# Global Energy Weekly

# Oil wants to break free

## The battle between oil and money kept prices in a range...

Rising interest rates around the world have reined in global aggregate demand, and curbed oil consumption growth in the process (see The battle royale between oil and money). Meanwhile, OPEC has put in place a new proactive strategy to curb supplies ahead of a potential meltdown in oil prices (see OPEC's whatever it takes moment). As a third balancing leg to the oil market, China has also emerged from the Covid pandemic weaker-than-thought due to the drag from manufacturing and real estate. Soft growth in China has added limited upward pressure to global energy prices even if mobility indicators have continued to improve. Plus Russia has pushed more oil than expected into the seaborne market this year thanks to watered down sanctions.

## ..but the market is set to tighten, adding upward pressure

While oil prices have failed to break a range for almost a year, financial markets and our own research team believe US interest rates could peak this quarter. Moreover, OPEC+ has already implemented pretty meaningful crude oil output cuts in recent months, leading to narrower Brent-Dubai and Brent-Saudi Heavy differentials. Crucially, the incentives for Russia to cut supply in support of the oil prices have finally arrived. Deep discounts forced by the oil price cap have finally started to impact the ability of the Russian government to collect oil taxes, straining the war effort in Ukraine and creating significant cracks in military command chains. As a result, Russia is now getting serious about reducing exports to the oil market to rein in Brent-Urals differentials.

## As commodities rise, inflation pressures could resurface

Beyond Russia and Saudi Arabia, the US government has altered global oil balances by about 450 thousand b/d for 18 months by releasing strategic oil barrels at will, but the SPR is now below 350mn barrels and needs to be refilled to 500 or 600mn barrels over the coming quarters. With no SPR sales and deep OPEC cuts, the global oil market should move into a 1060k b/d deficit in 2H2023 and 430k b/d in 2024, particularly if China follows through to stimulate economic growth. As such, we reiterate our $90/bbl average Brent price forecast for 2024. Still, rising OPEC spare capacity could act as a cap to oil prices and recession risks have not disappeared. More importantly, a spike in commodity prices could reignite a run up in interest rates and restart the battle between oil and money.

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Commodities
Global

**Global Commodity Research**
BofA Europe (Madrid)

**Francisco Blanch**
Commodity & Deriv Strategist
BofA Europe (Madrid)
+34 91 514 3070

**Warren Russell, CFA**
Commodity Strategist
BofAS
+1 646 855 5211

**Rachel Wiser**
Commodity Strategist
BofAS
+1 646 743 4069

**Andy Pham**
FICC Quant Strategist
BofAS
apham3@bofa.com

**Danica Averion**
Commodity Strategist
MLI (UK)
danica_ana.averion@bofa.com

**Michael Widmer**
Commodity Strategist
MLI (UK)
+44 20 7996 0694

Acronyms-see exhibit 33 page 10

**Exhibit 1: BofA Commodity Research Themes and Outlook**

Key takeaways

| | View | Recent reports |
|---|---|---|
| **Macro outlook** | ■ Our economists see world GDP rising 3% in 2023 and expanding by 2.6% in 2024. | |
| **WTI and Brent crude oil** | ■ We project Brent and WTI to average $80/bbl and $75/bbl, respectively, in 2023.<br>■ The global oil balance should stay tight in 2023, supported by additional OPEC+ cuts starting in May, slower non-OPEC growth, and rebounding Asia demand,<br>■ We forecast global demand growth to slow to 1.2mn b/d YoY in 2023 and 1mn b/d in 2024.<br>■ Non-OPEC supply should grow roughly 1.8mn b/d YoY in 2023 and 720k b/d in 2024.<br>■ We project total US crude and NGL supply to rise 1.1mn b/d in 2023 and 600k b/d in 2024.<br>■ OPEC crude oil supplies are set to fall 650k b/d in 2023 and 230k b/d in 2024 as OPEC+ actively manages balances. | • Money breaks oil's back 08 May 2023<br>• OPEC+'s whatever it takes moment 05 April 2023<br>• Global Energy Paper: Medium-term oil outlook 26 February 2023<br>• $80 is the new $60 for oil 16 September 2022<br>• Oil demand has a supply problem 27 May 2022 |
| **Atlantic Basin oil products** | ■ Refined product markets face risks from OPEC+ cuts, a looming recession, and rising global refining capacity.<br>■ We forecast RBOB-Brent to average $20/bbl in 2023, and we see ULSD-Brent cracks averaging $26/bbl over the same period.<br>■ OPEC+ cuts, rising complex refining capacity, lower gasoline and diesel cracks create upside for 3.5% fuel oil cracks, which we see averaging -$15/bbl this year. | • Oil takes a vacation 21 April 2023<br>• Gasoline still has fuel in the tank 06 March 2023<br>• Heat poised to cool down 10 January 2023 |
| **US natural gas** | ■ US gas supply and demand growth should hit 2.4Bcf/d and 0.2Bcf/d YoY in 2023, pushing stocks above +3.9Tcf by October.<br>■ We forecast $2.70/mmbtu US gas on average in 2023 and see a recovery to $4/mmbtu in 2024. | • US nat gas rollercoaster nears the bottom 17 February 2023 |
| **LNG** | ■ LNG supply growth is manageable from historical view at 13MMT in 23, 4MMT in 24, leaving demand to dictate future price path<br>■ Several factors may prevent a 2020 redux: warmer summer, revival of Asian spot demand, fuel switching, poor hydro/nuclear gen<br>■ TTF to grind lower in 2Q/3Q unless demand shifts, but beyond summer storage worries, we see a tightening LNG balance this winter and into 2024 | • LNG is now a buyer's market 17 April 2023 |
| **Thermal coal** | ■ Thermal coal prices surged to record highs as Russia, the world's 3rd largest coal exporter, invaded Ukraine.<br>■ We expect Newcastle coal to average $184/t in 2023 and $160/t in 2024. | • King coal loses its crown 31 March 2023 |

**Source:** BofA Global Research estimates

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**Exhibit 2: BofA Commodity Price Forecasts**

(period averages)

| | units | 1Q23F | 2Q23F | 3Q23F | 4Q23F | 2023F | 2024F |
|---|---|---|---|---|---|---|---|
| WTI Crude Oil | ($/bbl) | 76.00 | 72.00 | 75.00 | 77.00 | **75.00** | **85.00** |
| Brent Crude Oil | ($/bbl) | 82.00 | 76.00 | 80.00 | 82.00 | **80.00** | **90.00** |
| US NY Harbor ULSD (HO) Cracks to Brent Crude Oil | ($/bbl) | 40.62 | 24.00 | 20.00 | 18.00 | **25.66** | **18.00** |
| US RBOB Cracks to Brent Crude Oil | ($/bbl) | 23.13 | 28.00 | 20.00 | 10.00 | **20.28** | **12.00** |
| NWE Low Sulphur Gasoil Cracks to Brent Crude Oil | ($/bbl) | 31.30 | 16.00 | 12.00 | 10.00 | **17.34** | **10.00** |
| NWE Eurobob Cracks to Brent Crude Oil | ($/bbl) | 15.00 | 18.00 | 12.00 | 2.00 | **11.75** | **2.25** |
| NWE 1% Residual Cracks to Brent Crude Oil | ($/bbl) | -13.40 | -10.00 | -7.00 | -6.00 | **-9.10** | **-5.00** |
| NWE 0.5% Residual Cracks to Brent Crude Oil | ($/bbl) | 2.50 | 0.00 | 2.00 | 2.00 | **1.62** | **2.00** |
| NWE 3.5% Residual Cracks to Brent Crude Oil | ($/bbl) | -23.20 | -13.00 | -12.00 | -11.00 | **-14.79** | **-10.00** |
| US Natural Gas | ($/MMBtu) | 2.65 | 2.25 | 2.75 | 3.25 | **2.73** | **4.00** |
| Thermal coal, Newcastle FOB | ($/t) | 253 | 160 | 159 | 164 | **184** | **160** |
| Aluminium | $/t | 2,401 | 2,260 | 2,250 | 2,500 | **2,353** | **2,875** |
| Copper | $/t | 8,941 | 8,461 | 8,250 | 9,500 | **8,788** | **9,750** |
| Lead | $/t | 2,131 | 2,118 | 2,050 | 2,050 | **2,087** | **2,000** |
| Nickel | $/t | 25,973 | 22,277 | 20,000 | 20,000 | **22,063** | **21,250** |
| Zinc | $/t | 3,122 | 2,539 | 2,250 | 2,500 | **2,603** | **2,375** |
| Gold | $/oz | 1892 | 1977 | 1925 | 1900 | **1923** | **1963** |
| Silver | $/oz | 23 | 24 | 23 | 23 | **23** | **23** |
| Platinum | $/oz | 995 | 1,027 | 1,000 | 1,250 | **1,068** | **1,100** |
| Palladium | $/oz | 1,568 | 1,445 | 1,300 | 1,250 | **1,391** | **1,100** |

**Source:** BofA Global Research estimates

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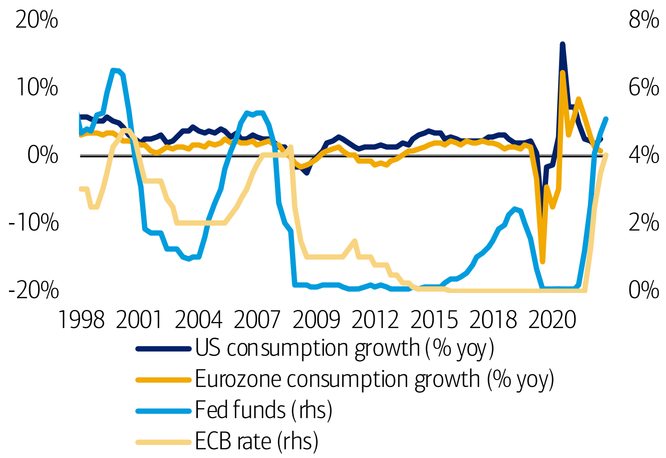
# Oil wants to break free

### The battle between oil and money kept prices in a range…

Rising interest rates around the world have likely reined in global aggregate demand, and curbed oil consumption growth in the process (Exhibit 3). Money supply is also shrinking fast to tame in the biggest spike in US and European inflation in four decades (Exhibit 4). With rising interest rates putting downward pressure on demand and prices, macro market participants have opted to maintain either neutral or short positions on oil.

**Exhibit 3: US and Eurozone private consumption growth (% yoy) and monetary policy rates**

Consumption growth is slowing amid higher rates




**Source:** BEA, Eurostat, Federal Reserve, ECB

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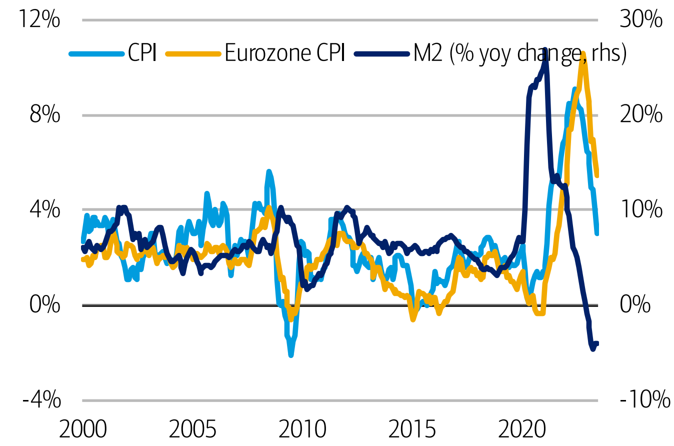
**Exhibit 4: US money supply and CPI and Eurozone CPI**

The Money supply has dramatically dropped since spring 2021




**Source:** Bloomberg

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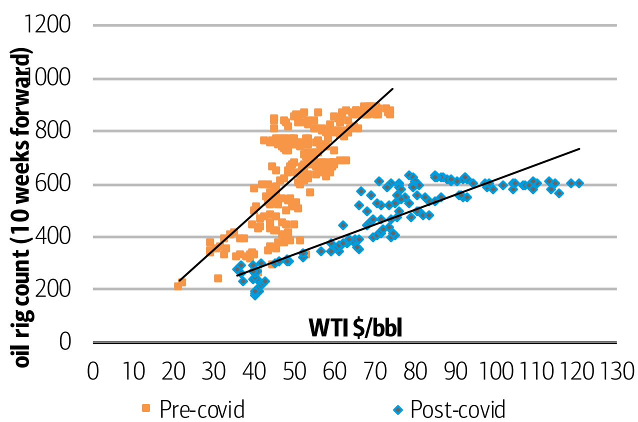
### …as a slowing economy has met reduced OPEC supplies

As higher rates have triggered concerns about a recession, OPEC has put in place a new preemptive and proactive strategy to prevent a meltdown in oil prices (see [OPEC's whatever it takes moment]ope). In part, OPEC's move has been helped but the fact that shale oil supply in the US has seen a material reduction in price elasticities in recent years (Exhibit 5). A reduced US response has paved the way for Saudi Arabia to once again become the swing producer in the global oil market (Exhibit 6).

**Exhibit 5: US oil rigs and front month WTI prices**

US oil has been less elastic to WTI prices since covid




**Source:** Bloomberg

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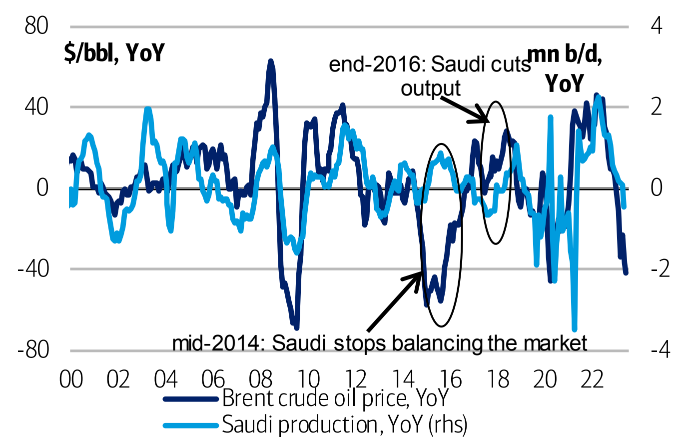
**Exhibit 6: Brent crude oil price and Saudi production changes**

Saudi is aggressively levering its muscles as the world's most powerful swing crude oil producer




**Source:** Bloomberg

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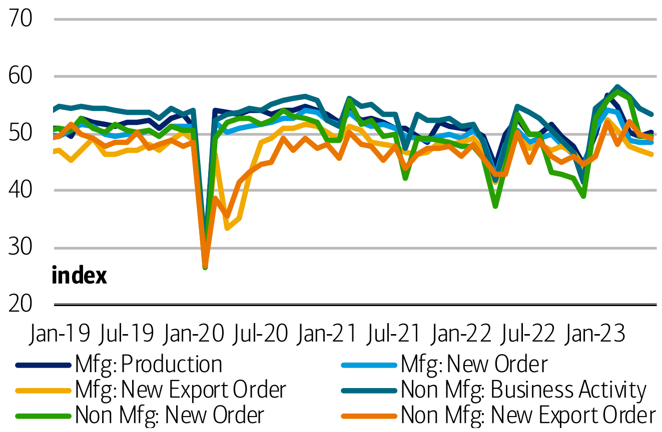
### China has also emerged from Covid weaker than thought...

While the Fed and OPEC+ row in different directions (see [The battle royale between oil and money]) and ultimately kept oil prices in a range for almost a year now, other factors have come into play too. Specifically, Chinese economic activity has recovered at a slower pace than expected due to weakness in industry (Exhibit 7) and a very depressed real estate sector, dragged down by a declining population and 80 million empty apartments (Exhibit 8).

**Exhibit 7: China PMIs**

Chinese economic activity has recovered at a slower pace




**Source:** NBS

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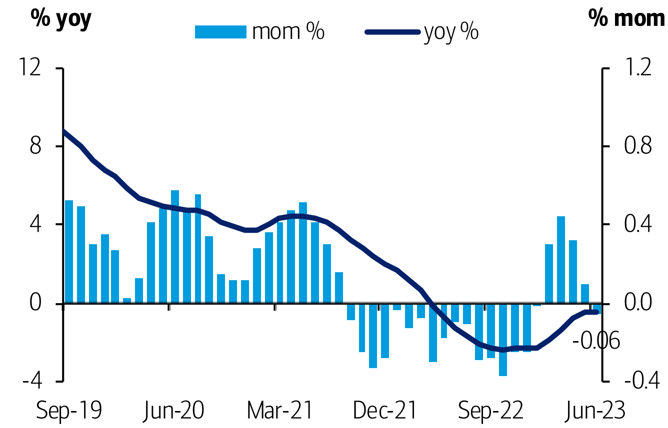
**Exhibit 8: NBS 70-city home prices**

70-city new home prices fell by 0.06% mom in June




**Source:** NBS, CEIC

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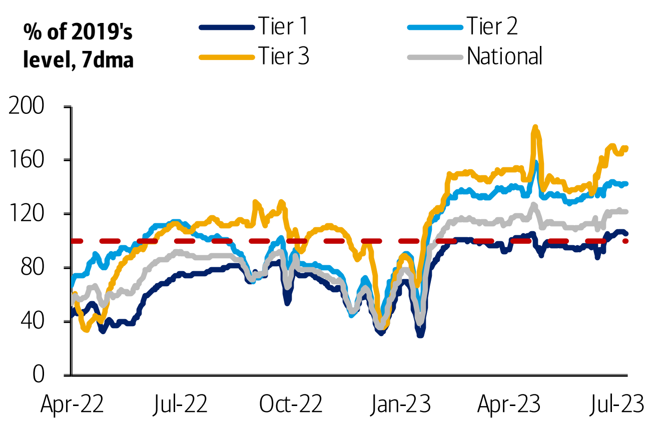
### ...adding limited upward pressure to global energy prices

Still, mobility indicators in China have picked up firmly even if industrial and real estate demand for fuel has lagged, lending at least some level of support to global oil markets (Exhibit 9). Even then, macro clouds in China have been persistent as a result of the ongoing "decoupling" from the US economy and thus increased post-Covid travel has not been sufficient to create meaningful upside pressures across a broad range of energy prices (Exhibit 10).

**Exhibit 9: Daily subway rides by city tiers (28-city)**

Daily subway rides in all tier cities remained resilient




**Source:** Wind, Note: 100 represents benchmark (subway volume in December 2019); data as of July 17

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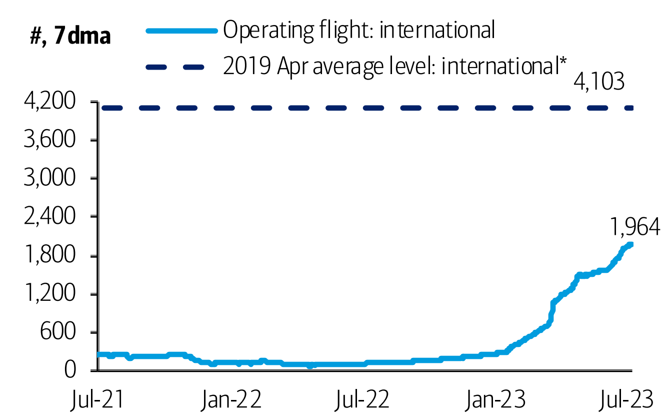
**Exhibit 10: China's operating flights: international**

The number of international flights recovered further to 47.9% of 2019 April level (vs. 47.4% previously)




**Source:** Wind, Note: *We have reset the benchmark of pre-COVID level based on the Apr's press conference by CAAC, data as of July 18

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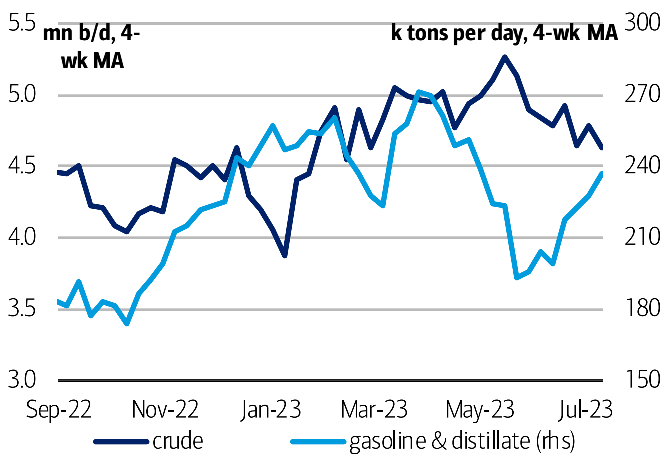
### Plus Russia has added more oil than expected this year

Moreover, larger-than-expected Russian oil volumes have continued to enter global oil markets (Exhibit 11), as the price cap mechanism to enable the provision of freight and insurance services to the Russian oil industry has worked very effectively to preserve and even increase crude and petroleum product flows. Reportedly, domestic production in Russia has declined due to weak local demand conditions (Exhibit 12), but ultimately prices in the seaborne oil market are determined by export availability.

**Exhibit 11: Russian oil exports**

Russian exports have ben strong despite global efforts




**Source:** Bloomberg

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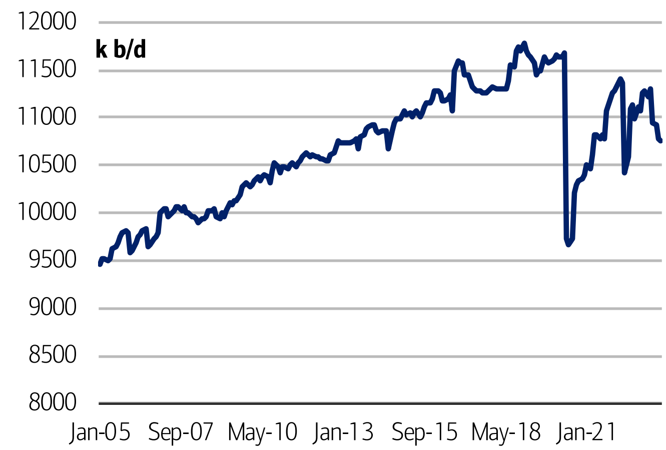
**Exhibit 12: Russia oil output**

Russian production supposedly declined thanks to lower domestic demand




**Source:** Bloomberg

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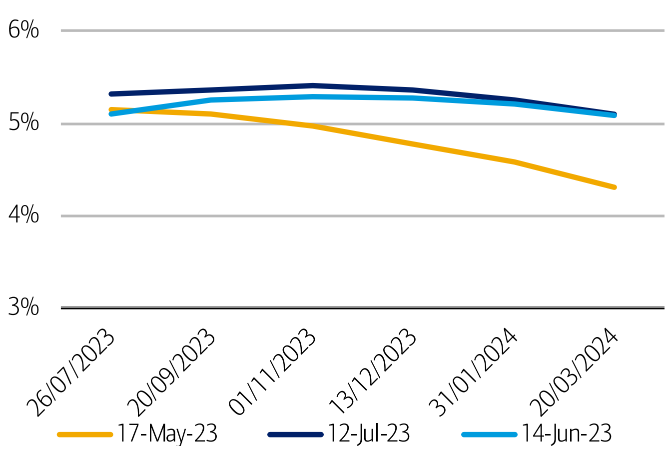
### Yet US interest rates could peak soon, EM CBs could cut…

While oil prices have failed to break a range, financial markets believe US interest rates could peak this quarter (Exhibit 13). Our economic team does too and projects peak Fed funds rate of 5.625. As we recently explained (see [Money breaks oil's back]) peak interest rates may not necessarily signal a big resurgence in oil prices. But lower interest rates do, and some EM central banks have started to cut rates and there is room for further stimulus in coming quarters (Exhibit 14).

**Exhibit 13: Fed OIS curve**

The curve has risen since May but expected to peak soon




**Source:** Bloomberg

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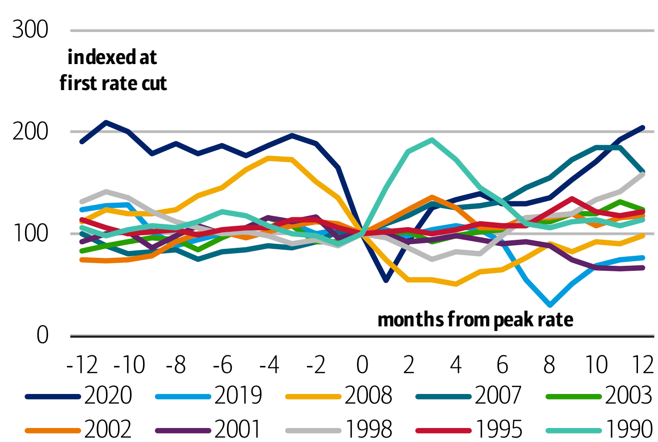
**Exhibit 14: WTI prices before and after US rate cuts**

WTI doesn't appear to care about US rate cuts




**Source:** Bloomberg

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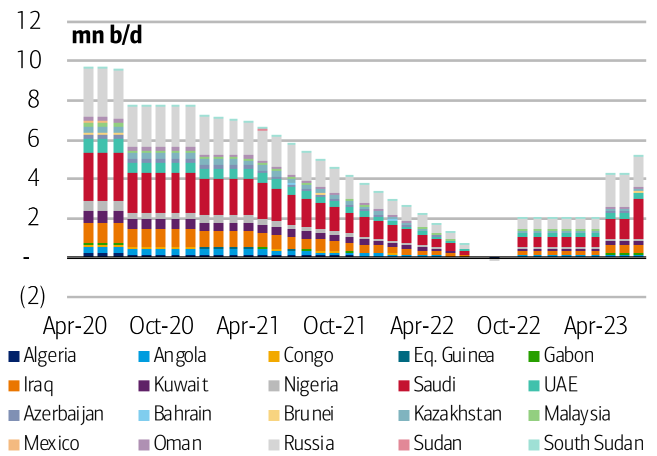
### …and OPEC continues to implement deep output curbs

Moreover, OPEC+ has already implemented pretty meaningful crude oil output cuts in recent months (Exhibit 15), with output for the group coming down from a peak of 40.5 mn b/d last year to 38.7 mn b/d this year (hitting in May). True, Russia's volumes have been firm and other non-OPEC supplies have kept hitting the market, but Brent-Dubai and Brent-Saudi Heavy differentials have finally started to compress to reflect tighter conditions (Exhibit 16)

**Exhibit 15: OPEC+ production cuts (mandated and voluntary)**
OPEC+ has already implemented meaningful output cuts




**Source:** IEA, BofA Global Research

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**Exhibit 16: Brent-Dubai spread**
Brent-Dubai spread has compressed reflecting tighter conditions


**Source:** Bloomberg

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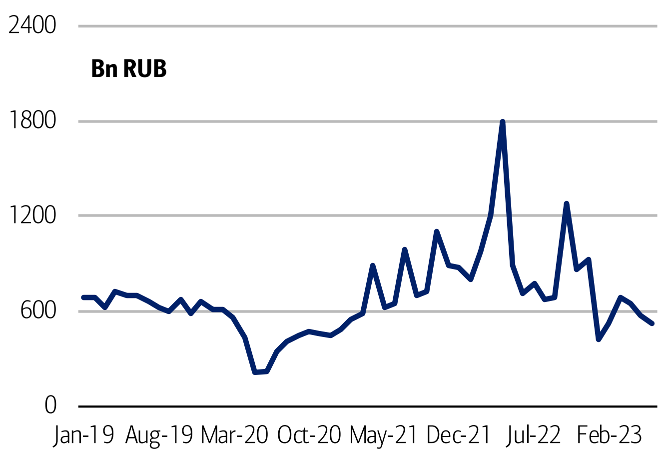
### Financially strained Russia is finally poised to cut exports

Crucially, the incentives for Russia to cut supply in support of the oil prices have finally arrived. The oil price cap has finally started to impact the ability of the Russian government to collect oil taxes (Exhibit 17), significantly straining the war effort in Ukraine and crating significant cracks in military command chains. As a result, Russia is now getting serious about reducing exports to the oil market to rein in Brent-Urals differentials (Exhibit 18).

**Exhibit 17: Russia oil and gas revenues**
Production cuts have helped limit Russia's revenues..




**Source:** Bloomberg

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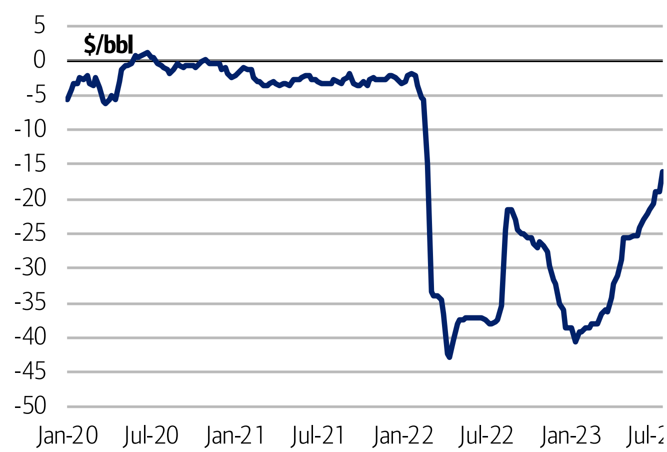
**Exhibit 18: Urals FOB Med vs Dated Brent Strip**
…making Russia more serious about reigning in Brent-Urals differentials




**Source:** S&P Commodity Insights

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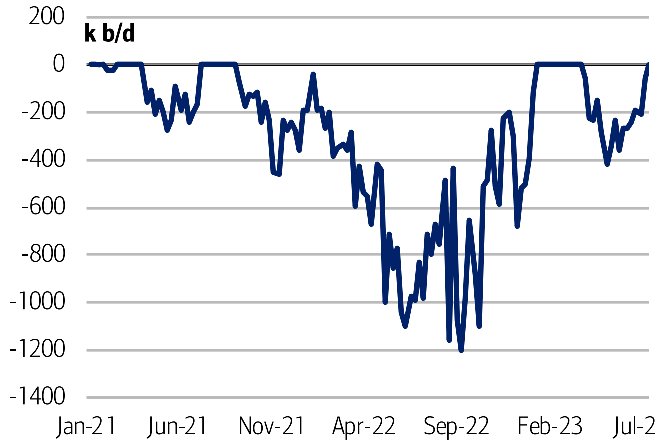
**Meanwhile, the US may need to focus on refilling the SPR**

Beyond Russia and Saudi Arabia, it is important not to lose sight of the world's largest oil producer. The US government has altered global oil balances by about 450 thousand b/d for 18 months (Exhibit 19) by releasing strategic oil barrels. With US oil production becoming less elastic, America has flexed its government muscle to cap global energy prices. Yet the SPR is now below 350mn barrels and needs to be refilled by to 500 or 600mn barrels (Exhibit 20).

**Exhibit 19: US SPR**

US drew down about 450k b/d of oil releases over the last 18 months




**Source:** Bloomberg

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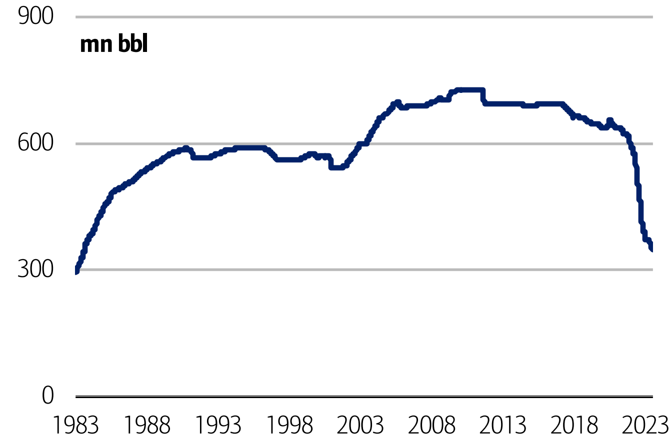
**Exhibit 20: US SPR inventory level**

US SPR inventory has now fallen below 350 mn bbl




**Source:** Bloomberg

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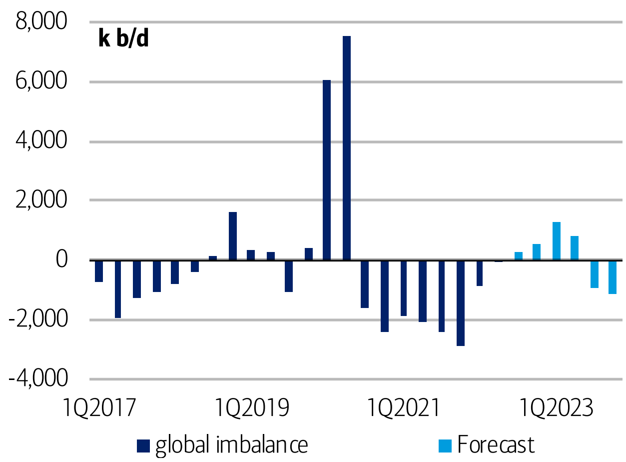
**As such, the global oil market should tighten in 2H2023…**

The stars are finally aligning for a run in crude oil prices over the coming quarters. From a fundamental perspective, our supply and demand balance projections continue to suggest that oil markets will tighten very substantially over the coming 18 months (Exhibit 21), so we expect global oil stocks to decline substantially over this period as a result (Exhibit 22). Plus America's ability to remain an "oil influencer" will be significantly reduced with the SPR at a 40 year low.

**Exhibit 21: Global oil imbalance**
Tightening global oil balances in the coming quarters and support 80-90 $/bbl oil




**Source:** IEA, BofA Global Research estimates

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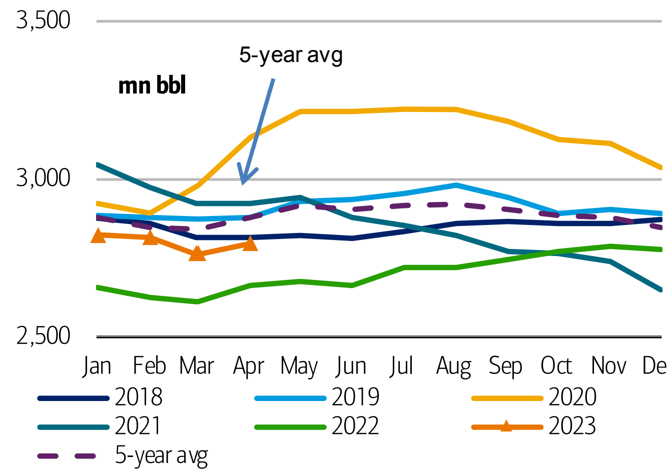
**Exhibit 22: OECD industry total oil stocks (crude, ngl, products, and feedstock)**
Oil stocks are expected to further decline




**Source:** IEA

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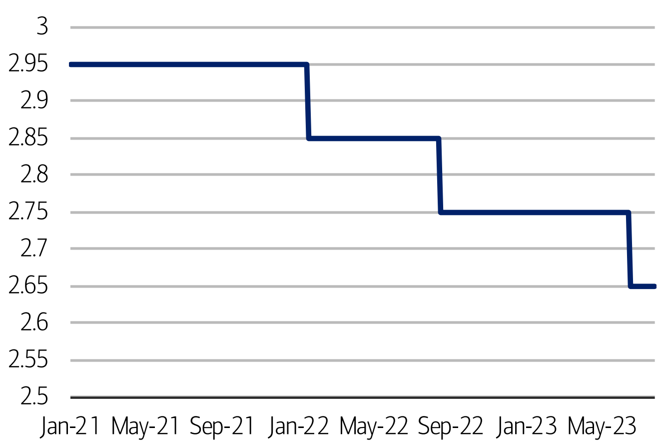
### …particularly if China follows through to stimulate growth…

Another key factor that will determine the strength of the oil price path in the months ahead is China. The government there has started to stimulate growth through a number of measures including lower interest rates (Exhibit 23) as well as robust grid spending and transportation sector stimulus programs (Exhibit 24). Other measures are in play including extending EV tax breaks and recent policy goals of strengthening youth employment and foreign investment.

**Exhibit 23: China 1 year lending rate**
China has been lower interest rates to boost spending




**Source:** Bloomberg

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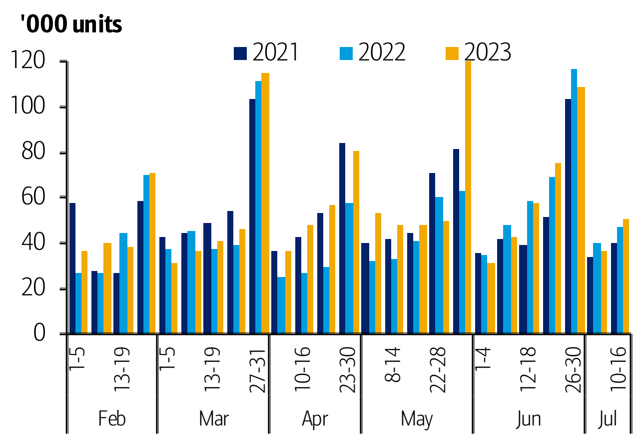
**Exhibit 24: Auto sales**
Auto sales in July 10-16 picked up by 7% yoy




**Source:** CPCA, Note: data as of July 16

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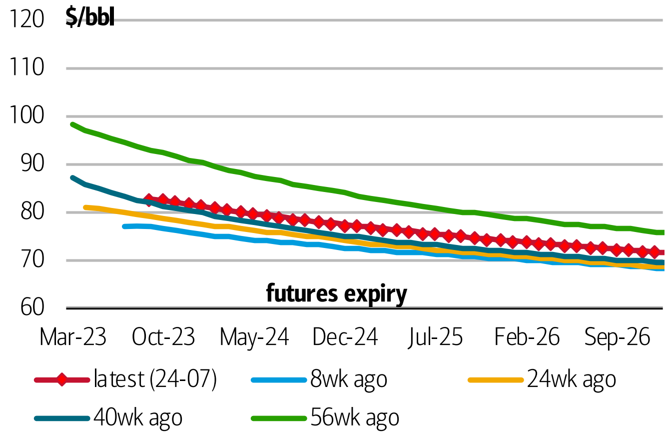
### …and we reiterate our oil price forecasts for 2023 and 24

Reflecting tighter conditions, but not necessarily a strong stimulus package from China, the term structure of Brent crude oil has now firmly moved into backwardation, a sign of market strength (Exhibit 25). Following a dip into contango in front-to-third month time spreads, Brent backwardation is now back to $2.20 (month 1 to month 6), and we believe that Brent crude oil prices will rise to $90/bbl by early next year due to tighter balances (Exhibit 26).

**Exhibit 25: Brent crude oil forward curve**

Brent is now firmly in backwardation




**Source:** Bloomberg

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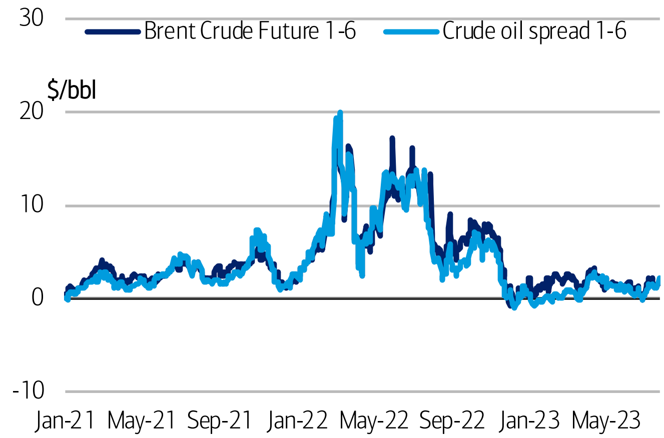
**Exhibit 26: Crude oil timespreads**

We believe crude oil prices will rise to $90/bbl thanks to tighter balances




**Source:** Bloomberg

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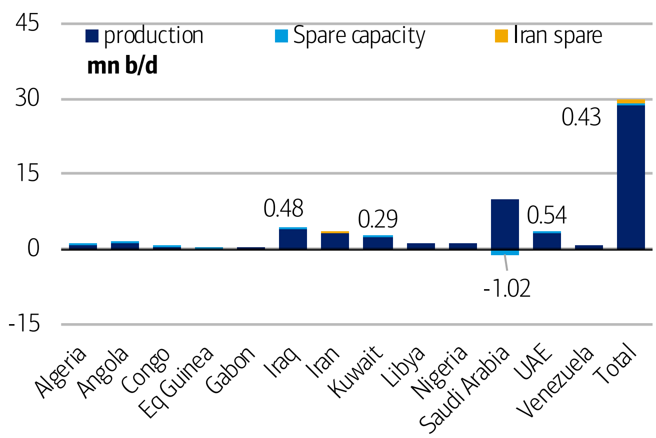
## Still, rising spare capacity could act as a cap to oil prices…

Even then, we do not expect a raging bull market for the time being. After all, OPEC+ spare capacity has increased as a result of the recent production cuts, a factor that could cap oil prices (Exhibit 27). Saudi Arabia does not want to see oil in the demand destruction observed in the global gas market as a result of last year's mega spikes. Plus medium term, we expect global oil demand growth to slow down materially to near zero into 2027/28 (Exhibit 28).

**Exhibit 27: OPEC production capacity**

Spare capacity has increased amid production cuts




**Source:** IEA, BofA Global Research estimates

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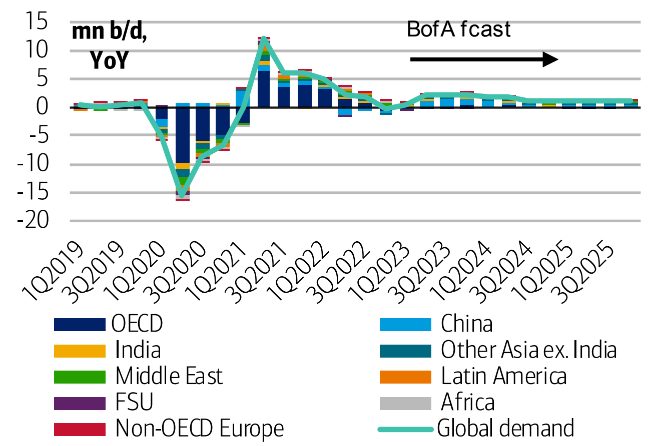
**Exhibit 28: Global oil demand growth**

We expect emerging markets, led by China, to push global oil demand up 1.8mn b/d YoY in 2023




**Source:** IEA, BofA Global Research estimates

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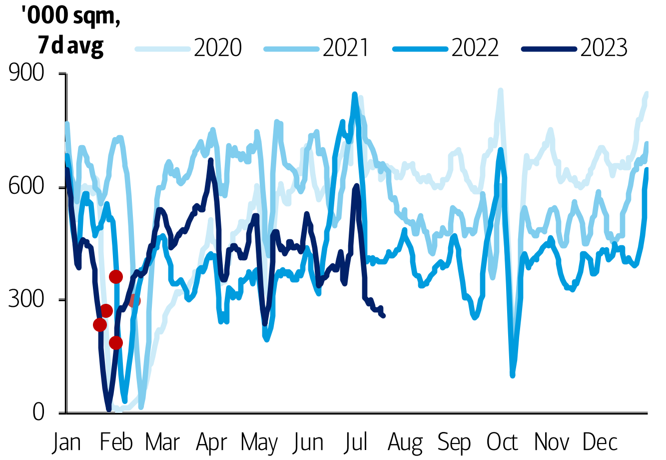
## …while weak economic activity can create downside risks

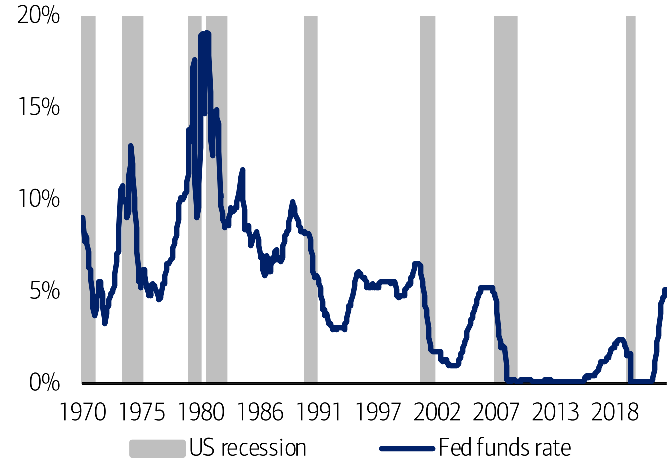
Another major risk to our constructive oil view is China. With demographics only set to worsen over the coming years and a significant overhang of unsold apartments, the government will likely struggle to revive a real estate sector that represents almost a third of the economy (Exhibit 29). Plus trade tensions and near-shoring trends could create a structural drag in China's manufacturing sector. Beyond China, higher Fed fund rates could also eventually trigger a US recession in the months ahead (Exhibit 30).

**Exhibit 29: Property transaction in 30 major cities**
New home sales fell further




**Source:** Wind, Note: Red dots indicate Lunar New Year (LNY) in each year, data as of July 18
BofA GLOBAL RESEARCH

**Exhibit 30: US fed funds rate and recessions**
Higher fed funds could trigger a US recession




**Source:** Bloomberg
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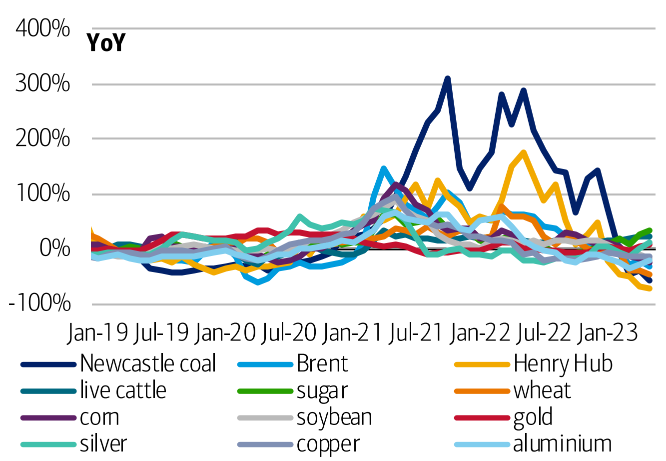
## Plus a spike in commodity prices could brink rate hikes back

The challenge in this battle between oil and money is that commodity prices and interest rates are increasingly intertwined. Without a doubt, commodity prices have been a drag on headline inflation and YoY comparables are very favorable at the moment (Exhibit 31), contributing to bring headline inflation down to 3% in the US and below 2% in some European countries like Spain. Yet a resurgence in energy and food prices in the months ahead, triggered by OPEC's and Russia's actions, could murk the macro outlook and lead to further unexpected rate hikes (Exhibit 32).

**Exhibit 31: Commodity prices**
With the exception of gold, beef, and sugar, most major commodity prices are down year-on-year




**Source:** Bloomberg
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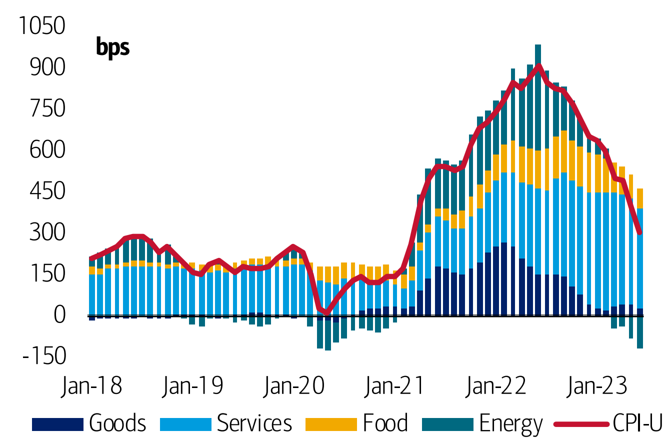
**Exhibit 32: US CPI contributions (% yoy)**
A resurgence in energy and food prices in months ahead could murk the macro and inflation outlook and lead to further unexpected rate hikes




**Source:** BLS
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**Exhibit 33: Acronyms and Definitions**
Definitions of acronyms in the text

| Acronym | Definition |
|---|---|
| $/bbl | dollars per barrel |
| 2H2023 | Second half of 2023 |
| avg | average |
| b/d | barrels per day |
| bbl | barrel |
| CB | central bank |
| CPI | consumer price index |
| ECB | European Central Bank |
| EM | European market |
| EV | electric vehicle |
| MA | moving average |
| Mfg | manufacturing |
| mn | million |
| NBS | National Bureau of Statistics of China |
| ngl | natural gas liquids |
| OECD | Organisation for the Economic Cooperation and Development |
| OIS | overnight index swap |
| OPEC | Organization of the Petroleum Exporting Countries |
| OPEC+ | OPEC countries plus ten additional countries |
| PMI | purchasing managers index |
| SPR | Strategic Petroleum Reserve |
| WTI | West Texas Intermediate |
| yoy | year over year |

**Source:** BofA Global Research

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