ENVERUS

MACRO
GLOBAL

PETROLOGIC
The Biden Band-Aid

NEW: This report contains interactive content. Click to view charts and figures with additional data points and in-depth information.

AUTHORS

Al Salazar, MBA
Vice President

Bill Farren-Price
Director

Chetan Sharma, M.A.
Senior Associate

Dean Kim
Associate

Elena Every
Associate

Kurri Reich
Associate

FOCUS

What is Enverus' oil price outlook for the near-to-medium term?

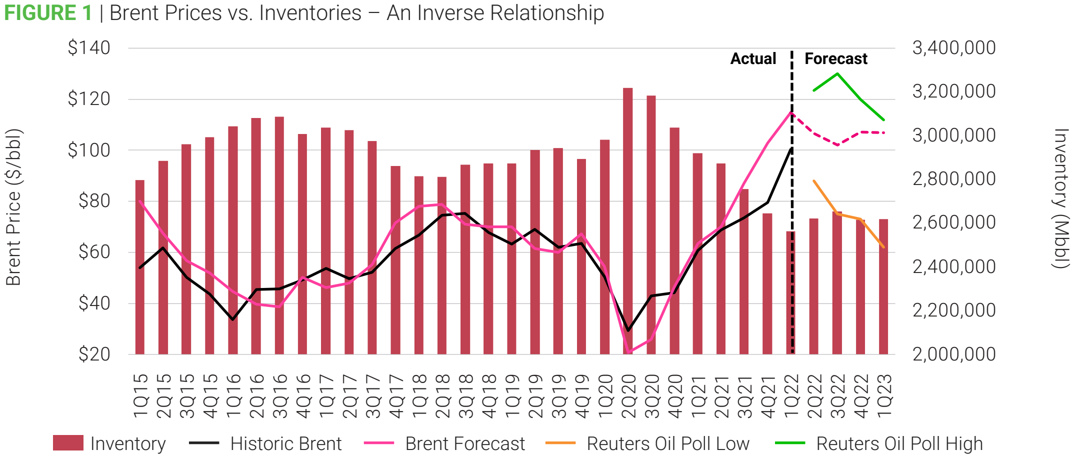
KEY POINTS

- As we suggested back **in November**, oil market intervention of all flavors is on the rise. The U.S. decision to unveil the largest SPR release has stabilized oil markets, albeit with the curve sitting north of levels prior to the Ukraine war as outright stocks remain at historically low levels. As buyers wind down Russian oil purchases over the rest of this year, the prospect of replacement supply is bleak with OPEC nearing its limits, Iran still out of the market and Libyan production unreliable.
- Aside from the SPR, U.S. oil supply growth will help ease tightness, even if delivering that growth is challenged by limited fracture crews and other OFS constraints. Faltering oil demand due to high oil prices and a cost of living squeeze that has seen food and metals prices surge to long-term highs are also likely to help ease balances. Monetary tightening will also create headwinds to activity and consumption.
- We expect Brent to remain comfortably above $100 in 2022. Had it not been for the Biden Band-Aid, Russian supply outages and rising demand would have kept balances tight and stocks drawing through the remainder of the year. Baseline revisions to U.S. supply mean lower outright production despite the upgrade in growth this year. The precise rate at which Russian oil is sanctioned remains key as does the pace of OPEC's ramp in supply as it nears capacity limits.

NEED TO KNOW

Our fundamental price model leverages the significant inverse relationship between stocks and price.

FIGURE 1 | Brent Prices vs. Inventories – An Inverse Relationship



Source | Enverus Intelligence, Reuters

Scan to download the Intelligence mobile app.

Please contact support@enverus.com if you encounter any problem launching the mobile app.

WHAT TO LOOK FOR:

"We forecast global oil demand to grow by about 1.65 MMbbl/d Y/Y in 2022, nearly half the growth we forecast prior to the Ukraine war.

- Al Salazar

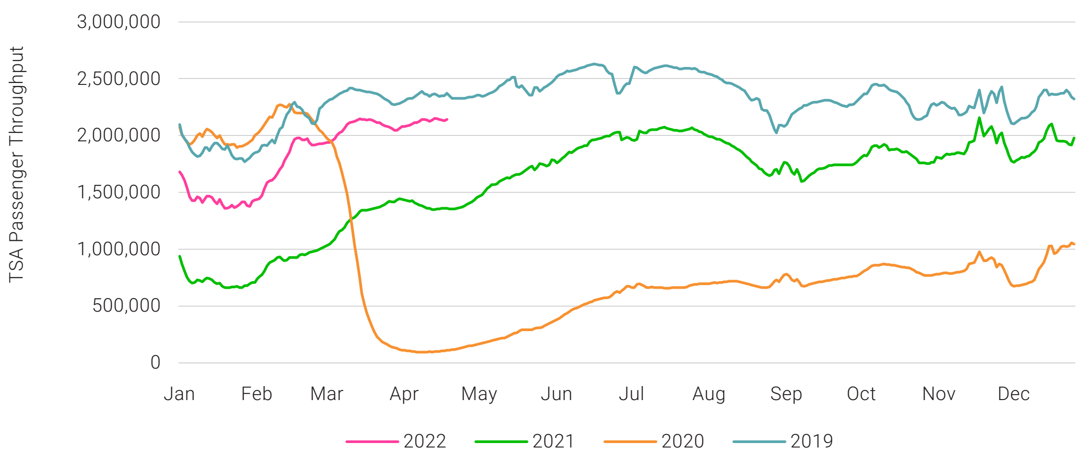
DEMAND | IMF GDP Downgrade

The IMF's April World Economic Outlook projects global economic growth (real GDP) of 3.6% Y/Y in 2022, ~1.3 percentage points lower than its previous outlook in October 2021. The downgrade was almost equally balanced between advanced economies and emerging markets, with war-driven commodity inflation expected to remain elevated for longer.

Accordingly, we are leaving our expectations for global oil demand growth mostly unchanged after a substantial reduction **last month** in anticipation of the IMF release. Last month, we had halved our 2022 forecast for oil demand growth to 1.5 MMbbl/d from 3 MMbbl/d prior to the invasion. Given the recovery in U.S. air traffic this year and steady gasoline consumption, we nudged up our forecast to 1.65 MMbbl/d Y/Y (Figure 2). Our expectation is lower than both the EIA (2.4 MMbbl/d) and the IEA (1.9 MMbbl/d), but we expect these agencies will further downgrade their projections as they model weaker economic performance due to the war and inflation in the coming weeks.

We are also monitoring the spread of COVID-19 in some of China's biggest population centers. China has maintained its zero-tolerance policy towards COVID-19, and Shanghai, a metropolis of nearly 30 million people, has been shut down for several weeks. For the first time since 2020, China's consumer spending contracted by about 3.5 percentage points Y/Y in March while unemployment rose 0.3 percentage points M/M to 5.8%. A slowing economy along with reduced mobility in major cities will undoubtedly weigh on liquids consumption the longer lockdown measures remain in place.

FIGURE 2 | U.S. TSA Passenger Throughput



Source | Enverus Intelligence, Transportation Security Agency

WHAT TO LOOK FOR:

"The U.S. decision to release 180 MM bbl of oil from the SPR will keep the market balanced but won't repair historically low inventory levels.

- Bill Farren-Price

WHAT TO LOOK FOR:

"OPEC-10 production is now 920 Mbbl/d below target and even Saudi Arabia only increased 50 Mbbl/d in March.

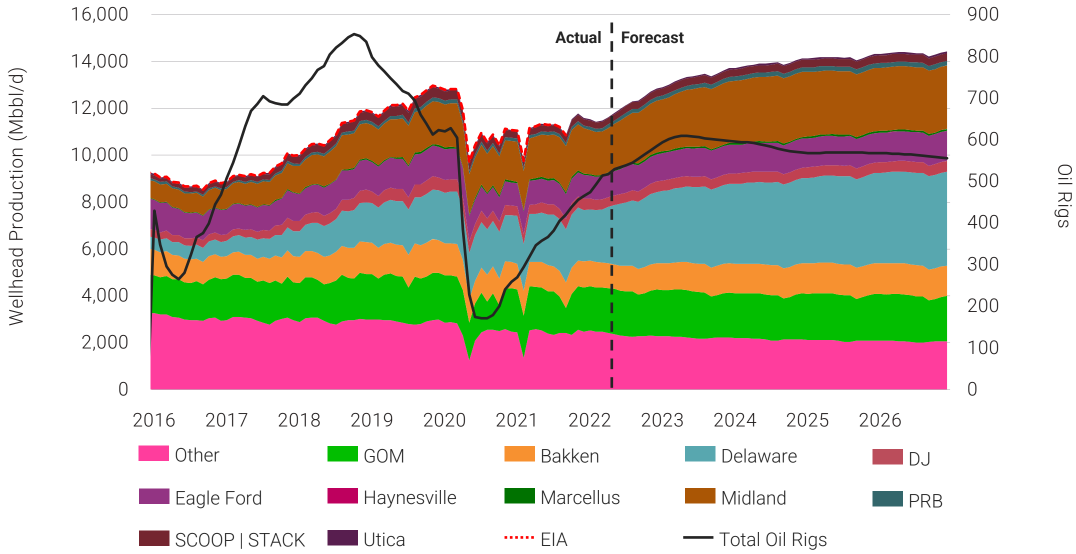
- Bill Farren-Price

SUPPLY | SPR Bazooka

The U.S. decision in late March to release 180 MMbbl of oil from the SPR over the next six months coupled with stock releases by other IEA member countries will keep the market from further drawing commercial inventories, but they will not repair historically low OECD stock levels as Russian exports decline. This third release in six months is the largest since the SPR was established in 1975 in the wake of the Arab oil embargo. The U.S. move comes amid reluctance by OPEC producers to increase supply beyond their steady ramp-up and a failure to make a breakthrough on Iran's nuclear program, which would have opened the door to a steady increase in exports from the country.

- **OPEC:** Production in March was up a modest 60 Mbbl/d as increases from Saudi Arabia, UAE and Iraq hardly offset struggling producers elsewhere in the group and declines in Libya, which is not part of the supply agreement. OPEC-10 production is now 920 Mbbl/d below target; Saudi Arabia only increased by 50 Mbbl/d in March at 10.28 MMbbl/d, short of its 10.33 MMbbl/d target.
- **Russia**: Moscow has stopped publishing monthly oil production data, making assessments of output more challenging, but March production seems to have been little changed from February despite lower exports as Atlantic Basin crude and product buyers stayed away. Production is expected to fall in April as storage fills and as Russian refiner demand falls, and we see supply falling further through the year. Kazakhstan oil output declined in March due to disruption to loading at Novorossiysk in the Black Sea.
- **North America:** We increased our forecast for 2022 E/E growth to 1.2 MMbbl/d, although with a downside risk due to fracture crew constraints. Monthly Canadian oil output dipped ~2.7% in March to ~5.1 MMbbl/d as rigs continue to decline due to seasonal breakup. We expect supply growth of 6% this year, or 430 Mbbl/d, amid rising interest in Canadian assets – shown by the Montney VET/LXE deal that commanded a premium.
- **NOCAR**: Output in March was 25.9 MMbbl/d, matching our expectation for average production in 2022. Last month we modeled **NOCAR's potential supply response** to recent higher oil prices and estimated it to be limited (~200 Mbbl/d) and lagged by 18-24 months. Given the long-cycle nature of projects in this stack, only a small handful of countries are able to deploy rigs to boost production. Any significant upside to our current forecast would require new project sanctions.

FIGURE 3 | U.S. Wellhead Oil Production



Source | Enverus Intelligence, EIA

APPENDIX | Outlook for Market Balances and Brent and WTI

MMbbl/d	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23
SUPPLY								
OPEC Liquids Total								
Crude	25.5	26.9	27.8	28.4	29.0	29.4	29.6	29.6
NGL	5.1	5.1	5.2	5.3	5.4	5.4	5.4	5.8
Non-OPEC Liquids Total								
CAR (Canada, America, Russia)	33.3	33.5	34.7	34.8	33.1	32.8	32.5	32.9
U.S. Crude	11.3	11.1	11.6	11.5	11.8	12.3	12.7	13.0
U.S. NGL	5.4	5.5	5.6	5.7	5.7	5.8	5.9	6.0
NOCAR	25.2	25.5	25.5	25.9	26.0	25.8	26.0	26.1
Processing Gains and Biofuels	5.2	5.5	5.0	4.7	5.3	5.6	5.2	4.9
Total Supply	94.3	96.5	98.1	99.2	98.7	99.0	98.7	99.3
DEMAND								
OECD	44.1	45.8	46.7	45.9	45.7	46.4	46.5	46.6
Non-OECD	52.3	53.1	53.8	53.0	52.9	53.2	53.0	52.5
Total Demand	96.3	98.8	100.5	99.0	98.6	99.5	99.4	99.1
Miscellaneous to Balance	(0.9)	(0.6)	(2.2)	1.3	(0.1)	0.2	0.3	0.1
U.S. and IEA Members SPR					1.3	1.3		
Implied Inventory Change	(2.0)	(2.3)	(2.4)	(1.0)	0.1	(0.5)	(0.8)	0.2
OECD Stocks (MMbbl)	2,874	2,755	2,645	2,564	2,622	2,652	2,615	2,618
PRICE FORECASTS ($/bbl)								
Current Brent Forecast					$107	$102	$107	$107
Prior Month Brent Forecast					$113	$117	$117	$113
Brent Forward Strip @ April 29					$94	$91	$88	$81
WTI Forecast					$102	$97	$102	$102

Source | Enverus Intelligence, IEA, IMF, ANP, ANH, CHN, NPD, OGA, MINIM, EIA, Baker Hughes, company disclosures

Enverus Intelligence™ | Research Disclosure Statement:

The material in this report is the property of Enverus Intelligence Research, Inc. ("EIR") unless otherwise indicated. All trademarks, service marks and logos used in this report are proprietary to EIR or Enverus. This report is provided solely to clients of EIR. Furthermore, this report is proprietary, confidential and provided for the exclusive use of the recipient and may not be redistributed to or shared with any individual, company or entity outside of your organization without the express prior written consent of EIR.

The material presented in this report is provided for information purposes only and is not to be used or considered as a recommendation to buy, hold or sell any securities or other financial instruments. Information contained herein has been compiled by EIR and prepared from various public and industry sources that we believe to be reliable, but no representation or warranty, expressed or implied is made by EIR, its affiliates or any other person as to the accuracy or completeness of the information. Such information is provided with the expectation that it will be read as part of a mosaic of analysis and should not be relied upon on a stand-alone basis. Past performance should not be taken as an indication or guarantee of future performance, and we make no representation or warranty regarding future performance. The opinions expressed in this report reflect the judgment of EIR as of the date of this report and are subject to change at any time as new or additional data and information is received and analyzed. EIR undertakes no duty to update this report, or to provide supplemental information to any client receiving this report.

To the full extent provided by law, neither EIR nor any of its affiliates, nor any other person accepts any liability whatsoever for any direct or consequential loss arising from any use of this report or the information contained herein. The recipient assumes all risks and liability with regard to any use or application of the data included herein.

EIR provides custom research to its clients which are distributed on different frequency schedules. Custom research reports may provide different depths of analysis and more frequent updates based on levels of service and fees selected by clients.

No EIR directors, officers or employees are on the Board of Directors of a subject company and no one at a subject company is on the Board of Directors of EIR. EIR does not invest in any securities or manage any securities portfolios. Therefore, it would have no investment relationship with a subject company. Furthermore all employees are subject to restrictions on trading in energy company securities. The views expressed in this report accurately reflect the research analyst's personal views about the subject securities. EIR analysts are compensated from overall firm revenue only and are not compensated to express any view about an issuer or from proceeds derived from any particular transaction between EIR or any of its affiliates and an issuer. Within the last twelve months EIR has not received compensation from the subject company for any products or services. Enverus and its affiliated companies other than EIR serve over 6,000 customers globally and should be assumed to have received compensation from the subject company for non-securities related products or services in the preceding twelve months.

These disclosures apply to any and all supporting materials provided with this report, including but not limited to NAV or other models.

Equity owners of Enverus include affiliated entities of Hellman & Friedman and Genstar Capital, each of whom separately sponsor and manage private investment funds and may make investments in, or otherwise seek to do business with, a company or companies covered by this report. EIR has adopted and implemented policies and procedures reasonably designed to maintain the independence of its research coverage in an attempt to mitigate any potential conflict of interest related to such activities.

Valuation and Methodology

EIR valuations are based primarily on calculations of net asset value (NAV), which are derived using discounted cash flow (DCF) models. The NAV model begins with an evaluation of a company's proved developed reserves using industry-standard decline analysis. EIR then assesses the company's land holdings using a variety of technical data sources (geology, completion, historical production, etc.) to estimate the viability of the acreage for future drilling. Each well has an associated capital and operating cost structure that is incorporated into EIR's model, which also accounts for hedges, debt, taxes, general and administrative costs, and other corporate-level financial inputs. EIR typically runs a number of sensitivities around key variables, such as well cost, reserves and commodity prices, to show the range of possible outcomes.

Note to U.K. Persons

EIR is not an authorized person as defined in the U.K.'s Financial Services and Markets Act 2000 ("FSMA") and the content of this report has not been approved by such an authorized person. You will accordingly not be able to rely upon most of the rules made under FSMA for the protection of clients of financial services businesses, and you will not have the benefit of the U.K.'s Financial Services Compensation Scheme. This document is only directed at (a) persons who have professional experience in matters relating to investments (being 'investment professionals' within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "FPO")), and (b) High net worth companies, trusts etc. of a type described in Article 49(2) of the FPO (all such persons being "relevant persons"). EIR's services are available only to relevant persons and will be engaged in only with relevant persons. This report must not be acted or relied upon by persons who are not relevant persons. Persons of a type described in Article 49(2) of the FPO comprise (a) any body corporate which has, or which is a member of the same group as an undertaking which has, a called up share capital or net assets of not less than (i) in the case of a body corporate which has more than 20 members or is a subsidiary undertaking of an undertaking which has more than 20 members, £500,000 and (ii) in any other case, £5 million, (b) any unincorporated association or partnership which has net assets of not less than £5 million, (c) the trustee of a high value trust within the meaning of Article 49(6) of the FPO and (d) any person ('A') whilst acting in the capacity of director, officer or employee of a person ('B') falling within any of (a), (b) or (c) above where A's responsibilities, when acting in that capacity, involve him in B's engaging in investment activity.