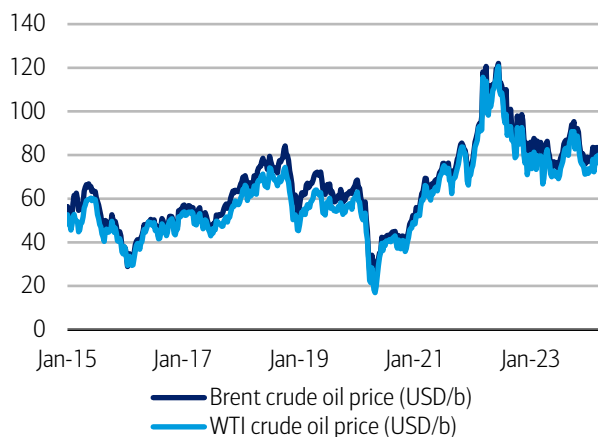
- *Reuters* reports that IEA sees a well-supplied oil market in 2024, with the major contribution from non-OPEC+ producers, including the US, Brazil and Guyana;
- *Reuters* reports that market was concerned about China demand, expecting more future stimulus to fulfill the 5% economic growth target for 2024;
- The US commercial crude oil inventory increased 1mb WoW to 449mb through the week ended 1 Mar 2024;

*Reuters* reports that Saudi Aramco planned to reduce Arab Heavy crude supply to Asia in April due to oilfield maintenance, with supplies of other crude grades maintained;

*JLC* reports that the drilling of PetroChina's Shendi Take-1 broke through 10,000 meters, becoming the world's second and Asia's first oil well exceeding 10,000 meters.

**Exhibit 1: Brent and WTI weekly prices**

Brent oil price decreased 1.8% WoW to US\$82.1/b and WTI oil price decreased 2.5% WoW to US\$78.0/b in the week ended 8 Mar 2024

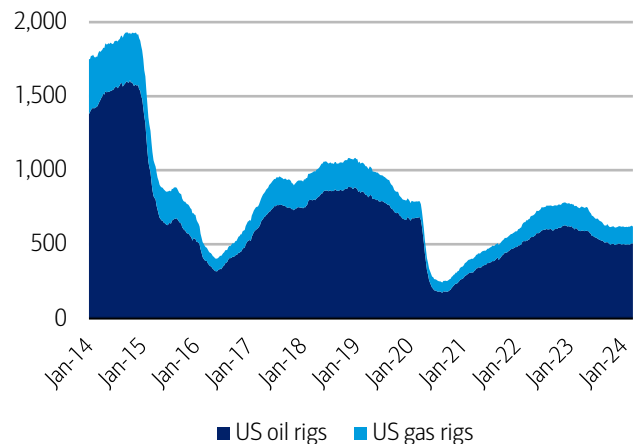


Source: Bloomberg, BofA Global Research

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**Exhibit 2: US weekly oil and gas rig count**

Oil rigs -2 and gas rigs -4 WoW

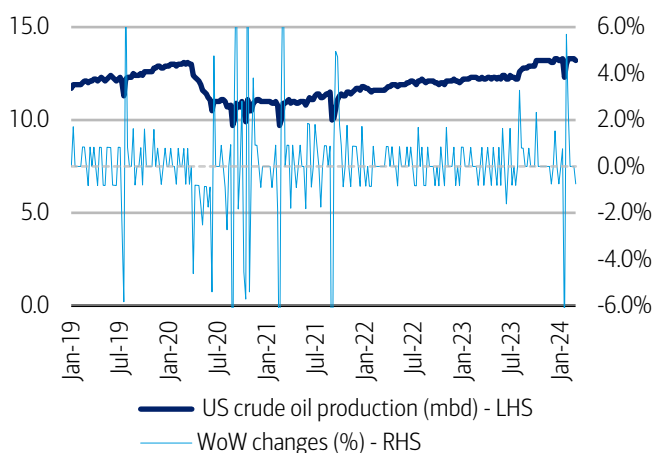


Source: Baker Hughes, Bloomberg, BofA Global Research

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**Exhibit 3: US crude oil production**

Decreased 0.1mbd WoW to 13.2mbd

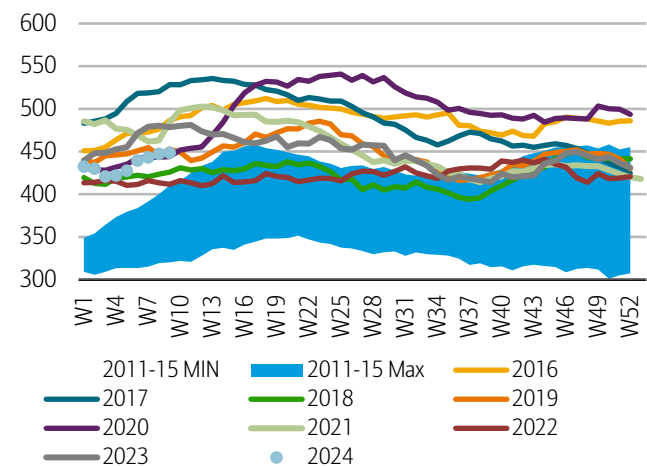


Source: EIA, Bloomberg, BofA Global Research

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**Exhibit 4: US weekly crude oil inventory (mb)**

Increased 1mb WoW to 449mb

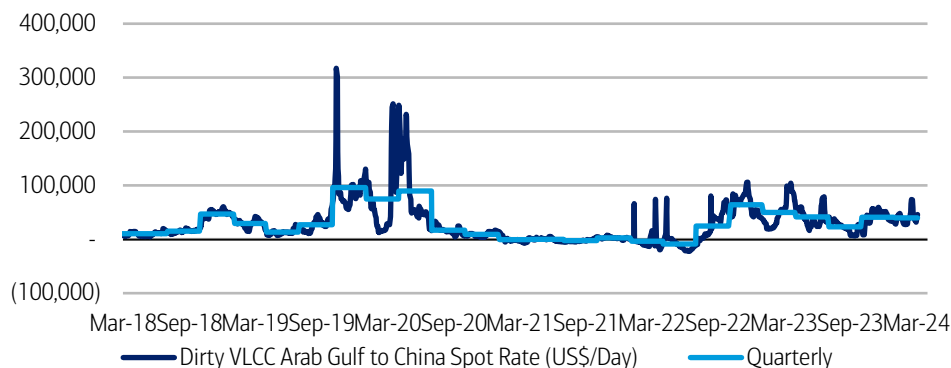


Source: EIA, Bloomberg, BofA Global Research

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**Exhibit 5: Dirty VLCC Arab Gulf to China spot rate (US\$/day)**

Crude oil shipping cost from Arab Gulf to China



Source: Bloomberg, BofA Global Research

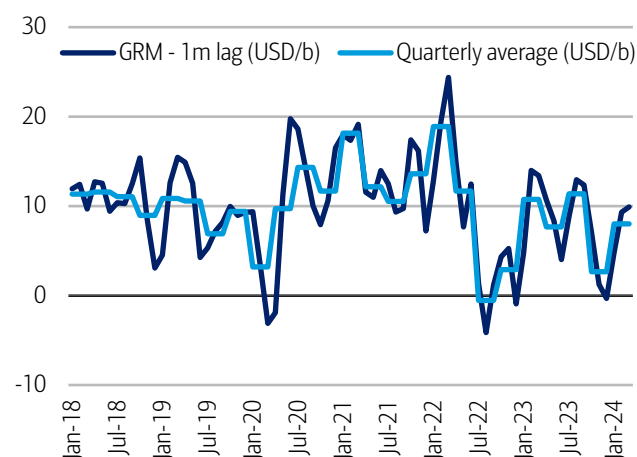
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## Refining

- China's refining margin (one-month crude price lag) in Mar 2024 rose to US\$9.9/b, from US\$9.3/b in Feb 2024. YTD, average GRM came in at US\$8.0/b;
- National Development and Reform Commission (NDRC) raised gasoline and diesel retail prices by RMB125/ton and RMB120/ton in the latest round of price adjustment on 4 Mar 2024; prices are now RMB9,105/ton and RMB8,065/ton, respectively. The next round of price adjustment is scheduled for 18 Mar;
- The run rate of independent refineries in Shandong in the week ended 8 Mar 2024 decreased WoW to 53.5% vs. 56.8% in Feb 2024. The YTD rate averaged 57.6% in 2024, vs 61.9% in 2023;
- Based on one-month lag crude price, China diesel crack margin increased WoW to US\$21.6/b and gasoline crack margin rose WoW to US\$14.7/b in the week ended 8 Mar 2024;
- Compared with Singapore Dubai Crack margin, the export arbitrage spread for diesel narrowed WoW to a positive US\$0.9/b (-US\$3.1/b WoW) and for gasoline narrowed WoW to positive US\$1.9/b (-US\$2.4/b WoW) in the week ended 8 Mar 2024;
- JLC reports that Sinopec Yangzi Petrochemical in Jiangsu province brought its refinery upgrade project online with the #3 catalytic cracker successfully put into operation.

### Exhibit 6: China gross refining margin (GRM) with 1month lag in crude prices

Profit of US\$9.9/b in Mar 2024, vs. US\$9.3/b in the previous month

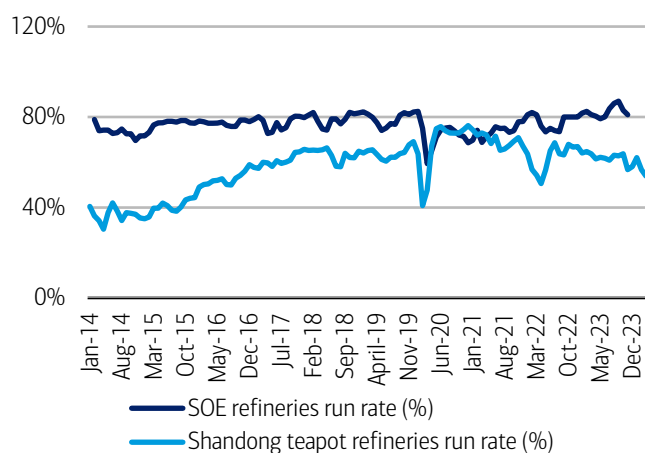


Source: Wind, BofA Global Research estimates

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### Exhibit 7: Shandong teapots refinery run rates (%)

Average run rate of teapots declined to 53.5% vs. 56.8% in Feb for the week ended 8 Mar

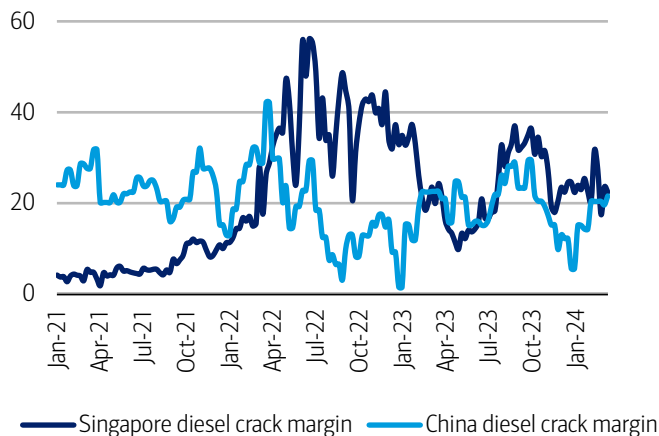


Source: Bloomberg, S&P Global, BofA Global Research

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**Exhibit 8: Diesel crack margin in China vs. Singapore (US\$/b)**

China diesel crack margin was US\$21.6/b for the week ended 8 Mar

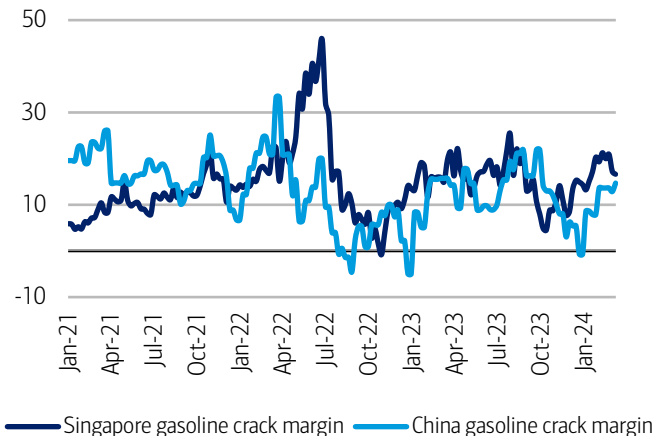


Source: Bloomberg, Wind, BofA Global Research

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**Exhibit 9: Gasoline crack margin in China vs. Singapore (US\$/b)**

China gasoline crack margin was US\$14.7/b for the week ended 8 Mar

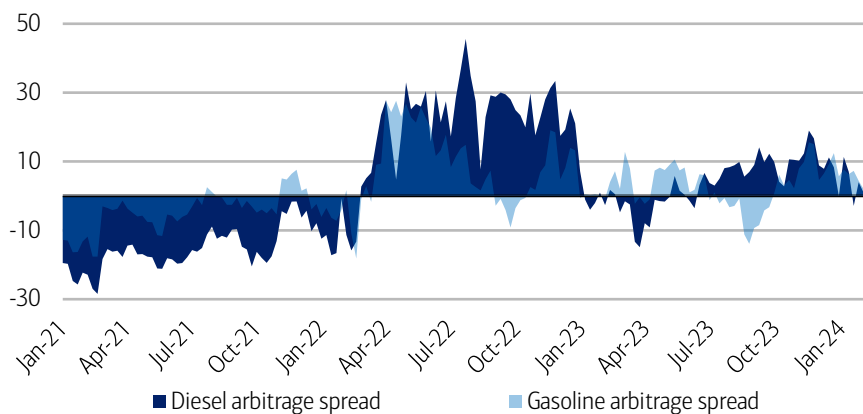


Source: Bloomberg, Wind, BofA Global Research

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**Exhibit 10: Diesel/gasoline export arbitrage spread**

Export arbitrage spread for diesel narrowed WoW to positive US\$0.9/b (-US\$3.1/b WoW) and that for gasoline narrowed to positive US\$1.9/b (-US\$2.4/b WoW), respectively, for the week ended 8 Mar



Source: Bloomberg, Wind, BofA Global Research

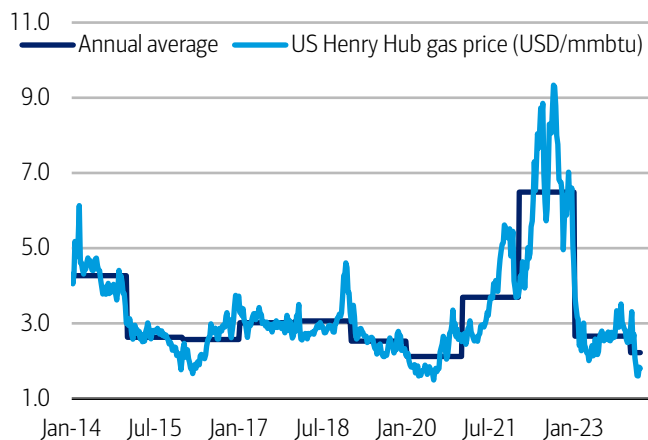
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## Natural gas

- The US Henry Hub natural gas price decreased by 1.6% WoW to US\$1.81/mmbtu in the week ended 8 Mar 2024, 25.7% lower YoY;
- The Netherlands TTF natural gas price increased by 4.8% WoW to US\$8.54/mmbtu in the week ended 8 Mar 2024, 49.2% lower YoY;
- The JKM swap future rose by 1.9% WoW to USD8.46/mmbtu in the week ended 8 Mar 2024, 40.2% lower YoY;
- Reuters reports that Saudi Aramco and UAE's ADNOC are in talks to invest in US LNG projects to defend their positions in the increasingly competitive market.

### Exhibit 11: US Henry Hub natural gas price (US\$/mmbtu)

Decreased by 1.6% WoW to US\$1.81/mmbtu

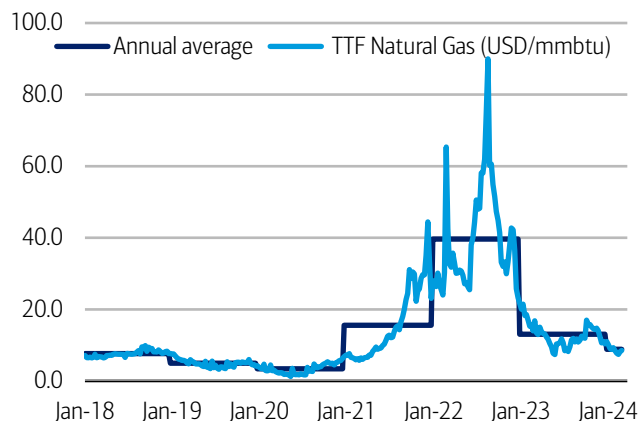


Source: Bloomberg, BofA Global Research

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### Exhibit 12: Netherlands TTF Natural gas price (US\$/mmbtu)

Increased by 4.8% WoW to US\$8.54/mmbtu

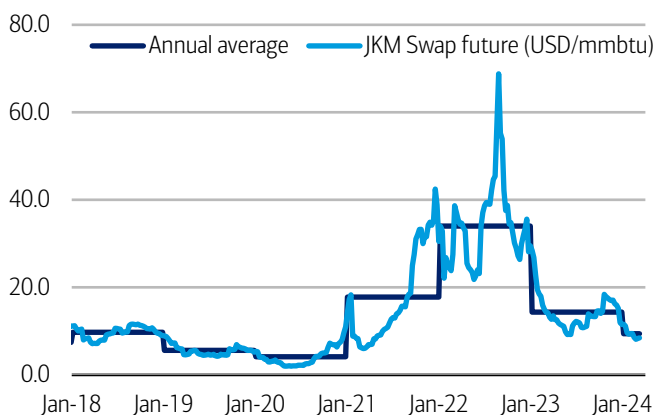


Source: Bloomberg, BofA Global Research

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### Exhibit 13: Northern Asia LNG-JKM swap future (US\$/mmbtu)

Increased by 1.9% WoW to USD8.46/mmbtu



Source: Bloomberg, BofA Global Research

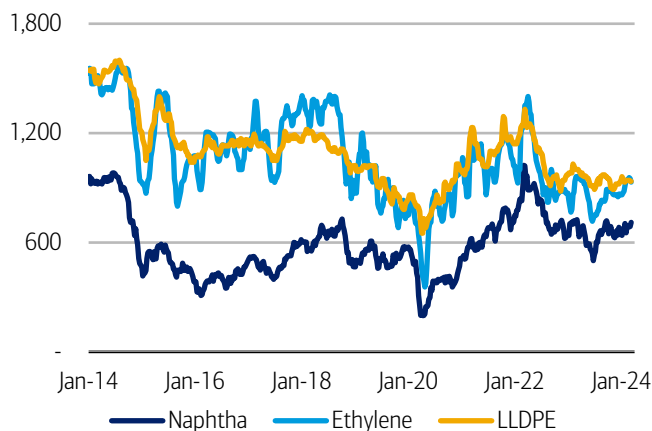
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## Chemicals

- Northeast Asia LLDPE price was flat WoW at US\$936/ton and PP price was flat WoW at US\$874/ton in the week ended 8 Mar 2024;
- LLDPE-ethylene spread expanded WoW to US\$5/ton;
- PP-propylene spread was flat WoW at US\$58/ton;
- East China m-MDI price decreased by 2% WoW to RMB20,800/ton and p-MDI price decreased by 3% WoW to RMB16,600/ton in the week ended 8 Mar 2024.

### Exhibit 14: Northeast Asia naphtha, ethylene and LLDPE prices (US\$/ton)

Ethylene price decreased and LLDPE price flat WoW

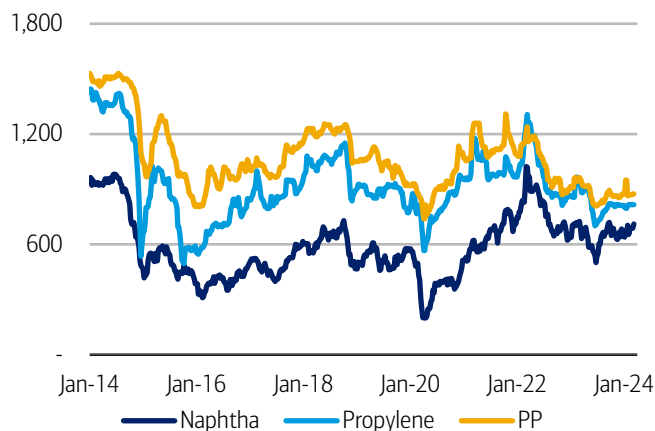


Source: Wind, BofA Global Research

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### Exhibit 15: Northeast Asia naphtha, propylene and PP prices (US\$/ton)

Propylene price and PP price flat WoW

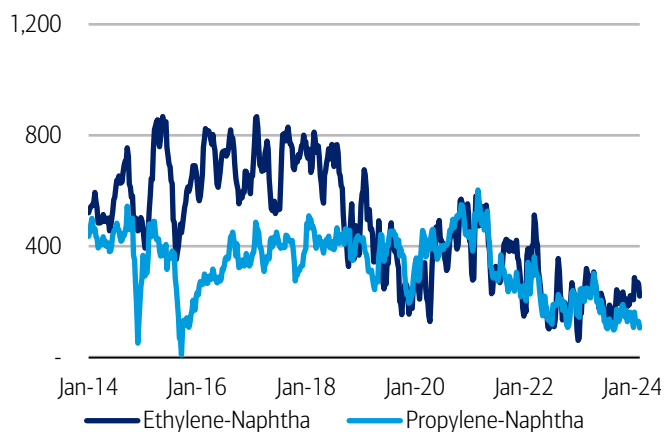


Source: Wind, BofA Global Research

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### Exhibit 16: Northeast Asia ethylene/propylene-naphtha spread (US\$/ton)

Ethylene-naphtha spread and propylene-naphtha spread narrowed WoW

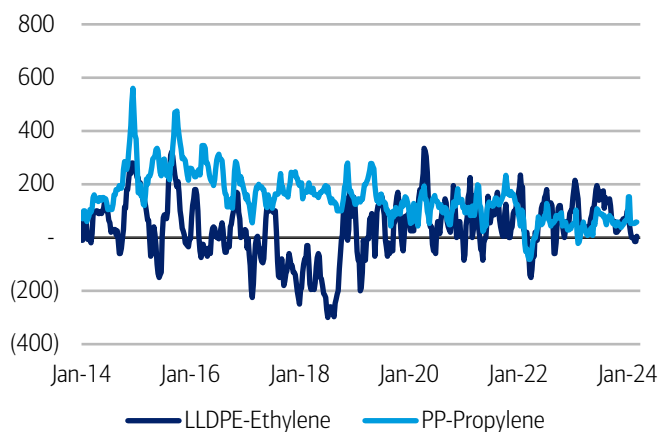


Source: Wind, BofA Global Research

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### Exhibit 17: Northeast Asia LLDPE-ethylene and PP-propylene spread (US\$/ton)

LLDPE-ethylene spread expanded and PP-propylene spread flat WoW

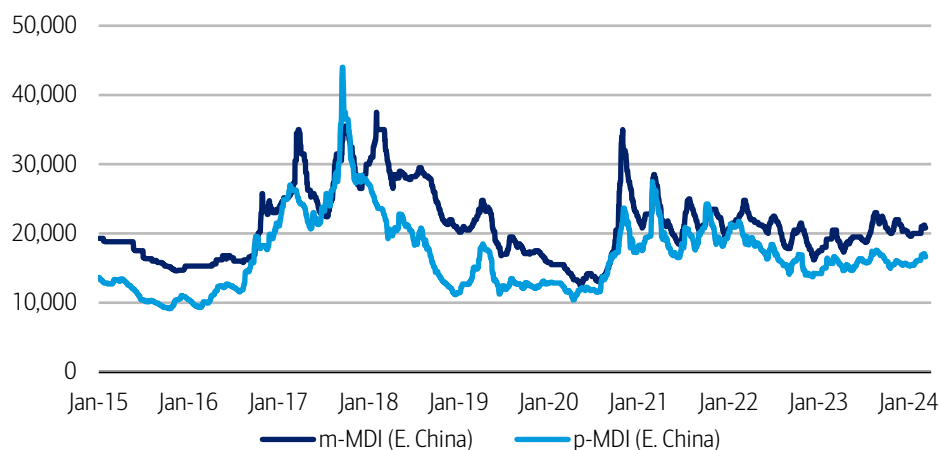


Source: Wind, BofA Global Research

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**Exhibit 18: East China m-MDI and p-MDI price (RMB/ton)**

East China m-MDI price decreased by 2% WoW to RMB20,800/ton and p-MDI price decreased by 3% WoW to RMB16,600/ton in the week ended 8 Mar



Source: Wind, BofA Global Research

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## Appendix

**Exhibit 21: Abbreviations**

Abbreviations used in the report

Abbreviation	Full name	Abbreviation	Full name
bbl/b	Barrel(s)	m-MDI	Monomeric methylene diphenyl isocyanate
bnt	Billion tons	mntpa	Million tons per year
CCS	Carbon capture and storage	MoM	Month on month
CDU	Crude distillation unit	mnt	Million tons
cm	Cubic meters	MTBE	Methyl tert-butyl ether
CNPC	China national petroleum corporation	NBS	National bureau of statistics
EOR	Enhanced oil recovery	NDRC	National Development and Reform Commission
EVA	Ethylene vinyl acetate	PTR	PetroChina
FDPE	Full density polyethylene	p-MDI	Polymeric methylene diphenyl isocyanate
GRM	Gross refining margin	PP	Polypropylene
HDPE	High density polyethylene	SNP	Sinopec
JKM	Japan/Korea Marker (Northeast Asian spot price index for LNG delivered ex-ship to Japan and Korea)	SOE	State owned enterprise
ktpa	Thousand tons per year	t	Ton(s)
LLDPE	Linear low-density polyethylene	TTF	Title transfer facility
LNG	Liquefied natural gas	UHMWPE	Ultra-high molecular weight polyethylene
mb	Million barrels	VLCC	Very large crude carrier
mbd	Million barrels per day	WoW	Week on week
mmbtu	Metric million British thermal unit	WTI	West Texas Intermediate
mmt	Million metric tons	YoY	Year on year
MDI	Methylene diphenyl isocyanate	YTD	Year to date

Source: BofA Global Research

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