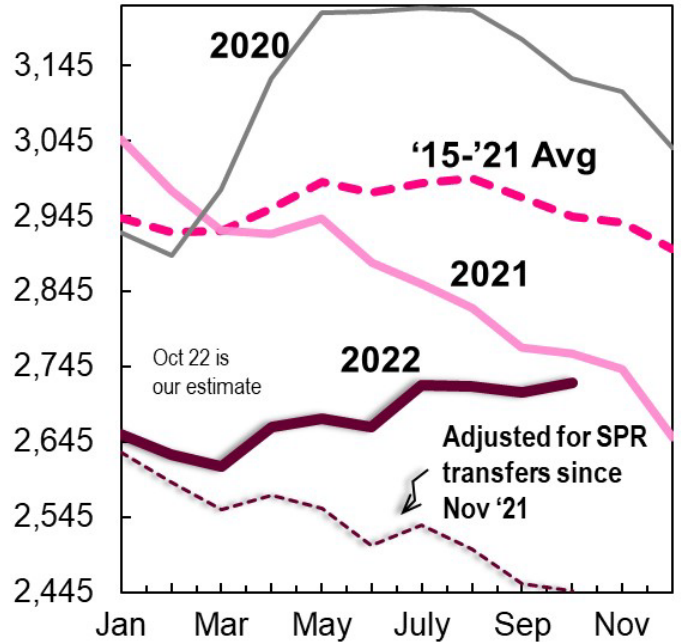




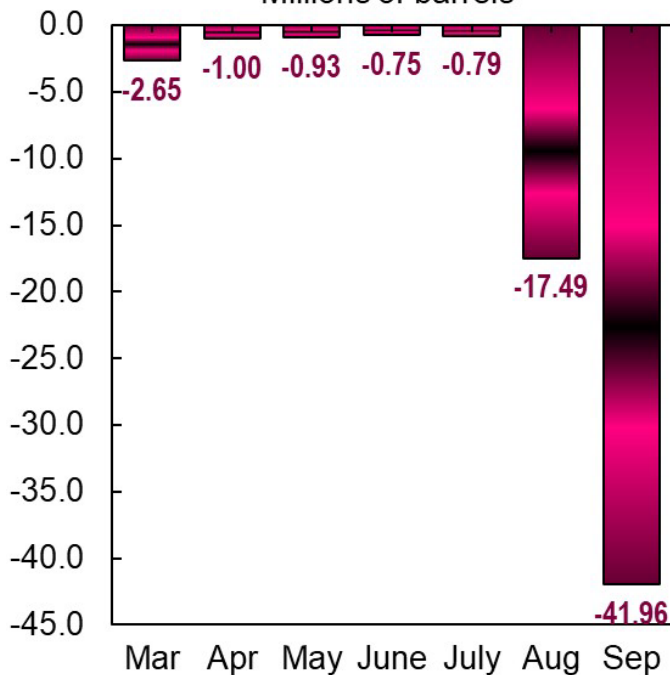
**THE MATH MATTERS**

OECD stocks were drawn by more than previously estimated and global oil demand ran higher than previously believed based on our cursory analyses of data sets from this morning's IEA report – you would never guess that if you read the Agency's summary that distributed to the wire services. As to inventories, there were downward revisions back to 1Q 2022 with the largest being the -42 million for the month of September. We had to rescale the Y axis lower in the analysis to the right, and the total draw on stocks since the summer of 2020 now totals more than 840 million – it dwarfs anything we have in our data back to 1971. Changes in global inventories have a direct bearing on the math for demand and there were upward revisions in our figures that came with the stock changes. The number we generated this morning based on world supply figures indicates that global consumption did indeed average a wee over 102 million b/d in October eclipsing consensus projections by about 1.6 million b/d. We'll update our "missing oil" analysis for tomorrow's report.

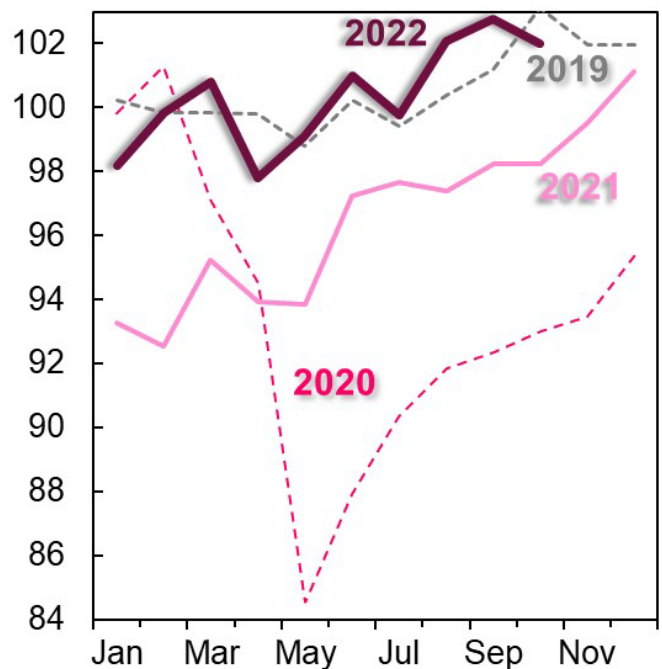
**OECD Commercial Stocks**  
 Month ending level, Million barrels



**OECD Inventory Revisions**  
 Millions of barrels

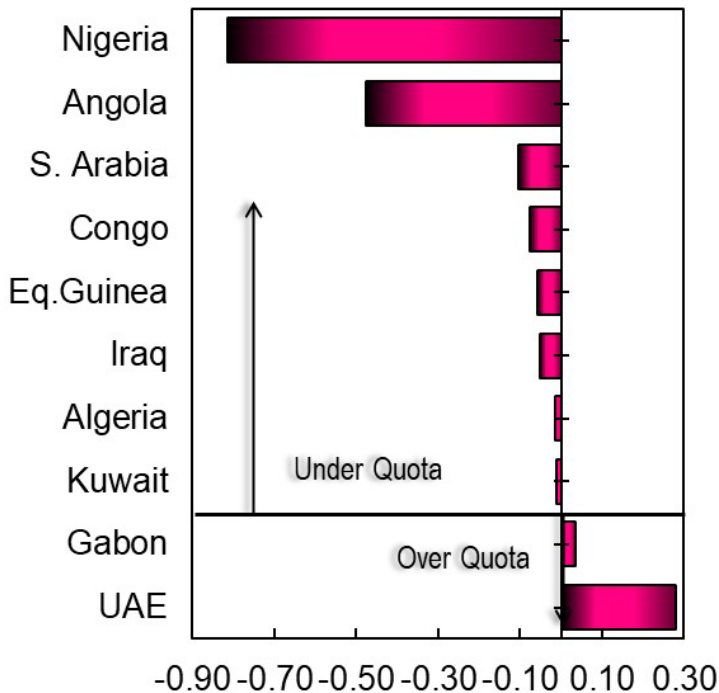


**Global Oil Demand**  
 Monthly, Million barrels/day



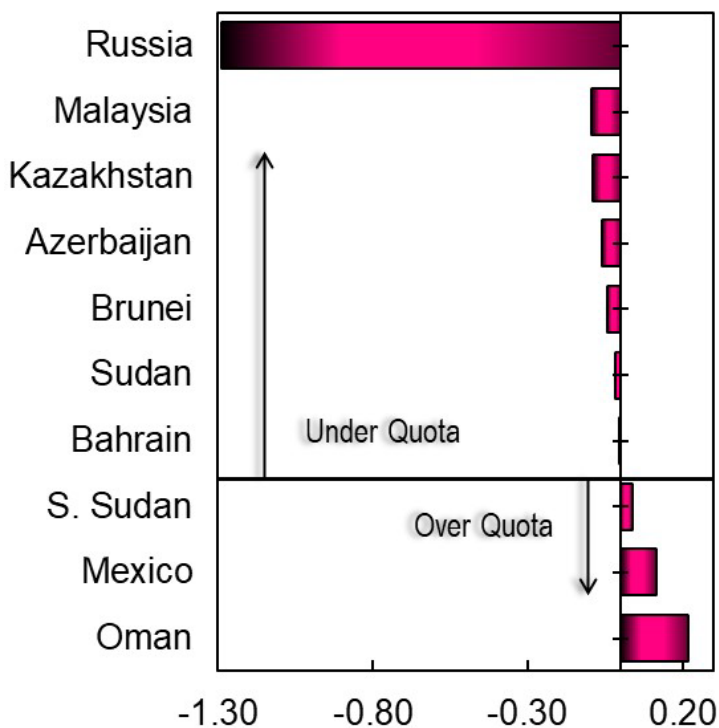
**OPEC-10 Output vs. Quota**

Oct 2022, MM b/d



**Non-OPEC+ Output vs. Quota**

Oct 2022, MM b/d

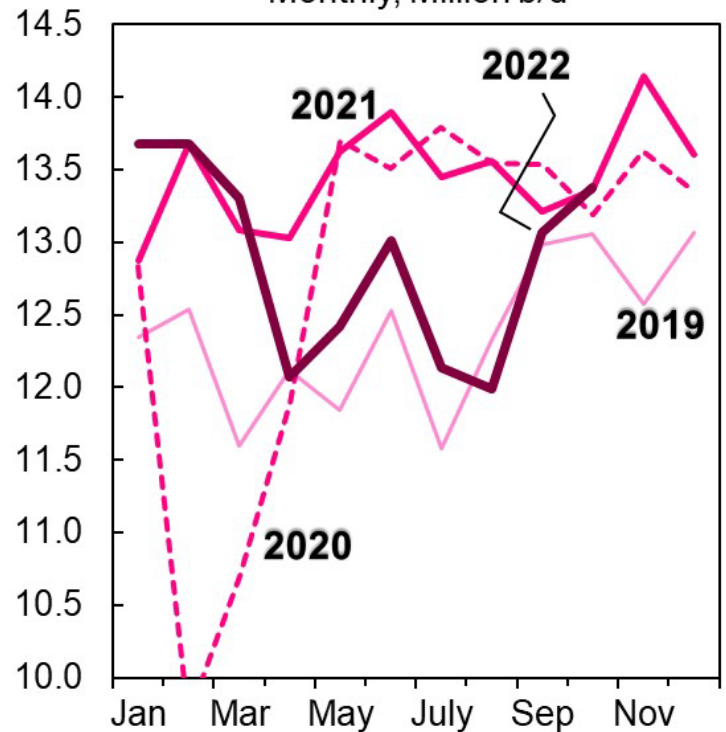


Global oil production capacity being strained was forecast to occur by us back in 2020. This is by no means a victory lap, but the forecast having been so out of consensus also jibes with the expectations of many that crude oil prices could never sustain levels north of \$60. In a similar manner, the notion of a “big rebound” in US and total non-OPEC supply and OPEC “cheating” on quotas resulting in a build in inventories over the 2020-2022 period has been a complete flop. What this means is that the global balance is dramatically tight compared with what most “knew” would be the case, and issues still abound. The twenty countries making up the OPEC+ group saw its collective output come in about 2.5 million b/d below October’s ceiling. Russia ranks as the largest miss which relates directly to the “buyer hesitancy” and unfolding embargoes implemented by the US and the EU – Russia was not able to take advantage of the quota unwind. The IEA this morning did reiterate its view that Russian output fall by 1.5 million b/d in the next few months. So far, since it’s invasion of Ukraine, production has fallen by just 300,000 b/d (the IEA, you may recall, projected output would collapse by 3.1 million b/d by 3Q – a call that was used to justify the largest ever non-emergency release of SPR crude). With the balance being so tight, the IEA’s projected drop in Russian production would be cataclysmic for the oil balance. In that regard, the oil market does not appear to be buying into the story. Prices are still being dampened from angst about the economic climate with crude trading below the current “fair value” figure by almost \$30/barrel – in other words, if the collective market view was that Russia’s production would actually drop by 1.5 million b/d from current levels we would see prices displaying a risk premium.



POSTSCRIPT

**China's Oil Demand**  
Monthly, Million b/d



Last night saw the release of refinery run rate data from China Customs. October's rate was basically flat with September – we estimated there would be a rise of about a hundred thousand b/d based on higher crude imports. Even so, the resulting figure for demand came in about even with the year-ago level which is stronger than forecast by about half-a-million b/d. Like the analysis for September, the key takeaway here is China's demand may be recovering sooner than forecast which would aggravate an already tight global oil balance.

**China's Refinery Runs**  
Monthly, Million b/d

