

Response to “Understanding the Price Cap on Russian Oil and its Role in Depressing Russian Oil Revenues” ([MIT CEEPR comment](#) by Catherine Wolfram)

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In early 2024, we released a [study](#) analyzing the effects of sanctions on the price of Russian oil. This study shows that the embargo forced Russia to accept a \$32/bbl discount on its Urals crude in March 2023 relative to January 2022, nearly half of which is directly attributable to the higher cost of shipping crude oil over longer distances, as Russia diverted much of its crude oil exports to India. Based on a calibrated model of global oil supply and demand, the remainder (\$17/bbl) can be explained by increased Indian bargaining power. We also provide a similar analysis for the ESPO price discount on exports to China. In contrast, the price cap deprived Russia of the financial resources it spent on assembling a “shadow” fleet of tankers, but its effect on the Russian oil export price was negligible once the adoption of the price cap had facilitated the use of Western services to transport Russian oil to Asia.

Recently, Catherine Wolfram, an esteemed energy economist at MIT and former U.S. Treasury official, expressed disapproval of our analysis (MIT CEEPR comment [RC-2024-05](#), henceforth the “Comment”). Since she is one of the architects of the price cap on Russian oil, we very much appreciate her perspective on our paper. Nonetheless, we beg to differ with her conclusions. The Comment makes four main claims about our paper. We address each in turn.

Claim 1: Our paper understates the market perception of the risk of the EU 6th sanctions package.

Professor Wolfram takes issue with our interpretation of the negligible change in global oil prices that followed the announcement on June 28, 2022 that the EU would consider imposing a price cap. Our view, both here and in the paper, is that the absence of a large increase in oil prices around this announcement is evidence that it did not meaningfully shift market perceptions of global oil supply and demand balances. This interpretation is supported by the fact that it was unclear whether there would be a price cap or what its level would be.

Another plausible reason why the announcement of the G7 price cap would have done little to lower the global price of oil was because market participants did not believe that a price cap would be enforceable in the first place (a belief that, in retrospect, has gathered some supportive evidence).

¹ *The views expressed here are those of the authors and do not necessarily reflect those of the Federal Reserve Bank of Dallas or the Federal Reserve System*

The Comment suggests that our analysis ignores that anticipation of the price cap alone could have lowered the price of oil well before the price cap was imposed. It conjectures that anticipation of the price cap reversed an oil price surge earlier in 2022, allegedly caused by the anticipation of the maritime service ban in the June 3 EU sanctions package. The claim is that we failed to take account of these anticipatory effects. In fact, however, section 4 of our paper goes to great lengths to investigate this possibility and finds no support for this conjecture.

What earlier oil price surge is the Comment referring to? Professor Wolfram concedes that the oil price barely increased in the first days after the June 3 announcement of the EU sanctions package, but suggests that this may be because the June 3 announcement had been anticipated after May 4 when the possibility of sanctions was first announced by the EU. The Comment proposes – without evidence - that the roughly 20% increase in the price of oil in May 2022 should be attributed to the anticipation of a maritime services ban.

- One problem with this argument is that anticipatory effects on the oil price, if there were any, could have simply occurred because of concerns about the imposition of an oil embargo. The Comment implies that this oil price increase was due specifically to concerns about a maritime services ban, but there is no evidence of this.
- Another problem is that – contrary to what the Comment asserts as having been shown in our paper – between May 4 and June 3 global real activity, and hence demand for oil, was expanding, so there is a plausible alternative explanation of this oil price increase.
- A third problem is that such an anticipatory effect would have been expected to persist once the sanctions package was formally announced, but the data show a sustained decline in the price of oil starting shortly after the June 3 announcement, yet before public attention shifted toward a possible price cap.
- More generally, as discussed in Section 3.6 of our paper, the persistent increase in oil inventories after June 2022 is difficult to reconcile with the view that falling oil prices in late 2022 were driven by expectations of lower oil prices in anticipation of the price cap.

When discussing the response to the G7 price cap, the Comment furthermore suggests that the U.S Treasury widely shared its plans for a price cap with market participants as early as late spring 2022, suggesting that one would not have expected a price reaction around June 28. If this argument were true and the market anticipated the price cap in late spring, of course, one would not have expected a reaction to the May EU announcement either. It seems that the author of the Comment cannot have it both ways and simply assume that unobserved expectations moved the oil price in one direction or the other whenever it is convenient for the author's interpretation. Short of concrete evidence that the U.S. Treasury's consultations moved the market at one point or another, such arguments remain unsubstantiated conjectures. As our thorough analysis shows, not only

is there no evidence supporting these conjectures, but there are alternative explanations that line up well with existing economic models of the oil market.

More generally, the Comment claims that our paper “argues that Western service provision was unimportant to Russian oil trade.” The opposite is true. We highlight the significance of these services at great length, especially in the context of the price cap and the sanctions. We stress that the price cap policy allowed the West to relax the ban on using Western shipping insurance and related financial services to transport Russian oil to third countries. The paper further emphasizes that the price cap facilitated the use of Western maritime services to transport Russian oil, which had potentially important macroeconomic effects, even though the direct impact on the Russian oil export price was negligible.

Claim 2: The paper mischaracterizes the price cap

The Comment also takes issue with our use of standard economic terminology relating to whether the Russian fob price was “binding”. Typically, a price cap is labeled as “binding” when the market price would exceed the cap, and “non-binding” when the price is below it (e.g. Stigler 1946, Smith & Williams 1981, Mankiw 1998). The Comment raises two issues with this terminology that are worth addressing.

First, it claims that shipping service providers would command a risk premium on shipments that comply with the price cap. The argument is that insurance providers cannot verify the price paid for Russian oil exports, and therefore command a risk premium for shipping or insuring them. This claim is self-contradictory. Either the price is verifiably below the cap, in which case no services price premium is necessary, or the price is not verifiable, in which case the cap cannot be enforced. In either case, no risk premium would be necessary.

In support of the existence of an insurance risk premium, the Comment quotes a [Bloomberg article](#) that it claims places the sanctions risk premium at \$7-\$9 in April 2024. But the \$7-\$9 referenced in Bloomberg refers to the combined cost of insurance and freight. In short, there is no empirical support for such a risk premium in maritime insurance markets.

Second, the Comment claims that the data for the Russian fob oil price are unreliable given that some transactions comply with the price cap and others do not. The Comment questions how reporting agencies average across these two types of trades. However, this is not how the price data in question are constructed. Our main source for Russian fob price data is the widely used series constructed by Argus. Their methodology is described [here](#), and relies on “time stamped bid/ask ranges, averages of deals done in a window, volume weighted averages of deals done over the entire day as well as cumulative transaction averages across a month and cumulative daily averages.” This methodology relies on sampling, which is true both for Russian exports and exports from other producers. There is no evidence that the Argus price is systematically biased.

Claim 3: The paper's description of the role of Russia's shadow fleet is inaccurate

We are puzzled by the positions that this Comment takes in this regard. It implies that the shadow fleet is entirely Russia-owned (when most of it is not), introduces the Russian product tanker fleet (which is outside of the scope of our paper, which focuses on the crude oil market), and implies that the value of the Russian tanker fleet represents the cost incurred by Russia in its efforts to circumvent the price cap. The latter, of course, is false given that (a) Russia had a large tanker fleet before the introduction of sanctions, (b) incentives existed for Russia to buy tankers that are unrelated to the price cap (e.g. to transport oil through waters next to a war zone, or to profit from the expansion in demand for shipping miles caused by the embargo on Russian oil), and (c) there were pre-existing sanctions on part of this fleet.

Our view of the evolution of the shadow fleet is described in section 2.4 of the paper. The Comment does not provide any evidence that this view is inaccurate (with the caveat that the composition of the shadow fleet has changed over time, causing our snapshot to be outdated).

Moreover, there is no mystery about why Russia gradually expanded its fleet of oil tankers as sanctions were imposed. Clearly, a shadow fleet cannot be assembled overnight. The fact that Russia continued to build its fleet, even as the Russian fob price initially dropped below the price cap, made perfect business sense and was a prudent precaution. With the Russian fob price below the price cap and all Russian oil exports to Asia being legal, there was little need for other vessels to join the shadow fleet at the time. Nor is the fact surprising that non-Russian vessels joined the shadow fleet when the Russian fob price exceeded the price cap later in 2023.

There is, however, an important point of agreement that we have with Professor Wolfram. We agree that the price cap is likely to have induced Russia to buy *some* additional tankers. Section 3.1 of our paper discusses the challenge of determining what changes in the Russian fleet can be causally attributed to the price cap.

Claim 4: The paper's explanation doesn't explain market movements over time.

The focus of our paper is the change in the Russian fob price discount between January 2022 and March 2023. We chose January 2022 as the reference month because it predates the disruptions caused by the Russian invasion of Ukraine. We chose March 2023 because it is the first month for which Western sanctions were fully in effect, allowing for any shipments that were on route before the sanctions became active (and which were therefore exempt from the sanctions) to reach their destination.

Contrary to the claim above, the mechanisms described in our paper are consistent with major changes in the Russian fob price discount over time. In particular, the decline in the

Russian fob price discount is consistent with our narrative. For example, as the shadow fleet grew, Russia's reliance on Chinese and Indian buyers also diminished, thereby reducing Chinese and Indian bargaining power. Furthermore, capacity constraints in the tanker market diminished, reducing the freight costs of shipping Urals crude to Asia.

The view that, instead, variation in the aforementioned insurance risk premium is driving these changes does not stand up to scrutiny. For one thing, many vessels involved in moving Russian oil to Asia do not even use Western insurance. This is confirmed by a recent [Bloomberg article](#) which – far from contradicting our analysis, as claimed in the Comment – points out that as of March 2024 less than a quarter of Russian oil shipments appear covered by Western insurance. Thus, even if a nonnegligible insurance premium existed and varied over time (which remains to be established), it is unlikely to explain the observed variation in the Russian fob price relative to the Brent price.

Summary

In short, while we appreciate Professor Wolfram's effort to comment on our paper, we believe that her comments do not accurately represent our positions. The Comment makes several claims that, as we discussed, involve unsubstantiated conjectures or misinterpretations of the data. While we acknowledge the importance of questioning our modeling assumptions, our paper already addresses the concerns raised in this Comment in response to earlier email exchanges with Professor Wolfram. Our analysis may not be the final word on this topic, but it provides the most plausible explanation of the facts given the available evidence to date.

References

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