Global Energy Weekly

Oil regains upper hand over money

21 February 2024

Commodities
Global

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Energy prices have fallen since 3Q23, then steadied

From oil, to gas, to coal, global energy prices have been on a downward trend for almost two years now. Brent fell from a high of $139/bbl in 2022 to a low of $70/bbl at the end of last year, while European TTF gas collapsed from a high of €340/MWh to a low of €23/MWh in June 2023, though winter prices reached as low as €23.45/MWh this week. Since early December, however, oil has bucked the trend observed in other energy markets and recovered, pushing up for about 10 weeks now on the back of OPEC+ cuts and an increasingly complex geopolitical landscape. In fairness, oil markets remain quite dislocated, with much longer supply chains as vessels are forced into new routes (see Freight fright). Still, gasoline prices relative to average hourly earnings have come down significantly from the 2022 highs. Similarly, the cost of energy as a share of income has now normalized on a spot and forward basis after the great gas & power crisis of 2022.

Oil may regain upper hand over money on rate cuts

Key policy measures by the Biden Administration on Russia, Iran, and Venezuela, a surge in US shale output, coupled with warm weather and more renewables, as well as steep interest rate hikes by the Fed and ECB, have forced OPEC+ to cut oil production repeatedly to firm up markets (see The battle royale between oil and money). In turn, output cuts have translated into an increase in spare production capacity. With this backdrop, long dated oil remains anchored at $70/bbl, resulting in relatively backwardated global crude oil curves. As such, global capex trends haven't changed much in the past two years. A wave of US mergers should further enhance capital discipline, with even Aramco now joining the spending cuts. After all, relative to a number of metrics such as income, other goods in the economy, or even history, oil appears relatively cheap, particularly given where global inventories stand today.

Still, we see muted oil volatility in the months ahead

With oil prices moderating, how much room is there for the Fed to cut rates? Headline inflation has indeed come down with lower energy costs, yet core inflation as well as wage growth have been stubbornly sticky in the US for some time. For now, the fixed income market, and our economists, still expect meaningful interest rate cuts this year. Should monetary policy ease, we believe the downward pressure on energy prices observed in the past two years would likely reverse if OPEC+ discipline holds. Thus, while many factors have come together to stabilize oil prices in the recent $80 range, we believe that volatility may have further room to drop. In part, implied oil vol has begun to converge with muted realized volatility in global energy markets, a trend that we think will continue as juxtaposing forces extend the recent period of oil price stability into 2Q24, geopolitics permitting (see Can (geo)politics Trump fundamentals?).

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 2.8% in 2024.	
WTI and Brent crude oil	■ We project Brent and WTI to average $80/bbl and $75/bbl, respectively, in 2024. ■ The global oil balance should remain in a mild surplus during 2024, as OPEC+ withholds more supply from the market to counteract slowing demand growth ■ We forecast global demand growth of 2.3mn b/d YoY in 2023 and 1.2mn b/d in 2024. ■ Non-OPEC supply should grow roughly 2.24mn b/d YoY in 2023 and 1.35mn b/d in 2024. ■ We project total US crude and NGL supply to rise 1.5mn b/d in 2023 and 700k b/d in 2024. ■ OPEC crude oil supplies are set to fall 470k b/d in 2023 and 260k b/d in 2024 as OPEC+ actively manages balances	• Can (geo)politics Trump fundamentals? 04 January 2024 • The grind of the oil bulls 26 September 2023 • Money breaks oil's back 08 May 2023 • OPEC+'s whatever it takes moment 05 April 2023 • Global Energy Paper: Medium-term oil outlook 26 February 2023
Atlantic Basin oil products	■ Refined product markets face risks from OPEC+ cuts, a looming recession, and the pace of global refining capacity growth. ■ We forecast RBOB-Brent to average $13/bbl in 2024, and we see ULSD-Brent cracks averaging $26/bbl over the same period. ■ OPEC+ cuts, rising complex refining capacity, lower gasoline and diesel cracks create upside for 3.5% fuel oil cracks, which we see averaging -$12/bbl in 2024.	• Waiting for Dangot(e) 31 October 2023 • Diesel weasels out of a cyclical downturn 29 August 2023 • In the fuel oil market, high sulfur is king 31 July 2023
US natural gas	■ US gas supply and demand growth should hit 1.6Bcf/d and 2.6Bcf/d YoY in 2024, pushing stocks to 3.95Tcf by October. ■ We forecast US Henry Hub natural gas prices will average $3/mmbtu in 2024	• US nat gas rollercoaster nears the bottom 17 February 2023
LNG	■ Near term downside risk for global gas prices, but LNG supply to rise just 1.7% in 24, which counters softer demand growth ■ A rebound in global manufacturing, LNG delays/outages, and weather could tighten balances in 24, but China remains a wildcard	• Winter weather melts global gas prices 13 February 2024 • LNG is now a buyer's market 17 April 2023
Thermal coal	■ Seaborne coal prices pulled back on softer balances. Yet, China has come back in earnest, more than doubling thermal coal imports ■ We are constructive in 2024 on strong Asian demand and declining Russian supply	• China coal floors global gas 05 September 2023 • King coal loses its crown 31 March 2023

Source: BofA Global Research estimates

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Exhibit 2: BofA Global Research Commodity Price Forecasts
(period averages)

	units	1Q23F	2Q23F	3Q23F	4Q23F	2023F	1Q24F	2Q24F	3Q24F	4Q24F	2024F
WTI Crude Oil	($/bbl)	76	74	82	82	**78**	73	75	77	75	**75**
Brent Crude Oil	($/bbl)	82	78	86	86	**83**	78	80	82	80	**80**
US NY Harbor ULSD (HO) Cracks to Brent Crude Oil	($/bbl)	41	25	40	37	**36**	30	25	25	25	**26**
US RBOB Cracks to Brent Crude Oil	($/bbl)	23	31	29	7	**22**	11	21	14	7	**13**
NWE Low Sulphur Gasoil Cracks to Brent Crude Oil	($/bbl)	31	17	32	29	**27**	23	20	20	19	**21**
NWE Eurobob Cracks to Brent Crude Oil	($/bbl)	15	22	27	7	**18**	5	14	10	3	**8**
NWE 1% Residual Cracks to Brent Crude Oil	($/bbl)	-13	-8	-3	-7	**-8**	-6	-5	-5	-5	**-5**
NWE 0.5% Residual Cracks to Brent Crude Oil	($/bbl)	2	2	4	3	**3**	2	2	2	2	**2**
NWE 3.5% Residual Cracks to Brent Crude Oil	($/bbl)	-23	-11	-4	-14	**-13**	-13	-12	-12	-12	**-12**
US Natural Gas	($/MMBtu)	2.74	2.32	2.66	3.15	**2.72**	2.90	2.50	3.00	3.60	**3.00**
Thermal coal, Newcastle FOB	($/t)	253	160	147	145	**176**	148	148	151	153	**150**
Aluminium	$/t	2,401	2,260	2,160	2,250	**2,268**	2,250	2,500	2,750	2,750	**2,563**
Copper	$/t	8,941	8,461	8,367	8,000	**8,442**	8,000	8,500	8,750	9,250	**8,625**
Lead	$/t	2,137	2,118	2,171	2,200	**2,156**	2,000	2,000	2,000	2,000	**2,000**
Nickel	$/t	25,973	22,277	20,392	18,500	**21,786**	18,500	18,500	19,000	19,000	**18,750**
Zinc	$/t	3,132	2,527	2,435	2,500	**2,648**	2,500	2,500	2,250	2,250	**2,375**
Gold	$/oz	1892	1977	1927	1900	**1924**	1950	1950	2000	2000	**1975**
Silver	$/oz	23	24	24	23	**23**	23	23	24	24	**23**
Platinum	$/oz	995	1,027	932	950	**976**	1,000	1,000	1,100	1,100	**750**
Palladium	$/oz	1,568	1,445	1,254	1,250	**1,379**	900	800	700	600	**750**

Source: BofA Global Research estimates

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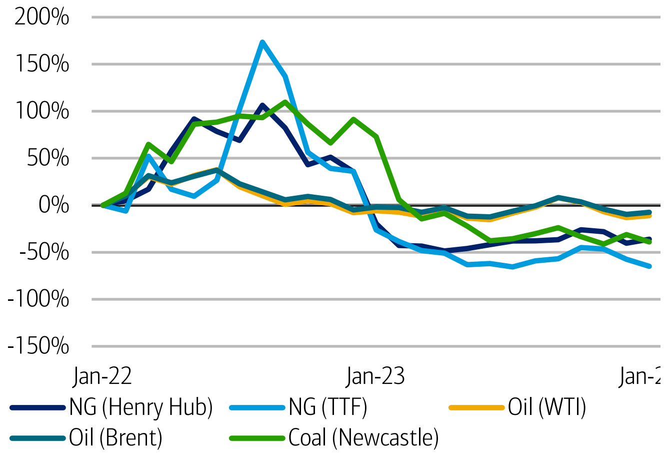
Oil regains upper hand over money

Energy prices have fallen relative to 3Q23 highs…

From oil, to gas, to coal, global energy prices have been on a downward trend for almost two years now (Exhibit 3). Brent oil fell from a high of $139/bbl in 2022 to a low of $70/bbl last year, while European TTF natural gas collapsed from a high of €340/MWh to a low of €23/MWh in June 2023, though winter prices reached as low as €23.45/MWh this week. Since early December, however, oil prices have bucked the trend observed in other energy markets and recovered, pushing up for about 10 weeks now on the back of OPEC+ cuts and an increasingly complex geopolitical landscape (Exhibit 4).

Exhibit 3: Global energy prices indexed to January 2022

From oil, to gas, to coal, global energy prices have been on a downward trend for almost two years now…



Source: Bloomberg

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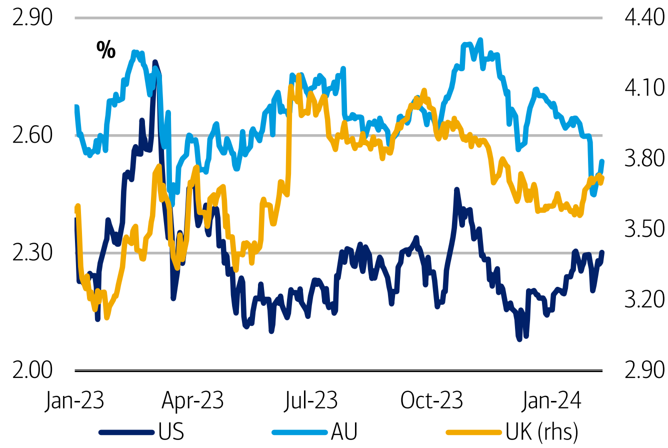
Exhibit 4: 5y5y inflation swaps

…contributing to bring headline inflation lower in the US and around the world



Source: Bloomberg

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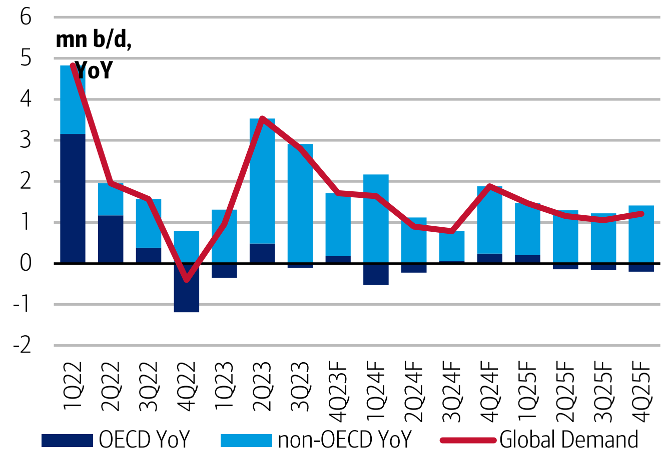
…as slowing demand and a positive supply shock…

Of course, much of the decline in energy prices observed during the past two years since the start of the Russian invasion of Ukraine can be linked to fundamental market developments. For instance, global oil demand growth has been naturally slowing down in recent months after expanding at a breakneck pace during the three-year post Covid recovery period (Exhibit 5). Meanwhile, non-OPEC supply growth has remained very robust for some time too with US shale volumes on the lead, helping push oil prices lower (Exhibit 8).

Exhibit 5: Global oil demand growth

Global oil demand growth has been slowing down in recent months after a wild three-year post Covid recovery



Source: IEA, BofA Global Research Estimates

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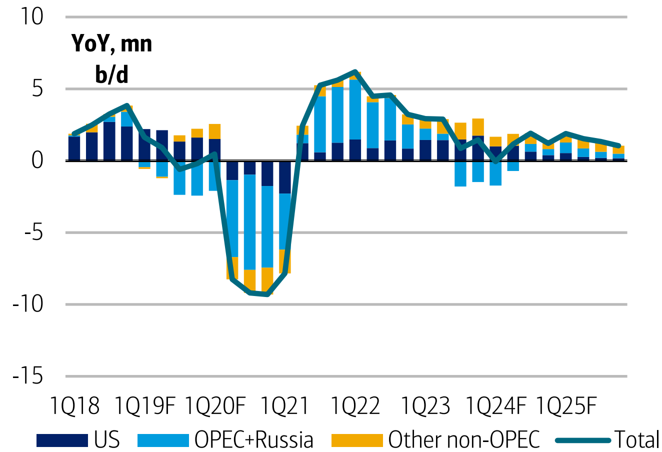
Exhibit 6: Global oil supply growth

Meanwhile, non-OPEC supply growth has remained very robust for some time, pushing prices lower



Source: IEA, BofA Global Research Estimates

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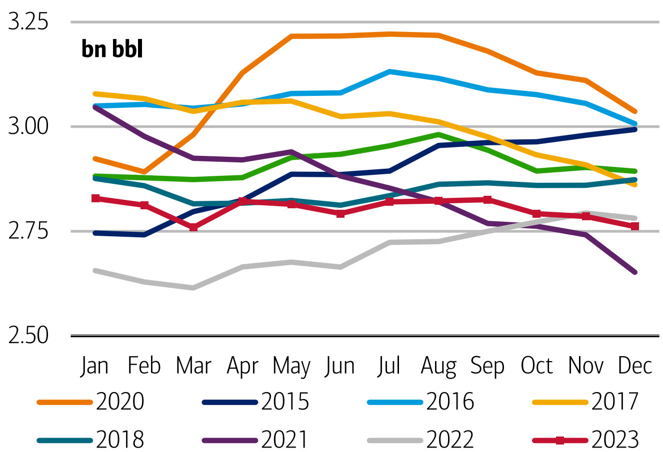
…have joined forces to push up commercial stocks…

In any case, the fundamental drivers of energy markets have been closely reflected in the inventory cycle observed in the past few quarters. A key point to note is that commercial inventories across the OECD have recovered from the lows observed during March 2022 in part due to these opposing trends (Exhibit 7), although total petroleum stocks remain exceptionally low due to the big draws in strategic oil reserves (Exhibit 8). The divergence between strategic and commercial stocks remains a contentious issue for the market.

Exhibit 7: Industrial OECD oil inventories

Commercial inventories across the OECD have recovered in part due to these opposing trends…



Source: IEA

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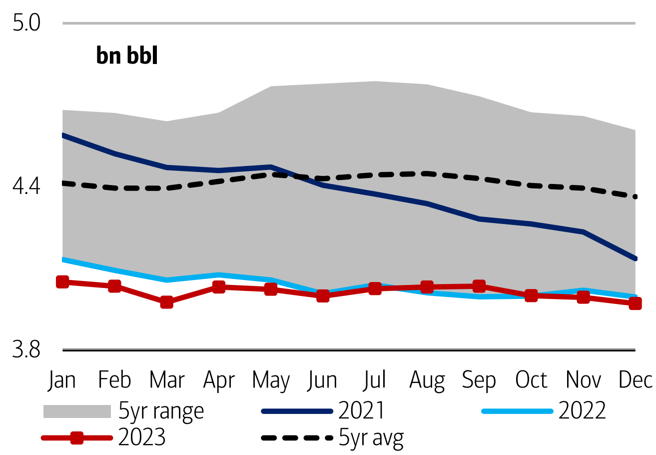
Exhibit 8: Total OECD oil inventories

…although total petroleum stocks remain exceptionally low due to the big draws in strategic oil reserves



Source: IEA

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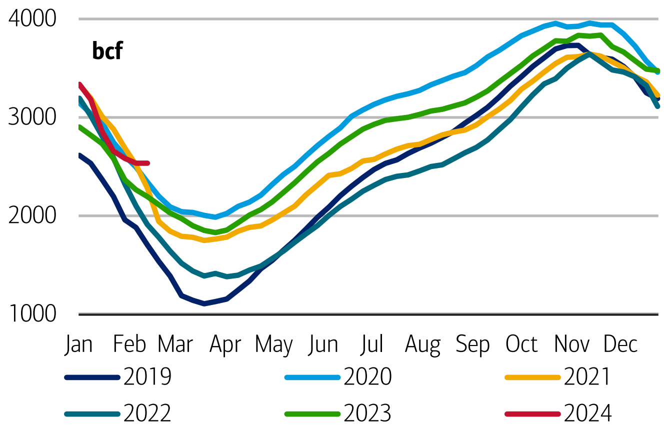
…for both oil as well as US and European nat gas

Should the US government continue to fill strategic stocks when oil prices are in the low $70s range, as it has been doing, oil prices will struggle to break much lower. Even then, this is not true for other thermal fuels that lack government support. Beyond oil, we would note that inventories of other key fuels, such as US natural gas (Exhibit 9) or European natural gas, remain high as a result of a weak winter heating demand backdrop (Exhibit 10). Warm weather has also negatively impacted oil, but not as much.

Exhibit 9: US natural gas working storage
Beyond oil, it is worth noting that inventories of other key fuels, such as US natural gas...



Source: Bloomberg

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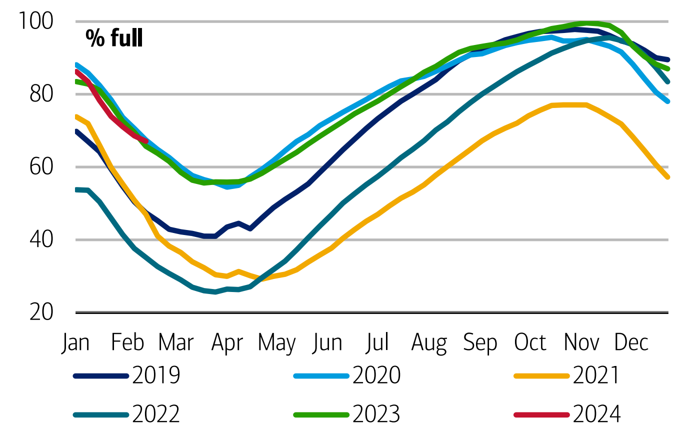
Exhibit 10: Europe gas storage
...or European natural gas, remain high as a result of a weak winter heating demand backdrop



Source: Bloomberg

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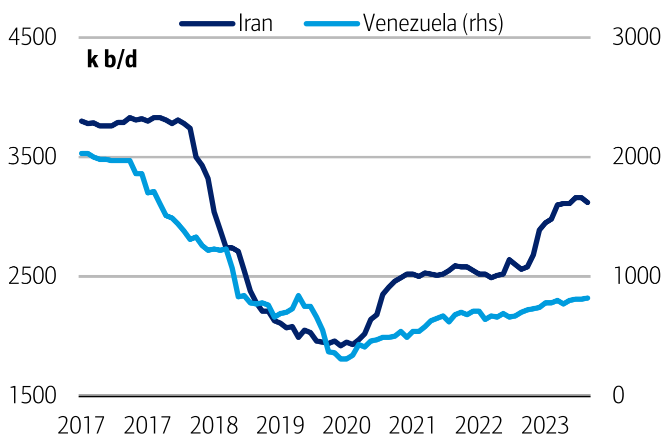
Key policy measures by the Biden Administration…

Beyond the vagaries of fundamental economic and weather drivers for oil prices, we would note the very active involvement of the Biden administration in trying to cap (and perhaps even floor) global energy prices to ensure a smooth landing for inflation and the US economy. Importantly, rising production volumes in Venezuela and Iran (Exhibit 11) have added oil volumes that the market was not expecting. Similarly, despite the sanction on Russian oil exports, levels have remained broadly stable (Exhibit 12).

Exhibit 11: Crude oil production in Iran and Venezuela
Rising production volumes in Venezuela and Iran



Source: Bloomberg

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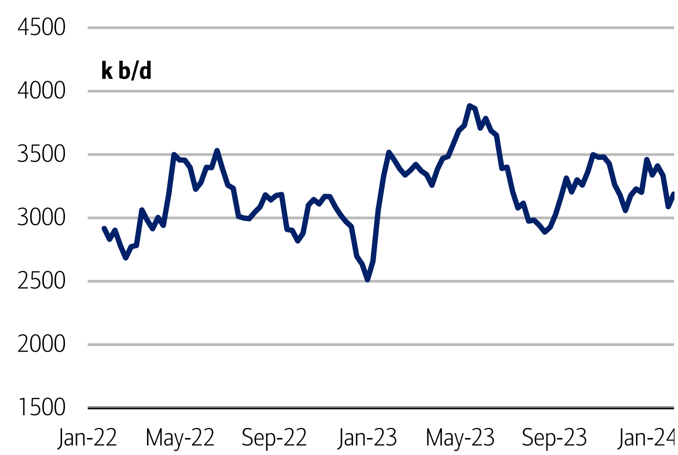
Exhibit 12: Russian waterborne crude oil exports
Despite the sanction on Russian oil exports, levels have remained broadly stable



Source: Bloomberg

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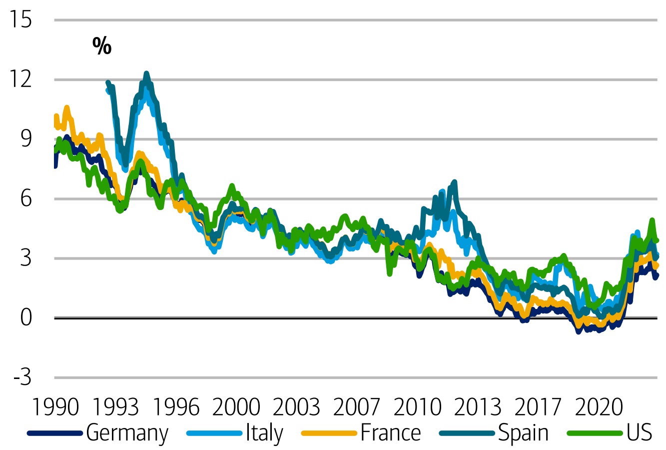
…and steep interest rate hikes by the Fed and ECB…

A macro factor that has also significantly affected oil demand conditions has been the substantial tightening of monetary policy around the world. Sharp increases in interest rates in the US and Europe have likely acted to tame oil demand (Exhibit 13), materially slowing down economic activity. While the inversion of the US yield curve could potentially result in a recession ahead (Exhibit 14), this worst-case scenario for oil demand over the course of the next 18 months is no longer a central scenario for markets.

Exhibit 13: 10 year government bond yields

Sharp increases in interest rates in the US and Europe have likely acted to tame oil demand...



Source: Bloomberg

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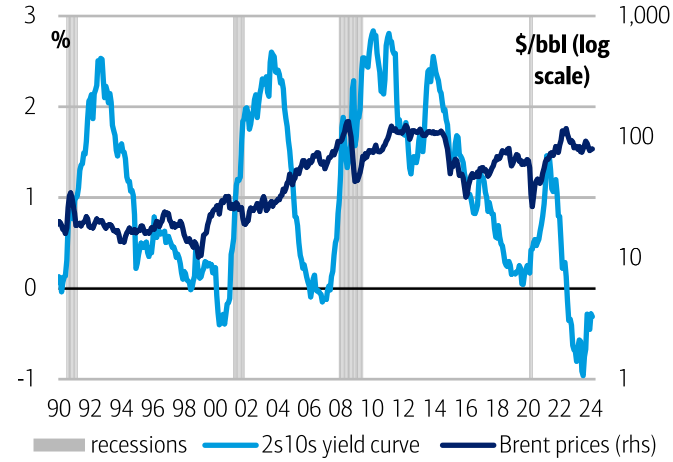
Exhibit 14: Brent prices and 2s10s US Treasury yield curve

...while the inversion of the US yield curve could potentially result in a recession ahead



Source: Bloomberg

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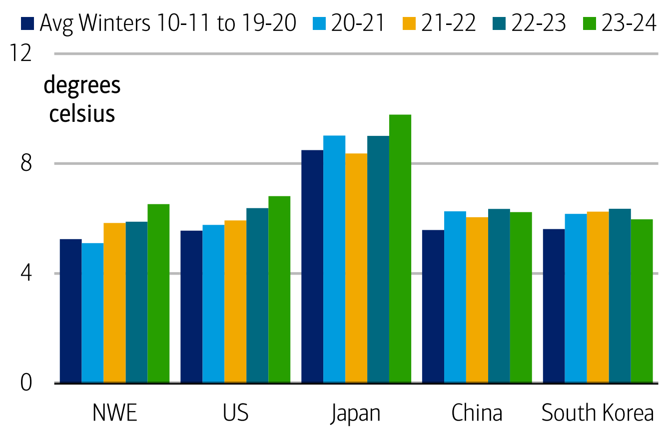
...coupled with warm weather and more renewables...

We highlighted the weather as a key factor negatively impacting oil prices this winter. Of course, warm winter weather reduces demand for petroleum products such as diesel and heating oil (Exhibit 15), as well as propane, which has likely pushed demand lower relative to expectations. Meanwhile, a big ramp up in renewable and nuclear power generation is reducing the use of thermal fuels (Exhibit 16) across the board too.

Exhibit 15: Winter to date average temperature by country or region

Importantly, warm winter weather has reduced demand for petroleum products so far this year...



Source: Bloomberg

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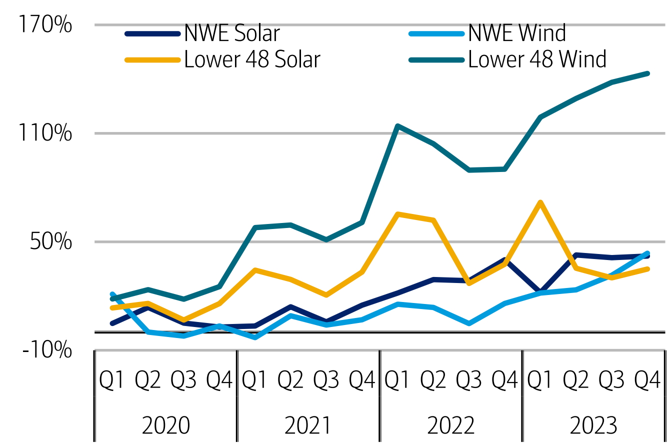
Exhibit 16: Quarterly NWE and Lower 48 wind and solar generation indexed to respective 2019 quarters

...while a big ramp up in renewable and nuclear power generation is reducing the use of thermal



Source: Bloomberg

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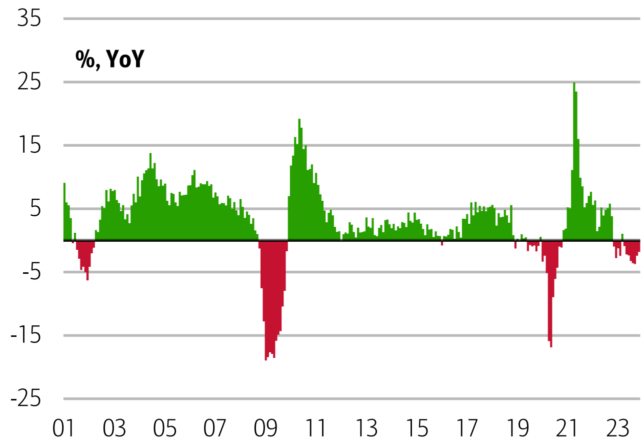
...have forced OPEC+ to cut oil production, in turn...

Softer weather demand trends, coupled with the ongoing major contraction in global trade activity (Exhibit 17) and a major softening in industrial production trends have put the oil market's swing suppliers on the defensive. Specifically, the surplus that has emerged on the back of weaker supply/demand balances pushed OPEC+ to start cutting production 18 months ago, a trend that continued in January (Exhibit 18) with Saudi Arabia convincing other members to pare back output volumes.

Exhibit 17: Global Trade Growth
Softer weather demand trends, coupled with the ongoing major contraction in global trade activity...



Source: Bloomberg

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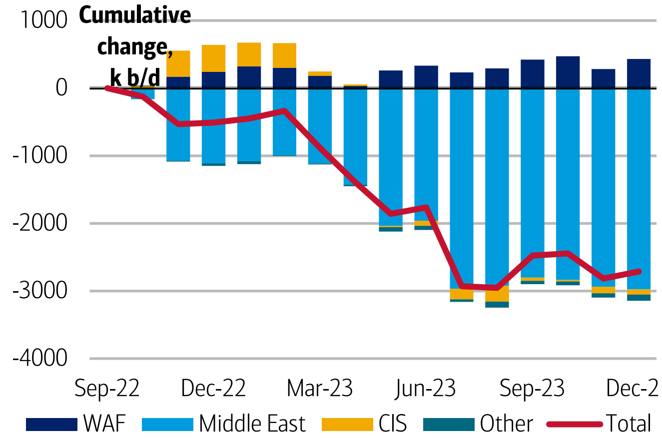
Exhibit 18: Cumulative change in OPEC+ production
...have pushed OPEC+ to cut production for several months now, a trend that continued in January



Source: IEA, OPEC, BofA Global Research

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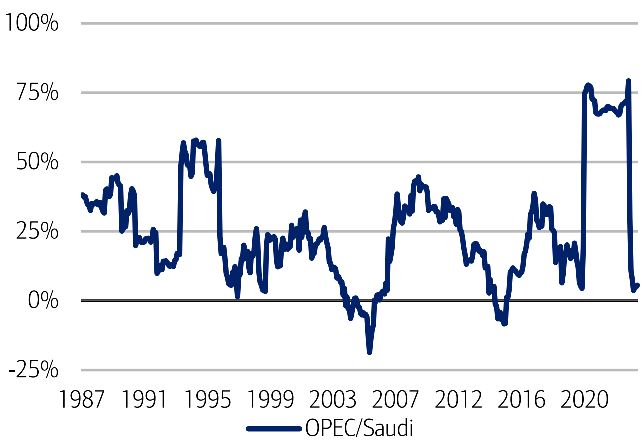
...leading to an increase in spare production capacity

OPEC+ production cuts can generally help stabilize downside risks to oil prices when the market is in surplus. However, the timing, scale, scope and depth of those cuts matters tremendously to any future price outcome. With Saudi opting to conduct voluntary production cuts, OPEC+ has acted in a less coordinated manner than during the two years following Covid (Exhibit 19). So OPEC+ cohesion has fallen. Still, we note that a key development here is the big increase in spare production capacity in the group (Exhibit 20).

Exhibit 19: OPEC cohesion (correlation between Saudi supply changes and other OPEC supply changes)
While OPEC+ has acted in a less coordinated manner than during the two years following Covid...



Source: IEA, BofA Global Research estimates

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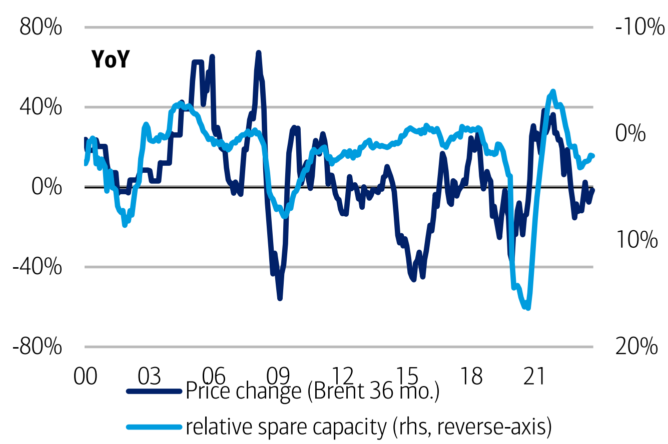
Exhibit 20: Relative spare capacity (normalized) and price changes
...we note that the result has nevertheless been a big increase in spare production capacity in the group



Source: EIA, Bloomberg, BofA Global Research

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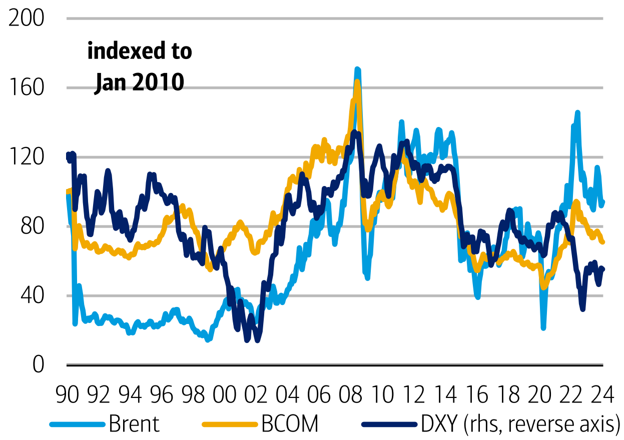
A strong dollar may have capped upside pressure too

The relationship between the US dollar and oil prices has broken down compared to history (Exhibit 21) mostly as a result of the reduction in US foreign fuel dependency. Back in 2008, at the height of the spike in WTI crude oil prices to $145/bbl and total US crude oil imports hitting 11mn b/d, the DXY touched a low point of 71 and the EURUSD touched 1.60. Yet the correlation between oil prices and the US currency have broken down since thanks to shale, although relatively high petroleum fuel prices in local currency have likely dented demand at the margin (Exhibit 22).

Exhibit 21: BCOM, DXY and Brent crude oil prices
The relationship between the US dollar and oil prices has broken down compared to history…



Source: Bloomberg

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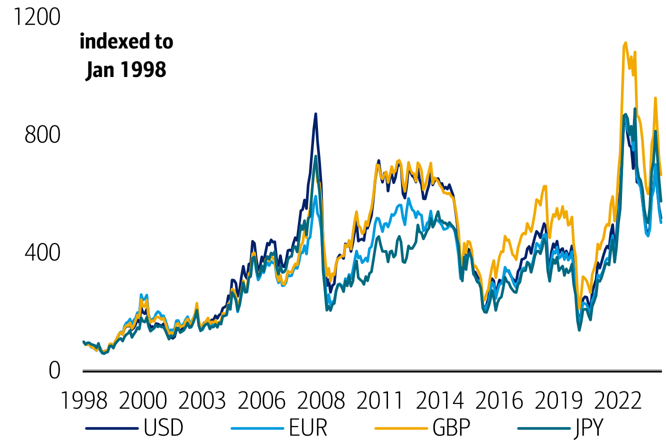
Exhibit 22: Front-month gasoil futures price in local currency indexed to January 1998
…but relatively high petroleum fuel prices in local currency have likely dented demand at the margin



Source: Bloomberg, BofA Global Research

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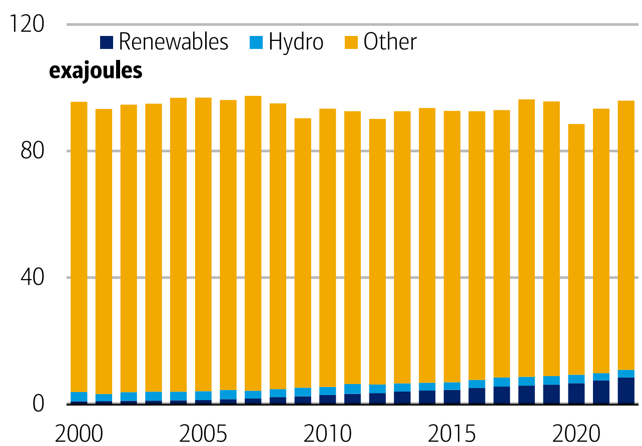
Energy imbalances globally are also deflationary…

There are at least two reasons in our view behind this major macro dislocation. First, the shale revolution has led to a net oil and natural gas production increase in the US of 18mn boe/d since 2008. Second, a more recent push into renewables has started to exacerbate the growing domestic fuel glut in the US (Exhibit 23). Both factors, with production at the helm, have turned America into a net energy exporter while China's energy imports have kept on expanding (Exhibit 24) due to rising domestic production costs.

Exhibit 23: Primary energy consumption in US by fuel
The shale revolution and a big push into renewables has led to a domestic fuel glut in the US…



Source: Energy Institute

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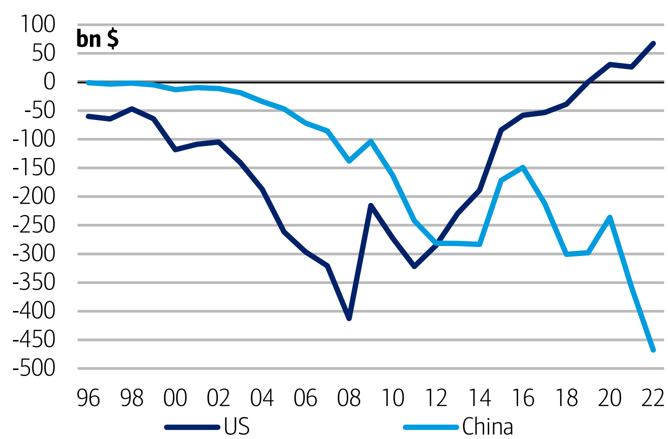
Exhibit 24: Energy trade balance
…turning America into a net energy exporter while China's energy imports keep expanding



Source: CEIC, BofA Global Research

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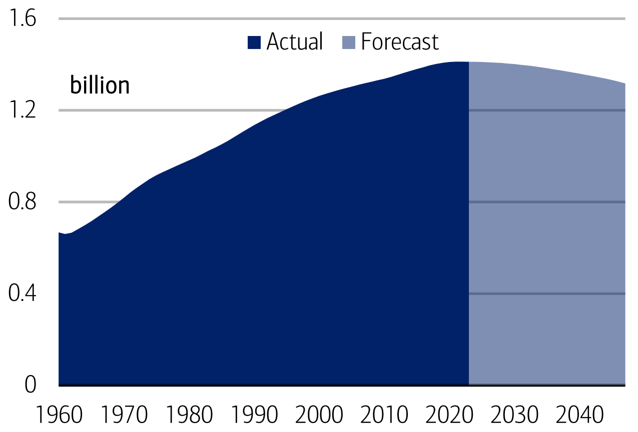
…especially in the context of a weak China economy

Even then, the dramatic demographic contraction that China is starting to face (Exhibit 25) could further expand the major deflationary force of shale and renewables in global energy markets, in our view (Exhibit 26). After all, a contracting work force and a declining population trend will likely need less thermal inputs going forward as energy efficiencies and improving non-thermal technology should reduce future demand for fuels. This negative demographic force will likely become a major factor in energy markets over the next 10 years.

Exhibit 25: Population of China
Even then, the dramatic demographic contraction that China is starting to face...



Source: World Bank

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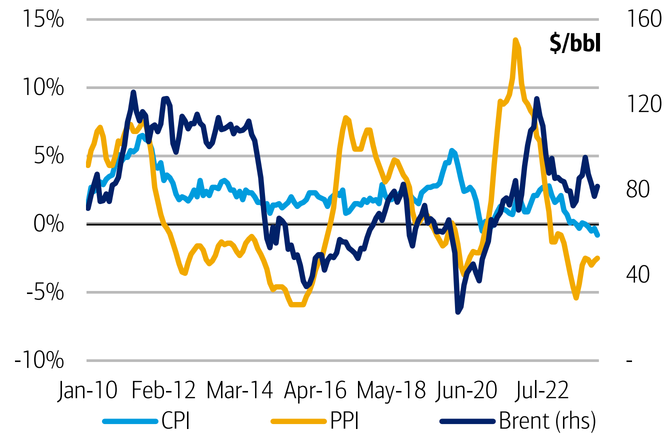
Exhibit 26: CPI and PPI in China versus Brent
...could also turn into a major deflationary force in global energy markets, in our view



Source: Bloomberg

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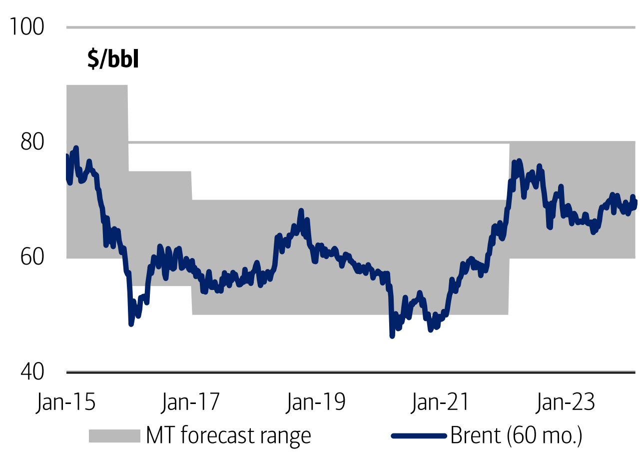
However, long dated oil remains anchored at $70...

So, what does a slowing US shale production profile against shrinking demographics in China mean for oil prices? The market seems to assume one will offset the other, perhaps rightly so. Despite the $70 to $139 range in prompt oil prices during the past two years, we note that long dated oil remains anchored (Exhibit 27) at around $70/bbl, at the center of our published 2023 oil price band of $60-$80/bbl. Still, fading demographics may not have kicked in yet, as an emerging credit impulse in China points to continued car sales growth, with ICE engines making a modest comeback (Exhibit 28).

Exhibit 27: Long dated Brent prices
Despite the $70 to $139 range in prompt oil prices during the past two years, we note that long dated oil remains anchored



Source: Bloomberg, BofA Global Research

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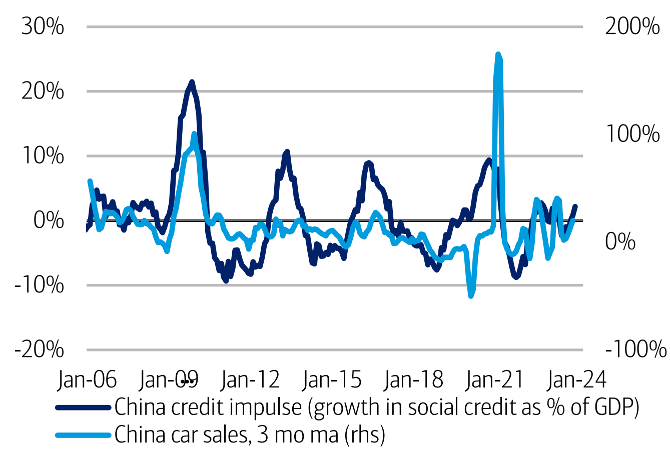
Exhibit 28: China credit impulse and car sales growth
An emerging credit impulse in China points to continued car sales growth, with ICE engines making a modest comeback



Source: Bloomberg

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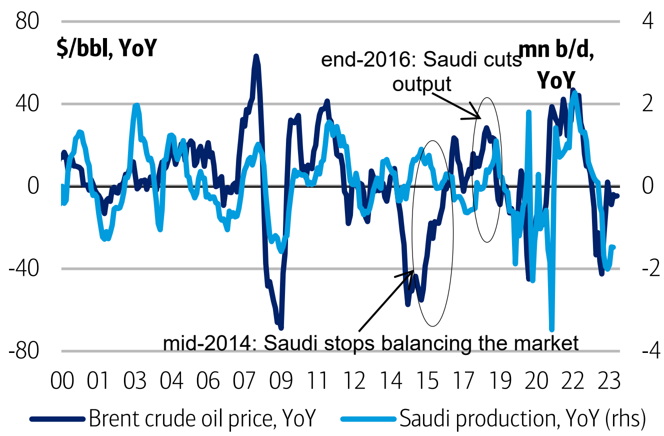
...resulting in much flatted global crude oil curves

Beyond these long-term trends, it is worth noting that Saudi Arabia (and OPEC+) has typically always acted countercyclically to support oil prices with crude production cuts (Exhibit 29), losing market share in the process. Since 2020, OPEC+ (excluding Angola) market share has declined from 43% to 36% in December. Still, Saudi cuts have ultimately allowed for a significant recovery in both Brent and WTI timespreads in recent weeks (Exhibit 30), a supportive factor for markets.

Exhibit 29: Brent crude oil price and Saudi production changes

Saudi Arabia (and OPEC+) has typically always acted countercyclically to support oil prices with crude production cuts…



Source: Bloomberg, IEA, OPEC, BofA Global Research

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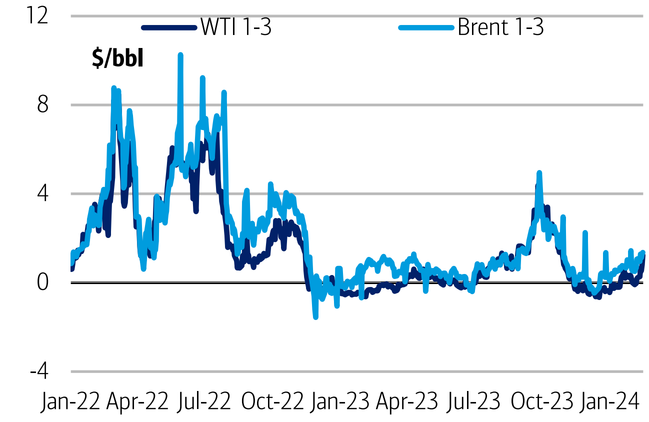
Exhibit 30: Brent and WTI 1-3 month timespreads

…ultimately allowing for a significant recovery in both Brent and WTI timespreads in recent weeks



Source: Bloomberg

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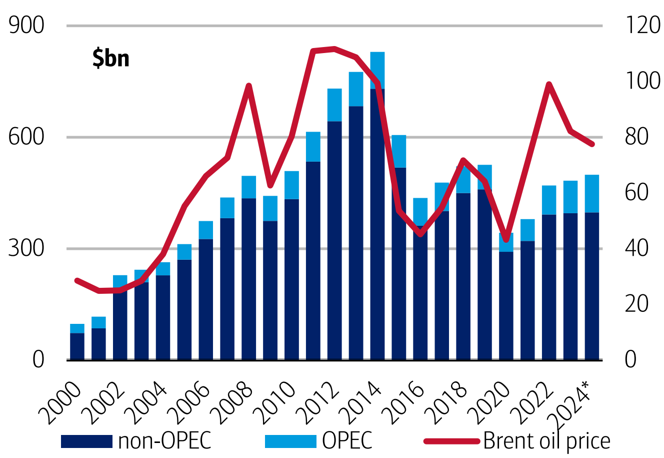
As such, global capex trends haven't changed much…

Another balancing item that has helped prevent a major move in long dated prices is the stabilization of oil and gas capex across the industry. Global oil and gas capex has picked up from the lows of roughly $100 bn in 2020 and now sits at approximately $500bn per annum (Exhibit 31), a level sufficient to keep non-OPEC+ volumes on a positive growth trajectory. As such, the global rig count has picked up markedly in recent quarters, but it is still well below the 2019 highs (Exhibit 32).

Exhibit 31: Global oil and gas capex

Global oil and gas capex has picked up from the lows and now sits at around $500bn p.a.



Source: Woodmac

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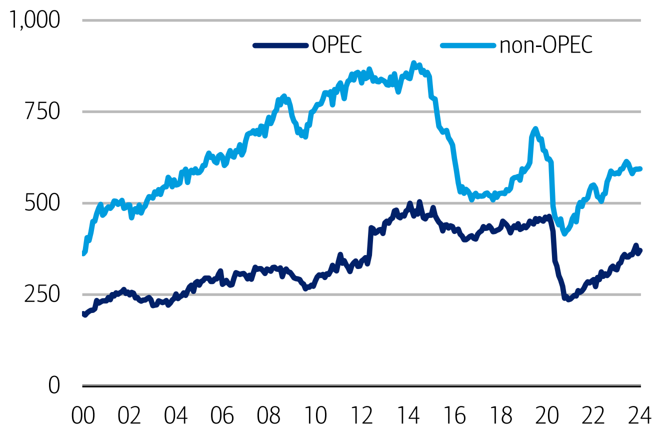
Exhibit 32: Global rig count (excluding NAM)

The global rig count has picked up markedly in recent quarters, but it is still well below the 2019 highs



Source: Bloomberg

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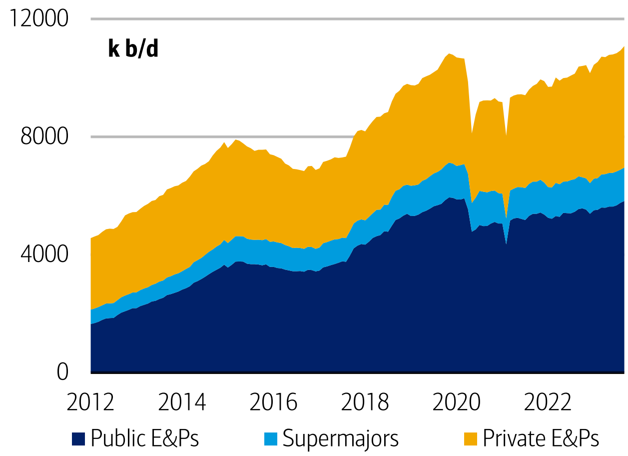
…although a wave of US mergers should enhance…

Even then, we see the recovery in exploration and production capex coming to an end. In part, it is worth noting that much of the growth in US shale oil supply in recent years has been driven by private firms (Exhibit 33), but a frantic wave of mergers has led to a meaningful consolidation of suppliers in recent quarters (Exhibit 34). As a result, we expect capital discipline to kick in and limit volume growth going forward, with less money going into the ground and more profits flowing to shareholders instead.

Exhibit 33: US onshore oil production
Much of the growth in US shale oil supply in recent years has been driven by private firms...



Source: Rystad Energy

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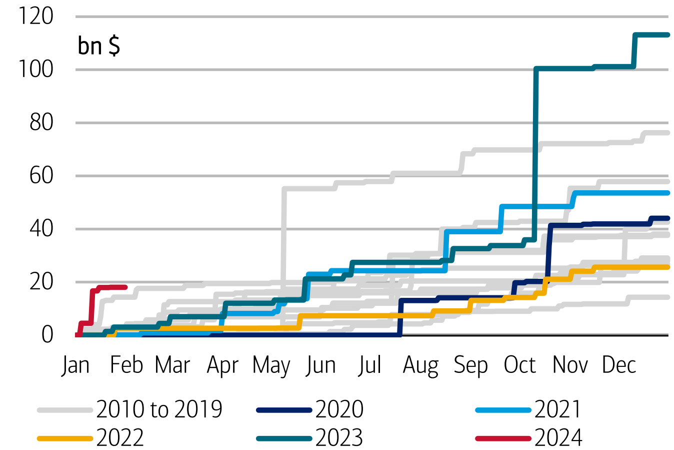
Exhibit 34: US upstream M&A total consideration by year
...but a frantic wave of mergers has led to a meaningful consolidation of suppliers in recent quarters



Source: Wood Mackenzie

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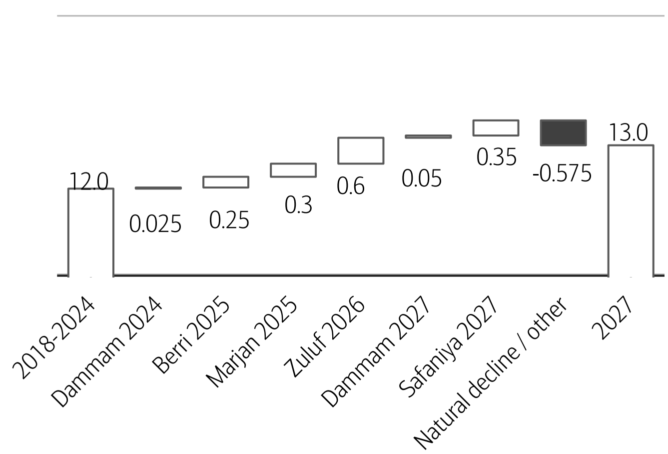
...capital discipline, with even Aramco joining the cuts

Beyond the likely improvement in capital discipline across established western oil producers, it is important to note as well that Aramco announced a meaningful cut to its investment program that will impact production capacity in 2027 (Exhibit 35). Interestingly, capital disciple has occurred against the backdrop of relatively tight sovereign and corporate credit market conditions (Exhibit 36), suggesting that these reductions in spending are driven by shareholder rather than bondholder pressures and are thus more sustainable.

Exhibit 35: Aramco old MSC delivery plan decomposed (mb/d)
Aramco has announced a meaningful cut to its investment program that will impact production in 2027



Source: Company report. BofA Global Research. Note: Safaniya currently pending final investment decision; c.350mbpd planned delivery in 2027, with remainder after 2027.

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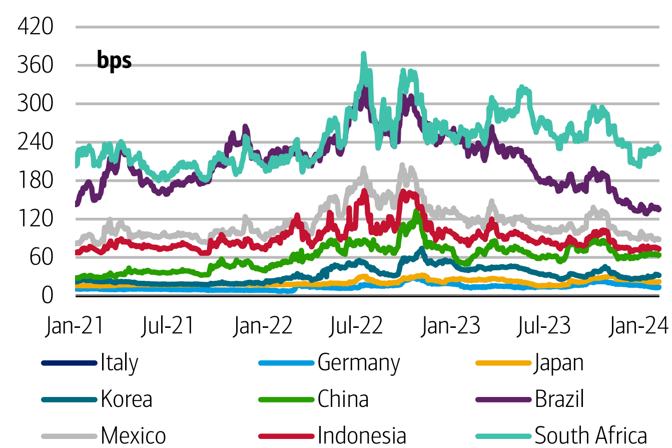
Exhibit 36: Global sovereign CDS 5Y spreads
Interestingly, capital discipline has occurred against the backdrop of relatively tight sovereign and corporate credit market conditions



Source: Bloomberg

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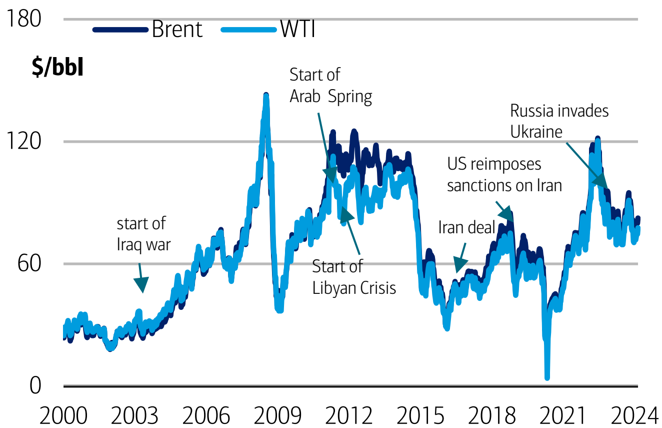
Geopolitics remain a major risk to oil prices as...

Having said all this, we note that oil prices remain at the mercy of geopolitical developments around the world. We have noted repeatedly that geopolitical events have sometimes led to meaningful oil production disruptions in recent decades (Exhibit 37), including events in Kuwait, Venezuela, Iraq, Libya, Iran, and others. Recently, however, the impact of Red Sea dislocations on oil markets has been relatively muted and the effect has been mostly felt on container shipping rates (Exhibit 38).

Exhibit 37: Brent and WTI prices
Geopolitical events have sometimes led to meaningful oil production disruptions in recent decades



Source: Bloomberg

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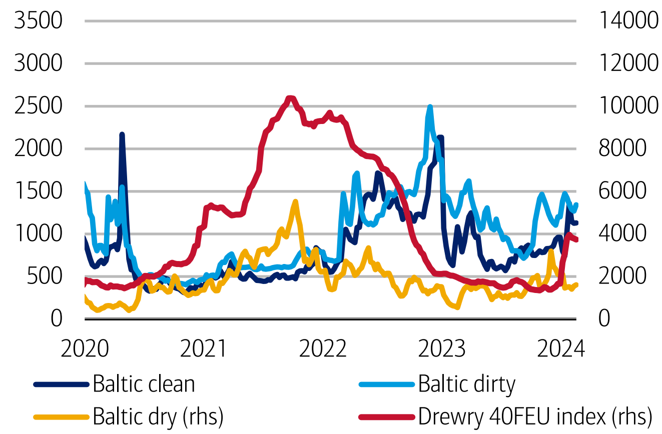
Exhibit 38: Freight rates
Recently, the impact of Red Sea dislocations has been mostly felt on container shipping rates



Source: Bloomberg

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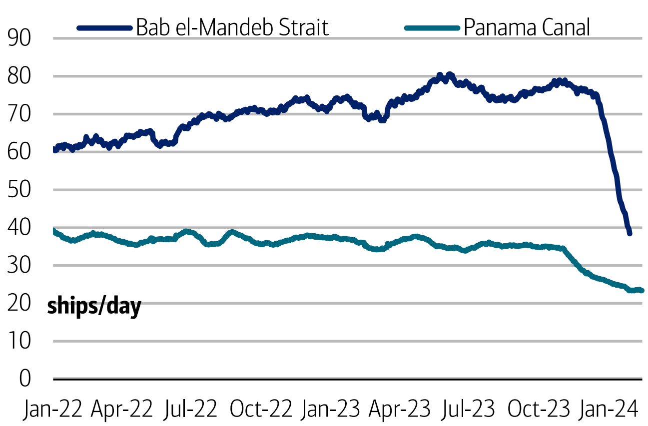
…major hotspots have surged around the world

Albeit for different reasons, freight volumes crossing through both the Panama Canal and the Suez Canal have collapsed (Exhibit 39). A very severe drought and Houthi attacks on ships have forced many companies to send their vessels through the Cape of Good Hope, extending shipping routed and increasing the volumes of oil at sea, although the biggest impact of these dislocations in petroleum markets has been felt in the middle distillate complex. Also, Russian energy supplies into Europe tumbled as a result of the Ukraine War and have yet to recover (Exhibit 40)

Exhibit 39: 30 day rolling average daily ships through Suez and Panama Canals
Albeit for different reasons, freight volumes crossing through both the Panama Canal and the Suez Canal have collapsed



Source: IMF Portwatch

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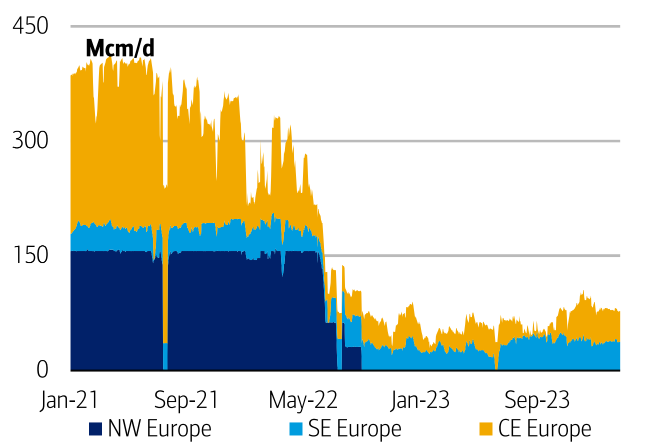
Exhibit 40: Russian pipeline gas imports into Europe
Russian energy supplies into Europe tumbled as a result of the Ukraine War and have yet to recover



Source: Bloomberg

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Relative to a number of metrics such as income,

In short, global oil markets remain quite dislocated, with much longer supply chains, but prices have yet to absorb some of these pressures. In fact, gasoline prices relative to average hourly earnings have come down significantly from the 2022 highs (Exhibit 41) and are no longer a pre-eminent political issue in America. Similarly, the cost of energy as a share of total income has now normalized on a spot and forward basis (Exhibit 42) after the great global gas and power crisis of 2022.

Exhibit 41: US gasoline prices relative to average hourly earnings
Gasoline prices relative to average hourly earnings have come down significantly from the 2022 highs

Source: Bloomberg
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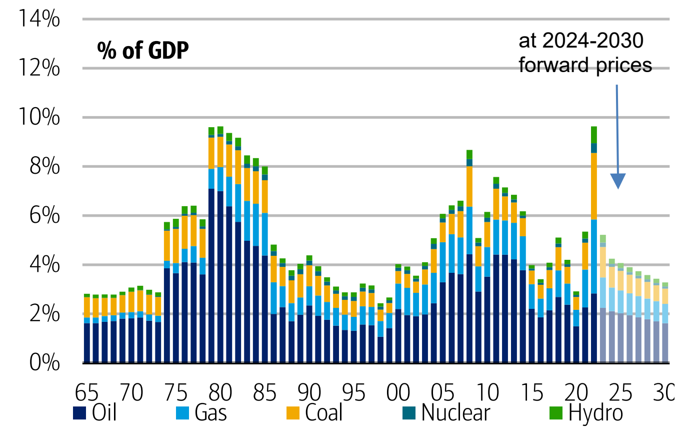
Exhibit 42: Primary energy to nominal GDP ratio - World
Similarly, the cost of energy as a share of total income has now normalized on a spot and forward basis



Source: Bloomberg, IMF, BP, IEA, Energy Institute, BofA Global Research estimates
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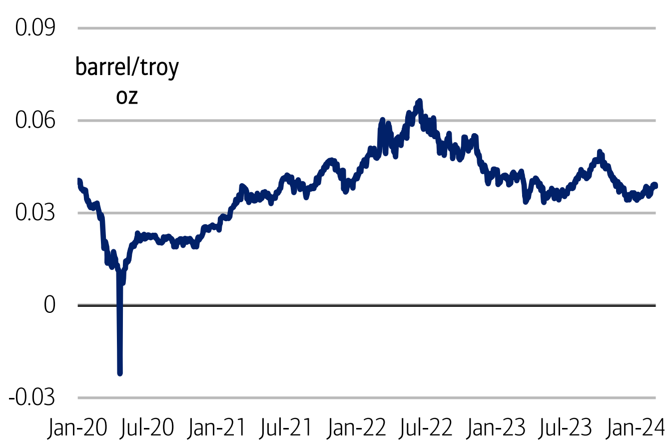
…other goods or even history, oil appears cheap

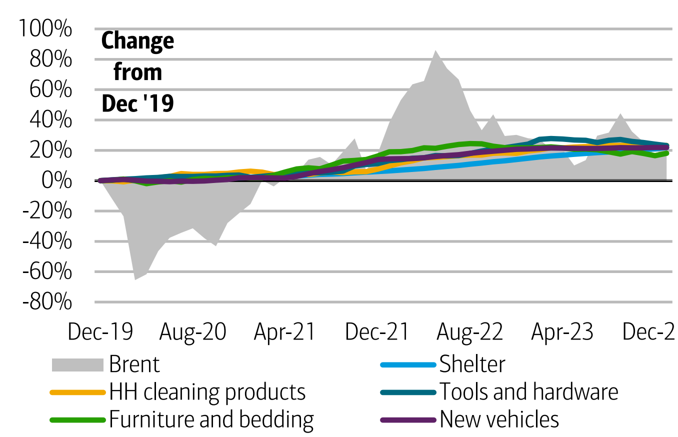
Importantly, oil and energy prices have not just moderated against both income and wages. Oil measured in gold, a favored asset by central banks these days, looks particularly cheap (Exhibit 43) given the robust performance of the yellow metal in a world of rising inflation, rising deficits, and central bank reserve asset seizures. Also, when measured against other goods in the economy, we note that prompt oil prices do not appear particularly expensive (Exhibit 44), including against autos or shelter.

Exhibit 43: Brent prices in gold
Oil measured in gold, a favored asset by central banks these days, looks particularly cheap



Source: Bloomberg
BofA GLOBAL RESEARCH

Exhibit 44: US consumer prices and Brent crude oil prices
Measured against other goods in the economy, we note that prompt oil prices do not appear expensive



Source: Bloomberg
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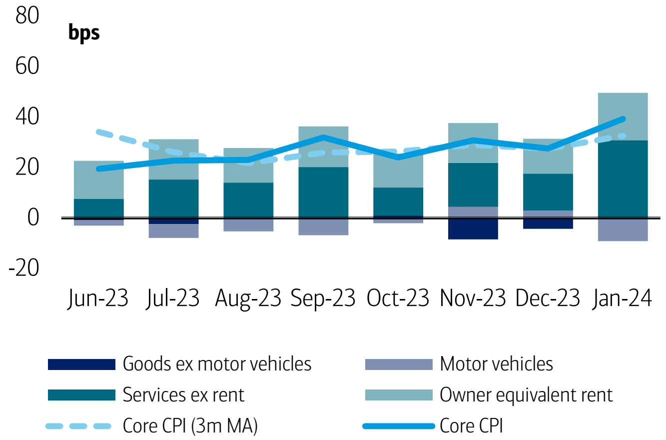
With monetary policy across the OECD set to ease…

With oil prices moderating, how much room is there for the Fed to cut rates? Headline inflation has indeed come down with lower energy costs, yet core inflation as well as wage growth have been stubbornly sticky in the US for some time (Exhibit 45). For now, the fixed income market, and our economists, still expect meaningful interest rate cuts this year (Exhibit 46). Should monetary policy ease, we believe the downward pressure on energy prices observed in the past two years would likely reverse.

Exhibit 45: Core CPI breakdown

Core inflation as well as wage growth have been stubbornly sticky in the US for some time…



Source: Bloomberg

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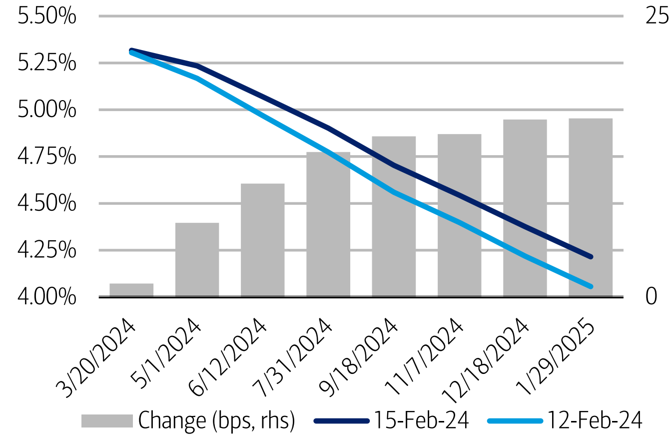
Exhibit 46: Fed OIS

…but the fixed income market, and our economists, still expect meaningful interest rate cuts this year



Source: Bloomberg

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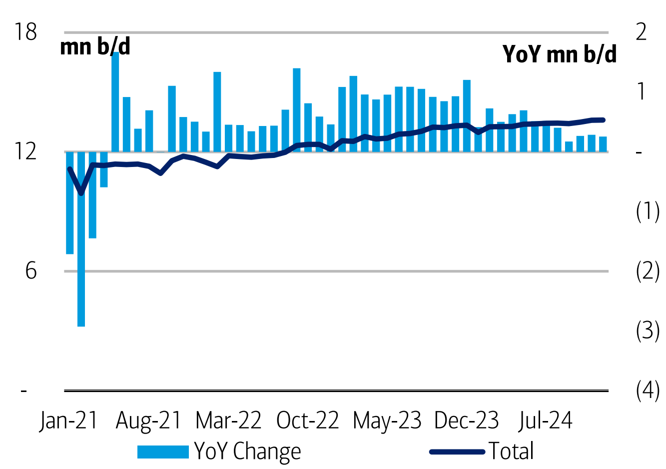
…slowing shale and OPEC+ production cuts could…

In fact, any meaningful reduction in interest rates could also come against a backdrop of declining growth rates for supply. We expect crude oil production to slow down materially YoY in the US into 4Q24 (Exhibit 47), eventually lending support to a recovery in energy prices. In the short run, OPEC+ has committed to meaningful production cuts, and a number of countries beyond Saudi Arabia are starting to deliver (Exhibit 48). OPEC+ production is now down by 6mn b/d from a 43mn b/d post pandemic high.

Exhibit 47: US crude oil production

We expect crude oil production to slow down materially YoY in the US into 4Q24



Source: EIA, BofA Global Research estimates

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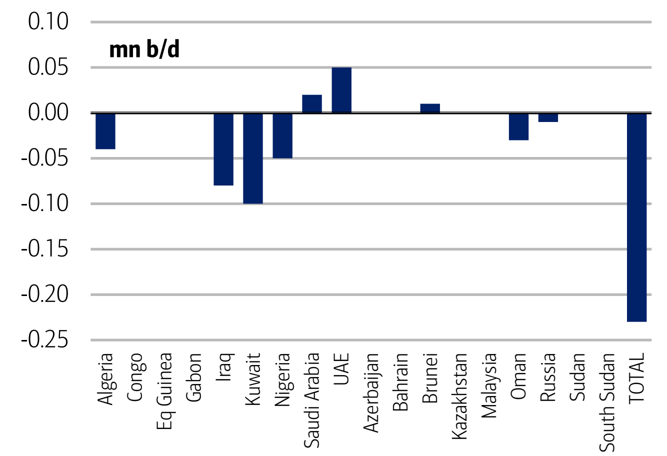
Exhibit 48: MoM change in OPEC+ production Jan 24 vs Dec 23

OPEC+ has committed to meaningful production cuts and a number of countries are starting to deliver



Source: Platts

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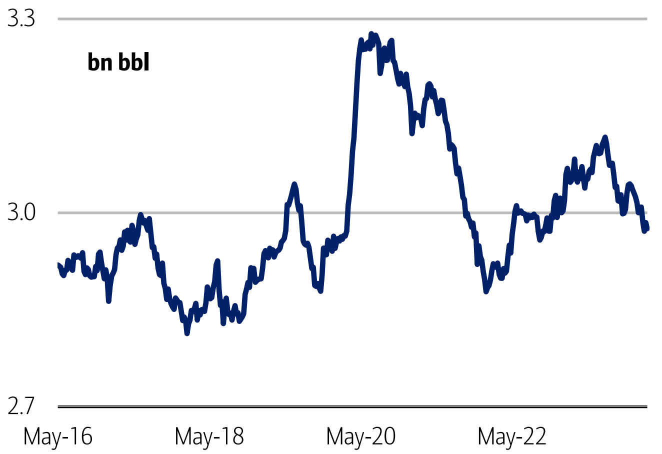
…push inventories into a downward trajectory…

With OPEC+ holding back production, US shale set to slow down materially, and the Fed poised to cut rates over the coming quarters, an inflection point for oil prices may be nigh. In that regard, it is important to remember that global crude oil inventories are now 75mn bbl below last year levels according to Kayrros (Exhibit 49), although floating inventories have increased substantially to deal with the much longer routes (Exhibit 50).

Exhibit 49: Observed global inventory changes
Global crude oil inventories are now 75mn bbl below last year levels, according to Kayrros...



Source: Kayrros
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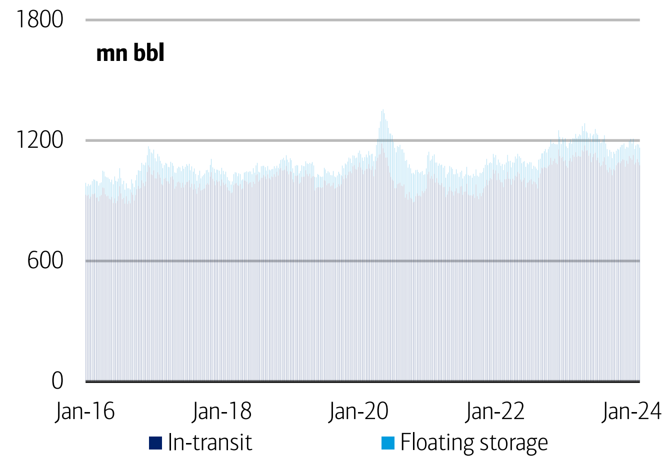
Exhibit 50: Floating inventories
...although floating inventories have increased to deal with the much longer shipping routes



Source: Bloomberg
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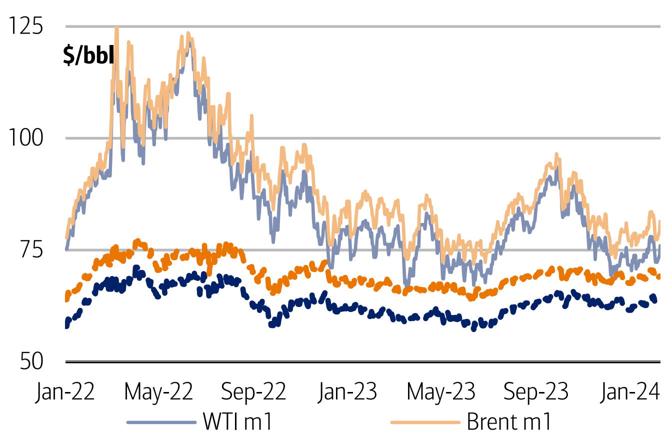
...allowing oil to regain the upper hand over money

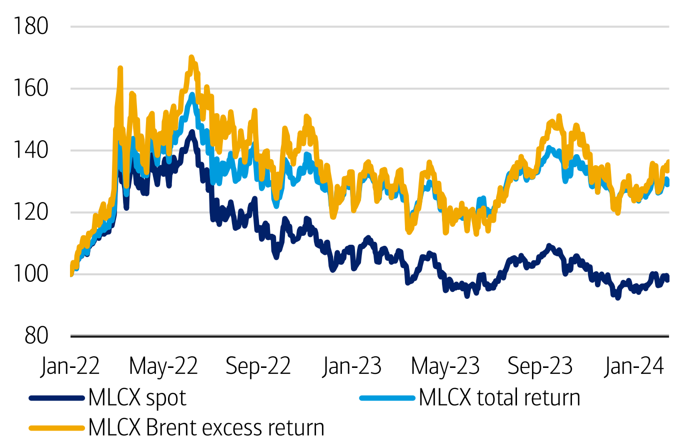
The stabilization of global oil supply and demand balances via OPEC+ output management has been so far successful at counterbalancing the aggressive monetary policy tightening cycle implemented by the Fed and the ECB. The proof is that prompt oil prices have now traded substantially above forward prices for more than 2 years running (Exhibit 51). Yet monetary policy easing could become a substantial tailwind for oil prices and total commodity returns (Exhibit 52) going forward, if OPEC+ discipline holds.

Exhibit 51: Brent and WTI prompt and long dated prices
Prompt oil prices have now traded substantially above forward prices for more than 2 years running



Source: Bloomberg
BofA GLOBAL RESEARCH

Exhibit 52: MLCX spot, total and excess Brent returns
Monetary policy easing could become a substantial tailwind for oil prices and total commodity returns



Source: Bloomberg
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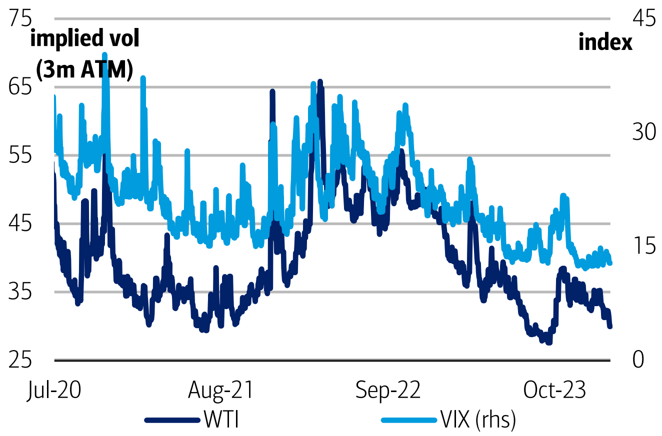
Still, we see muted oil volatility in the months ahead

While many factors have come together to stabilize oil prices around the current range, we believe that volatility may have further room to drop. Even as the VIX has remained muted in the context of rallying equity markets, oil volatility has only recently started to come off (Exhibit 53). In part, implied vol has begun to converge with muted realized volatility in global energy markets (Exhibit 54), a trend that we think will continue as juxtaposing forces extend the recent period of oil price stability, geopolitics permitting.

Exhibit 53: VIX and 3M implied vol for WTI

While the VIX has remained muted in the context of rallying equity markets, oil has only recently come off



Source: Bloomberg

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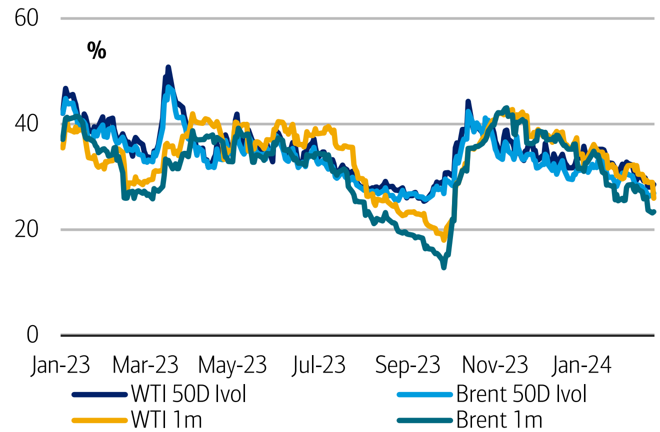
Exhibit 54: Realized and implied volatility

In part, implied vol has started to converge with muted realized volatility in global energy markets



Source: Bloomberg

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Exhibit 55: Acronyms list

This is a list of acronyms used in the publication

Acronym	Definition
$/bbl	dollars per barrel
2H2023	Second half of 2023
avg	average
b/d	barrels per day
bbl	barrel
bn	billion
boe	barrel of oil equivalent
Btu	British thermal unit
CB	central bank
CPI	consumer price index
D&C	Drilling and completion
DM	developed market
E&P	Exploration and production
ECB	European Central Bank
EM	European market
EM	emerging market
EUAs	European Union Allowances
EUR	Euro
EV	electric vehicle
FID	Final Investment Decision
FPSO	Floating production storage and offloading
GoM	Gulf of Mexico
GWh	gigawatt hours
Hz	Horiztontal
IEA	International Energy Agency
IMO	International Maritime Organization
JKM	Japan Korea Marker
JPY	Japanese Yen
LNG	liquified natural gas
MA	moving average
mcm	million cubic meters
ME	Middle East
Mfg	manufacturing
MMBtu	million British thermal unit
mn	million

Exhibit 55: Acronyms list
This is a list of acronyms used in the publication

Acronym	Definition
mt	metric ton
MWh	Megawatt hours
NBS	National Bureau of Statistics of China
NEV	New Electric Vehicle
ngl	natural gas liquids
NWE	North west Europe
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
OPEC+	OPEC countries plus ten additional countries
PMI	purchasing managers index
rhs	righthand side
SPR	Strategic Petroleum Reserve
TMX	Trans Mountain Expansion
TTF	Dutch TTF
TWh	terawatt hours
VLSFO	very low sulfur fuel
WCS	Western Canadian Select
WTI	West Texas Intermediate
YoY	year over year
yr	year

Source: BofA Global Research

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