



Physical and paper oil market interactions

Mike Wittner

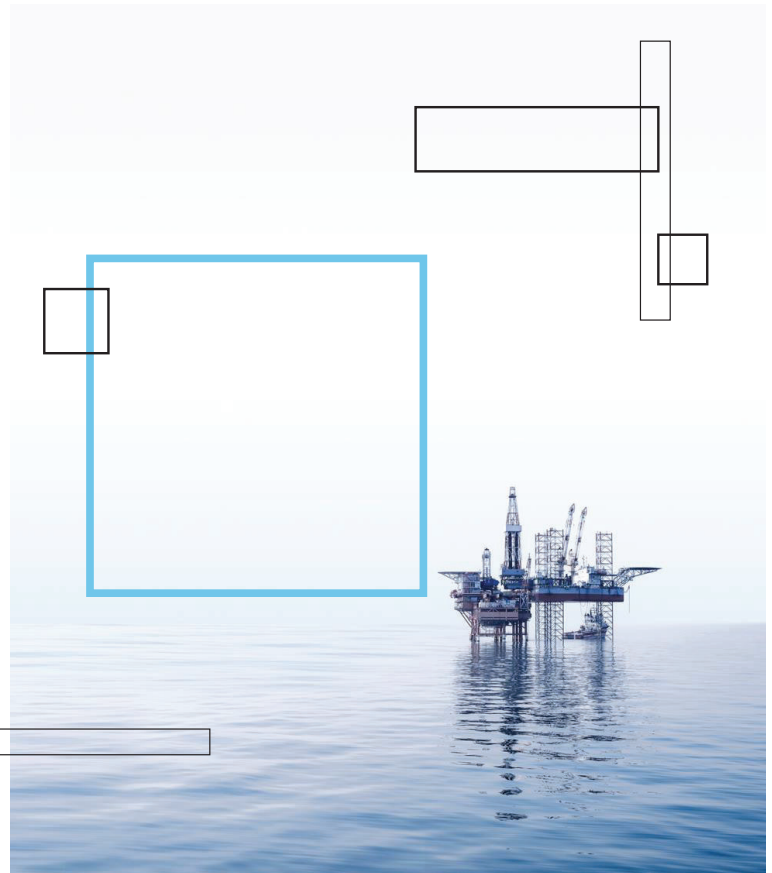
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9th Joint IEA-IEF-OPEC Workshop

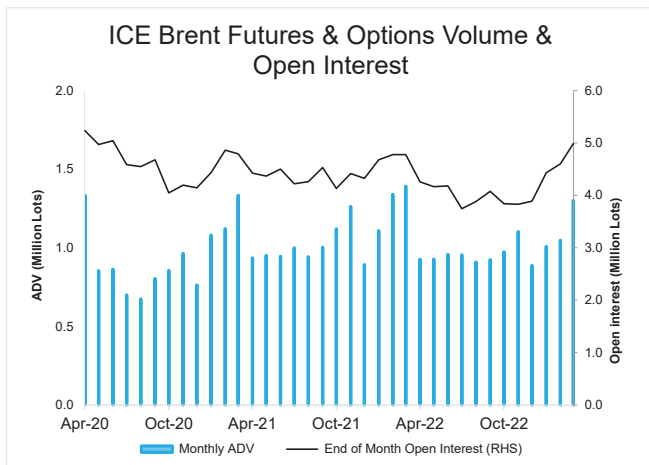
OPEC - Vienna, Austria

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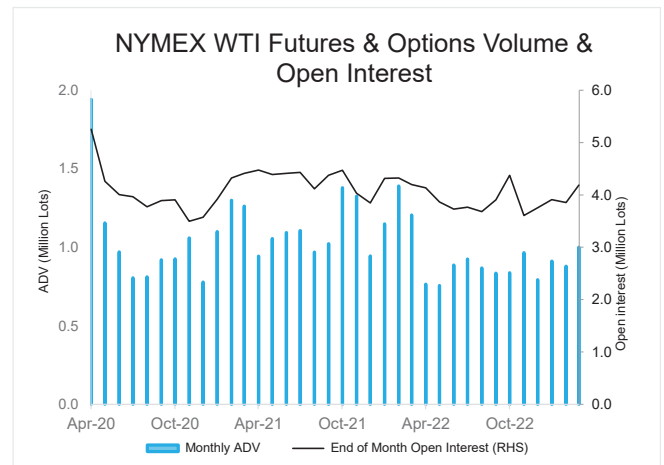
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ICE Brent and NYMEX WTI Futures: Volumes & OI are recovering



Source: ICE and CME

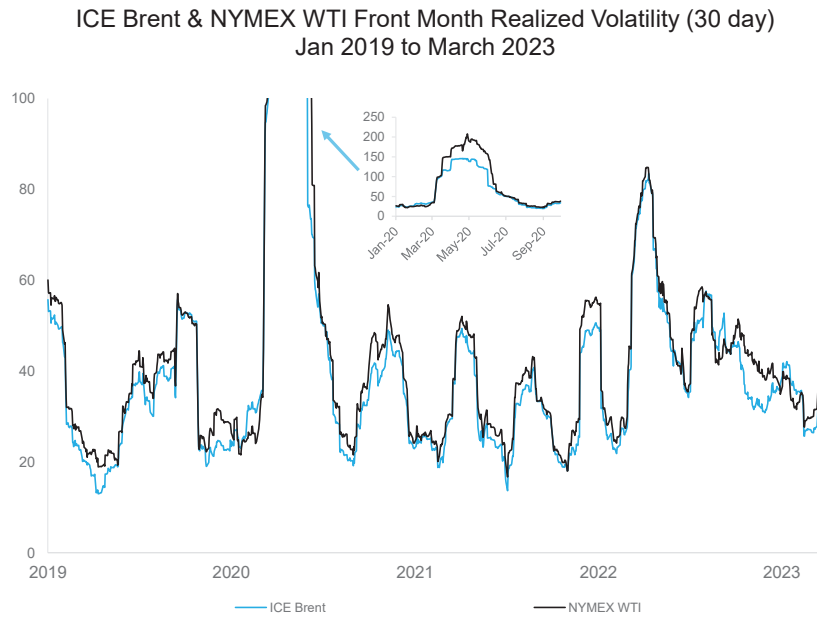


- In late 2021 and 2022, high outright prices, high volatility, and increased exchange margins all combined to weigh on trading activity
- Greater resilience of ICE Brent vs. NYMEX WTI (global vs. regional benchmarks; waterborne flexibility vs. Cushing constraints)
- Trading activity has been recovering since late 2022. All of the factors above -- outright prices, volatility, and exchange margins -- are easing/normalizing

2



ICE Brent and NYMEX WTI Futures: Volatility trending lower

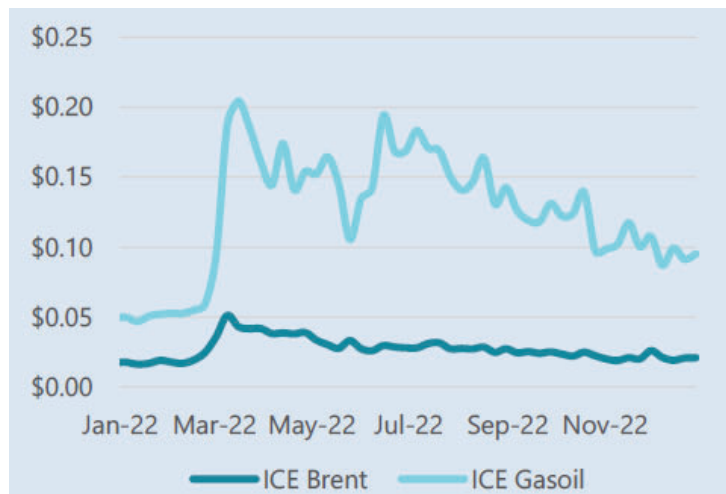


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ICE Brent and ICE Low-Sulphur Gasoil: Bid/ask spreads declining

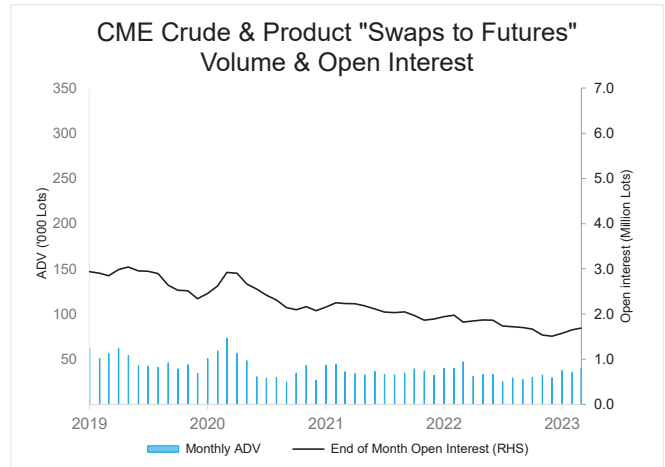
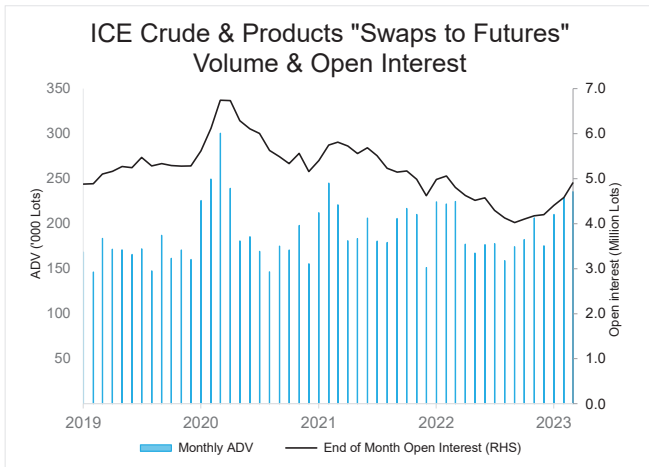
ICE Brent and ICE Low-Sulphur Gasoil Bid/Ask Spreads (\$/bbl)



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ICE and NYMEX “Swaps to Futures” Markets: important hedging tools for commercial oil market participants

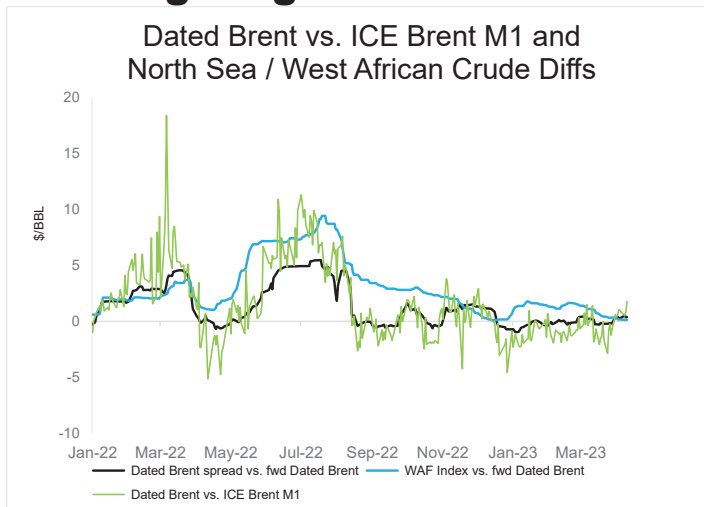


Source: ICE and CME

- The OTC/swaps markets for crude oil and refined products migrated largely onto exchanges following the 2008-2009 Financial Crisis/Great Recession
- Counterparty risk a growing problem for OTC/swaps market participants in 2008-2009, but exchange trading/clearing helped market participants to address the issue
- “Swaps to Futures” (former OTC/swaps market) is comprised of important hedging tools for commercial oil market participants. For crude oil and refined products: calendar spreads, geographic and grade/quality differentials, and product cracks.



Physical vs. paper: very strong Dated Brent vs. ICE Brent M1 during summer 2022 due to tight light sweet crude markets

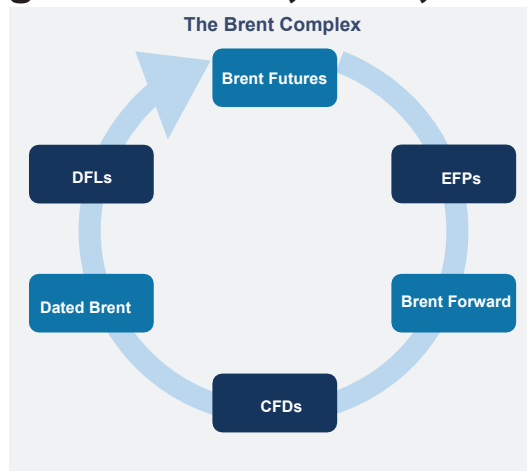


Source: ICE and Platts

- Crude futures prices fell from mid-June 2022, due to weakening outlook for macro/oil demand growth. In contrast, physical light sweet crude markets tight. Very low crude/product stocks. Very strong gasoil/diesel cracks & refining margins. Seasonally increasing crude & product demand.
- Supply disruptions in Libya and Nigeria. Field maintenance in North Sea and Kazakhstan. Tight Atlantic Basin light sweet crude supply. Also: steep backwardation added to premium for short-haul barrels and rapidly increasing natural gas prices added to light sweet demand.
- Result: very strong Dated Brent vs. ICE Brent M1. Very strong diffs for North Sea and West African crudes, as well as Azeri Light and Murban.
- The paper and physical crude oil markets interacted/functioned properly, and futures prices properly converged with the physical markets



The Brent Complex: Dated Brent, “Cash” (physical forwards), and ICE Brent all work together. DFLs, EFPs, and CFDs have key roles.



Source: Energy Intelligence

- ICE Brent is a deliverable contract based on Exchange for Physical (EFP) delivery, with an option to cash settle against the ICE Brent Index.
- ICE Brent market participants have the option – but not the obligation – of taking physical delivery by using the EFP mechanism (a swap of a futures position for a physical position).
- On contract expiry, ICE Brent futures converges with the physical Brent market through the ICE Brent Index. The Index represents the average price of BFOET in the physical market in the relevant delivery month.
- The EFP mechanism, together with the ICE Brent Index, ensures that the futures markets remains linked with the physical Brent market

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Summary and conclusions

- Exchange trading activity for crude oil has been recovering since late 2022.
- Outright crude prices, volatility, and exchange margins have been easing/normalizing. Bid/ask spreads also declining.
- “Swaps to Futures” markets
- The OTC/swaps markets for crude oil and refined products migrated largely onto exchanges following the 2008-2009 Financial Crisis/Great Recession.
- “Swaps to Futures” (former OTC/swaps market) is comprised of important hedging tools for commercial oil market participants for crude oil and refined products.
- Very strong Dated Brent vs. ICE Brent M1 during summer 2022
- During summer 2022, very strong Dated Brent vs. ICE Brent M1 differentials and very strong differentials for North Sea and West African crudes were caused by a range of oil market fundamental factors.
- The paper and physical crude oil markets interacted/functioned properly, and futures prices properly converged with the underlying physical markets.
- The Brent Complex: connecting physical and futures
- In the Brent Complex, Dated Brent, the “cash” market (physical forward market), and ICE Brent futures all work together. DFLs, EFPs, and CFDs play key roles linking the different elements of the Brent Complex.

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Contacts and resources

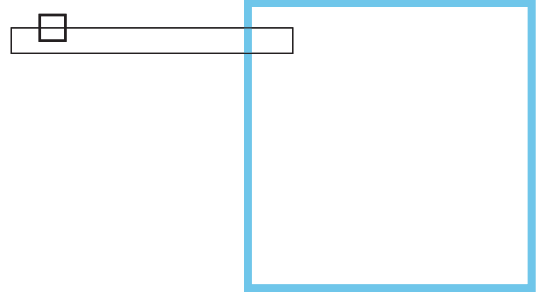
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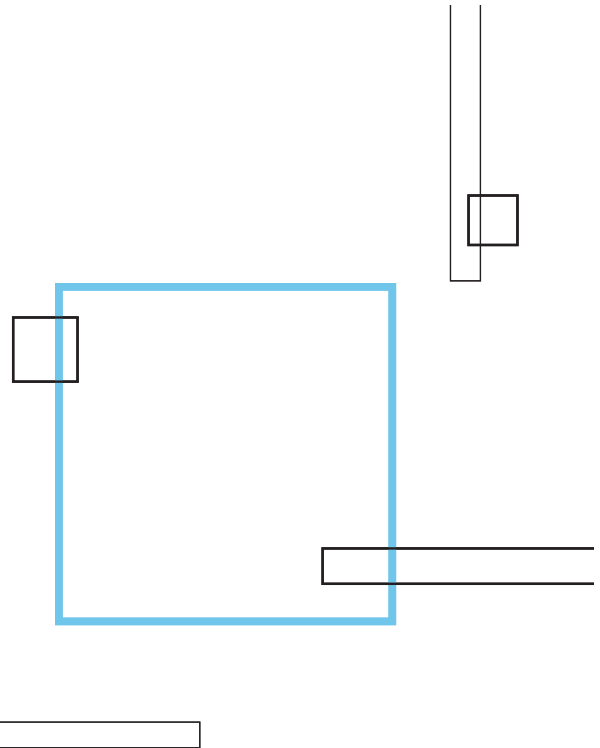
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