

# CRUDE OIL PRICE PREDICTION: PROBLEM STATEMENT

## Supply

Supply and demand have to do with how much oil is available.

Supply has historically been determined by countries that are part of [OPEC](#). But now, the United States is playing a bigger role in supply thanks to booming production from American shale fields. This is a big deal because European and British companies account for about 85% to 90% of the business of insuring, reinsuring, and financing seaborne Russian oil.

The COVID-19 pandemic triggered an unprecedented [demand shock](#) in the oil industry, leading to a collapse in oil prices. Demand for oil cratered as governments around the world shuttered businesses, issued stay-at-home mandates, and restricted travel.

An oil price war between Russia and Saudi Arabia erupted in March when the two nations failed to reach a consensus on oil production levels.

Just look at what happened in 2014.

“Saudi Arabia made the decision that they were not going to cut back production, they were going to continue to produce at record high levels,” said Tamar Essner, senior energy director at Nasdaq IR Solutions. “At the same time, you had very robust output from the United States, and from other producers around the world.”

Oil prices fell sharply as producers pumped more than the world could consume. OPEC was largely blamed for the free fall in oil prices because it refused to cut down its production. But OPEC said U.S. shale drillers were to blame for pumping too much, and should cut their production first.

## Demand

Demand on the other hand is determined by how much need there is for oil at a given time. That need is often for things like heat, electricity and transportation. The more economic growth a region sees, the more demand there will be for oil.

“Economies around the world have picked up since the financial crisis, and growth has gotten stronger so people have been using more energy,” Essner said.

And then there’s the question of how the market will react to renewable energy.

“A lot of this will be impacted by public policy, but at the end of the day renewable can only displace hydrocarbons if it’s economically feasible,” Essner said.

In early 2022, Russia began military operations in Ukraine, which centered around the separatist regions in the east and other targets within the country. As a result, WTI oil prices spiked from \$74.32 on Dec. 15, 2021, to \$100, while [Brent crude](#) shot up to more than \$105 during intraday trading in early 2022.<sup>11</sup>

The economic sanctions that result from geopolitical tensions can also lead to [volatility](#) in the energy markets. On Feb. 22, 2022, U.S. President Joe Biden announced sanctions that included blocking two state-owned Russian financial banks and their [subsidiaries](#), which provide financing to the Russian military. Sanctions also banned Russian [sovereign debt](#) purchases within the U.S. and targeted Russian elites and their families.

“Right now, renewables are still more expensive than non-renewable and As all our machines are made to run on non-renewable it is a tedious and high investment process to change, so consumers aren’t going to voluntarily make the switch.”

## **Geopolitics**

Since supply is determined by the big oil-producing countries, tension with one of those nations can cause major problems. So if there's war or conflict in an oil-producing region, crude inventories could seem threatened, and that could ultimately alter the price of oil.

"Geopolitics has traditionally been a factor in the oil price," Essner said.

"Particularly when situations in the Middle East or other oil-rich regions of the world would flare up and there would be conflict, you would generally speaking see a little bit of an uptick in the price of oil as a result, just by virtue of the risk of supply being disrupted, or of means of transportation being disrupted, such as a canal or pipeline or workers going on protest, things like that."

Just think back to the Gulf War of 1991. Oil production fell, which caused prices to rise.

And in 2003, oil prices soared after the U.S. invaded Iraq. That Middle Eastern nation produces a lot of oil, and with instability in the region, people weren't immediately sure what would happen to the supply.

Although exports to the European Union (EU) have fallen since Russia's invasion of Ukraine, the bloc is still buying a significant amount - over one million barrels of oil per day. However, EU members states have said they'll ban all seaborne imports from December. India and China have recently become big buyers and now account for over half of all Russia's seaborne oil exports.

"That's what makes the oil markets so fascinating, is that it's really a very interesting interplay of financial markets, the economy, and those are two very different things, the currency market, geopolitics and the environment," Essner said.

As the oil price is not a stable we should not only focus on the period changes in it. we also note the other parameters which indirectly affect the flow of the price of crude oil.