COVID-19 brought about capex cuts, with greater impact than 2014

1. 2021-2030 estimated capex
Source: IEA, BCG Analysis
The risk of peak investment in oil and gas is significant.

The chart shows the estimated capex from 2020 to 2030. The capex is measured in billion US$. For 2020, the current and expected capex is shown. For 2030, the chart is divided into two parts: additional capex required and current and expected capex. The total capex for 2030 is 225 billion US$. The chart assumes demand returns in the 2022 time period.

Source: IEA, Rystad, BCG Analysis

1. 2021-2030 estimated capex
2. Assumes demand returns in 2022 time period
Additional investment and volumes needed— even if demand has already peaked

Demand and Supply gap with no new investment

-27
-51
-68

Million b/d

<table>
<thead>
<tr>
<th>Year</th>
<th>IEA Oil Demand</th>
<th>OPEC Oil Demand</th>
<th>Oil Supply (No new investment)</th>
<th>Low oil demand estimate</th>
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Additional production needed to offset declines

2022- 27 mmboe/d - if demand recovers slightly

2030- 68 mmboe/d if demand recovers and continues growth at lower than historic average

2030- 51 mmboe/d even if demand peaks

Note: Dotted lines connect organization provided forecasts
Source: IEA, OPEC, BP Net Zero, BCG CEI analysis
The industry has undergone a structural shift since 2014- and supply crisis can more quickly be managed

50%

reduction in lead times for new projects

Short-cycle and faster FID-to-first-production projects now preferred over larger-scale, slower, capital-intensive projects

A price rise, but no 2008 super spike

Source: IEA, BCG Analysis
Cuts to date and indications of 2021 cuts suggest a similar impact on capex changes

2020’s cut in upstream capex was more than the initial cut after the 2014 price decline

Capex, Billion US$

Note: 2021 estimated 20% cut based on guidance delivered to date
Source: IEA, BCG Analysis
Price level **and** volatility are key indicators for companies setting capex levels

Source: EIA, BCG Analysis